UNITED STATES OF AMERICA
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Fiscal Year Ended:December 31, 2019
OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the Transition Period from _______________ to _______________.
Commission File Number 1-13759

REDWOOD TRUST, INC.

(Exact Name of Registrant as Specified in Its Charter)

Maryland	**68-0329422**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
One Belvedere Place, Suite 300	
Mill Valley, California	**94941**
(Address of Principal Executive Offices)	(Zip Code)

(415) 389-7373
(Registrant's Telephone Number, Including Area Code)

Securities Registered Pursuant to Section 12(b) of the Act:

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common stock, par value $0.01 per share	RWT	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

At June 28, 2019, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was $1,600,621,984 based on the closing sale price as reported on the New York Stock Exchange.

The number of shares of the registrant's Common Stock outstanding on February 26, 2020 was 114,353,805.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement to be filed with the Securities and Exchange Commission under Regulation 14A within 120 days after the end of registrant's fiscal year covered by this Annual Report are incorporated by reference into Part III.

REDWOOD TRUST, INC.
2019 ANNUAL REPORT ON FORM 10-K

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PART I

ITEM 1. BUSINESS

Introduction

Redwood Trust, Inc., together with its subsidiaries, is a specialty finance company focused on making credit-sensitive investments in single-family residential and multifamily mortgages and related assets and engaging in mortgage banking activities. Our goal is to provide attractive returns to shareholders through a stable and growing stream of earnings and dividends, as well as through capital appreciation. We operate our business in four segments: Residential Lending, Business Purpose Lending, Multifamily Investments, and Third-Party Residential Investments.

Our primary sources of income are net interest income from our investments and non-interest income from our mortgage banking activities. Net interest income consists of the interest income we earn on investments less the interest expense we incur on borrowed funds and other liabilities. Income from mortgage banking activities is generated through the origination and acquisition of loans, and their subsequent sale, securitization, or transfer to our investment portfolios.

Redwood Trust, Inc. has elected to be taxed as a real estate investment trust ("REIT") under the Internal Revenue Code of 1986, as amended (the "Internal Revenue Code"), beginning with its taxable year ended December 31, 1994. We generally refer, collectively, to Redwood Trust, Inc. and those of its subsidiaries that are not subject to subsidiary-level corporate income tax as "the REIT" or "our REIT." We generally refer to subsidiaries of Redwood Trust, Inc. that are subject to subsidiary-level corporate income tax as "our taxable REIT subsidiaries" or "TRS." Our mortgage banking activities and investments in mortgage servicing rights ("MSRs") are generally carried out through our taxable REIT subsidiaries, while our portfolio of mortgage- and other real estate-related investments is primarily held at our REIT. We generally intend to retain profits generated and taxed at our taxable REIT subsidiaries, and to distribute as dividends at least 90% of the taxable income we generate at our REIT.

Redwood Trust, Inc. was incorporated in the State of Maryland on April 11, 1994, and commenced operations on August 19, 1994. On March 1, 2019, Redwood completed the acquisition of 5 Arches, LLC ("5 Arches"), at which time 5 Arches became a wholly-owned subsidiary of Redwood. On October 15, 2019, Redwood acquired CoreVest American Finance Lender, LLC and certain affiliated entities ("CoreVest"), at which time CoreVest became wholly owned by Redwood. Our executive offices are located at One Belvedere Place, Suite 300, Mill Valley, California 94941. References herein to "Redwood," the "company," "we," "us," and "our" include Redwood Trust, Inc. and its consolidated subsidiaries, unless the context otherwise requires.

Financial information concerning our business, both on a consolidated basis and with respect to each of our segments, is set forth in *Financial Statements and Supplementary Data* as well as in *Management's Discussion and Analysis of Financial Condition and Results of Operations* which are included in Part II, Items 8 and 7, respectively, of this Annual Report on Form 10-K.

Our Business Segments

Beginning in the fourth quarter of 2019, we reorganized our segments to align with changes in how we view our segments for making operating decisions and assessing performance. As a result of acquisitions in the business purpose lending space and the continued growth of multifamily investments in 2019, we created four new operating segments: Residential Lending, Business Purpose Lending, Multifamily Investments, and Third-Party Residential Investments. We conformed the presentation of prior periods in accordance with these new segments. Following is a full description of our current segments.

Residential Lending – consists of a mortgage loan conduit that acquires residential loans from third-party originators for subsequent sale, securitization, or transfer into our investment portfolio, as well as the investments we retain from these activities. We typically acquire prime, jumbo mortgages and the related mortgage servicing rights on a flow basis from our network of loan sellers and distribute those loans through our Sequoia private-label securitization program or to institutions that acquire pools of whole loans. Our investments in this segment primarily consist of residential mortgage-backed securities ("RMBS") retained from our Sequoia securitizations (some of which we consolidate for GAAP purposes), jumbo whole loans we retained and finance through our Federal Home Loan Bank of Chicago ("FHLBC") member subsidiary, as well as MSRs retained from jumbo whole loans we sold or securitized. This segment also includes various derivative financial instruments that we utilize to manage certain risks associated with our inventory of residential loans held-for-sale and long-term investments we hold within this segment. This segment's main source of revenue is net interest income from its long-term investments and its inventory of loans held-for-sale, as well as income from mortgage banking activities, which includes valuation increases (or gains) on loans we acquire and subsequently sell, securitize, or transfer into our investment portfolio, and the hedges used to manage risks associated with these activities. Additionally, this segment may realize gains and losses upon the sale of securities. Funding expenses, direct operating expenses, and tax expenses associated with these activities are also included in this segment.

Business Purpose Lending – consists of a platform that originates and acquires business purpose residential loans for subsequent securitization or transfer into our investment portfolio, as well as the investments we retain from these activities. We typically originate single-family rental and residential bridge loans and distribute certain single-family rental loans through our CoreVest American Finance Lender ("CAFL") private-label securitization program and retain others for investment along with our residential bridge loans. Single-family rental loans are business purpose residential mortgage loans to investors in single-family (1-4 unit) rental properties. Residential bridge loans are business purpose residential mortgage loans to investors rehabilitating and subsequently reselling or renting residential properties. Our investments in this segment primarily consist of securities retained from our CAFL securitizations (which we consolidate for GAAP purposes), residential bridge loans, and single-family rental loans we finance through our FHLBC member subsidiary. This segment also includes various derivative financial instruments that we utilize to manage certain risks associated with our inventory of single-family rental loans held-for-sale and our investments. This segment's main source of revenue is net interest income from its investments and loans held-for-sale, as well as income from mortgage banking activities, which includes valuation increases (or gains) on loans we originate or acquire and subsequently sell, securitize or transfer into our investment portfolio, and the hedges used to manage risks associated with these activities. Additionally, this segment may realize gains and losses upon the sale of securities. Funding expenses, direct operating expenses, and tax expenses associated with these activities are also included in this segment.

Multifamily Investments – consists of investments in securities collateralized by multifamily mortgage loans, as well as other investments in multifamily mortgages and related assets. The securities in this segment are primarily comprised of investments in Freddie Mac K-Series securitizations. This segment's main sources of revenue are interest income from securities and loans held-for-investment. Additionally, this segment may realize gains and losses upon the sale of securities or loans. Funding expenses, hedging expenses, direct operating expenses, and tax provisions associated with these activities are also included in this segment.

Third-Party Residential Investments – consists of investments in RMBS issued by third parties, investments in Freddie Mac SLST securitizations (which we consolidate for GAAP purposes), our servicer advance investments, and other residential credit investments not generated through our Residential Lending segment. This segment's main sources of revenue are interest income from securities and loans held-for-investment. Additionally, this segment may realize gains and losses upon the sale of securities. Funding expenses, hedging expenses, direct operating expenses, and tax provisions associated with these activities are also included in this segment.

Consolidated Securitization Entities

We sponsor our Sequoia securitization program, which we use for the securitization of residential mortgage loans. We are required under Generally Accepted Accounting Principles in the United States ("GAAP") to consolidate the assets and liabilities of certain securitization entities we have sponsored for financial reporting purposes. We refer to certain of these securitization entities issued prior to 2012 as "consolidated Legacy Sequoia entities," and the securitization entities formed in connection with the securitization of Redwood Choice expanded-prime loans as the "consolidated Sequoia Choice entities." We also consolidate certain third-party Freddie Mac K-Series and SLST securitization entities that we determined were VIEs and for which we determined we were the primary beneficiary. Additionally, beginning in the fourth quarter of 2019, we consolidated certain CAFL securitization entities that we determined were VIEs and for which we determined we were the primary beneficiary. Where applicable, in analyzing our results of operations, we distinguish results from current operations "at Redwood" and from consolidated entities. Each of these consolidated entities is independent of Redwood and of each other, and the assets and liabilities of these entities are not owned by us or legal obligations of ours, respectively, although we are exposed to certain financial risks associated with any role we carry out for these entities (e.g., as sponsor or depositor) and, to the extent we hold securities issued by, or other investments in, these entities, we are exposed to the performance of these entities and the assets they hold.

Information Available on Our Website

Our website can be found at www.redwoodtrust.com. We make available, free of charge through the investor information section of our website, access to our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the U.S. Securities Exchange Act of 1934, as well as proxy statements, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the U.S. Securities and Exchange Commission ("SEC"). We also make available, free of charge, access to the charters for our Audit Committee, Compensation Committee, and Governance and Nominating Committee, our Corporate Governance Standards, and our Code of Ethics governing our directors, officers, and employees. Within the time period required by the SEC and the New York Stock Exchange, we will post on our website any amendment to the Code of Ethics and any waiver applicable to any executive officer, director, or senior officer (as defined in the Code). In addition, our website includes information concerning purchases and sales of our equity securities by our executive officers and directors, as well as disclosure relating to certain non-GAAP financial measures (as defined in the SEC's Regulation G) that we may make public orally, telephonically, by webcast, by broadcast, or by similar means from time to time. The information on our website is not part of this Annual Report on Form 10-K.

Our Investor Relations Department can be contacted at One Belvedere Place, Suite 300, Mill Valley, CA 94941, Attn: Investor Relations, telephone (866) 269-4976 or email investorrelations@redwoodtrust.com.

Cautionary Statement

This Annual Report on Form 10-K and the documents incorporated by reference herein contain forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements involve numerous risks and uncertainties. Our actual results may differ from our beliefs, expectations, estimates, and projections and, consequently, you should not rely on these forward-looking statements as predictions of future events. Forward-looking statements are not historical in nature and can be identified by words such as “anticipate,” “estimate,” “will,” “should,” “expect,” “believe,” “intend,” “seek,” “plan” and similar expressions or their negative forms, or by references to strategy, plans, or intentions. These forward-looking statements are subject to risks and uncertainties, including, among other things, those described in this Annual Report on Form 10-K under the caption “Risk Factors.” Other risks, uncertainties, and factors that could cause actual results to differ materially from those projected are described below and may be described from time to time in reports we file with the SEC, including reports on Forms 10-Q and 8-K. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.

Statements regarding the following subjects, among others, are forward-looking by their nature: (i) statements we make regarding Redwood’s business strategy and strategic focus, including statements relating to our overall market position, strategy and long-term prospects (including trends driving the flow of capital in the housing finance market, our strategic initiatives designed to capitalize on those trends, our ability to attract capital to finance those initiatives, our approach to raising capital, our ability to pay higher sustainable dividends in the future, and the prospects for federal housing finance reform); (ii) statements related to our financial outlook and expectations for 2020 and future years; (iii) statements related to our residential and business purpose lending platforms, including our positioning in the market and the expansion of our bridge lending business to include more robust construction/redevelopment opportunities; (iv) statements relating to the potential for regulatory reform and positioning Redwood to capitalize on resulting opportunities, including through the application of technological innovations; (v) statements we make relating to our recourse leverage ratio, including our statement that, as we continue to deploy our capital available for investment, we expect this leverage ratio to increase toward the middle of our 3.0x to 4.0x target range; (vi) statements relating to acquiring residential mortgage loans in the future that we have identified for purchase or plan to purchase, including the amount of such loans that we identified for purchase during the fourth quarter of 2019 and at December 31, 2019, and expected fallout and the corresponding volume of residential mortgage loans expected to be available for purchase; (vii) statements regarding business purpose loan originations, loans funded, and associated funding commitments; (viii) statements relating to our estimate of our available capital (including that we estimate our available capital at December 31, 2019 was approximately $260 million), and expectations relating to our belief that our available capital is sufficient to fund our operations and currently contemplated investment activities; (ix) statements we make regarding future dividends, including with respect to our regular quarterly dividends in 2020; and (x) statements regarding our expectations and estimates relating to the characterization for income tax purposes of our dividend distributions, our expectations and estimates relating to tax accounting, tax liabilities and tax savings, and GAAP tax provisions, and our estimates of REIT taxable income and TRS taxable income.

Important factors, among others, that may affect our actual results include:

- the pace at which we redeploy our available capital into new investments;
- interest rate volatility, changes in credit spreads, and changes in liquidity in the market for real estate securities and loans;
    - "Credit spreads" is used generally to refer to the market value yield on a loan or security less the relevant risk-free benchmark interest rate;
- changes in the demand from investors for residential mortgages and investments, and our ability to distribute residential mortgages through our whole-loan distribution channel;
- our ability to finance our investments in securities and our acquisition of residential mortgages with short-term debt;
- changes in the values of assets we own;
- general economic trends, the performance of the housing, real estate, mortgage, credit, and broader financial markets, and their effects on the prices of earning assets and the credit status of borrowers;
- the impact of changes to U.S. federal income tax laws on the U.S. housing market, mortgage finance markets, and our business;
- changes to fiscal, tax, and other federal policies by Congress or President Trump’s administration;
- developments related to the fixed income and mortgage finance markets and the Federal Reserve’s statements regarding its future open market activity and monetary policy;

- federal and state legislative and regulatory developments, and the actions of governmental authorities, including the new U.S. presidential administration, and in particular those affecting the mortgage industry or our business (including, but not limited to, the Federal Housing Finance Agency's rules relating to FHLB membership requirements and the implications for our captive insurance subsidiary's membership in the FHLB);
- strategic business and capital deployment decisions we make;
- our exposure to credit risk and the timing of credit losses within our portfolio;
- the concentration of the credit risks we are exposed to, including due to the structure of assets we hold and the geographical concentration of real estate underlying assets we own;
- our exposure to adjustable-rate mortgage loans;
- the efficacy and expense of our efforts to manage or hedge credit risk, interest rate risk, and other financial and operational risks;
- changes in credit ratings on assets we own and changes in the rating agencies' credit rating methodologies;
- changes in interest rates;
- changes in mortgage prepayment rates;
- changes in liquidity in the market for real estate securities and loans;
- our ability to finance the acquisition of real estate-related assets with short-term debt;
- the ability of counterparties to satisfy their obligations to us;
- our involvement in securitization transactions, the profitability of those transactions, and the risks we are exposed to in engaging in securitization transactions;
- exposure to claims and litigation, including litigation arising from our involvement in securitization transactions;
- ongoing litigation against various trustees of RMBS transactions;
- whether we have sufficient liquid assets to meet short-term needs;
- our ability to successfully compete and retain or attract key personnel;
- our ability to adapt our business model and strategies to changing circumstances;
- changes in our investment, financing, and hedging strategies and new risks we may be exposed to if we expand our business activities;
- our exposure to a disruption or breach of the security of our technology infrastructure and systems;
- exposure to environmental liabilities;
- our failure to comply with applicable laws and regulations;
- our failure to maintain appropriate internal controls over financial reporting and disclosure controls and procedures;
- the impact on our reputation that could result from our actions or omissions or from those of others; changes in accounting principles and tax rules;
- our ability to maintain our status as a REIT for tax purposes;
- limitations imposed on our business due to our REIT status and our status as exempt from registration under the Investment Company Act of 1940;
- decisions about raising, managing, and distributing capital; and
- other factors not presently identified.

This Annual Report on Form 10-K may contain statistics and other data that in some cases have been obtained from or compiled from information made available by servicers and other third-party service providers.

Certifications

Our Chief Executive Officer and Chief Financial Officer have executed certifications dated March 2, 2020, as required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002, and we have included those certifications as exhibits to this Annual Report on Form 10-K. In addition, our Chief Executive Officer certified to the New York Stock Exchange (NYSE) on June 4, 2019 that he was unaware of any violations by Redwood Trust, Inc. of the NYSE's corporate governance listing standards in effect as of that date.

Employees

As of December 31, 2019, Redwood employed 372 people.

Item 1A. Risk Factors

Risks Related to Recent or Potential Economic, Strategic, and Legislative/Regulatory Developments Affecting our Industry

General economic developments and trends and the performance of the housing, real estate, mortgage finance, and broader financial markets may adversely affect our business and the value of, and returns on, real estate-related and other assets we own or may acquire and could also negatively impact our business and financial results.

Our level of business activity and the profitability of our business, as well as the values of, and the cash flows from, the assets we own, are affected by developments in the U.S. economy and the broader global economy. As a result, negative economic developments are likely to negatively impact our business and financial results. There are a number of factors that could contribute to negative economic developments, including, but not limited to, U.S. fiscal and monetary policy changes, including Federal Reserve policy shifts and changes in benchmark interest rates, changing U.S. consumer spending patterns, negative developments in the housing, single-family rental (SFR), multifamily, and real estate markets, rising unemployment, rising government debt levels, and changing expectations for inflation and deflation. For example, changes and uncertainty resulting from, and the impact of, various international trade negotiations and the appropriation process for funding the operations of the U.S. federal government could negatively impact financial markets, as well as domestic and global economic growth. Also, the U.K. exit from the European Union is another factor that could adversely impact financial markets, as well as domestic and global economic growth. Personal income and unemployment levels affect borrowers' ability to repay residential mortgage loans underlying our investments in residential real estate-related assets (and renters' ability to meet rental obligations underlying our investments in multifamily and SFR securities and loans secured by non-owner occupied rental properties), and there is risk that economic growth and activity could be weaker than anticipated or negative.

Government interventions into the financial markets and fiscal stimulus spending that occurred in the wake of the 2007-2008 financial crisis have contributed to significantly increased U.S. budget deficits and overall debt levels, and the federal tax reform legislation signed into law in December 2017 is forecast to further increase budget deficits over the next decade. These increases can put upward pressure on interest rates and could be among the factors that could lead to higher interest rates over the long-term future. Higher long-term interest rates could adversely affect our overall business, income, and our ability to pay dividends, as discussed further below under "Interest rate fluctuations can have various negative effects on us and could lead to reduced earnings and increased volatility in our earnings." Furthermore, our business and financial results may be harmed by our inability to accurately anticipate developments associated with changes in, or the outlook for, interest rates. In addition, near-term and long-term U.S. economic conditions could be impacted by changes in fiscal and tax policy.

Real estate values, and the ability to generate returns by owning or taking credit risk on loans secured by real estate, are important to our business. Following the financial crisis of 2007-2008, government intervention has been important in supporting real estate markets, the overall U.S. economy, and capital markets. Mortgage markets have also received substantial U.S. government support. In particular, the government's support of mortgage markets through its support of Fannie Mae and Freddie Mac expanded in late 2008, as the U.S. Treasury Department chose to backstop these government-sponsored enterprises. The governmental support for these entities has contributed to Fannie Mae's and Freddie Mac's continued dominance of residential mortgage finance and securitization activity, inhibiting the return of private sector mortgage securitization. This support may continue for some time and could have potentially negative consequences to us, since we have traditionally taken an active role in assuming credit risk in the private sector mortgage market, including through investments in Sequoia securitizations we sponsor. Both Congress and President Trump's administration have proposed various plans for reform of Fannie Mae and Freddie Mac (and the broader role of the government in the U.S. mortgage markets); however, it's unclear which reforms will ultimately be implemented, if any, what the timeframe for any such reform would be, and what the impact on our business would be.

Changes to the U.S. federal income tax laws could have an adverse impact on the U.S. housing market, mortgage finance markets, and our business.

In December 2017, President Trump signed into law the Tax Cuts and Jobs Act (the "Tax Act"), which contained significant changes to the Internal Revenue Code for taxable years beginning in 2018. Among other things, the Tax Act reduced for individuals the annual residential mortgage-interest deduction for purchase money mortgage debt incurred after December 15, 2017, in taxable years beginning after December 31, 2017, and beginning before January 1, 2026, from $1,000,000 (or $500,000 in the case of married taxpayers filing separately) to $750,000 (or $375,000 in the case of married taxpayers filing separately), as well as eliminated for individuals the deduction for interest with respect to home equity indebtedness, with certain exceptions for indebtedness from refinancing existing indebtedness. The Tax Act also limits the state and local tax deduction for individuals to a combined $10,000 for income, sales, and property taxes (for both single and married tax filers) in taxable years beginning after December 31, 2017, and beginning before January 1, 2026. The reduction or limitation of these tax deductions is a factor that, all other things being equal, would generally adversely affect home prices at the higher end of the housing market, particularly in states with high state and local taxes and property values. In addition, such changes increase taxes payable by certain borrowers, thereby reducing their available cash and adversely impacting their ability to make payment on the mortgage loans, which in turn, could cause a rise in delinquencies. The impact of these changes has yet to be fully determined, but the limitations on these deductions could have an adverse impact on the U.S. residential housing market, the market value of residential mortgage loans and residential mortgage-backed securities, and the volume of future originations of residential mortgage loans, particularly jumbo mortgage loans, all of which could negatively impact our business or financial results.

Congress and President Trump's administration have made and may continue to make substantial changes to fiscal, tax, and other federal policies that may adversely affect our business.

President Trump has called for and, in some cases, already signed into law substantial changes to U.S. fiscal and tax policies, including corporate and individual tax reform. In addition, President Trump has also called for, and, in some cases, already made, significant changes to U.S. trade, housing finance, healthcare, immigration, foreign, and government regulatory policy. Some of the called-for changes would require Congressional approval, while others have already been, and may in the future be, carried out unilaterally by the executive branch of the U.S. government. To the extent Congress or President Trump implement changes to U.S. policy, those changes may impact, among other things, the U.S. economy, housing and housing finance markets, international trade, unemployment, immigration, the regulatory environment in the U.S. including banking regulations and the Dodd-Frank Act, international relations, inflation, healthcare, and other areas. Although we cannot predict the impact, if any, of these changes to our business, they could adversely affect our business. Until we know what policy changes are made and how those changes impact our business and the business of our competitors over the long-term, we will not know if, overall, we will benefit from them or be negatively affected by them.

Changing benchmark interest rates, and the Federal Reserve's actions and statements regarding monetary policy, can affect the fixed income and mortgage finance markets in ways that could adversely affect our future business and financial results and the value of, and returns on, real estate-related investments and other assets we own or may acquire.

Statements by the Federal Reserve regarding monetary policy and the actions it takes to set or adjust monetary policy may affect the expectations and outlooks of market participants in ways that disrupt our business and adversely affect our financial results and the value of, and returns on, our portfolio of real-estate related investments and the pipeline of mortgage loans we own or may originate or acquire. For example, since December 2015, the Federal Reserve raised the target federal funds rate nine times, bringing it from near zero to a high of 2.25% to 2.50%, before it began easing rates in 2019 to the current target level between 1.50% and 1.75%. The federal funds rate could be increased again over the next several years. Increasing rates generally reduce mortgage loan origination volumes, particularly the volume of residential mortgage refinancings. As another example, from 2013 through 2019, statements made by the Chair and other members of the Board of Governors of the Federal Reserve System and by other Federal Reserve Bank officials regarding the U.S. economy, future economic growth, the Federal Reserve's future open market activity and monetary policy had a significant impact on, among other things, benchmark interest rates, the value of residential mortgage loans, and, more generally, the fixed income markets. These statements and the actions of the Federal Reserve, and other factors also significantly impacted many market participants' expectations and outlooks regarding future levels of benchmark interest rates and the expected yields these market participants would require to invest in fixed income instruments, including most residential and SFR mortgages and residential, SFR, and multifamily mortgage-backed securities.

To the extent benchmark interest rates rise, one of the immediate potential impacts on our business would be a reduction in the overall value of the pool of mortgage loans that we own and the overall value of the pipeline of mortgage loans that we have identified for origination or purchase. Rising benchmark interest rates also generally have a negative impact on the overall cost of short- and long-term borrowings we use to finance our acquisitions and holdings of mortgage loans, including as a result of the requirement to post additional margin (or collateral) to lenders to offset any associated decline in value of the mortgage loans we finance with short- and long-term borrowings. The short- and long-term borrowings we use to finance our acquisitions and holdings of mortgage loans are generally uncommitted and have a limited term, which could result in these types of borrowings not being available in the future to fund our acquisitions and holdings and could result in our being required to sell holdings of mortgage loans and incur losses. Similar impacts would also be expected with respect to the short-term borrowings we use to finance our acquisitions and holdings of residential, SFR, and multifamily mortgage-backed securities. In addition, any inability to fund originations or acquisitions of mortgage loans could damage our reputation as a reliable counterparty in the mortgage finance markets.

To the extent benchmark interest rates rise, it would also likely impact the volume of residential mortgage loans available for purchase in the marketplace and our ability to compete to acquire residential mortgage loans as part of our residential mortgage banking activities. These impacts could result from, among other things, a lower overall volume of mortgage refinance activity by mortgage borrowers and an increased level of competition from large commercial banks that may operate with a lower cost of capital than we do, including as a result of Federal Reserve monetary policies that impact banks more favorably than us and other non-bank institutions. These and other impacts of developments of the type described above may have a negative impact on our business and results of operations and we cannot accurately predict the full extent of these impacts or for how long they may persist.

Federal and state legislative and regulatory developments and the actions of governmental authorities and entities may adversely affect our business and the value of, and the returns on, mortgages, mortgage-related securities, and other assets we own or may acquire in the future.

As noted above, our business is affected by conditions in the housing, business-purpose, multifamily, and real estate markets and the broader financial markets, as well as by the financial condition and resources of other participants in these markets. These markets and many of the participants in these markets are subject to, or regulated under, various federal and state laws and regulations. In some cases, the government or government-sponsored entities, such as Fannie Mae and Freddie Mac, directly participate in these markets. In particular, because issues relating to residential real estate and housing finance can be areas of political focus, federal, state and local governments may be more likely to take actions that affect residential real estate, the markets for financing residential real estate, and the participants in residential real estate-related industries than they would with respect to other industries. As a result of the government’s statutory and regulatory oversight of the markets we participate in and the government’s direct and indirect participation in these markets, federal and state governmental actions, policies, and directives can have an adverse effect on these markets and on our business and the value of, and the returns on, mortgages, mortgage-related securities, and other assets we own or may acquire in the future, which effects may be material.

Furthermore, the financial crisis of 2007-2008 and subsequent financial turmoil prompted the federal government to put into place new statutory and regulatory frameworks and policies for reforming the U.S. financial system. These financial reforms are aimed at, among other things, promoting robust supervision and regulation of financial firms, establishing comprehensive supervision of financial markets, protecting consumers and investors from financial abuse, providing the U.S. government with additional tools to manage financial crises, and raising international regulatory standards and improving international cooperation, but their scope could be expanded beyond what has been currently enacted, implemented, and proposed. Certain financial reforms focused specifically on the issuance of asset-backed securities through securitization transactions include significantly enhanced disclosure requirements, risk retention requirements, and rules restricting a broad range of conflicts of interests in regard to these transactions. Implementation of financial reforms, whether through law, regulations, or policy, including changes to the manner in which financial institutions, financial products, and financial markets operate and are regulated and any related changes in the accounting standards that govern them, could adversely affect our business and financial results by subjecting us to regulatory oversight, making it more expensive to conduct our business, reducing or eliminating any competitive advantage we may have, or limiting our ability to expand, or could have other adverse effects on us.

Alternatively, under President Trump’s administration the scope of financial reforms and the regulatory framework governing the financial system has been, and could continue to be, reduced or refocused. Trump administration policies, federal legislation, or executive or regulatory actions aimed at weakening or dismantling the Dodd-Frank Act or its regulatory apparatus, including by reducing capital requirements on banking institutions or by weakening or redirecting the Consumer Financial Protection Bureau ("CFPB"), its leadership, or its enforcement capabilities or priorities, could result in increased competition from commercial banks and other large financial institutions that may have advantages due to their size and cost of capital.

During and since 2008, the federal government made available programs designed to provide homeowners with assistance in avoiding residential mortgage loan foreclosures, including through loan modification and refinancing programs. In addition, certain mortgage lenders and servicers voluntarily, or as part of settlements with law enforcement authorities, established loan modification programs relating to the mortgages they hold or service and adopted new servicing standards intended to protect homeowners. Changes to servicing standards, whether resulting from a settlement or a change in regulation, are likely to have the effect of lengthening the time it takes for a servicer to foreclose on the property underlying a delinquent mortgage loan. Loan modification programs and changes to servicing standards and regulations, as well as future law enforcement and legislative or regulatory actions, may adversely affect the value of, and the returns on, the mortgage loans and mortgage securities we currently own or may acquire in the future.

Ultimately, we cannot assure you of the impact that governmental actions may have on our business or the financial markets and, in fact, they may adversely affect us, possibly materially. We cannot predict whether or when such actions may occur or what unintended or unanticipated impacts, if any, such actions could have on our business and financial results. Even after governmental actions have been taken and we believe we understand the impacts of those actions, we may not be able to effectively respond to them so as to avoid a negative impact on our business or financial results.

Federal regulations may limit, eliminate, or reduce the attractiveness of our subsidiary's ability to use borrowings from the Federal Home Loan Bank of Chicago to finance the mortgage loans and securities it holds and acquires, which could negatively impact our business and operating results.

In June 2014, we announced that our wholly-owned captive insurance company subsidiary, RWT Financial, LLC, was approved as a member of the Federal Home Loan Bank of Chicago ("FHLBC"). This membership has provided RWT Financial with access to attractive long-term collateralized financing for mortgage loans and securities it holds and acquires. RWT Financial currently has approximately $2.00 billion of long-term borrowings from the FHLBC to finance its portfolio of residential and business-purpose mortgage loans and securities. In January 2016, federal regulations were adopted by the Federal Housing Finance Agency ("FHFA"), which is the regulator of the Federal Home Loan Bank System, relating to captive insurance company membership in the Federal Home Loan Bank System. Under these regulations, RWT Financial is eligible to remain as a member of the FHLBC until the expiration of a five-year transition period and its existing $2.00 billion of FHLB debt is permitted to remain outstanding until stated maturity (even though the scheduled maturity extends beyond the five-year transition period). As residential and business-purpose loans and securities pledged as collateral for this debt pay down, RWT Financial is permitted to pledge additional loans, securities, or other eligible assets to collateralize this debt; however, we do not expect RWT Financial to be able to increase its FHLB debt above the existing $2.00 billion outstanding.

The final regulations published by the FHFA could negatively impact us in a number of different ways, including, without limitation, by: limiting our ability to acquire (or the attractiveness of acquiring) residential and business-purpose mortgage loans to hold as long-term investments; limiting our ability to increase net interest income earned by RWT Financial; and, following the five-year transition period and the scheduled maturity of our currently outstanding advances, requiring us to arrange for alternative (and, likely, less attractive) financing sources for residential and business-purpose mortgage loans and securities currently financed with the FHLBC or, if such alternative financing sources are not then available, requiring us to liquidate all or a portion of our portfolio of residential and business-purpose loans and securities currently financed with the FHLBC, any of which could negatively impact our business and operating results. In addition, our increased reliance on long-term financing from the FHLBC exposes us to risks of the type described below in Part II, Item 7 of this Annual Report on Form 10-K under the heading, "*Risks Relating to Debt Incurred under Short- and Long-Term Borrowing Facilities*."

State and/or local rent control or rent stabilization regulations may reduce the value of single-family rental or multifamily properties collateralizing mortgage loans we own, or those underlying the securities or other investments we own. As a result, the value of these types of mortgage loans, securities, and other investments may be negatively impacted, which impacts could be material.

Numerous counties and municipalities, including those in which certain of the properties securing SFR and multifamily mortgage loans we own, or those underlying the securities or other investments we own, are located, impose rent control or rent stabilization rules on apartment buildings. These ordinances may limit rent increases to fixed percentages, to percentages of increases in the consumer price index, to increases set or approved by a governmental agency, or to increases determined through mediation or binding arbitration. In some jurisdictions, including, for example, New York City, many apartment buildings are subject to rent stabilization and some units are subject to rent control. These regulations, among other things, may limit the ability of single-family rental and multifamily property owners who have borrowed money (including in the form of mortgage debt) to finance their property or properties to raise rents above specified percentages. Any limitations on a borrower's ability to raise property rents may impair such borrower's ability to repair or renovate the mortgaged property or repay its mortgage loan.

Some states, counties and municipalities have imposed or may impose in the future stricter rent control regulations. For example, on June 14, 2019, the New York State Senate passed the Housing Stability and Tenant Protection Act of 2019 (the “HSTP Act”), which, among other things, limits the ability of landlords to increase rents in rent stabilized apartments in New York State at the time of lease renewal and after a vacancy. The HSTP Act also limits potential rent increases for major capital improvements and for individual apartment improvements in such rent stabilized apartments. In addition, the HSTP Act permits certain qualified localities in the State of New York to implement the rent stabilization system. In addition, the California State Assembly passed Assembly Bill 1482 (“AB 1482”), which, among other things, will prevent landlords in California from increasing the gross rental rate by more than 5% plus the percentage change in the cost of living in any 12-month period and require landlords to have “just cause” when evicting a tenant that has continuously and lawfully occupied a residential property for 12 months. Such “just cause” may include, among other things, the failure to pay rent, causing damage or destruction to the property, and assigning or subletting the premises in violation of the tenant’s lease. In addition, the Oregon State House passed Senate Bill 608 (“SB 608”), which, among other things, will limit rent increases to 7% each year, in addition to inflation, and would, in most cases, require landlords to provide notice and give a reason for evicting tenants. The HSTP Act, AB 1482 or SB 608 may reduce the value of the SFR and multifamily properties collateralizing mortgage loans we own, or those underlying the securities or other investments we own, that are located in the States of New York, California or Oregon, respectively, that are subject to the applicable rent control regulations. The value of SFR and multifamily mortgage loans, securities, and other investments may be negatively impacted by rent control or rent stabilization laws, regulations, or ordinances, which impacts may be material.

Decisions we make about our business strategy and investments, as well as decisions about raising capital or returning capital to shareholders (through dividends or common stock repurchases), could fail to improve our business and results of operations.

Since December 2017, we have announced several new initiatives to expand our mortgage banking activities and grow our investment portfolio, including by expanding our mortgage loan purchase activity to include, for example, loans secured by non-owner occupied rental properties generally made up of one to four units and residential bridge loans (which we collectively refer to as “business-purpose real estate loans”), and increasing the size and optimizing the target returns of our investment portfolio. As examples, during 2019, we completed the acquisitions of two business-purpose real estate loan origination platforms, CoreVest and 5 Arches, through which we now originate business-purpose loans. As another example, in 2019, we participated in a multifamily whole loan investment fund created to acquire $1 billion of floating rate, light-renovation multifamily loans from Freddie Mac. Other new investment initiatives include investing in residential securities collateralized by re-performing and non-performing mortgage loans, multifamily securities, shared equity appreciation real estate option contracts, and investments in excess mortgage servicing rights ("MSRs") and servicer advance investments related to pools of residential and small-balance multifamily mortgage loans. Additionally, during 2019, we sold certain lower-yielding securities in our investment portfolio in order to redeploy capital into higher-yielding securities as part of our portfolio and capital management strategies.

These new initiatives are intended to grow our mortgage banking business and investment portfolio, as well as to allocate capital to profitable business and investment opportunities. These initiatives are premised on our outlook for economic and market conditions, secular trends in consumer demand for housing, as well as competitive considerations. Over the long-term, the assumptions underlying these trends and changes, or assumptions regarding the risk profile of these initiatives and investments, could turn out to be incorrect or economic and market conditions could develop in a manner that is not consistent with our assumptions. Additionally, these initiatives may have more risks, and different risks, than our traditional mortgage banking activities and investment portfolio. For example, our portfolio and capital management strategies may include selling securities and reinvesting in securities with greater exposure to credit risk due to their structural credit enhancement of senior securities, as well as more limited payment histories. As another example, originating and investing in business-purpose mortgage loans exposes us to new and different risks than our traditional residential mortgage banking activities, including higher rates of delinquency, default, foreclosure and litigation. As a result, these new initiatives could fail to improve the long-term profitability of Redwood, could fail to result in capital being available for or deployed into more profitable businesses and investments, could result in dilutive issuances of equity or debt securities convertible into equity to fund our business and investment activities, or could otherwise damage our business, our reputation, our ability to access financing, and our ability to raise capital, or could have other unforeseen consequences, any or all of which could result in a material adverse effect on our business and results of operations in the future. Decisions we make in the future about our business strategy and investments, as well as decisions about raising capital or returning capital to shareholders (through dividends or common stock repurchases), could also fail to improve our business and results of operations.

In February 2016 and again in February 2018, our Board of Directors approved authorizations for the purchase of Redwood common stock and also authorized the repurchase of other securities issued by Redwood, including convertible and exchangeable debt securities. Subsequently, since 2016, we have repurchased approximately $50 million of our common stock at an average price per share of $13.87 and approximately $4 million of our outstanding debt securities. At December 31, 2019, approximately $100 million of this current authorization remained available for the repurchase of shares of our common stock. If we repurchase shares of Redwood common stock or other securities issued by Redwood, it is because at the time we believe the shares or securities are trading at attractive levels relative to other uses of capital or investment opportunities then available to us; however, it is possible that other uses of this capital could have been more accretive to our earnings or book value or that subsequent capital needs arise that were not contemplated at the time we made these decisions. Our past and future decisions relating to the repurchases of Redwood common stock or other securities issued by Redwood could fail to improve our results of operations or could negatively impact our ability to execute our business plans, meet financial obligations, access financing, or raise additional capital, any or all of which could result in a material adverse effect on our business and results of operations in the future.

In addition, in September 2019, one of our subsidiaries issued approximately $201 million of exchangeable senior notes (exchangeable into common stock), and during 2019, we issued approximately 25.9 million shares of common stock for aggregate net proceeds of approximately $405 million through underwritten public offerings, from time to time in at-the-market ("ATM") offerings, under our direct stock purchase and dividend reinvestment plan, and as a portion of the purchase price for our acquisition of CoreVest. We may issue additional shares of common stock (or debt securities convertible into common stock) in subsequent public offerings or private placements. In addition, we may issue additional shares of common stock pursuant to our ATM offering program, upon conversion of our convertible debt or upon exchange of our exchangeable debt, to participants in our direct stock purchase and dividend reinvestment plan, to our directors, officers and employees under our employee stock purchase plan and our incentive plan, including upon the exercise of, or in respect of, distributions on equity awards previously granted thereunder, and as a portion of the purchase price for our acquisition of 5 Arches. It may not be possible for existing stockholders to participate in future share issuances, which may dilute existing stockholders' interests in us. To the extent we raise capital to fund our operations and investment activities, our approach to raising capital is based on what we believe to be in the best interest of our shareholders. However, it is possible that our use of the proceeds of such capital raising transactions may not yield a significant return or any return at all for our stockholders.

Our acquisitions of 5 Arches and CoreVest could fail to improve our business or result in diminished returns, could expose us to new or increased risks, and could increase our cost of doing business.

During 2019, we completed the acquisitions of two business-purpose real estate loan origination platforms, 5 Arches and CoreVest, through which we now originate business-purpose loans. Prior to the completion of these two acquisitions, we had not previously acquired an operating company, and we had not been engaged in directly originating mortgage loans since 2016, when we ceased our commercial origination and mortgage banking activities. If we experience challenges with the integration of the 5 Arches or CoreVest platforms that we did not anticipate or cannot mitigate, the returns we expected with respect to these investments may not be generated. For example, originating business-purpose mortgage loans could fail to improve our business or financial results if we do not have the opportunity to originate quality investments or if our estimates or projections of overall rates of return on such investments are incorrect. If our assumptions are wrong, or if market conditions change, we may, as a result, not have capital available for deployment into more profitable businesses and investments.

Our business-purpose loan origination platforms are dependent upon conditions in the investor real estate market, and conditions that negatively impact this market may reduce demand for our loans and adversely impact our business, results of operations and financial condition. Our borrowers are primarily owners of residential rental and small multifamily properties, and residential properties for rehabilitation and subsequent resale or rental. Accordingly, the success of our business is closely tied to the overall success of the investors and small business owners in these markets. Various changes in real estate conditions may impact this market. Any negative trends in such real estate conditions may reduce demand for our products and services and, as a result, adversely affect our results of operations.

Integrating the 5 Arches and CoreVest businesses and directly originating mortgage loans could also expose us to new or increased risks, including increased regulation by federal and state authorities, challenges in effectively integrating operations, failure to maintain effective internal controls, procedures and policies, and other unknown liabilities and unforeseen increased expenses or delays associated with the acquisitions or the business of originating mortgage loans. Additionally, CoreVest engages in and sponsors securitization transactions relating to SFR mortgage loans, and in connection with the acquisition of CoreVest, we acquired, and we expect to continue to retain, mortgage-backed securities issued in CoreVest's securitization transactions. These securitization transactions and investments expose us to potentially material risks, in the same manner as described below in the risk factor titled "*Through certain of our wholly-owned subsidiaries we have engaged in the past, and expect to continue to engage in, securitization transactions relating to real estate mortgage loans. In addition, we have invested in and continue to invest in mortgage-backed securities and other ABS issued in securitization transactions sponsored by other companies. These types of transactions and investments expose us to potentially material risks.*"

Additionally, in connection with our acquisitions of CoreVest and 5 Arches, a portion of the purchase price of each acquisition was allocated to goodwill and intangible assets. The amount of the purchase price which is allocated to goodwill and intangible assets is determined by the excess of the purchase price over the net identifiable assets acquired. As of December 31, 2019, $89 million of goodwill and $73 million of intangible assets were recorded on our consolidated balance sheet. Accounting standards require that we test goodwill and intangible assets for impairment at least annually (or more frequently if impairment indicators arise). If we determine goodwill or intangible assets are impaired, we will be required to write down the value of these assets, up to their entire balance. Any write-down would have a negative effect on our consolidated financial statements.

Risks Related to our Investments and Investing Activity

The nature of the assets we hold and the investments we make expose us to credit risk that could negatively impact the value of those assets and investments, our earnings, dividends, cash flows, and access to liquidity, or otherwise negatively affect our business.

Overview of credit risk

We assume credit risk primarily through the ownership of securities backed by residential, business-purpose, and multifamily real estate loans and through direct investments in residential, business-purpose, and multifamily real estate loans. We may also assume similar credit risks through other types of transactions with counterparties who are seeking to reduce their exposure to credit risk or who are seeking financing for their own holdings of residential, business-purpose, and multifamily real estate loans or servicing rights relating to residential, business-purpose, and multifamily real estate loans. Credit losses on residential real estate loans can occur for many reasons, including: fraud; poor underwriting; poor servicing practices; weak economic conditions; increases in payments required to be made by borrowers; declines in the value of real estate; declining rents on single- and multifamily residential rental properties; natural disasters, the effects of climate change (including flooding, drought, wildfires, and severe weather) and other natural events; uninsured property loss; over-leveraging of the borrower; costs of remediation of environmental conditions, such as indoor mold; changes in zoning or building codes and the related costs of compliance; acts of war or terrorism; changes in legal protections for lenders and other changes in law or regulation; and personal events affecting borrowers, such as reduction in income, job loss, divorce, or health problems. In addition, the amount and timing of credit losses could be affected by loan modifications, delays in the liquidation process, documentation errors, and other action by servicers. Weakness in the U.S. economy or the housing market could cause our credit losses to increase beyond levels that we currently anticipate.

In addition, rising interest rates may increase the credit risks associated with certain residential real estate loans. For example, the interest rate is adjustable for many of the loans held at securitization entities we have sponsored and for a portion of the loans underlying residential securities we have acquired from securitizations sponsored by others. In addition, a portion of the loans we have pledged to secure short-term warehouse borrowings and a portion of the business-purpose and multifamily real estate loans and loans underlying multifamily securities we have acquired may have adjustable interest rates. Accordingly, when short-term interest rates rise, required monthly payments from borrowers will rise under the terms of these adjustable-rate mortgages, and this may increase borrowers' delinquencies and defaults.

Credit losses on business-purpose and multifamily real estate loans and real estate loans collateralizing business-purpose and multifamily securities can occur for many of the reasons noted above for residential real estate loans. Moreover, these types of real estate loans may not be fully amortizing and, therefore, the borrower's ability to repay the principal when due may depend upon the ability of the borrower to refinance or sell the property at maturity. Business-purpose and multifamily real estate loans and real estate loans collateralizing business-purpose and multifamily securities are particularly sensitive to conditions in the rental housing market and to demand for rental residential properties.

We may have heightened credit losses associated with certain securities and investments we own.

Within a securitization of residential, multifamily, or business-purpose real estate loans, various securities are created, each of which has varying degrees of credit risk. We may own the securities in which there is more (or the most) concentrated credit risk associated with the underlying real estate loans.

In general, losses on an asset securing a residential, multifamily, or business-purpose real estate loan included in a securitization will be borne first by the owner of the property (i.e., the owner will first lose any equity invested in the property) and, thereafter, by the first-loss security holder, and then by holders of more senior securities. In the event the losses incurred upon default on the loan exceed any classes of securities junior to those in which we invest (if any), we may not be able to recover all of our investment in the securities we hold. In addition, if the underlying properties have been overvalued by the originating appraiser or if the values subsequently decline and, as a result, less collateral is available to satisfy interest and principal payments due on the related security, then the first-loss securities may suffer a total loss of principal, followed by losses on the second-loss and then third-loss securities (or other residential, business-purpose, and multifamily securities that we own). In addition, with respect to residential securities we own, we may be subject to risks associated with the determination by a loan servicer to discontinue servicing advances (advances of mortgage interest payments not made by a delinquent borrower) if they deem continued advances to be unrecoverable, which could reduce the value of these securities or impair our ability to project and realize future cash flows from these securities.

For loans or other investments we own directly (not through a securitization structure), we will most likely be in a position to incur credit losses - should they occur - only after losses are borne by the owner of the property (e.g., by a reduction in the owner's equity stake in the property). Similar to our exposure to credit losses on loans we own directly, we have committed to assume credit losses - but only up to a specified amount - on certain conforming residential mortgage loans that we acquired and then sold to Fannie Mae and Freddie Mac pursuant to risk-sharing arrangements we entered into with those entities, to the extent any such losses exceed the owner's equity investment in the property. We may take actions available to us in an attempt to protect our position and mitigate the amount of credit losses, but these actions may not prove to be successful and could result in our increasing the amount of credit losses we ultimately incur on a loan.

Additionally, loans to small, privately owned businesses such as the borrowers in our business-purpose loan origination platforms involve a high degree of business and financial risk. Often, there is little or no publicly available information about these businesses. Accordingly, we must rely on our own due diligence to obtain information in connection with our investment decisions. A borrower's ability to repay its loan may be adversely impacted by numerous factors, including a downturn in its industry or other negative local or more general economic conditions. Deterioration in a borrower's financial condition and prospects may be accompanied by deterioration in the collateral for the loan. These factors may have an impact on loans involving such businesses, and can result in substantial losses, which in turn could have a material and adverse effect on our business, results of operations and financial condition.

The nature of the assets underlying some of the securities and investments we hold could increase the credit risk of those securities.

For certain types of loans underlying securities we may own or acquire, the loan rate or borrower payment rate may increase over time, increasing the potential for default. For example, securities may be backed by residential real estate loans that have negative amortization features. The rate at which interest accrues on these loans may change more frequently or to a greater extent than payment adjustments on an adjustable-rate loan, and adjustments of monthly payments may be subject to limitations or may be limited by the borrower's option to pay less than the full accrual rate. As a result, the amount of interest accruing on the remaining principal balance of the loans at the applicable adjustable mortgage loan rate may exceed the amount of the monthly payment. To the extent we are exposed to it, this is particularly a risk in a rising interest rate environment. Negative amortization occurs when the resulting excess (of interest owed over interest paid) is added to the unpaid principal balance of the related adjustable mortgage loan. For certain loans that have a negative amortization feature, the required monthly payment is increased after a specified number of months or after a maximum amount of negative amortization has occurred in order to amortize fully the loan by the end of its original term. Other negative amortizing loans limit the amount by which the monthly payment can be increased, which results in a larger final payment at maturity. As a result, negatively amortizing loans have performance characteristics similar to those of balloon loans. Negative amortization may result in increases in delinquencies, loan loss severity, and loan defaults, which may, in turn, result in payment delays and credit losses on our investments. Other types of loans and investments to which we are exposed, such as hybrid loans and adjustable-rate loans, may also have greater credit risk than more traditional amortizing fixed-rate mortgage loans.

Many of the real estate loans collateralizing multifamily securities and business-purpose and multifamily real estate loans we own or may acquire are only partially amortizing or do not provide for any principal amortization prior to a balloon principal payment at maturity. Real estate loans that only partially amortize or that have a balloon principal payment at maturity may have a higher risk of default at maturity than fully amortizing loans. In addition, since most of the principal of these loans is repaid at maturity, the amount of loss upon default is generally greater than on other loans that provide for more principal amortization.

We have concentrated credit risk in certain geographical regions and may be disproportionately affected by an economic or housing downturn, natural disaster, terrorist event, climate change, or any other adverse event specific to those regions.

A decline in the economy or difficulties in certain real estate markets, such as a high level of foreclosures in a particular area, are likely to cause a decline in the value of residential and multifamily properties. This, in turn, will increase the risk of delinquency, default, and foreclosure on real estate underlying securities and loans we hold with properties in those regions, and it will increase the risk of loss on other investments we own. This may then adversely affect our credit loss experience and other aspects of our business, including our ability to securitize (or otherwise sell) real estate loans and securities.

The occurrence of a natural disaster (such as an earthquake, tornado, hurricane, flood, landslide, or wildfire), or the effects of climate change (including flooding, drought, and severe weather), may cause decreases in the value of real estate (including sudden or abrupt changes) and would likely reduce the value of the properties collateralizing real estate loans we own or those underlying the securities or other investments we own. For example, in recent years, hurricanes have caused widespread flooding in Florida and Texas and wildfires and mudslides in northern and southern California have destroyed or damaged thousands of homes. Since certain natural disasters may not typically be covered by the standard hazard insurance policies maintained by borrowers, the borrowers may have to pay for repairs due to the disasters. Borrowers may not repair their property or may stop paying their mortgage loans under those circumstances, especially if the property is damaged. This would likely cause foreclosures to increase and lead to higher credit losses on our loans or investments or on the pool of mortgage loans underlying securities we own.

A significant number of residential real estate loans that we own, or that underlie the securities we own, are secured by properties in California and, thus, we have a higher concentration of credit risk within California than in other states. Additional states where we have concentrations of residential loan credit risk are set forth in Note 6 to the Financial Statements within this Annual Report on Form 10-K. Balances on real estate loans collateralizing multifamily securities and business-purpose real estate loans we own and may originate or acquire are larger than residential loans and in the past we have had, and may have in the future, a geographically concentrated portfolio of such loans and securities. Real estate loans collateralizing multifamily securities and business-purpose real estate loans we currently own are generally concentrated in California, Texas, Florida, New Jersey, Georgia, and Arizona.

The timing of credit losses can harm our economic returns.

The timing of credit losses can be a material factor in our economic returns from real estate loans, investments, and securities. If unanticipated losses occur within the first few years after a loan is originated, an investment is made, or a securitization is completed, those losses could have a greater negative impact on our investment returns than unanticipated losses on more seasoned loans, investments, or securities. In addition, higher levels of delinquencies and cumulative credit losses within a securitized loan pool can delay our receipt of principal and interest that is due to us under the terms of the securities backed by that pool. This would also lower our economic returns. The timing of credit losses could be affected by the creditworthiness of the borrower, the borrower’s willingness and ability to continue to make payments, and new legislation, legal actions, or programs that allow for the modification of loans or ability for borrowers to get relief through bankruptcy or other avenues.

Our efforts to manage credit risks may fail.

We attempt to manage risks of credit losses by continually evaluating our investments for impairment indicators and establishing reserves under GAAP for credit and other risks based upon our assessment of these risks. We cannot establish credit reserves for tax accounting purposes. The amount of reserves that we establish may prove to be insufficient, which would negatively impact our financial results and would result in decreased earnings. In addition, cash and other capital we hold to help us manage credit and other risks and liquidity issues may prove to be insufficient. If these increased credit losses are greater than we anticipated and we need to increase our credit reserves, our GAAP earnings might be reduced. Increased credit losses may also adversely affect our cash flows, ability to invest, dividend distribution requirements and payments, asset fair values, access to short-term borrowings, and ability to securitize or finance assets.

Despite our efforts to manage credit risk, there are many aspects of credit risk that we cannot control. Our quality control and loss mitigation policies and procedures may not be successful in limiting future delinquencies, defaults, and losses, or they may not be cost effective. Our underwriting reviews may not be effective. The securitizations in which we have invested may not receive funds that we believe are due from mortgage insurance companies and other counterparties. Loan servicing companies may not cooperate with our loss mitigation efforts or those efforts may be ineffective. Service providers to securitizations, such as trustees, loan servicers, bond insurance providers, and custodians, may not perform in a manner that promotes our interests. Delay of foreclosures could delay resolution and increase ultimate loss severities, as a result.

The value of the homes or properties collateralizing or underlying real estate loans or investments may decline, and rents on single- and multifamily rental properties may decline. The frequency of default and the loss severity on loans upon default may be greater than we anticipate. Interest-only loans, negative amortization loans, adjustable-rate loans, larger balance loans, reduced documentation loans, subprime loans, Alt-A quality loans, second lien loans, loans in certain locations, residential mortgage loans that are not "qualified mortgages" under regulations promulgated by the CFPB, re-performing and non-performing loans, and loans or investments that are partially collateralized by non-real estate assets may have increased risks and severity of loss. If property securing or underlying loans becomes real estate owned as a result of foreclosure, we bear the risk of not being able to sell the property and recovering our investment and of being exposed to the risks attendant to the ownership of real property.

Changes in consumer behavior, bankruptcy laws, tax laws, regulation of the mortgage industry, and other laws may exacerbate loan or investment losses. Changes in rules that would cause loans owned by a securitization entity to be modified may not be beneficial to our interests if the modifications reduce the interest we earn and increase the eventual severity of a loss. In some states and circumstances, the securitizations in which we invest have recourse as owner of the loan against the borrower's other assets and income in the event of loan default. However, in most cases, the value of the underlying property will be the sole effective source of funds for any recoveries. Other changes or actions by judges or legislators regarding mortgage loans and contracts, including the voiding of certain portions of these agreements, may reduce our earnings, impair our ability to mitigate losses, or increase the probability and severity of losses. Any expansion of our loss mitigation efforts could increase our operating costs and the expanded loss mitigation efforts may not reduce our future credit losses.

Credit ratings assigned to debt securities by the credit rating agencies may not accurately reflect the risks associated with those securities. Furthermore, downgrades in credit ratings could increase our credit risk, reduce our cash flows, or otherwise adversely affect our business and operations.

We generally do not consider credit ratings in assessing our estimates of future cash flows and desirability of our investments (although our assessment of the quality of an investment may prove to be inaccurate and we may incur credit losses in excess of our initial expectations). The assignment of an "investment grade" rating to a security by a rating agency does not mean that there is not credit risk associated with the security or that the risk of a credit loss with respect to such security is necessarily remote. Many of the securities we own do have credit ratings and, to the extent we securitize loans and securities, we expect to retain credit rating agencies to provide ratings on the securities created by these securitization entities (as we have in the past).

Rating agencies rate debt securities based upon their assessment of the safety of the receipt of principal and interest payments. Rating agencies do not consider the risks of fluctuations in fair value or other factors that may influence the value of debt securities and, therefore, any assigned credit rating may not fully reflect the true risks of an investment in securities. Also, rating agencies may fail to make timely adjustments to credit ratings based on available data or changes in economic outlook or may otherwise fail to make changes in credit ratings in response to subsequent events, so that our investments may be better or worse than the ratings indicate. Credit rating agencies may change their methods of evaluating credit risk and determining ratings on securities backed by real estate loans and securities. These changes may occur quickly and often. The market's ability to understand and absorb these changes and the impact to the securitization market in general are difficult to predict. Such changes may have an impact on the amount of investment-grade and non-investment-grade securities that are created or placed on the market in the future. Downgrades to the ratings of securities could have an adverse effect on the value of some of our investments and our cash flows from those investments.

Changes in prepayment rates of mortgage loans could reduce our earnings, dividends, cash flows, and access to liquidity.

The economic returns we earn from most of the real estate securities and loans we own (directly or indirectly) are affected by the rate of prepayment of the underlying mortgage loans. Prepayments are difficult to accurately predict and adverse changes in the rate of prepayment could reduce our cash flows, earnings, and dividends. Adverse changes in cash flows would likely reduce the fair values of many of our assets, which could reduce our ability to borrow against our assets and may cause market valuation adjustments for GAAP purposes, which could reduce our reported earnings. While we estimate prepayment rates to determine the effective yield of our assets and valuations, these estimates are not precise and prepayment rates do not necessarily change in a predictable manner as a function of interest rate changes. Prepayment rates can change rapidly. As a result, changes can cause volatility in our financial results, affect our ability to securitize assets, affect our ability to fund acquisitions, and have other negative impacts on our ability to generate earnings.

We may own securities backed by residential loans that are particularly sensitive to changes in prepayments rates. These securities include interest-only securities (IOs) that we acquire from third parties and from our Sequoia entities. Faster prepayments than we anticipated on the underlying loans backing these IOs will have an adverse effect on our returns on these investments and may result in losses. Similarly, we own mortgage servicing rights, or MSRs, associated with residential mortgage loans, and excess MSR investments associated with residential and multifamily mortgage loans, all of which are particularly sensitive to changes in prepayments rates. As the owner of an MSR (or excess MSR investment), we are entitled to a portion of the interest payments made by the borrower in respect of the associated loan and, in the case of MSRs, we are responsible for hiring and compensating a sub-servicer to directly service the associated loan. Faster prepayments than we anticipate on loans associated with MSRs and excess MSR investments we own will have an adverse effect on our returns from these MSRs and may result in losses.

Some of the business-purpose loans we originate or hold may allow the borrower to make prepayments without incurring a prepayment penalty and some may include provisions allowing the borrower to extend the term of the loan beyond the originally scheduled maturity. Because the decision to prepay or extend a business-purpose loan is controlled by the borrower, we may not accurately anticipate the timing of these events, which could affect the earnings and cash flows we anticipate and could impact our ability to finance these assets.

Interest rate fluctuations can have various negative effects on us and could lead to reduced earnings and increased volatility in our earnings.

Changes in interest rates, the interrelationships between various interest rates, and interest rate volatility could have negative effects on our earnings, the fair value of our assets and liabilities, loan prepayment rates, and our access to liquidity. Changes in interest rates can also harm the credit performance of our assets. We generally seek to hedge some but not all interest rate risks. Our hedging may not work effectively and we may change our hedging strategies or the degree or type of interest rate risk we assume.

Some of the loans and securities we own or may acquire have adjustable-rate coupons (i.e., they may earn interest at a rate that adjusts periodically based on an interest rate index). The cash flows we receive from these assets may vary as a function of interest rates, as may the reported earnings generated by these assets. We also acquire loans and securities for future sale, as assets we are accumulating for securitization, or as a longer-term investment. We expect to fund assets with a combination of equity, fixed rate debt and adjustable rate debt. To the extent we use adjustable rate debt to fund assets that have a fixed interest rate (or use fixed rate debt to fund assets that have an adjustable interest rate), an interest rate mismatch could exist and we could, for example, earn less (and fair values could decline) if interest rates rise, at least for a time. We may or may not seek to mitigate interest rate mismatches for these assets with hedges such as interest rate agreements and other derivatives and, to the extent we do use hedging techniques, they may not be successful.

Higher interest rates generally reduce the fair value of many of our assets, with the exception of our IOs, MSRs, excess MSR investments, and adjustable-rate assets. This may affect our earnings results, reduce our ability to securitize, re-securitize, or sell our assets, or reduce our liquidity. Higher interest rates could reduce the ability of borrowers to make interest payments or to refinance their loans. Higher interest rates could reduce property values and increased credit losses could result. Higher interest rates could reduce mortgage originations, thus reducing our opportunities to acquire new assets.

When short-term interest rates are high relative to long-term interest rates, an increase in adjustable-rate residential loan prepayments may occur, which would likely reduce our returns from owning interest-only securities backed by adjustable-rate residential loans.

It can be difficult to predict the impact on interest rates of unexpected and uncertain global political and economic events, such as the outbreak of pandemic or epidemic disease, the economic and international trade conflict between the U.S. and China, the upcoming U.S. presidential election, the U.K. exit from the European Union, or changes in the credit rating of the U.S. government, the United Kingdom, or one or more Eurozone nations; however, increased uncertainty or changes in the economic outlook for, or rating of, the creditworthiness of the U.S. government, the United Kingdom, or Eurozone nations may have adverse impacts on, among other things, the U.S. economy, financial markets, the cost of borrowing, the financial strength of counterparties we transact business with, and the value of assets we hold. Any such adverse impacts could negatively impact the availability to us of short-term debt financing, our cost of short-term debt financing, our business, and our financial results.

We have significant investment and reinvestment risks.

New assets we acquire or originate may not generate yields as attractive as yields on our current assets, which could result in a decline in our earnings per share over time.

Assets we acquire, originate, or invest in may not generate the economic returns and GAAP yields we expect. Realized cash flow could be significantly lower than expected and returns from new investments, originations, and acquisitions could be negative. In order to maintain our portfolio size and our earnings, we must reinvest in new assets a portion of the cash flows we receive from principal, interest, and sales. We receive monthly payments from many of our assets, consisting of principal and interest. In addition, occasionally some of our residential securities are called (effectively sold). We may also sell assets from time to time as part of our portfolio and capital management strategies. Principal payments, calls, and sales reduce the size of our current portfolio and generate cash for us.

If the assets we invest in or acquire in the future earn lower GAAP yields than do the assets we currently own, our reported earnings per share could decline over time as the older assets are paid down, are called, or are sold, assuming comparable expenses, credit costs, and market valuation adjustments. Under the effective yield method of accounting that we use for GAAP purposes for some of our assets, we recognize yields on assets based on our assumptions regarding future cash flows. A portion of the cash flows we receive may be used to reduce our basis in these assets. As a result of these various factors, our basis for GAAP amortization purposes may be lower than the current fair values of these assets. Assets with a lower GAAP basis than current fair values generate higher GAAP yields, and such yields are not necessarily available on newly acquired assets. Future economic conditions, including credit results, prepayment patterns, and interest rate trends, are difficult to project with accuracy over the life of the assets we acquire, so there will be volatility in the reported returns over time.

Our growth may be limited if assets are not available or not available at attractive prices.

To reinvest the proceeds from principal repayments we receive on our existing investments and deploy capital we raise, we must originate, invest in, or acquire new assets. If the availability of new assets is limited, we may not be able to originate, invest in, or acquire assets that will generate attractive returns. Generally, asset supply can be reduced if originations of a particular product are reduced or if there are fewer sales in the secondary market of seasoned product from existing portfolios. In particular, assets we believe have a favorable risk/reward ratio may not be available for purchase (or origination by our business-purpose loan origination platforms).

We do not originate residential loans; rather, we rely on the origination market to supply the types of loans we seek to invest in. At times, due to increases in interest rates, heightened credit concerns, strengthened underwriting standards, increased regulation, and/or concerns about economic growth or housing values, the volume of originations may decrease significantly. For example, in recent years residential mortgage interest rates were generally declining, with the result that a significant portion of industry-wide origination volumes were related to residential borrowers refinancing existing mortgage loans. As interest rates increased in 2017 and 2018, the volume of refinance loans declined. To the extent interest rates increase in the future, refinance loan volume is likely to decline again, and this volume may not return to previous levels. A reduced volume of loan originations may make it difficult for us to acquire loans and securities. Similar factors may contribute to reduced volumes of loan originations by our business-purpose loan origination platforms, which would otherwise be available for transfer to our investment portfolio.

We originate business-purpose loans, but we may not be willing to provide the level of loan proceeds to the borrower or interest rate that borrowers find acceptable or that matches our competitors.

The supply of new issue residential mortgage-backed securities (RMBS) collateralized by jumbo mortgage loans available for purchase could be adversely affected if the economics of executing securitizations are not favorable or if the regulations governing the execution of securitizations discourage or preclude certain potential market participants from engaging in these transactions. In addition, if there is not a robust market for triple-A rated securities, the supply of real estate subordinate securities could be significantly diminished.

In 2014, we began entering into risk-sharing arrangements with Fannie Mae and Freddie Mac and more recently we have been purchasing credit risk transfer (CRT) securities issued by Fannie Mae and Freddie Mac under which we are compensated for agreeing to absorb credit losses on new conforming loans or for engaging in similar types of credit risk-sharing or -transfer structures. Since December 2017, we have announced several other new initiatives to grow our investment portfolio, including investing in residential securities collateralized by re-performing and non-performing mortgage loans, multifamily securities, shared equity appreciation real estate option contracts, and investments in excess MSRs and servicer advance investments related to pools of residential and small-balance multifamily mortgage loans. While these initiatives represent potential opportunities for future capital deployment, ultimately these initiatives may not produce sizable investment opportunities due to competition from other investors, regulatory issues, or federal housing finance reform initiatives that impact Fannie Mae and Freddie Mac.

Investments in diverse types of assets and businesses could expose us to new, different, or increased risks.

We have invested in and may in the future invest in a variety of real estate and non-real estate related assets that may not be closely related to the types of investments we have traditionally made. Additionally, we may enter into or engage in various types of securitizations, transactions, services, and other operating businesses that are different than the types we have traditionally entered into or engaged in. For example, in 2014 our FHLBC-member subsidiary established a borrowing facility with the FHLBC that provides a source of long-term financing for residential and business-purpose mortgage loans that our subsidiary buys and holds, as a result of which its holdings of residential and business-purpose whole loans have increased. As another example, we recently began expanding our mortgage loan purchase activity to include business-purpose loans secured by non-owner occupied rental properties and residential bridge loans, and in 2019 we completed the acquisitions of two business-purpose real estate loan origination platforms, CoreVest and 5 Arches, through which we now originate business-purpose loans. We also recently completed investments in subordinate securities backed by re-performing and non-performing residential loans, multifamily securities, shared equity appreciation real estate option contracts, excess MSR investments collateralized by residential and multifamily loans, servicer advance investments related to residential mortgage loans, and a whole loan investment fund created to acquire light-renovation multifamily loans.

Any of these actions may expose us to new, different, or increased investment, operational, financial, or management risks. Several of these investments were complex, highly structured, and involve partnerships and joint ventures with co-investors, any or all of which may limit the liquidity of such investments. Additionally, when investing in transactions with complex or novel structures, the risks associated with the transactions and structures may not be fully known to buyers and sellers. For example, we have limited control of our investment in a whole loan investment fund created to acquire light-renovation multifamily loans from Freddie Mac, and there are contingent liabilities associated with this investment that are not reflected on our balance sheet. Also, we recently began investing in shared equity appreciation real estate option contracts, which expose us to risk of loss related to home price appreciation (or depreciation). If our assumptions regarding the valuation and rate of appreciation in value of the property securing an option contract are wrong, our returns will be reduced, and if the value of the property securing the contract decreases, we may suffer losses, up to the total loss of our investment. Additionally, real estate option contracts may be subject to regulatory risk from federal, state, and local regulators. For example, if a state mortgage regulator determines that entering into, or investing in, a real estate option contract is activity covered by that state's mortgage licensing statute, our investment may be at risk if we and our purchase and sale counterparty, who enters into the option contract with the homeowner, do not possess the applicable license.

For another example, one of our excess MSR investments includes an associated investment in servicer advances financed with non-recourse debt. Non-recourse financing generally limits our exposure to losses to the value of the collateral securing the financing (i.e., the servicer advances). However, a default on such non-recourse financing of servicer advances could result in a complete loss of our servicer advance investments and the related excess MSRs. Additionally, this non-recourse financing is short-term. We may not be able to renew this financing on favorable terms, or at all, which may have a negative impact on the value of our investment. A more detailed discussion of the risks related to this servicer advance financing is described below in Part II, Item 7 of this Annual Report on Form 10-K under the heading, *"Risks Relating to Debt Incurred under Short- and Long-Term Borrowing Facilities."*

As another example, in connection with our acquisitions of CoreVest and 5 Arches, we made assumptions about the cash flows and investments that will be generated from these acquisitions. There may be risks and challenges associated with the integration of the CoreVest and 5 Arches platforms and workforces that we did not anticipate or may not be able to mitigate. Additionally, originating and investing in business-purpose mortgage loans exposes us to new and different risks than our traditional residential mortgage banking activities, including higher rates of delinquency, default, foreclosure and litigation. If our assumptions are wrong, or if market conditions change, it could have a negative impact on our financial or operational results related to these acquisitions and to our business as a whole.

We may invest in non-real estate asset-backed securities (ABS), corporate debt, or equity. We have invested in diverse types of IOs from residential, business-purpose, and multifamily securitizations sponsored by us or by others. The higher credit and prepayment risks associated with these types of investments may increase our exposure to losses. We may invest in non-U.S. assets that may expose us to currency risks (which we may choose not to hedge) and different types of credit, prepayment, hedging, interest rate, liquidity, legal, and other risks. These types of investments could expose us to new, different, or increased risks that we did not anticipate, which could have a negative impact on the financial returns generated.

In addition, when investing in assets or businesses we are exposed to the risk that those assets, or interest income or revenue generated by those assets or businesses, result in our not meeting the requirements to maintain our REIT status or our status as exempt from registration under the Investment Company Act of 1940, as amended (Investment Company Act), as further described in the risk factors titled "*We have elected to be taxed as a REIT and, as such, are required to meet certain tests in order to maintain our REIT status. This adds complexity and costs to running our business and exposes us to additional risks*" and "*Conducting our business in a manner so that we are exempt from registration under, and in compliance with, the Investment Company Act may reduce our flexibility and could limit our ability to pursue certain opportunities. At the same time, failure to continue to qualify for exemption from the Investment Company Act could adversely affect us.*"

We may change our investment strategy or financing plans, which may result in riskier investments and diminished returns.

We may change our investment strategy or financing plans at any time, which could result in our making investments that are different from, and possibly riskier than, the investments we have previously made or described. A change in our investment strategy or financing plans may increase our exposure to interest rate and default risk and real estate market fluctuations. Decisions to employ additional leverage could increase the risk inherent in our investment strategy. Additionally, a portion of our recent investment activity has included financing that is either short-term securitization debt or is incurred by entities that we do not control and thus is not reflected on our balance sheet. Furthermore, a change in our investment strategy could result in our making investments in new asset categories or in different proportions among asset categories than we previously have. For example, as noted above, since December 2017, we have announced several new initiatives to expand our mortgage banking and investment activities, including by expanding our mortgage loan purchase activity to include business-purpose loans secured by non-owner occupied rental properties and residential bridge loans, completing the acquisitions of two business-purpose real estate loan origination platforms, CoreVest and 5 Arches, through which we now originate business-purpose loans, and increasing the size and optimizing the target returns of our investment portfolio. We also recently completed investments in subordinate securities backed by re-performing and non-performing residential loans, multifamily securities, shared equity appreciation real estate option contracts, excess MSR and servicer advance investments collateralized by residential and multifamily loans, and a whole loan investment fund created to acquire light-renovation multifamily loans. As another example, in the future, we could determine to invest a greater proportion of our assets in securities backed by non-prime or subprime residential mortgage loans. These changes could result in our making riskier investments, which could ultimately have an adverse effect on our financial returns. Alternatively, we could determine to change our investment strategy or financing plans to be more risk averse, resulting in potentially lower returns, which could also have an adverse effect on our financial returns.

The performance of the assets we own and the investments we make will vary and may not meet our earnings or cash flow expectations. In addition, the cash flows and earnings from, and market values of, securities, loans, and other assets we own may be volatile.

We seek to manage certain of the risks associated with acquiring, originating, holding, selling, and managing real estate loans and securities and other real estate-related investments. No amount of risk management or mitigation, however, can change the variable nature of the cash flows of, fair values of, and financial results generated by these loans, securities, and other assets. Changes in the credit performance of, or the prepayments on, these investments, including real estate loans and the loans underlying real estate securities, and changes in interest rates impact the cash flows on these securities and investments, and the impact could be significant for our loans, securities, and other assets with concentrated risks. Changes in cash flows lead to changes in our return on investment and also to potential variability in and level of reported income. The revenue recognized on some of our assets is based on an estimate of the yield over the remaining life of the asset. Thus, changes in our estimates of expected cash flow from an asset will result in changes in our reported earnings on that asset in the current reporting period. We may be forced to recognize adverse changes in expected future cash flows as a current expense, further adding to earnings volatility. Additionally, our non-GAAP measures of financial performance and our earnings calculated in accordance with GAAP may be subject to volatility. Moreover, the Securities and Exchange Commission has increasingly been focused on the use of non-GAAP financial metrics and may require us to change the presentation or method of calculation of our non-GAAP metrics which may result in variability and volatility.

Changes in the fair values of our assets, liabilities, and derivatives can have various negative effects on us, including reduced earnings, increased earnings volatility, and volatility in our book value.

Fair values for our assets and liabilities, including derivatives, can be volatile and our revenue and income can be impacted by changes in fair values. The fair values can change rapidly and significantly and changes can result from changes in interest rates, perceived risk, supply, demand, and actual and projected cash flows, prepayments, and credit performance. A decrease in fair value may not necessarily be the result of deterioration in future cash flows. Fair values for illiquid assets can be difficult to estimate, which may lead to volatility and uncertainty of earnings and book value.

For example, real estate-related securities in our investment portfolio may be subject to changes in credit spreads. Credit spreads measure the yield demanded on securities by the market based on their credit relative to a specific benchmark, and is a measure of the perceived risk of the investment. Fixed rate securities are valued based on a market credit spread over the rate payable on fixed rate swaps or fixed rate U.S. Treasuries of like maturity. Floating rate securities are typically valued based on a market credit spread over LIBOR (or another floating rate index such as the Secured Overnight Financing Rate (“SOFR”)) and are affected similarly by changes in LIBOR (or other index) spreads. Excessive supply of these securities or reduced demand may cause the market to require a higher yield on these securities, resulting in the use of a higher, or “wider,” spread over the benchmark rate to value such securities. Under such conditions, the value of our securities portfolios would tend to decline. Conversely, if the spread used to value such securities were to decrease, or “tighten,” the value of our real estate and other securities portfolio would tend to increase. Such changes in the market value of our real estate-related securities portfolio may affect our net equity, net income or cash flow directly through their impact on unrealized gains or losses on available-for-sale securities, and therefore our ability to realize gains on such securities, or indirectly through their impact on our ability to borrow and access capital. Widening credit spreads could cause the net unrealized gains on our securities and derivatives, recorded in accumulated other comprehensive income or retained earnings, and therefore our book value per share, to decrease and result in net losses.

For GAAP purposes, we mark to market most of the assets and some of the liabilities on our consolidated balance sheet. In addition, valuation adjustments on certain consolidated assets and many of our derivatives are reflected in our consolidated statement of income. Assets that are funded with certain liabilities and hedges may have differing mark-to-market treatment than the liability or hedge. If we sell an asset that has not been marked to market through our consolidated statement of income at a reduced market price relative to its cost basis, our reported earnings will be reduced.

Our loan sale profit margins are generally reflective of gains (or losses) over the period from when we identify a loan for purchase until we subsequently sell or securitize the loan. These profit margins may encompass elements of positive or negative market valuation adjustments on loans, hedging gains or losses associated with related risk management activities, and any other related transaction expenses; however, under GAAP, the differing elements may be realized unevenly over the course of one or more quarters for financial reporting purposes, with the result that our financial results may be more volatile and less reflective of the underlying economics of our business activity.

Our calculations of the fair value of the securities, loans, MSRs, derivatives, and certain other assets we own or consolidate are based upon assumptions that are inherently subjective and involve a high degree of management judgment.

We report the fair values of securities, loans, MSRs, derivatives, and certain other assets on our consolidated balance sheets. In computing the fair values for these assets we may make a number of market-based assumptions, including assumptions regarding future interest rates, prepayment rates, discount rates, credit loss rates, and the timing of credit losses. These assumptions are inherently subjective and involve a high degree of management judgment, particularly for illiquid securities and other assets for which market prices are not readily determinable. For further information regarding our assets recorded at fair value see Note 5 to the Financial Statements within this Annual Report on Form 10-K. Use of different assumptions could materially affect our fair value calculations and our financial results. Further discussion of the risk of our ownership and valuation of illiquid securities is set forth in the immediately following risk factor.

Changes in banks' inter-bank lending rate reporting practices, the method pursuant to which LIBOR is determined, or the discontinuation of LIBOR may adversely affect the value of the financial obligations to be held or issued by us that are linked to LIBOR.

LIBOR and other indices which are deemed "benchmarks" are the subject of recent national, international, and other regulatory guidance and proposals for reform. Some of these reforms are already effective while others are still to be implemented. These reforms may cause such benchmarks to perform differently than in the past, or have other consequences which cannot be predicted. It currently appears that, over time, U.S. Dollar LIBOR will be replaced by the Secured Overnight Financing Rate ("SOFR") published by the Federal Reserve Bank of New York. However, the manner and timing of this shift is uncertain. U.S. Dollar LIBOR's formal retirement is currently set for the end of 2021, but it is possible that rates based on LIBOR could continue to be published after that point. It is also possible that LIBOR will effectively end before 2021 if the number of panel banks reporting to LIBOR continues to decrease. Market participants are still considering how various types of financial instruments and securitization vehicles should react to a discontinuation of LIBOR. It is possible that not all of our assets and liabilities will transition away from LIBOR at the same time, and it is possible that not all of our assets and liabilities will transition to the same alternative reference rate, in each case increasing the difficulty of hedging. For example, switching existing financial instruments and hedging transactions from LIBOR to SOFR requires calculations of a spread. Industry organizations are attempting to structure the spread calculation in a manner that minimizes the possibility of value transfer between counterparties, borrowers, and lenders by virtue of the transition, but there is no assurance that the calculated spread will be fair and accurate or that all asset types and all types of securitization vehicles will use the same spread. We and other market participants have less experience understanding and modeling SOFR-based assets and liabilities than LIBOR-based assets and liabilities, increasing the difficulty of investing, hedging, and risk management. The process of transition involves operational risks. It is also possible that no transition will occur for many financial instruments. At this time, it is not possible to predict the effect of any such changes, any establishment of alternative reference rates or any other reforms to LIBOR that may be implemented. Uncertainty as to the nature of such potential changes, alternative reference rates or other reforms may adversely affect the market for or value of any securities on which the interest or dividend is determined by reference to LIBOR, loans, derivatives and other financial obligations or on our overall financial condition or results of operations. More generally, any of the above changes or any other consequential changes to LIBOR or any other "benchmark" as a result of international, national or other proposals for reform or other initiatives, or any further uncertainty in relation to the timing and manner of implementation of such changes, could have a material adverse effect on the value of and return on any securities based on or linked to a "benchmark."

Investments we make, hedging transactions that we enter into, and the manner in which we finance our investments and operations expose us to various risks, including liquidity risk, risks associated with the use of leverage, market risks, and counterparty risk.

Many of our investments have limited liquidity.

Many of the residential, business-purpose, multifamily, and other securities we own or may own are generally illiquid - that is, there is not a significant pool of potential investors that are likely to invest in these, or similar, securities. This illiquidity can also exist for the real estate loans we may hold and the business-purpose loans we originate. At times, the vast majority of the assets we own are illiquid. In turbulent markets, it is likely that the securities, loans, and other assets we own may become even less liquid. As a result, we may not be able to sell certain assets at opportune times or at attractive prices or we may incur significant losses upon sale of these assets, should we want or need to sell them.

Our level of indebtedness and liabilities could limit cash flow available for our operations, expose us to risks that could adversely affect our business, financial condition and results of operations and impair our ability to satisfy our obligations under our convertible notes and other debt instruments.

At December 31, 2019, our total consolidated liabilities (excluding indebtedness associated with asset-backed securities issued and other liabilities of consolidated entities, for which we are not liable) was $5.5 billion. We may also incur additional indebtedness to meet future financing needs. Our indebtedness could have significant negative consequences for our business, results of operations and financial condition, including:

- increasing our vulnerability to adverse economic and industry conditions;

- limiting our ability to obtain additional financing;

- requiring the dedication of a substantial portion of our cash flow from operations to service our indebtedness, thereby reducing the amount of our cash flow available for other purposes;

- requiring asset sales to fund the repayment of maturing debt;

- limiting our flexibility in planning for, or reacting to, changes in our business;

- dilution experienced by our existing stockholders as a result of the conversion of the convertible notes or exchangeable securities into shares of common stock; and

- placing us at a possible competitive disadvantage with less leveraged competitors and competitors that may have better access to capital resources.

We cannot assure you that we will be able to continue to maintain sufficient cash reserves or continue to generate cash flow from operations at levels sufficient to permit us to pay principal, premium, if any, and interest on our indebtedness, or that our cash needs will not increase. If we are unable to generate sufficient cash flow or otherwise obtain funds necessary to make required payments, or if we fail to comply with the various requirements of our indebtedness then outstanding, we would be in default, which would permit the holders of the affected indebtedness to accelerate the maturity of such indebtedness and could cause defaults under our other indebtedness. Any default under any indebtedness could have a material adverse effect on our business, results of operations and financial condition. For an additional discussion of our outstanding indebtedness, see Part II, Item 7 of this Annual Report on Form 10-K under the heading *"Risks Relating to Debt Incurred under Short- and Long-Term Borrowing Facilities."*

Our use of financial leverage could expose us to increased risks.

We fund the residential loans we acquire in anticipation of a future sale or securitization with a combination of equity and short-term debt. In addition, we also make investments in securities and loans financed with short- and long-term debt. By incurring this debt (i.e., by applying financial leverage), we expect to generate more attractive returns on our invested equity capital. However, as a result of using financial leverage (whether for the accumulation of loans or related to longer-term investments), we could also incur significant losses if our borrowing costs increase relative to the earnings on our assets and costs of any related hedges. Financing facility creditors may also force us to sell assets pledged as collateral under adverse market conditions to meet margin calls, for example, in the event of a decrease in the fair values of the assets pledged as collateral. Liquidation of the collateral could create negative tax consequences and raise REIT qualification issues. Further discussion of the risk associated with maintaining our REIT status is set forth in the risk factor titled *"We have elected to be taxed as a REIT and, as such, are required to meet certain tests in order to maintain our REIT status. This adds complexity and costs to running our business and exposes us to additional risks."* In addition, we make financial covenants to creditors in connection with incurring short- and long-term debt, such as covenants relating to our maintaining a minimum amount of tangible net worth or stockholders' equity and/or a minimum amount of liquid assets, and a maximum ratio of recourse debt to stockholders' equity. If we fail to comply with these financial covenants we would be in default under our financing facilities, which could result in, among other things, the liquidation of collateral we have pledged pursuant to these facilities under adverse market conditions and the inability to incur additional borrowings to finance our business activities. A further discussion of financial covenants we are subject to and related risks associated with our use of short-term debt is set forth in Part II, Item 7 of this Annual Report on Form 10-K under the heading, *"Risks Relating to Debt Incurred Under Short- and Long-Term Borrowing Facilities."* Additionally, our ability to increase our borrowing limits under our debt financing facilities (and therefore increase our investment capacity) may be limited by our ability to raise equity capital, which we may not be able to raise at attractive prices or at all.

The inability to access financial leverage through warehouse and repurchase facilities, credit facilities, our FHLB-member subsidiary's borrowing facility with the FHLBC, or other forms of debt financing may inhibit our ability to execute our business plan, which could have a material adverse effect on our financial results, financial condition, and business.

Our ability to fund our business and our investment strategy depends on our securing warehouse, repurchase, or other forms of debt financing (or leverage) on acceptable terms. For example, pending the sale or securitization of a pool of mortgage loans or other assets we generally fund the acquisition of those mortgage loans or other assets through borrowings from warehouse, repurchase, and credit facilities, and other forms of short-term financing.

We cannot assure you that we will be successful in establishing sufficient sources of short-term debt when needed. In addition, because of its short-term nature, lenders may decline to renew our short-term debt upon maturity or expiration, and it may be difficult for us to obtain continued short-term financing. During certain periods, lenders may curtail their willingness to provide financing, as liquidity in short-term debt markets, including repurchase facilities and commercial paper markets, can be withdrawn suddenly, making it difficult or expensive to renew short-term borrowings as they mature. To the extent our business or investment strategy calls for us to access financing and counterparties are unable or unwilling to lend to us, then our business and financial results will be adversely affected. In addition, it is possible that lenders who provide us with financing could experience changes in their ability to advance funds to us, independent of our performance or the performance of our investments, in which case funds we had planned to be able to access may not be available to us. Additionally, federal regulations were adopted by the Federal Housing Finance Agency in January 2016 relating to captive insurance company membership in the Federal Home Loan Bank System. Under these regulations, our captive insurance company subsidiary, RWT Financial, LLC, which is currently a member of the Federal Home Loan Bank of Chicago (FHLBC), is only eligible to remain as a member of the FHLBC for a five-year transition period and may not be able to obtain additional advances or increases to its borrowing capacity from the FHLBC. Although FHLBC is permitted to allow advances that were outstanding to RWT Financial prior to effectiveness of the regulations to remain outstanding until scheduled maturity (even if that scheduled maturity extends beyond the five-year transition period), these regulations may limit RWT Financial's ability to increase the size of its portfolio of residential and business-purpose mortgage loans and securities and thereby may impact the ability to increase net interest income generated by RWT Financial's portfolio of held-for-investment loans and securities, and could otherwise have an adverse effect on our business and results of operations, as further described under the risk factor titled *"Federal regulations may limit, eliminate, or reduce the attractiveness of our subsidiary's ability to use borrowings from the Federal Home Loan Bank of Chicago to finance the mortgage loans and securities it holds and acquires, which could negatively impact our business and operating results."* Additionally, our ability to increase borrowing limits under our debt financing facilities (and therefore increase our investment capacity) may be limited by our ability to raise equity capital, which we may not be able to raise at attractive prices or at all.

Hedging activities may reduce earnings, may fail to reduce earnings volatility, and may fail to protect our capital in difficult economic environments.

We attempt to hedge certain interest rate risks (and, at times, prepayment risks and fair values) by balancing the characteristics of our assets and associated (existing and anticipated) liabilities with respect to those risks and entering into various interest rate agreements. The number and scope of the interest rate agreements we utilize may vary significantly over time. We generally seek to enter into interest rate agreements that provide an appropriate and efficient method for hedging certain risks related to changes in interest rates.

The use of interest rate agreements and other instruments to hedge certain of our risks may have the effect over time of lowering long-term earnings to the extent these risks do not materialize. To the extent that we hedge, it is usually to seek to protect us from some of the effects of short-term interest rate volatility, to lower short-term earnings volatility, to stabilize liability costs or fair values, to stabilize our economic returns from, or meet rating agency requirements with respect to, a securitization transaction, or to stabilize the future cost of anticipated issuance of securities by a securitization entity. Hedging may not achieve our desired goals. Hedging with respect to the pipeline of loans we plan to purchase may not be effective due to loan fallout or other reasons. Using interest rate agreements as a hedge may increase short-term earnings volatility, especially if we do not elect certain accounting treatments for our hedges. Reductions in fair values of interest rate agreements may not be offset by increases in fair values of the assets or liabilities being hedged. Conversely, increases in fair values of interest rate agreements may not fully offset declines in fair values of assets or liabilities being hedged. Changes in fair values of interest rate agreements may require us to pledge significant amounts of cash or other acceptable forms of collateral.

We also may hedge by taking short, forward, or long positions in U.S. Treasuries, mortgage securities, or other cash instruments. We may take both long and short positions in credit derivative transactions linked to real estate assets. These derivatives may have additional risks to us, such as: liquidity risk, due to the fact that there may not be a ready market into which we could sell these derivatives if needed; basis risk, which could result in a decline in value or a requirement to make a cash payment as a result of changes in interest rates; and the risk that a counterparty to a derivative is not willing or able to perform its obligations to us due to its financial condition or otherwise.

Our earnings may be subject to fluctuations from quarter to quarter as a result of the accounting treatment for certain derivatives or for assets or liabilities whose terms do not necessarily match those used for derivatives, or as a result of our inability to meet the requirements necessary to obtain specific hedge accounting treatment for certain derivatives.

Additionally, the interest rate agreements and other instruments that we may use to hedge certain risks are also subject to risks related to the transition away from the use of LIBOR as a floating rate index, as further described above under the risk factor titled "*The performance of the assets we own and the investments we make will vary and may not meet our earnings or cash flow expectations. In addition, the cash flows and earnings from, and market values of, securities, loans, and other assets we own may be volatile - Changes in banks' inter-bank lending rate reporting practices, the method pursuant to which LIBOR is determined, or the discontinuation of LIBOR may adversely affect the value of the financial obligations to be held or issued by us that are linked to LIBOR.*"

We enter into derivative contracts that may expose us to contingent liabilities and those contingent liabilities may not appear on our balance sheet. We may invest in synthetic securities, credit default swaps, and other credit derivatives, which expose us to additional risks.

We enter into derivative contracts, including interest rate swaps, options, and futures, that could require us to make cash payments in certain circumstances. Additionally, we may be required to make capital contributions to an investment fund in certain circumstances, including if debt covenants relating to financing incurred by the investment fund are not maintained. Such potential payment or capital call obligations would be contingent liabilities and may not appear on our balance sheet. Our ability to satisfy these contingent liabilities depends on the liquidity of our assets and our access to capital and cash. The need to fund these contingent liabilities could adversely impact our financial condition.

We may in the future invest in synthetic securities, credit default swaps, and other credit derivatives that reference other real estate securities or indices. These investments may present risks in excess of those resulting from the referenced security or index. These investments are typically contractual relationships with counterparties and not acquisitions of referenced securities or other assets. In these types of investments, we have no right directly to enforce compliance with the terms of the referenced security or other assets and we have no voting or other consensual rights of ownership with respect to the referenced security or other assets. In the event of insolvency of a counterparty, we will be treated as a general creditor of the counterparty and will have no claim of title with respect to the referenced security.

Hedging activities may subject us to increased regulation.

Under the Dodd-Frank Act, there is increased regulation of companies, such as Redwood and certain of our subsidiaries, that enter into interest rate hedging agreements and other hedging instruments and derivatives. This increased regulation could result in Redwood or certain of our subsidiaries being required to register and be regulated as a commodity pool operator or a commodity trading advisor. If we are not able to maintain an exemption from these regulations, it could have a negative impact on our business or financial results. Moreover, rules requiring central clearing of certain interest rate swap and other transactions, as well as rules relating to margin and capital requirements for swap transactions and regulated participants in the swap markets, as well as other swap market regulatory reforms, may increase the cost or decrease the availability to us of hedging transactions, and may also limit our ability to include swaps in our securitization transactions.

Our results could be adversely affected by counterparty credit risk.

We have credit risks that are generally related to the counterparties with which we do business. There is a risk that counterparties will fail to perform under their contractual arrangements with us and this risk is usually more pronounced during an economic downturn. Counterparties may seek to eliminate credit exposure by entering into offsetting, or "back-to-back," hedging transactions, and the ability of a counterparty to settle a synthetic transaction may be dependent on whether the counterparties to the back-to-back transactions perform their delivery obligations. Those risks of non-performance may differ materially from the risks entailed in exchange-traded transactions, which generally are backed by clearing organization guarantees, daily mark-to-market and settlement of positions, and segregation and minimum capital requirements applicable to intermediaries. Transactions entered into directly between parties generally do not benefit from those protections, and expose the parties to the risk of counterparty default. Furthermore, there may be practical and timing problems associated with enforcing our rights to assets in the case of an insolvency of a counterparty.

In the event a counterparty to our short-term borrowings becomes insolvent, we may fail to recover the full value of our pledged collateral, thus reducing our earnings and liquidity. In the event a counterparty to our interest rate agreements or other derivatives becomes insolvent or interprets our agreements with it in a manner unfavorable to us, our ability to realize benefits from the hedge transaction may be diminished, any cash or collateral we pledged to the counterparty may be unrecoverable, and we may be forced to unwind these agreements at a loss. In the event a counterparty that sells us residential mortgage loans becomes insolvent or is acquired by a third party, we may be unable to enforce our loan repurchase rights in connection with a breach of loan representations and warranties and we may suffer losses if we must repurchase delinquent loans. In the event that one of our sub-servicers becomes insolvent or fails to perform, loan delinquencies and credit losses may increase and we may not receive the funds to which we are entitled. We attempt to diversify our counterparty exposure and (except with respect to loan representations and warranties) attempt to limit our counterparty exposure to counterparties with investment-grade credit ratings, although we may not always be able to do so. Our counterparty risk management strategy may prove ineffective and, accordingly, our earnings and cash flows could be adversely affected.

Business, Operational and Other Risks

Through certain of our wholly-owned subsidiaries we have engaged in the past, and plan to continue to engage, in acquiring residential mortgage loans and originating business-purpose mortgage loans with the intent to sell these loans to third parties or hold them as investments. Similarly, we have engaged in the past, and may continue to engage, in acquiring residential MSRs. These types of transactions and investments expose us to potentially material risks.

Acquiring and originating mortgage loans with intent to sell these loans to third parties generally requires us to incur short-term debt, either on a recourse or non-recourse basis, to finance the accumulation of loans or other assets prior to sale. This type of debt may not be available to us, or may only be available to us on an uncommitted basis, including in circumstances where a line of credit had previously been made available or committed to us. In addition, the terms of any available debt may be unfavorable to us or impose restrictive covenants that could limit our business and operations or the violation of which could lead to losses and inhibit our ability to borrow in the future. We expect to pledge assets we acquire to secure the short-term debt we incur. To the extent this debt is recourse to us, if the fair value of the assets pledged as collateral declines, we would be required to increase the amount of collateral pledged to secure the debt or to repay all or a portion of the debt. In addition, when we originate or acquire assets for a sale, we make assumptions about the cash flows that will be generated from those assets and the market value of those assets. If these assumptions are wrong, or if market values change or other conditions change, it could result in a sale that is less favorable to us than initially assumed, which would typically have a negative impact on our financial results.

Furthermore, if we are unable to complete the sale of these types of assets, it could have a negative impact on our business and financial results. We have a limited capacity to hold residential and business-purpose loans on our balance sheet as investments, and our business is not structured to buy-and-hold the full volume of loans that we routinely acquire or originate with the intent to sell. If demand for buying whole-loans weakens, we may be forced to incur additional debt on unfavorable terms or may be unable to borrow to finance these assets, which may in turn impact our ability to continue acquiring or originating loans over the short or long term.

Prior to originating or acquiring loans or other assets for sale, we may undertake underwriting and due diligence efforts with respect to various aspects of the loan or asset. When underwriting or conducting due diligence, we rely on resources and data available to us, which may be limited, and we rely on investigations by third parties. We may also only conduct due diligence on a sample of a pool of loans or assets we are acquiring and assume that the sample is representative of the entire pool. Our underwriting and due diligence efforts may not reveal matters which could lead to losses. If our underwriting process is not robust enough or if we do not conduct adequate due diligence, or the scope of our underwriting or due diligence is limited, we may incur losses. Losses could occur due to the fact that a counterparty that sold us a loan or other asset (or that is the obligor or a party related to an obligor of a business-purpose loan we originate) refuses or is unable (e.g., due to its financial condition) to repay or repurchase that loan or asset or pay damages to us if we determine subsequent to purchase that one or more of the representations or warranties made to us in connection with the sale or origination was inaccurate.

Our ability to operate our business in the manner described above depends on the availability and productivity of our personnel. To the extent our management or personnel are impacted in significant numbers by the outbreak of pandemic or epidemic disease, such as the coronavirus or COVID-19, our business and operating results may be negatively impacted.

In addition, when selling mortgage loans or acquiring servicing rights associated with residential mortgage loans, we typically make representations and warranties to the purchaser or to other third parties regarding, among other things, certain characteristics of those assets, including characteristics we seek to verify through our underwriting and due diligence efforts. If our representations and warranties are inaccurate with respect to any asset, we may be obligated to repurchase that asset or pay damages, which may result in a loss. We generally only establish reserves for potential liabilities relating to representations and warranties we make if we believe that those liabilities are both probable and estimable, as determined in accordance with GAAP. As a result, we may not have reserves relating to these potential liabilities or any reserves we may establish could be inadequate. Even if we obtain representations and warranties from the counterparties from whom we acquired the loans or other assets or the borrowers to whom we made the loans, or their related parties, they may not parallel the representations and warranties we make or may otherwise not protect us from losses, including, for example, due to the fact that the counterparty may be insolvent or otherwise unable to make a payment to us at the time we make a claim for repayment or damages for a breach of representation or warranty. Furthermore, to the extent we claim that counterparties we have acquired loans from or borrowers to whom we made the loan, or their related parties have breached their representations and warranties to us, it may adversely impact our business relationship with those counterparties, including by reducing the volume of business we conduct with those counterparties, which could negatively impact our ability to acquire loans and our business. To the extent we have significant exposure to representations and warranties made to us by one or more counterparties we acquire loans from, we may determine, as a matter of risk management, to reduce or discontinue loan acquisitions from those counterparties, which could reduce the volume of residential loans we acquire and negatively impact our business and financial results.

RWT Financial, our FHLB-member subsidiary, maintains a portfolio of residential and business-purpose mortgage loans and securities it holds for investment with long-term financing provided by the FHLBC. At December 31, 2019, RWT Financial had approximately $2.00 billion of long-term borrowings outstanding from the FHLBC, which were collateralized by residential and business-purpose mortgage loans and securities. RWT Financial has effectively reached its maximum borrowing capacity from the FHLBC of $2.00 billion, and it does not expect to be able to obtain any increase in its borrowing capacity in the future. FHLBC financing has enabled RWT Financial to earn attractive returns on loans held as long-term investments, contributing a significant amount to our 2019 earnings. RWT Financial’s ability to increase the size of its portfolio of residential and business-purpose mortgage loans and securities may be limited by the lack of availability of attractive financing and this may impact the ability to increase net interest income generated by RWT Financial, as further described under the risk factor titled “*Federal regulations may limit, eliminate, or reduce the attractiveness of our subsidiary’s ability to use borrowings from the Federal Home Loan Bank of Chicago to finance the mortgage loans and securities it holds and acquires, which could negatively impact our business and operating results*.” Additionally, the portfolio of residential and business-purpose mortgage loans held as long-term investments exposes us to the risk of loss on the full balance of those loans, which is typically not the case with respect to securities we retain from securitization transactions we sponsor. The materialization of any of these risks related to RWT Financial’s investment activity and FHLB financing could significantly impact our financial and operating results.

Our portfolio of business-purpose loans held for investment represents a growing portion of our overall investment portfolio, and such loans expose us to new and different risks from our traditional investments in jumbo residential mortgage loans.

A growing portion of our portfolio of loans held for investment is made up of business-purpose mortgage loans. Business-purpose mortgage loans are directly exposed to losses resulting from default and foreclosure. Therefore, the value of the underlying property, the creditworthiness and financial position of the borrower and the priority and enforceability of the lien will significantly impact the value of such mortgages. Whether or not we have participated in the negotiation of the terms of any such mortgages, there can be no assurance as to the adequacy of the protection of the terms of the loan, including the validity or enforceability of the loan and the maintenance of the anticipated priority and perfection of the applicable security interests. Furthermore, claims may be asserted that might interfere with enforcement of our rights. In the event of a foreclosure, we may assume direct ownership of the underlying real estate. The liquidation proceeds upon sale of such real estate may not be sufficient to recover our cost basis in the loan, resulting in a loss to us. Any costs or delays involved in the completion of a foreclosure of the loan or a liquidation of the underlying property will further reduce the proceeds and thus increase the loss.

A portion of our business-purpose loan portfolio currently is, and in the future may be, delinquent and subject to increased risks of credit loss for a variety of reasons, including, without limitation, because the underlying property is too highly-leveraged or the borrower falls upon financial distress. Delinquent loans may require a substantial amount of workout negotiations or restructuring, which may entail, among other things, a reduction in the interest rate or capitalization of past due interest. However, even if restructurings are successfully accomplished, risks still exist that borrowers will not be able or willing to maintain the restructured payments or refinance the restructured mortgage upon maturity.

If restructuring is not successful, we may find it necessary to foreclose on the underlying property, and the foreclosure process may be lengthy and expensive, including out-of-pocket costs and increased use of our internal resources. Borrowers may resist mortgage foreclosure actions by asserting numerous claims, counterclaims and defenses against us including, without limitation, numerous lender liability claims and defenses, even when such assertions may have no basis in fact, in an effort to prolong the foreclosure action and force us into a modification of the loan or a favorable buy-out of the borrower's position. In some states, foreclosure actions can sometimes take several years or more to litigate. Foreclosure may create a negative public perception of the related mortgaged property, resulting in a decrease in its value. Even if we are successful in foreclosing on a loan, the liquidation proceeds upon sale of the underlying real estate may not be sufficient to recover our cost basis in the loan, resulting in a loss to us. Furthermore, any costs or delays involved in the completion of a foreclosure of the loan or a liquidation of the underlying property will further reduce the proceeds and thus increase the loss. Any such reductions could materially and adversely affect the value of the loan and could, in aggregate, have a material and adverse effect on our business, results of operations and financial condition.

Additionally, residential bridge loans on properties in transition may involve a greater risk of loss than traditional mortgage loans. This product typically is used for acquiring and rehabilitating or improving the quality of single-family residential investment properties and generally serves as an interim solution for borrowers and/or properties prior to the borrower selling the property or stabilizing the property and obtaining long-term permanent financing. The typical borrower of these bridge loans has often identified an undervalued asset that has been under-managed or is located in a recovering market. If the market in which the asset is located fails to improve according to the borrower's projections, or if the borrower fails to improve the quality of the asset's management or the value of the asset, the borrower may not receive a sufficient return on the asset to satisfy the transitional loan, and we bear the risk that we may not recover some or all of our investment. In addition, borrowers often use the proceeds of a conventional mortgage to repay a residential bridge loan. Residential bridge loans therefore are subject to risks of a borrower's inability to obtain permanent financing to repay the loan. Residential bridge loans are also subject to risks of borrower defaults, bankruptcies, fraud, and other losses. In the event of any default under residential bridge loans that may be held by us, we bear the risk of loss of principal and non-payment of interest and fees to the extent of any deficiency between the value of the mortgage collateral and the principal amount and unpaid interest of the transitional loan. To the extent we suffer such losses with respect to these loans, our business, results of operations and financial condition may be materially adversely affected.

Through certain of our wholly-owned subsidiaries we have engaged in the past, and expect to continue to engage in, securitization transactions relating to real estate mortgage loans. In addition, we have invested in and continue to invest in mortgage-backed securities and other ABS issued in securitization transactions sponsored by other companies. These types of transactions and investments expose us to potentially material risks.

Engaging in securitization transactions and other similar transactions generally requires us to incur short-term debt on a recourse basis to finance the accumulation of loans or other assets prior to securitization. If demand for investing in securitization transactions weakens, we may be unable to complete the securitization of loans accumulated for that purpose, which may hurt our business or financial results. In addition, in connection with engaging in securitization transactions, we engage in due diligence with respect to the loans or other assets we are securitizing and make representations and warranties relating to those loans and assets. The risks associated with incurring this type of debt in connection with securitization activity, the risks related to our ability to complete securitization transactions after we have accumulated loans for that purpose, and the risks associated with the due diligence we conduct, and the representations and warranties we make, in connection with securitization activity are similar to the risks associated with acquiring and originating loans with the intent to sell them to third parties, as described in the immediately preceding risk factor titled "*Through certain of our wholly-owned subsidiaries we have engaged in the past, and plan to continue to engage, in acquiring residential mortgage loans and originating business-purpose mortgage loans with the intent to sell these loans to third parties or hold them as investments. Similarly, we have engaged in the past, and continue to engage, in acquiring residential MSRs. These types of transactions and investments expose us to potentially material risks.*"

When engaging in securitization transactions, we also prepare marketing and disclosure documentation, including term sheets, offering documents, and prospectuses, that include disclosures regarding the securitization transactions and the assets being securitized. If our marketing and disclosure documentation are alleged or found to contain inaccuracies or omissions, we may be liable under federal and state securities laws (or under other laws) for damages to third parties that invest in these securitization transactions, including in circumstances where we relied on a third party in preparing accurate disclosures, or we may incur other expenses and costs in connection with disputing these allegations or settling claims. We have also engaged in selling or contributing commercial and multifamily real estate loans, to third parties who, in turn, have securitized those loans. In these circumstances, we have in the past and may in the future also prepare marketing and disclosure documentation, including documentation that is included in term sheets, offering documents, and prospectuses relating to those securitization transactions. We could be liable under federal and state securities laws (or under other laws) for damages to third parties that invest in these securitization transactions, including liability for disclosures prepared by third parties or with respect to loans that we did not sell or contribute to the securitization. Additionally, we typically retain various third-party service providers when we engage in securitization transactions, including underwriters or initial purchasers, trustees, administrative and paying agents, and custodians, among others. We frequently contractually agree to indemnify these service providers against various claims and losses they may suffer in connection with the provision of services to us and/or the securitization trust. To the extent any of these service providers are liable for damages to third parties that have invested in these securitization transactions, we may incur costs and expenses as a result of these indemnities.

There may be defects in the legal process and legal documents governing transactions in which securitization trusts and other secondary purchasers take legal ownership of residential mortgage loans and establish their rights as first priority lien holders on underlying mortgaged property. To the extent there are problems with the manner in which title and lien priority rights were established or transferred, securitization transactions that we sponsored and third-party sponsored securitizations that we hold investments in may experience losses, which could expose us to losses and could damage our ability to engage in future securitization transactions.

In connection with our operating and investment activity, we rely on third parties to perform certain services, comply with applicable laws and regulations, and carry out contractual covenants and terms, the failure of which by any of these third parties may adversely impact our business and financial results.

In connection with our business of acquiring and originating loans, engaging in securitization transactions, and investing in third-party issued securities and other assets, we rely on third party service providers to perform certain services, comply with applicable laws and regulations, and carry out contractual covenants and terms. As a result, we are subject to the risks associated with a third party's failure to perform, including failure to perform due to reasons such as fraud, negligence, errors, miscalculations, or insolvency. For example, if loan servicers experience higher volumes of delinquent loans than they have in the past, there is a risk that, as a result, their operational infrastructures may not be able to properly process this increased volume. Many loan servicers have been accused of improprieties in the handling of the loan modification or foreclosure process with respect to residential mortgage loans that have gone into default. To the extent a third-party loan servicer fails to fully and properly perform its obligations, loans and securities that we hold as investments may experience losses and securitizations that we have sponsored may experience poor performance, and our ability to engage in future securitization transactions could be harmed. As another example, our residential lending and business-purpose lending segments utilize third party appraisals during the loan underwriting process, obtained on the collateral underlying each prospective mortgage. The quality of these appraisals may vary widely in accuracy and consistency. The appraiser may feel pressure from the broker or lender to provide an appraisal in the amount necessary to enable the originator to make the loan, whether or not the value of the property justifies such an appraised value. Inaccurate or inflated appraisals may result in an increase in the severity of losses on the mortgage loans, which could have a material and adverse effect on our business, results of operations and financial condition. Additionally, our business-purpose loan origination platforms may utilize third party inspectors in connection with funding advances on bridge loans for rehabilitation or ground-up construction. These third parties may be required to certify a borrower's eligibility for advances based on the satisfaction of construction milestones. In the past we have experienced, and may in the future experience, fraudulent or negligent activity among borrowers and certain of these third parties that has led to the disbursement of under-collateralized funds and could cause us to incur financial losses on loans we have originated.

For some of the loans that we hold and for some of the loans we sell or securitize, we hold the right to service those loans and we retain a sub-servicer to service those loans. In these circumstances we are exposed to certain risks, including, without limitation, that we may not be able to enter into subservicing agreements on favorable terms to us or at all, or that the sub-servicer may not properly service the loan in compliance with applicable laws and regulations or the contractual provisions governing their sub-servicing role, and that we would be held liable for the sub-servicer's improper acts or omissions. Additionally, in its capacity as a servicer of residential mortgage loans, a sub-servicer will have access to borrowers' non-public personal information, and we could incur liability in connection with a data breach relating to a sub-servicer, as discussed further below under the risk factor titled *"Maintaining cybersecurity is important to our business and a breach of our cybersecurity could have a material adverse impact. Our technology infrastructure and systems are important and any significant disruption or breach of the security of this infrastructure or these systems could have an adverse effect on our business. We also rely on technology infrastructure and systems of third parties who provide services to us and with whom we transact business.*" When we retain a sub-servicer we are generally also obligated to fund any obligation of the sub-servicer to make advances on behalf of a delinquent loan obligor. To the extent any one sub-servicer counterparty services a significant percentage of the loans with respect to which we own the servicing rights, the risks associated with our use of that sub-servicer are concentrated around this single sub-servicer counterparty. To the extent that there are significant amounts of advances that need to be funded in respect of loans where we own the servicing right, it could have a material adverse effect on our business and financial results.

In addition, we have participated in various investments structured as joint ventures or partnerships with unaffiliated third parties. Some of these joint venture entities rely, in part, on their members or partners to make committed capital contributions in order to pay the purchase price for investments, to fund shortfalls in capital under related financing agreements, or to fund indemnification or repurchase obligations related to securitization. A failure by one of the members to make such capital contributions for amounts required could result in events of default under the terms of the investment or the related financing and a loss of our investment in the joint venture entity and its related investments. For example, in connection with our servicer advance investments, we consolidate an entity that was formed to finance servicing advances and for which we, through our control of an affiliated partnership entity (the "SA Buyer") formed to invest in servicer advance investments and excess MSRs, are the primary beneficiary. SA Buyer has agreed to purchase all future arising servicer advances under certain residential mortgage servicing agreements. SA Buyer relies, in part, on its members to make committed capital contributions in order to pay the purchase price for future servicer advances. A failure by any or all of the members to make such capital contributions for amounts required to fund servicer advances could result in an event of default under our servicer advance financing and a complete loss of our investment in SA Buyer and its servicer advance investments and excess MSRs. Additionally, to the extent that the servicer of the underlying mortgage loans (who is unaffiliated with us except through their co-investment in SA Buyer and the related financing entity) fails to recover the servicer advances in which we have invested, or takes longer than we expect to recover such advances, the value of our investment could be adversely affected and we could fail to achieve our expected return and suffer losses.

We also rely on corporate trustees to act on behalf of us and other holders of ABS in enforcing our rights as security holders. Under the terms of most ABS we hold, we do not have the right to directly enforce remedies against the issuer of the security, but instead must rely on a trustee to act on behalf of us and other security holders. Should a trustee not be required to take action under the terms of the securities, or fail to take action, we could experience losses.

Our ability to execute or participate in future securitization transactions, including, in particular, securitizations of residential and business-purpose mortgage loans, could be delayed, limited, or precluded by legislative and regulatory reforms applicable to asset-backed securities and the institutions that sponsor, service, rate, or otherwise participate in or contribute to the successful execution of a securitization transaction. Other factors could also limit, delay, or preclude our ability to execute securitization transactions. These legislative, regulatory, and other factors could also reduce the returns we would otherwise expect to earn in connection with executing securitization transactions.

In July 2010, the Dodd-Frank Act was enacted. Provisions of the Dodd-Frank Act require, among other things, significant revisions to the legal and regulatory framework under which ABS, including RMBS and securities backed by business-purpose mortgage loans, are issued through the execution of securitization transactions. Some of the provisions of the Dodd-Frank Act have become effective or been implemented. In addition, prior to the passage of the Dodd-Frank Act, the Securities and Exchange Commission (SEC) and the Federal Deposit Insurance Corporation had already published proposed and final regulations under already existing legislative authority relating to the issuance of ABS, including RMBS. Additional federal or state laws and regulations that could affect our ability to execute future securitization transactions could be proposed, enacted, or implemented. In addition, various federal and state agencies and law enforcement authorities, as well as private litigants, have initiated and may, in the future, initiate additional broad-based enforcement actions or claims, the resolution of which may include industry-wide changes to the way residential mortgage loans are originated, transferred, serviced, and securitized, and any of these changes could also affect our ability to execute future securitization transactions. For an example, please refer to the risk factor titled *"Federal and state legislative and regulatory developments and the actions of governmental authorities and entities may adversely affect our business and the value of, and the returns on, mortgages, mortgage-related securities, and other assets we own or may acquire in the future."*

Rating agencies can affect our ability to execute or participate in a securitization transaction, or reduce the returns we would otherwise expect to earn from executing securitization transactions, not only by deciding not to publish ratings for our securitization transactions (or deciding not to consent to the inclusion of those ratings in the prospectuses or other documents we file with the SEC relating to securitization transactions), but also by altering the criteria and process they follow in publishing ratings. Rating agencies could alter their ratings processes or criteria after we have accumulated loans or other assets for securitization in a manner that effectively reduces the value of those previously acquired or originated loans or requires that we incur additional costs to comply with those processes and criteria. For example, to the extent investors in a securitization transaction would have significant exposure to representations and warranties made by us or by one or more counterparties we acquire loans from, rating agencies may determine that this exposure increases investment risks relating to the securitization transaction. Rating agencies could reach this conclusion either because of our financial condition or the financial condition of one or more counterparties we acquire loans from, or because of the aggregate amount of loan-related representations and warranties (or other contingent liabilities) we, or one or more counterparties we acquire loans from, have made or have exposure to. In addition, our ability to continue to securitize residential mortgage loans in the future will depend, in part, on the rating agencies' assessment of the investment risks that result from the ability-to-repay regulations and the TILA-RESPA Integrated Disclosure Rule (TRID). This includes, for example, how they assess investment risks associated with (a) non-material errors in loan-related disclosures made to mortgage borrowers, (b) residential mortgage loans that have an interest-only payment feature, or (c) loans under which the borrower has a debt-to-income ratio of more than 43%. These types of loans have historically accounted for a significant amount of the loans we have securitized, but they are not considered "qualified mortgages" under the ability-to-repay regulations. Since these provisions were implemented over the past several years, the rating agencies' assessment of these risks has generally been consistent with ours, but to the extent their assessments diverge from ours, this could negatively impact our ability to execute securitization transactions. If, as a result of any of the foregoing issues, rating agencies place limitations on our ability to execute future securitization transactions or impose unfavorable ratings levels or conditions on our securitization transactions, it could reduce the returns we would otherwise expect to earn from executing these transactions and negatively impact our business and financial results.

Furthermore, other matters, such as (i) accounting standards applicable to securitization transactions and (ii) capital and leverage requirements applicable to banks' and other regulated financial institutions' holdings of ABS, could result in less investor demand for securities issued through securitization transactions we execute or increased competition from other institutions that originate, acquire, and hold residential and business-purpose mortgage loans, multifamily real estate loans, and other types of assets and execute securitization transactions.

Our ability to profitably execute or participate in future securitizations transactions, including, in particular, securitizations of residential and business-purpose mortgage loans, is dependent on numerous factors and if we are not able to achieve our desired level of profitability or if we incur losses in connection with executing or participating in future securitizations it could have a material adverse impact on our business and financial results.

There are a number of factors that can have a significant impact on whether a securitization transaction that we execute or participate in is profitable to us or results in a loss. One of these factors is the price we pay for (or cost of originating) the mortgage loans that we securitize, which, in the case of residential mortgage loans, is impacted by the level of competition in the marketplace for acquiring mortgage loans and the relative desirability to originators of retaining mortgage loans as investments or selling them to third parties such as us. Another factor that impacts the profitability of a securitization transaction is the cost to us of the short-term debt that we use to finance our holdings of mortgage loans prior to securitization, which cost is affected by a number of factors including the availability of this type of financing to us, the interest rate on this type of financing, the duration of the financing we incur, and the percentage of our mortgage loans for which third parties are willing to provide short-term financing.

After we acquire or originate mortgage loans that we intend to securitize, we can also suffer losses if the value of those loans declines prior to securitization. Declines in the value of a mortgage loan, for example, can be due to, among other things, changes in interest rates, changes in the credit quality of the loan, and changes in the projected yields required by investors to invest in securitization transactions. To the extent we seek to hedge against a decline in loan value due to changes in interest rates, there is a cost of hedging that also affects whether a securitization is profitable. Other factors that can significantly affect whether a securitization transaction is profitable to us include the criteria and conditions that rating agencies apply and require when they assign ratings to the mortgage-backed securities issued in our securitization transactions, including the percentage of mortgage-backed securities issued in a securitization transaction that the rating agencies will assign a triple-A rating to, which is also referred to as a rating agency subordination level. Rating agency subordination levels can be impacted by numerous factors, including, without limitation, the credit quality of the loans securitized, the geographic distribution of the loans to be securitized, and the structure of the securitization transaction and other applicable rating agency criteria. All other factors being equal, the greater the percentage of the mortgage-backed securities issued in a securitization transaction that the rating agencies will assign a triple-A rating to, the more profitable the transaction will be to us.

The price that investors in mortgage-backed securities will pay for securities issued in our securitization transactions also has a significant impact on the profitability of the transactions to us, and these prices are impacted by numerous market forces and factors. In addition, the underwriter(s) or placement agent(s) we select for securitization transactions, and the terms of their engagement, can also impact the profitability of our securitization transactions. Also, transaction costs incurred in executing transactions impact the profitability of our securitization transactions and any liability that we may incur, or may be required to reserve for, in connection with executing a transaction can cause a loss to us. To the extent that we are not able to profitably execute future securitizations of residential mortgage loans or other assets, including for the reasons described above or for other reasons, it could have a material adverse impact on our business and financial results.

Our past and future loan origination and securitization activities or other past and future business or operating activities or practices could expose us to litigation, which may adversely affect our business and financial results.

Through certain of our wholly-owned subsidiaries we have in the past engaged in or participated in loan origination and securitization transactions relating to residential mortgage loans, business-purpose mortgage loans, multifamily mortgage loans, commercial real estate loans, and other types of assets. In the future we expect to continue to engage in or participate in loan origination and securitization transactions, including, in particular, securitization transactions relating to residential and business-purpose mortgage loans, and may also engage in other types of securitization transactions or similar transactions. Sequoia securitization entities we sponsored issued ABS backed by residential mortgage loans held by these Sequoia entities. Similarly, CoreVest securitization entities (or "CAFL" entities) we sponsor issued ABS backed by business-purpose mortgage loans held by these CAFL entities. In Acacia securitization transactions we participated in, Acacia securitization entities issued ABS backed by securities and other assets held by these Acacia entities. As a result of declining property values, increasing defaults, changes in interest rates, and other factors, the aggregate cash flows from the loans held by the Sequoia and CAFL entities and the securities and other assets held by the Acacia entities may be insufficient to repay in full the principal amount of ABS issued by these securitization entities. We are not directly liable for any of the ABS issued by these entities. Nonetheless, third parties who hold the ABS issued by these entities may try to hold us liable for any losses they experience, including through claims under federal and state securities laws or claims for breaches of representations and warranties we made in connection with engaging in these securitization transactions. Additionally, holders of ABS issued by CAFL entities prior to our acquisition of CoreVest may make claims against us for losses arising from activities that occurred prior to our acquisition.

For example, as discussed below in Part I, Item 3 of this Annual Report on Form 10-K, on December 23, 2009, the Federal Home Loan Bank of Seattle filed a claim in the Superior Court for the State of Washington against us and our subsidiary, Sequoia Residential Funding, Inc. The complaint related in part to residential mortgage-backed securities that were issued by a Sequoia securitization entity and alleged that, at the time of issuance, we, Sequoia Residential Funding, Inc. and the underwriters made various misstatements and omissions about these securities in violation of Washington state law. We have also been named in other similar lawsuits. A further discussion of these lawsuits is set forth in Note 15 to the Financial Statements within this Annual Report on Form 10-K. For another example, refer to the risk factor below, titled *"Litigation of the type initiated against various trustees of residential mortgage-backed securitization transactions issued prior to financial crisis of 2007-2008 ("RMBS trustee litigation") negatively impacted, and could further negatively impact, the value of securities we hold, could expose us to indemnification claims, and could impact the profitability of our participation in future securitization transactions."*

Other aspects of our business operations or practices could also expose us to litigation. In the ordinary course of our business we enter into agreements relating to, among other things, loans we originate and acquire and investments we make, assets and loans we sell, financing transactions, third parties we retain to provide us with goods and services, and our leased office space. We also regularly enter into confidentiality agreements with third parties under which we receive confidential information. If we breach any of these agreements, we could be subject to claims for damages and related litigation. For example, when we sell whole loans in the secondary market, we are required to make customary representations and warranties about such loans to the loan purchaser. Our mortgage loan sale agreements may require us to repurchase or substitute loans or indemnify investors in the event we breach a representation or warranty made to the loan purchaser. In addition, we may be required to repurchase loans as a result of borrower fraud or in the event of early payment default on a mortgage loan. The remedies available to a purchaser of mortgage loans may be broader than those available to us against the borrower or correspondent. Further, if a purchaser enforces its remedies against us, we may not be able to enforce the remedies we have against the borrower or correspondent seller. Financing for repurchased loans may be limited or unavailable, and may incur a steep discount to their repurchase price from financing counterparties. They are also typically sold at a significant discount to the UPB. Significant repurchase activity could harm our business, cash flow, results of operations and financial condition.

Through our 5 Arches and CoreVest loan origination platforms, we may be subject to lender liability claims, and if we are held liable under such claims, we could be subject to losses. A number of judicial decisions have upheld the right of borrowers to sue lending institutions on the basis of various evolving legal theories, collectively termed "lender liability." Generally, lender liability is founded on the premise that a lender has either violated a duty, whether implied or contractual, of good faith and fair dealing owed to the borrower or has assumed a degree of control over the borrower resulting in the creation of a fiduciary duty owed to the borrower or its other creditors or stockholders. We cannot assure investors that such claims will not arise through litigation or regulatory action or that we will not be subject to significant liability if a claim of this type did arise. Additionally, we could be subject to such claims relating to activities that occurred prior to our acquisitions of 5 Arches and CoreVest.

We are also subject to various other laws and regulations relating to our business and operations, including, without limitation, privacy laws and regulations and labor and employment laws and regulations, and if we fail to comply with these laws and regulations we could also be subjected to claims for damages and litigation. In particular, if we fail to maintain the confidentiality of consumers' personal or financial information we obtain in the course of our business (such as social security numbers), we could be exposed to losses. A further discussion of some of these risks is set forth in the risk factor titled "*Maintaining cybersecurity is important to our business and a breach of our cybersecurity could have a material adverse impact. Our technology infrastructure and systems are important and any significant disruption or breach of the security of this infrastructure or these systems could have an adverse effect on our business. We also rely on technology infrastructure and systems of third parties who provide services to us and with whom we transact business.*"

Defending a lawsuit can consume significant resources and may divert management's attention from our operations. We may be required to establish or increase reserves for potential losses from litigation, which could be material. To the extent we are unsuccessful in our defense of any lawsuit, we could suffer losses which could be in excess of any reserves established relating to that lawsuit) and these losses could be material.

Litigation of the type initiated against various trustees of residential mortgage-backed securitization transactions issued prior to financial crisis of 2007-2008 ("RMBS trustee litigation") during 2017 negatively impacted, and could further negatively impact, the value of securities we hold, could expose us to indemnification claims, and could impact the profitability of our participation in future securitization transactions.

Litigation against RMBS trustees has related to, among other things, claims by certain investors in the RMBS issued in those transactions that the trustees of those transactions breached their obligations to investors by, among other things, not appropriately investigating and pursuing remedies against the originators and servicers of the underlying mortgage loans. We are not a party to any RMBS trustee litigation; however, RMBS trustee litigation has negatively impacted the value of certain residential mortgage-backed securities issued prior to the crisis ("legacy RMBS") that were held in our investment portfolio during the year ended December 31, 2019. The value of other legacy RMBS we continue to hold or acquire could be impacted in the future. In particular, trustees of various legacy RMBS transactions that are the subject of the ongoing RMBS trustee litigation have withheld funds from investors in the RMBS issued in those transactions by asserting that, pursuant to their indemnification rights against the securitization trusts established under the applicable transaction documents, they are entitled to apply those funds to offset litigation expenses. Further, certain trustees have asserted that their indemnification rights entitle them to withhold large lump sum amounts to hold and apply to anticipated future litigation expenses. During the year ended December 31, 2019, these holdbacks resulted in an aggregate loss to the value of our portfolio of securities of approximately $0.5 million, and other or similar holdbacks by that trustee or other trustees of legacy RMBS transactions could result in further losses to the value of our portfolio of securities in the future, which losses could be material.

Our cash balances and cash flows may be insufficient relative to our cash needs.

We need cash to make interest payments, to post as collateral to counterparties and lenders who provide us with short-term debt financing and who engage in other transactions with us, for working capital, to fund REIT dividend distribution requirements, to comply with financial covenants and regulatory requirements, to fund general and administrative expenses, and for other needs and purposes. We may also need cash to repay short-term borrowings when due or in the event the fair values of assets that serve as collateral for that debt decline, the terms of short-term debt become less attractive, or for other reasons. In addition, we may need to use cash to post in response to margin calls relating to various derivative instruments we hold as the values of these derivatives change. Over the longer term, we may need cash to fund the repayment of outstanding convertible notes and exchangeable securities that mature in 2023, 2024, and 2025.

Our sources of cash flow include the principal and interest payments on the loans and securities we own, asset sales, securitizations, short-term borrowing, issuing long-term debt, and issuing stock. Our sources of cash may not be sufficient to satisfy our cash needs. Cash flows from principal repayments could be reduced if prepayments slow or if credit quality deteriorates. For example, for some of our assets, cash flows are "locked-out" and we receive less than our pro-rata share of principal payment cash flows in the early years of the investment.

Our minimum dividend distribution requirements could exceed our cash flows if our income as calculated for tax purposes significantly exceeds our net cash flows. This could occur when taxable income (including non-cash income such as discount amortization and interest accrued on negative amortizing loans) exceeds cash flows received. The Internal Revenue Code provides a limited relief provision concerning certain items of non-cash income; however, this provision may not sufficiently reduce our cash dividend distribution requirement. In the event that our liquidity needs exceed our access to liquidity, we may need to sell assets at an inopportune time, thus reducing our earnings. In an adverse cash flow situation, we may not be able to sell assets effectively and our REIT status or our solvency could be threatened. Further discussion of the risk associated with maintaining our REIT status is set forth in the risk factor titled *"We have elected to be taxed as a REIT and, as such, are required to meet certain tests in order to maintain our REIT status. This adds complexity and costs to running our business and exposes us to additional risks."*

We are subject to competition and we may not compete successfully.

We are subject to competition in seeking investments, acquiring, originating, and selling loans, engaging in securitization transactions, and in other aspects of our business. Our competitors include commercial banks, other mortgage REITs, Fannie Mae, Freddie Mac, regional and community banks, broker-dealers, insurance companies, and other specialty finance companies and financial institutions, as well as investment funds and other investors in real estate-related assets. In addition, other companies may be formed that will compete with us. Some of our competitors have greater resources than us and we may not be able to compete successfully with them. Furthermore, competition for investments, making loans, acquiring and selling loans, and engaging in securitization transactions may lead to a decrease in the opportunities and returns available to us.

In addition, there are significant competitive threats to our business from governmental actions and initiatives that have already been undertaken or which may be undertaken in the future. Sustained competition from governmental actions and initiatives could have a material adverse effect on us. For example, Fannie Mae and Freddie Mac are, among other things, engaged in the business of acquiring loans and engaging in securitization transactions. Until 2008, competition from Fannie Mae and Freddie Mac was limited to some extent due to the fact that they were statutorily prohibited from purchasing loans for single unit residences in the continental United States with a principal amount in excess of $417,000, while much of our business had historically focused on acquiring residential loans with a principal amount in excess of that amount. In February 2008, Congress passed an economic stimulus package that temporarily increased the size of certain loans these entities could purchase to up to $729,750, if the loans were made to secure real estate purchases in certain high-cost areas of the U.S. Since 2008, the loan size limits for Fannie Mae and Freddie Mac purchases have been adjusted up and down, and as of December 31, 2019, the maximum loan size limit was $ $765,600, which is an amount that continues to be above the historical loan size limit. In addition, in September 2008, Fannie Mae and Freddie Mac were placed into conservatorship and have become, in effect, instruments of the U.S. federal government.

Furthermore, it is unclear whether the Trump administration's policies, and any future federal legislation or executive or regulatory actions, regarding Fannie Mae and Freddie Mac will continue to maintain, or increase, the role of those entities in the housing finance market. As long as there is governmental support for these entities to continue to operate and provide financing to a significant portion of the mortgage finance market, they will represent significant business competition due to, among other things, their large size and low cost of funding. Additionally, Trump administration policies, federal legislation, or executive or regulatory actions aimed at weakening or dismantling the Dodd-Frank Act and its regulatory apparatus, including by reducing capital requirements on banking institutions or by weakening the CFPB, its leadership, or its enforcement capabilities or priorities, could result in increased competition from commercial banks and other large financial institutions that may have similar advantages due to their size and cost of capital. Further discussion is set forth in the risk factor titled "*Congress and President Trump's administration have made and may continue to make substantial changes to fiscal, tax, and other federal policies that may adversely affect our business*."

To the extent that laws, regulations, or policies governing the business activities of Fannie Mae and Freddie Mac are not changed to limit their role in housing finance (such as a change in these loan size limits or in the guarantee fees they charge), or the competition from these two governmental entities will remain significant or could increase. In addition, to the extent that property values decline while these loan size limits remain the same, it may have the same effect as an increase in this limit, as a greater percentage of loans would likely be within the size limit. Any increase in the loan size limit, or in the overall percentage of loans that are within the limit, allows Fannie Mae and Freddie Mac to compete against us to a greater extent than they had been able to compete previously and our business could be adversely affected. Additionally, the Federal Housing Administration (FHA) and the Department of Veterans Affairs (VA) guarantee qualified residential mortgages, and FHA and VA loans accounted for approximately 22% of the aggregate dollar value of residential loans originated in the U.S. in 2018. The federal government's ability to provide financing to a significant portion of the mortgage finance market through these entities represents significant business competition due to, among other things, their size and low cost of funding.

Our business model and business strategies, and the actions we take (or fail to take) to implement them and adapt them to changing circumstances involve risk and may not be successful.

U.S. real estate markets, the mortgage industry and the related capital markets have undergone significant changes since the U.S. financial crisis, including due to the significant governmental interventions in these areas and changes to the laws and regulations that govern the banking and mortgage finance industry. Additionally, it remains unclear how the Trump administration's policies, and any future federal legislation or executive or regulatory actions, regarding Fannie Mae and Freddie Mac and the housing finance market more broadly will impact that market and our business. Additional factors, including a rising or steady interest rate environment, which may cause the volume of refinance loans to decline, and secular trends in consumer demand for renting versus owning a residence, may also contribute to evolving conditions in the mortgage industry and capital markets. Our methods of, and model for, doing business and financing our investments are changing and if we fail to develop, enhance, and implement strategies to adapt to changing conditions in the mortgage industry and capital markets, our business and financial results may be adversely affected. Furthermore, changes we make to our business to respond to changing circumstances may expose us to new or different risks than we were previously exposed to and we may not effectively identify or manage those risks. Further discussion is set forth in the risk factor titled "Decisions we make about our business strategy and investments, as well as decisions about raising capital or returning capital to shareholders (through dividends or common stock repurchases), could fail to improve our business and results of operations."

Similarly, the competitive landscape in which we operate and the products and investments for which we compete are also affected by changing conditions. There may be trends or sudden changes in our industry or regulatory environment, changes in the role of government-sponsored entities, such as Fannie Mae and Freddie Mac, changes in the role of credit rating agencies or their rating criteria or processes, or changes in the U.S. economy more generally. If we do not effectively respond to these changes or if our strategies to respond to these changes are not successful, our ability to effectively compete in the marketplace may be negatively impacted, which would likely result in our business and financial results being adversely affected.

We have historically depended upon the issuance of mortgage-backed securities by the securitization entities we sponsor as a funding source for our residential real estate-related business. However, due to market conditions, we did not engage in residential mortgage securitization transactions in 2008 or 2009 and we only engaged in one residential mortgage securitization transaction in 2010 and two residential mortgage securitization transactions in 2011. While we engaged in numerous residential mortgage securitization transactions from 2012 through 2019, we do not know if market conditions will allow us to continue to regularly engage in these types of securitization transactions and any disruption of this market may adversely affect our earnings and growth. For example, in each of 2014 and 2015, we completed four securitization transactions, and in 2016 we completed three securitization transactions, as compared to 12 securitizations in 2013, nine securitizations in 2017, 12 securitizations in 2018, and nine securitizations in 2019 (including eight Sequoia transactions and one CAFL transaction following our acquisition of CoreVest). Even if regular residential and business-purpose mortgage loan securitization activity continues among market participants other than government-sponsored entities, we do not know if it will continue to be on terms and conditions that will permit us to participate or be favorable to us. Even if conditions are favorable to us, we may not be able to return to or sustain the volume of securitization activity we previously conducted. Additionally, securities collateralized by business-purpose loans such as those issued by our CAFL entities make up a small portion of the total volume of mortgage-backed securities issuance. The market for such securities is not as mature as the market for residential mortgage-backed securities and dislocations in this market or a change in the risk tolerance of investors or the perception of risk related to business-purpose mortgage-backed securities may negatively impact our ability to grow or sustain the volume of business-purpose mortgage-backed securities we issue, which may result in our business and financial results being adversely affected.

Initiating new business activities or significantly expanding existing business activities may expose us to new risks and will increase our cost of doing business.

Initiating new business activities or significantly expanding existing business activities, including through acquisitions, are two ways to grow our business and respond to changing circumstances in our industry; however, they may expose us to new risks and regulatory compliance requirements. We cannot be certain that we will be able to manage these risks and compliance requirements effectively. Furthermore, our efforts may not succeed and any revenues we earn from any new or expanded business initiative may not be sufficient to offset the initial and ongoing costs of that initiative, which would result in a loss with respect to that initiative.

For example, since December 2017, we have announced several new initiatives to expand our mortgage banking and investment activities, including by expanding our mortgage loan purchase activity to include business-purpose loans secured by non-owner occupied rental properties and residential bridge loans, completing the acquisitions of two business-purpose real estate loan origination platforms, CoreVest and 5 Arches, through which we now originate business-purpose loans, and increasing the size and optimizing the target returns of our investment portfolio. We also recently completed investments in subordinate securities backed by re-performing and non-performing residential loans, multifamily securities, shared equity appreciation real estate option contracts, excess MSR and servicer advance investments collateralized by residential and multifamily loans, and a whole loan investment fund created to acquire light-renovation multifamily loans. Further discussion of these business changes is set forth in the risk factor titled *"Decisions we make about our business strategy and investments, as well as decisions about raising capital or returning capital to shareholders (through dividends or common stock repurchases), could fail to improve our business and results of operations."*

In connection with initiating new business activities or expanding existing business activities, or for other business reasons, we may create new subsidiaries. Frequently, these subsidiaries would be wholly-owned, directly or indirectly, by Redwood, but we may also create or participate in partnerships and joint ventures with third-party co-investors and in those cases, the entities may be partially-owned by Redwood. The creation of those subsidiaries may increase our administrative costs and expose us to other legal and reporting obligations, including, for example, because they may be incorporated in states other than Maryland or may be established in a foreign jurisdiction. Any new subsidiary we create may elect, together with us, to be treated as our taxable REIT subsidiary. Taxable REIT subsidiaries are wholly-owned or partially-owned subsidiaries of a REIT that pay corporate income tax on the income they generate. A taxable REIT subsidiary is not able to deduct its dividends paid to its parent in determining its taxable income and any dividends paid to the parent are generally recognized as income at the parent level.

Our future success depends on our ability to attract and retain key personnel.

Our future success depends on the continued service and availability of skilled personnel, including our executive officers and other leaders that are part of our management team. To the extent personnel we attempt to hire, or have already hired, are concerned that economic, regulatory, or other factors could impact our ability to maintain or expand our current level of business, it could negatively impact our ability to hire or retain the personnel we need to operate our business. We cannot assure you that we will be able to attract and retain key personnel. Additionally, to the extent our management or personnel are impacted in significant numbers by the outbreak of pandemic or epidemic disease, such as the coronavirus or COVID-19, our business and operating results may be negatively impacted.

We may not be able to obtain or maintain the governmental licenses required to operate our business and we may fail to comply with various state and federal laws and regulations applicable to our business of acquiring residential mortgage loans and servicing rights and originating business-purpose real estate loans. We are approved to service residential mortgage loans sold to Freddie Mac and Fannie Mae and failure to maintain our status as an approved servicer could harm our business.

While we are not required to obtain licenses to purchase mortgage-backed securities, the purchase of residential and business-purpose mortgage loans in the secondary market, and the origination of business-purpose loans, may, in some circumstances, require us to maintain various state licenses. Acquiring the right to service residential mortgage loans and certain business-purpose mortgage loans may also, in some circumstances, require us to maintain various state licenses even though we currently do not expect to directly engage in loan servicing ourselves. As a result, we could be delayed in conducting certain business if we were first required to obtain a state license. We cannot assure you that we will be able to obtain all of the licenses we need or that we would not experience significant delays in obtaining these licenses. Furthermore, once licenses are issued we are required to comply with various information reporting and other regulatory requirements to maintain those licenses, and there is no assurance that we will be able to satisfy those requirements or other regulatory requirements applicable to our business of acquiring mortgage loans on an ongoing basis. Our failure to obtain or maintain required licenses or our failure to comply with regulatory requirements that are applicable to our business of acquiring or originating mortgage loans may restrict our business and investment options and could harm our business and expose us to penalties or other claims.

For example, under the Dodd-Frank Act, the CFPB also has regulatory authority over certain aspects of our business as a result of our residential mortgage banking activities, including, without limitation, authority to bring an enforcement action against us for failure to comply with regulations promulgated by the CFPB that are applicable to our business. One of the CFPB's areas of focus has been on whether companies like Redwood take appropriate steps to ensure that business arrangements with service providers do not present risks to consumers. The sub-servicers we retain to directly service residential mortgage loans (when we own the associated MSRs) are among our most significant service providers with respect to our residential mortgage banking activities and our failure to take steps to ensure that these sub-servicers are servicing these residential mortgage loans in accordance with applicable law and regulation could result in enforcement action by the CFPB against us that could restrict our business, expose us to penalties or other claims, negatively impact our financial results, and damage our reputation.

As another example, rules under the Home Mortgage Disclosure Act (HMDA) that took effect in January 2018 impose expanded data collection requirements and additional reporting obligations on mortgage lenders and purchasers of residential mortgage loans. The expanded data collection requirements may result in a higher frequency of data errors, which in turn could be perceived by regulators as an indication of inadequate controls and poor compliance processes, and could lead to monetary civil penalties. Additionally, the availability of increased amounts of data may increase regulatory scrutiny of our mortgage loan purchasing patterns. In addition, the Equal Credit Opportunity Act, and other Federal and state laws and regulations that apply to certain of our investment and business activities, include consumer protections relating to discrimination, abusive and deceptive practices, and other consumer-related matters. To the extent these laws and regulations apply to us, our failure to comply with them, even if not intentional, could give rise to liabilities, fines, and remediation requirements, which could be material. Failure to comply with these laws and regulations could also result for incorrectly concluding that certain aspects of our investment and business activities are not subject to certain laws or regulations.

In addition, we are a servicer approved to service residential mortgage loans sold to Freddie Mac and Fannie Mae. As an approved servicer, we are required to conduct certain aspects of our operations in accordance with applicable policies and guidelines published by Freddie Mac and Fannie Mae. Failure to maintain our status as an approved servicer would mean we would not be able to service mortgage loans for these entities, or could otherwise restrict our business and investment options and could harm our business and expose us to losses or other claims.

With respect to mortgage loans we own, or which we have purchased and subsequently sold, we may be subject to liability for potential violations of the CFPB's TILA-RESPA Integrated Disclosure rule (also referred to as "TRID") or other similar consumer protection laws and regulations, which could adversely impact our business and financial results.

Federal consumer protection laws and regulations have been enacted and promulgated that are designed to regulate residential mortgage loan underwriting and originators' lending processes, standards, and disclosures to borrowers. These laws and regulations include the CFPB's "TRID", "ability-to-repay" and "qualified mortgage" regulations. In addition, there are various other federal, state, and local laws and regulations that are intended to discourage predatory lending practices by residential mortgage loan originators. For example, the federal Home Ownership and Equity Protection Act of 1994 (HOEPA) prohibits inclusion of certain provisions in residential mortgage loans that have mortgage rates or origination costs in excess of prescribed levels and requires that borrowers be given certain disclosures prior to origination. Some states have enacted, or may enact, similar laws or regulations, which in some cases may impose restrictions and requirements greater than those in place under federal laws and regulations. In addition, under the anti-predatory lending laws of some states, the origination of certain residential mortgage loans, including loans that are classified as "high cost" loans under applicable law, must satisfy a net tangible benefits test with respect to the borrower. This test, as well as certain standards set forth in the "ability-to-repay" and "qualified mortgage" regulations, may be highly subjective and open to interpretation. As a result, a court may determine that a residential mortgage loan did not meet the standard or test even if the originator reasonably believed such standard or test had been satisfied. Failure of residential mortgage loan originators or servicers to comply with these laws and regulations could subject us, as an assignee or purchaser of these loans (or as an investor in securities backed by these loans), to monetary penalties and defenses to foreclosure, including by recoupment or setoff of finance charges and fees collected, and could result in rescission of the affected residential mortgage loans, which could adversely impact our business and financial results.

Environmental protection laws that apply to properties that secure or underlie our loan and investment portfolio could result in losses to us. We may also be exposed to environmental liabilities with respect to properties we become direct or indirect owners of or to which we take title, which could adversely affect our business and financial results.

Under the laws of several states, contamination of a property may give rise to a lien on the property to secure recovery of the cleanup costs. In certain of these states, such a lien has priority over the lien of an existing mortgage against the property, which could impair the value of an investment in a security we own backed by such a property or could reduce the value of such a property that underlies loans we have made or own. In addition, under the laws of some states and under the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, we may be liable for costs of addressing releases or threatened releases of hazardous substances that require remedy at a property securing or underlying a loan we hold if our agents or employees have become sufficiently involved in the hazardous waste aspects of the operations of the borrower of that loan, regardless of whether or not the environmental damage or threat was caused by us or the borrower.

In the course of our business, we may take title to real estate or may otherwise become direct or indirect owners of real estate. If we do take title or become a direct or indirect owner, we could be subject to environmental liabilities with respect to the property, including liability to a governmental entity or third parties for property damage, personal injury, investigation, and clean-up costs. In addition, we may be required to investigate or clean up hazardous or toxic substances or chemical releases at a property. The costs associated with investigation or remediation activities could be substantial. If we ever become subject to significant environmental liabilities, our business and financial results could be materially and adversely affected.

Maintaining cybersecurity is important to our business and a breach of our cybersecurity could have a material adverse impact on our business and financial results. Our technology infrastructure and systems are important and any significant disruption or breach of the security of this infrastructure or these systems could have an adverse effect on our business. We also rely on technology infrastructure and systems of third parties who provide services to us and with whom we transact business.

When we acquire or originate real estate mortgage loans, or the rights to service mortgage loans, we come into possession of borrower non-public personal information that an identity thief could utilize in engaging in fraudulent activity or theft. We may share this information with third parties, such as loan sub-servicers, outside vendors, third parties interested in acquiring such loans from us, or lenders extending credit to us collateralized by such loans. We have acquired more than 100,000 residential mortgage loans and rights to service residential mortgage loans since 2010 and have also acquired or originated thousands of these or other types of mortgage loans prior to and following 2010.

While we have security measures in place to protect this information and prevent security breaches, these security measures may be compromised as a result of third-party action, including intentional misconduct by computer hackers, cyber-attacks, "phishing" attacks, service provider or vendor error, or malfeasance or other intentional or unintentional acts by third parties and bad actors, including third-party service providers. Furthermore, borrower data, including personally identifiable information, may be lost, exposed, or subject to unauthorized access or use as a result of accidents, errors, or malfeasance by our employees, independent contractors, or others working with us or on our behalf. Our servers and systems, and those of our service providers, may be vulnerable to computer malware, break-ins, denial-of-service attacks, and similar disruptions from unauthorized tampering with our computer systems, which could result in someone obtaining unauthorized access to borrowers' data or our data, including other confidential business information. In the past, we have experienced unauthorized access to certain data and information. Our response was to take immediate steps to investigate and address the unauthorized access, and past unauthorized access has not had, and is not expected to have, a material adverse effect on our business and financial results. We have further developed and enhanced our cybersecurity systems and processes that are intended to protect this type of data and information; however, they may not be effective in preventing unauthorized access in the future. While past unauthorized access has been immaterial to our business and financial results, there can be no assurance of a similar result in the future. Furthermore, because the techniques used to obtain unauthorized access to, or to sabotage, systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. We may also experience security breaches that may remain undetected for an extended period.

We may be liable for losses suffered by individuals whose identities are stolen as a result of a breach of the security of the systems that we or third-parties and service providers of ours store this information on, and any such liability could be material. Even if we are not liable for such losses, any breach of these systems could expose us to material costs in notifying affected individuals and providing credit monitoring services to them, as well as regulatory fines or penalties. In addition, any breach of these systems could disrupt our normal business operations and expose us to reputational damage and lost business, revenues, and profits. Any insurance we maintain against the risk of this type of loss may not be sufficient to cover actual losses, or may not apply to the circumstances relating to any particular breach.

In addition, in order to analyze, acquire, and manage our investments, manage the operations and risks associated with our business, assets, and liabilities, and prepare our financial statements we rely upon computer hardware and software systems. Some of these systems are located at our offices and some are maintained by third party vendors or located at facilities maintained by third parties. We also rely on technology infrastructure and systems of third parties who provide services to us and with whom we transact business. Any significant interruption in the availability or functionality of these systems could impair our access to liquidity, damage our reputation, and have an adverse effect on our operations and on our ability to timely and accurately report our financial results.

In addition, any breach of the security of these systems could have an adverse effect on our operations and the preparation of our financial statements. Steps we have taken to provide for the security of our systems and data may not effectively prevent others from obtaining improper access to our systems data. Improper access could expose us to risks of data loss, reputational damage, increased regulatory scrutiny, litigation, and liabilities to third parties, and otherwise disrupt our operations.

Our business could be adversely affected by deficiencies in our disclosure controls and procedures or internal controls over financial reporting.

The design and effectiveness of our disclosure controls and procedures and internal controls over financial reporting may not prevent all errors, misstatements, or misrepresentations. While management continues to review the effectiveness of our disclosure controls and procedures and internal controls over financial reporting, there can be no assurance that our disclosure controls and procedures or internal controls over financial reporting will be effective in accomplishing all control objectives all of the time. Additionally, since our acquisitions of 5 Arches and CoreVest in 2019, we have been integrating these platforms into our enterprise, including as it relates to disclosure controls and procedures and internal controls over financial reporting. However, for the year-ended December 31, 2019, we have elected to exclude CoreVest from management's report on internal controls over financial reporting, pursuant to an exemption from compliance with section 404 of the Sarbanes-Oxley Act for newly-acquired companies. Deficiencies, particularly material weaknesses or significant deficiencies, in internal controls over financial reporting which have occurred or which may occur in the future could result in misstatements of our financial results, restatements of our financial statements, a decline in our stock price, or an otherwise material and adverse effect on our business, reputation, financial results, or liquidity and could cause investors and creditors to lose confidence in our reported financial results.

Our risk management efforts may not be effective.

We could incur substantial losses and our business operations could be disrupted if we are unable to effectively identify, manage, monitor, and mitigate financial risks, such as credit risk, interest rate risk, prepayment risk, liquidity risk, and other market-related risks, as well as operational risks related to our business, assets, and liabilities, such as mortgage operations risk, legal and compliance risk, human resources-related risk, cybersecurity and technology-related risk, and financial reporting risk. Our risk management policies, procedures, and techniques may not be sufficient to identify all of the risks we are exposed to, mitigate the risks we have identified for mitigation, or to identify additional risks to which we may become subject in the future. Expansion of our business activities, including through acquisitions such as our acquisitions of 5 Arches and CoreVest, generally also results in our being exposed to risks that we have not previously been exposed to or may increase our exposure to certain types of risks and we may not effectively identify, manage, monitor, and mitigate these risks as our business activity changes or increases. Further discussion is set forth in the risk factor titled *"Initiating new business activities or significantly expanding existing business activities may expose us to new risks and will increase our cost of doing business."*

We could be harmed by misconduct or fraud that is difficult to detect.

We are exposed to risks relating to misconduct by our employees, contractors we use, or other third parties with whom we have relationships. For example, our employees could execute unauthorized transactions, use our assets improperly or without authorization, perform improper activities, use confidential information for improper purposes, or mis-record or otherwise try to hide improper activities from us. This type of misconduct could also relate to loan administration services that we provide for others. This type of misconduct can be difficult to detect and if not prevented or detected could result in claims or enforcement actions against us or losses. Accordingly, misconduct by employees, contractors, or others could subject us to losses or regulatory sanctions and seriously harm our reputation. Our controls may not be effective in detecting this type of activity.

Inadvertent errors, including, for example, errors in the implementation of information technology systems, could subject us to financial loss, litigation, or regulatory action.

Our employees, contractors we use, or other third parties with whom we have relationships may make inadvertent errors that could subject us to financial losses, claims, or enforcement actions. These types of errors could include, but are not limited to, mistakes in executing, recording, or reporting transactions we enter into for ourselves or with respect to assets we manage for others. Errors in the implementation of information technology systems, compliance systems and procedures, or other operational systems and procedures could also interrupt our business or subject us to financial losses, claims, or enforcement actions. Errors could also result in the inadvertent disclosure of mortgage-borrower non-public personal information. Inadvertent errors expose us to the risk of material losses until the errors are detected and remedied prior to the incurrence of any loss. The risk of errors may be greater for business activities that are new for us or have non-standardized terms, for areas of our business that we are expanding, or for areas of our business that rely on new employees or on third parties that we have only recently established relationships with.

Our business may be adversely affected if our reputation is harmed.

Our business is subject to significant reputational risks. If we fail, or appear to fail, to address various issues that may affect our reputation, our business could be harmed. Issues could include real or perceived legal or regulatory violations or be the result of a failure in governance, risk-management, technology, or operations. Similarly, market rumors and actual or perceived association with counterparties whose own reputation is under question could harm our business. Lawsuits brought against us (or the resolution of lawsuits brought against us), claims of employee misconduct, claims of wrongful termination, adverse publicity, conflicts of interest, ethical issues, or failure to maintain the security of our information technology systems or to protect non-public personal information could also cause significant reputational damages. Such reputational damage could result not only in an immediate financial loss, but could also result in a loss of business relationships, the ability to raise capital, and the ability to access liquidity through borrowing facilities.

Our financial results are determined and reported in accordance with generally accepted accounting principles (and related conventions and interpretations), or GAAP, and are based on estimates and assumptions made in accordance with those principles, conventions, and interpretations. Furthermore, the amount of dividends we are required to distribute as a REIT is driven by the determination of our income in accordance with the Internal Revenue Code rather than GAAP.

Our reported GAAP financial results differ from the taxable income results that drive our dividend distribution requirements and, therefore, our GAAP results may not be an accurate indicator of taxable income and dividend distributions.

Generally, the cumulative income we report relating to an investment asset will be the same for GAAP and tax purposes, although the timing of this recognition over the life of the asset could be materially different. There are, however, certain permanent differences in the recognition of certain expenses under the respective accounting principles applied for GAAP and tax purposes and these differences could be material. Thus, the amount of GAAP earnings reported in any given period may not be indicative of future dividend distributions. A further explanation of differences between our GAAP and taxable income is presented in *"Management's Discussion and Analysis of Financial Condition and Results of Operations,"* which is set forth in Part II, Item 7 of this Annual Report on Form 10-K.

Our minimum dividend distribution requirements are determined under the REIT tax laws and are based on our REIT taxable income as calculated for tax purposes pursuant to the Internal Revenue Code. Our Board of Directors may also decide to distribute more dividends than required based on these determinations. One should not expect that our retained GAAP earnings will equal cumulative distributions, as the Board of Directors' dividend distribution decisions, permanent differences in GAAP and tax accounting, and even temporary differences may result in material differences in these balances.

Over time, accounting principles, conventions, rules, and interpretations may change, which could affect our reported GAAP and taxable earnings and stockholders' equity.

Accounting rules for the various aspects of our business change from time to time. Changes in GAAP, or the accepted interpretation of these accounting principles, can affect our reported income, earnings, and stockholders' equity. In addition, changes in tax accounting rules or the interpretations thereof could affect our taxable income and our dividend distribution requirements. Predicting and planning for these changes can be difficult.

Risks Related to Redwood's Capital, REIT and Legal/Organizational Structure

We have elected to be taxed as a REIT and, as such, are required to meet certain tests in order to maintain our REIT status. This adds complexity and costs to running our business and exposes us to additional risks.

Failure to qualify as a REIT could adversely affect our net income and dividend distributions and could adversely affect the value of our common stock.

We have elected to be taxed as a REIT for federal income tax purposes for all tax years since 1994. However, many of the requirements for qualification as a REIT are highly technical and complex and require an analysis of particular facts and an application of the legal requirements to those facts in situations where there is only limited judicial and administrative guidance. Thus, we cannot assure you that the Internal Revenue Service (the “IRS”) or a court would agree with our conclusion that we have qualified as a REIT historically, or that changes to our investments or business or the law will not cause us to fail to qualify as a REIT in the future. Furthermore, in an environment where assets may quickly change in value, previous planning for compliance with REIT qualification rules may be disrupted. If we failed to qualify as a REIT for federal income tax purposes and did not meet the requirements for statutory relief, we would be subject to federal corporate income tax on our taxable income, and we would not be allowed a deduction for distributions to shareholders in computing our taxable income. In such a case, we may need to borrow money or sell assets in order to pay the taxes due, even if the market conditions are not favorable for such sales or borrowings. In addition, unless we are entitled to relief under applicable statutory provisions, we could not elect to be taxed as a REIT for four years thereafter. Failure to qualify as a REIT could adversely affect our dividend distributions and could adversely affect the value of our common stock.

Maintaining REIT status and avoiding the generation of excess inclusion income at Redwood Trust, Inc. and certain of our subsidiaries may reduce our flexibility and could limit our ability to pursue certain opportunities. Failure to appropriately structure our business and transactions to comply with laws and regulations applicable to REITs could have adverse consequences.

To maintain REIT status, we must follow certain rules and meet certain tests. In doing so, our flexibility to manage our operations may be reduced. For instance:

- Compliance with the REIT income and asset rules, or uncertainty about the application of those rules to certain investments, may result in our holding investments in our taxable REIT subsidiaries (where any income they produce is subject to corporate-level taxation) when we would prefer to hold those investments in an entity that is taxed as a REIT (where they would not be subject to corporate-level taxation).

- Compliance with the REIT income and asset rules may limit the type or extent of financing or hedging that we can undertake.

- Our ability to own non-real estate assets and earn non-real estate related income is limited, and the rules for classifying assets and income are complicated. Our ability to own equity interests in other entities is also limited. If we fail to comply with these limits, we may be forced to liquidate attractive investments on short notice on unfavorable terms in order to maintain our REIT status.

- We generally use taxable REIT subsidiaries to own non-real estate assets and engage in activities that may give rise to non-real estate related income under the REIT rules. However, our ability to invest in taxable REIT subsidiaries is limited under the REIT rules. No more than 20% of the value of our total assets can be represented by securities of one or more taxable REIT subsidiaries. Maintaining compliance with this limit could require us to constrain the growth of our taxable REIT subsidiaries (and the business and investing activities they conduct) in the future.

- Meeting minimum REIT dividend distribution requirements could reduce our liquidity. We may earn non-cash REIT taxable income due to timing and/or character mismatches between the computation of our income for tax and accounting purposes. Earning non-cash REIT taxable income could necessitate our selling assets, incurring debt, or raising new equity in order to fund dividend distributions.

- We could be viewed as a “dealer” with respect to certain transactions and become subject to a 100% prohibited transaction tax or other entity-level taxes on income from such transactions.

Furthermore, the rules we must follow and the tests we must satisfy to maintain our REIT status may change, or the interpretation of these rules and tests by the IRS may change.

In addition, our stated goal has been to not generate excess inclusion income at Redwood Trust, Inc. and certain of its subsidiaries that would be taxable as unrelated business taxable income ("UBTI") to our tax-exempt shareholders. Achieving this goal has limited, and may continue to limit, our flexibility in pursuing certain transactions or has resulted in, and may continue to result in, our having to pursue certain transactions through a taxable REIT subsidiary, which would reduce the net returns on these transactions by the associated tax liabilities payable by such subsidiary. Despite our efforts to do so, we may not be able to avoid creating or distributing UBTI to our shareholders.

To maintain our REIT status, we may be forced to borrow funds during unfavorable market conditions, and the unavailability of such capital on favorable terms at the desired times, or at all, may cause us to curtail our investment activities and/or to dispose of assets at inopportune times, which could adversely affect our financial condition, results of operations, cash flow and per share trading price of our common stock.

To qualify as a REIT, we generally must distribute to our shareholders at least 90% of our REIT taxable income each year (excluding any net capital gains), and we will be subject to regular corporate income taxes to the extent that we distribute less than 100% of our REIT taxable income each year. In addition, we will be subject to a 4% nondeductible excise tax on the amount, if any, by which distributions we pay in any calendar year are less than the sum of 85% of our ordinary income, 95% of our net capital gains, and 100% of our undistributed income from prior years. To maintain our REIT status and avoid the payment of federal income and excise taxes, we may need to borrow funds to meet the REIT distribution requirements, even if the then-prevailing market conditions are not favorable for these borrowings. These borrowing needs could result from differences in timing between the actual receipt of income and inclusion of income for federal income tax purposes. For example, we may be required to accrue interest and discount income on mortgage loans, MBS, and other types of debt securities or interests in debt securities before we receive any payments of interest or principal on such assets. Our access to third-party sources of capital depends on a number of factors, including the market's perception of our growth potential, our current debt levels, the market price of our common stock, and our current and potential future earnings. We cannot assure you that we will have access to such capital on favorable terms at the desired times, or at all, which may cause us to curtail our investment activities and/or to dispose of assets at inopportune times, and could adversely affect our financial condition, results of operations, cash flow and per share trading price of our common stock.

Dividends payable by REITs, including us, generally do not qualify for the reduced tax rates available for some dividends.

The maximum U.S. federal income tax rate for qualified dividends paid by domestic non-REIT corporations to U.S. stockholders that are individuals, trust or estates is generally 20%. Although dividends paid by REITs to such stockholders are generally not eligible for that rate (subject to limited exceptions), under the Tax Act, such stockholders may deduct up to 20% of ordinary dividends from a REIT for taxable years beginning after December 31, 2017 and before January 1, 2026. Although this deduction reduces the effective tax rate applicable to certain dividends paid by REITs, such tax rate is still higher than the tax rate applicable to regular corporate qualified dividends. This may cause investors to view REIT investments as less attractive than investments in non-REIT corporations, which in turn may adversely affect the value of shares of REITs, including the shares of our common stock.

The failure of mortgage loans or MBS subject to a repurchase agreement or a mezzanine loan to qualify as a real estate asset would adversely affect our ability to qualify as a REIT.

When we enter into short-term financing arrangements in the form of repurchase agreements, we will sell certain of our assets to a counterparty and simultaneously enter into an agreement to repurchase the sold assets. We believe that we will be treated for U.S. federal income tax purposes as the owner of the assets that are the subject of any such agreements notwithstanding that such agreements may transfer record ownership of the assets to the counterparty during the term of the agreement. It is possible, however, that the IRS could assert that we did not own the assets during the term of the repurchase agreement, in which case we could fail to qualify as a REIT.

In addition, we have and may continue to acquire multifamily mezzanine loans. Multifamily mezzanine loans are loans secured by equity interests in a partnership or limited liability company that directly or indirectly owns real estate. In Revenue Procedure 2003-65, the IRS provided a safe harbor pursuant to which a mezzanine loan, if it meets each of the requirements contained in the Revenue Procedure, will be treated by the IRS as a real estate asset for purposes of the REIT asset tests, and interest derived from the mezzanine loan will be treated as qualifying mortgage interest for purposes of the REIT 75% gross income test. Although the Revenue Procedure provides a safe harbor on which taxpayers may rely, it does not prescribe rules of substantive tax law. We believe that the mezzanine loans that we have treated as real estate assets generally met all of the requirements for reliance on this safe harbor. However, there can be no assurance that the IRS will not challenge the tax treatment of these mezzanine loans, and if such a challenge were sustained, we could in certain circumstances be required to pay a penalty tax or fail to qualify as a REIT.

Changes in tax rules could adversely affect REITs and could adversely affect the value of our common stock.

The rules addressing federal income taxation are constantly under review by persons involved in the legislative process and by the IRS and the U.S. Department of the Treasury. Any future changes in the regulations or tax laws applicable to REITs or to mortgage related financial products could negatively impact our operations or reduce any competitive advantages we may have relative to non-REIT entities, either of which could reduce the value of our common stock.

The Tax Act significantly changed the U.S. federal income taxation of U.S. businesses and their owners, including REITs and their stockholders. The Tax Act remains unclear in some respects and could be subject to potential amendments and technical corrections, as well as interpretations and implementing regulations by the Treasury and IRS, any of which could lessen or increase its impact. In addition, it remains unclear how these U.S. federal income tax changes will affect state and local taxation, which often uses federal taxable income as a starting point for computing state and local tax liabilities. Some of the changes made by the tax legislation may adversely affect us in one or more reporting periods and prospectively. We continue to work with our tax advisors and auditors to determine the full impact that the Tax Act as a whole will have on us.

The application of the tax laws to our business is complicated, and we may not interpret and apply some of the rules and regulations correctly. In addition, we may not make all available elections, which could result in our not being able to fully benefit from available deductions or benefits. Furthermore, the elections, interpretations and applications we do make could be deemed by the IRS to be incorrect and could have adverse impacts on our GAAP earnings and potentially on our REIT status.

The Internal Revenue Code may change and/or the interpretation of the rules and regulations by the IRS may change. In circumstances where the application of these rules and regulations affecting our business is not clear, we may have to interpret them and their application to us. We seek the advice of outside tax advisors in arriving at these interpretations, but our interpretations may prove to be wrong, which could have adverse consequences.

Our tax payments and dividend distributions, which are intended to meet the REIT distribution requirements, are based in large part on our estimate of taxable income which includes the application and interpretation of a variety of tax rules and regulations. While there are some relief provisions should we incorrectly interpret certain rules and regulations, we may not be able to fully take advantage of these provisions, and this could have an adverse effect on our REIT status. In addition, our GAAP earnings include tax provisions and benefits based on our estimates of taxable income and should our estimates prove to be wrong, we could have to make an adjustment to our tax provisions and this adjustment could be material.

Our decisions about raising, managing, and distributing our capital may adversely affect our business and financial results. Furthermore, our growth may be limited if we are not able to raise additional capital.

We are required to distribute at least 90% of our REIT taxable income as dividends to shareholders. Thus, we do not generally have the ability to retain all of the earnings generated by our REIT and, to a large extent, we rely on our ability to raise capital to grow. We may raise capital through the issuance of new shares of our common stock, either through our direct stock purchase and dividend reinvestment plan or through public or private offerings. We may also raise capital by issuing other types of securities, such as preferred stock, convertible or exchangeable debt, or other types of debt securities. As of February 26, 2020, we had approximately 156 million unissued shares of stock authorized for issuance under our charter (although approximately 55 million of these shares are reserved for issuance under our equity compensation plans, dividend reinvestment and stock purchase plan, ATM offering program, and outstanding convertible notes and exchangeable notes). The number of our unissued shares of stock authorized for issuance establishes a limit on the amount of capital we can raise through issuances of shares of stock or securities convertible into, or exchangeable for, shares of stock, unless we seek and receive approval from our shareholders to increase the authorized number of our shares in our charter. Also, certain stock change of ownership tests may limit our ability to raise significant amounts of equity capital or could limit our future use of tax losses to offset income tax obligations if we raise significant amounts of equity capital.

In addition, we may not be able to raise capital at times when we need capital or see opportunities to invest capital. Many of the same factors that could make the pricing for investments in real estate loans and securities attractive, such as the availability of assets from distressed owners who need to liquidate them at reduced prices, and uncertainty about credit risk, housing, and the economy, may limit investors' and lenders' willingness to provide us with additional capital on terms that are favorable to us, if at all. There may be other reasons we are not able to raise capital and, as a result, may not be able to finance growth in our business and in our portfolio of assets. If we are unable to raise capital and expand our business and our portfolio of investments, our growth may be limited, we may have to forgo attractive business and investment opportunities, and our general and administrative expenses may increase significantly relative to our capital base. Alternatively, we may need to raise capital on unfavorable terms, which may lead to greater dilution of existing shareholders, higher interest costs, or higher transaction costs.

To the extent we have capital that is available for investment, we have broad discretion over how to invest that capital and our shareholders and other investors will be relying on the judgment of our management regarding its use. To the extent we invest capital in our business or in portfolio assets, we may not be successful in achieving favorable returns.

Conducting our business in a manner so that we are exempt from registration under, and in compliance with, the Investment Company Act may reduce our flexibility and could limit our ability to pursue certain opportunities. At the same time, failure to continue to qualify for exemption from the Investment Company Act could adversely affect us.

Under the Investment Company Act, an investment company is required to register with the SEC and is subject to extensive restrictive and potentially adverse regulations relating to, among other things, operating methods, management, capital structure, dividends, and transactions with affiliates. However, companies primarily engaged in the business of acquiring mortgages and other liens on and interests in real estate are generally exempt from the requirements of the Investment Company Act. We believe that we have conducted our business so that we are not subject to the registration requirements of the Investment Company Act. In order to continue to do so, however, Redwood and each of our subsidiaries must either operate so as to fall outside the definition of an investment company under the Investment Company Act or satisfy its own exclusion under the Investment Company Act. For example, to avoid being defined as an investment company, an entity may limit its ownership or holdings of investment securities to less than 40% of its total assets. In order to satisfy an exclusion from being defined as an investment company, other entities, among other things, maintain at least 55% of their assets in certain qualifying real estate assets (the 55% Requirement) and also maintain an additional 25% of their assets in such qualifying real estate assets or certain other types of real estate-related assets (the 25% Requirement). Rapid changes in the values of assets we own, however, can disrupt prior efforts to conduct our business to meet these requirements.

If Redwood or one of our subsidiaries fell within the definition of an investment company under the Investment Company Act and failed to qualify for an exclusion or exemption, including, for example, if it was required to and failed to meet the 55% Requirement or the 25% Requirement, it could, among other things, be required either (i) to change the manner in which it conducts operations to avoid being required to register as an investment company or (ii) to register as an investment company, either of which could adversely affect us by, among other things, requiring us to dispose of certain assets or to change the structure of our business in ways that we may not believe to be in our best interests. Legislative or regulatory changes relating to the Investment Company Act or which affect our efforts to qualify for exclusions or exemptions, including our ability to comply with the 55% Requirement and the 25% Requirement, could also result in these adverse effects on us.

If we were deemed an unregistered investment company, we could be subject to monetary penalties and injunctive relief and we could be unable to enforce contracts with third parties and third parties could seek to obtain rescission of transactions undertaken during the period we were deemed an unregistered investment company, unless the court found that under the circumstances, enforcement (or denial of rescission) would produce a more equitable result than no enforcement (or grant of rescission) and would not be inconsistent with the Investment Company Act.

Provisions in our charter and bylaws and provisions of Maryland law may limit a change in control or deter a takeover that might otherwise result in a premium price being paid to our shareholders for their shares in Redwood.

In order to maintain our status as a REIT, not more than 50% in value of our outstanding capital stock may be owned, actually or constructively, by five or fewer individuals (defined in the Internal Revenue Code to include certain entities). In order to protect us against the risk of losing our status as a REIT due to concentration of ownership among our shareholders and for other reasons, our charter generally prohibits any single shareholder, or any group of affiliated shareholders, from beneficially owning more than 9.8% of the outstanding shares of any class of our stock, unless our Board of Directors waives or modifies this ownership limit. This limitation may have the effect of precluding an acquisition of control of us by a third party without the consent of our Board of Directors. Our Board of Directors has granted a limited number of waivers to institutional investors to own shares in excess of this 9.8% limit, which waivers are subject to certain terms and conditions. Our Board of Directors may amend these existing waivers to permit additional share ownership or may grant waivers to additional shareholders at any time.

Certain other provisions contained in our charter and bylaws and in the Maryland General Corporation Law ("MGCL") may have the effect of discouraging a third party from making an acquisition proposal for us and may therefore inhibit a change in control. For example, our charter includes provisions granting our Board of Directors the authority to issue preferred stock from time to time and to establish the terms, preferences, and rights of the preferred stock without the approval of our shareholders. Provisions in our charter and the MGCL also restrict our shareholders' ability to remove directors and fill vacancies on our Board of Directors and restrict unsolicited share acquisitions. These provisions and others may deter offers to acquire our stock or large blocks of our stock upon terms attractive to our shareholders, thereby limiting the opportunity for shareholders to receive a premium for their shares over then-prevailing market prices.

The ability to take action against our directors and officers is limited by our charter and bylaws and provisions of Maryland law and we may (or, in some cases, are obligated to) indemnify our current and former directors and officers against certain losses relating to their service to us.

Our charter limits the liability of our directors and officers to us and to shareholders for pecuniary damages to the fullest extent permitted by Maryland law. In addition, our charter and bylaws together require us to indemnify our officers and directors (and those of our subsidiaries and affiliates) to the maximum extent permitted by Maryland law in the defense of any proceeding to which he or she is made, or threatened to be made, a party because of his or her service to us. In addition, we have entered into, and may in the future enter into, indemnification agreements with our directors and certain of our officers and the directors and certain of the officers of certain of our subsidiaries and affiliates which obligate us to indemnify them against certain losses relating to their service to us and the related costs of defense.

Other Risks Related to Ownership of Our Common Stock

Investing in our common stock may involve a high degree of risk. Investors in our common stock may experience losses, volatility, and poor liquidity, and we may reduce our dividends in a variety of circumstances.

An investment in our common stock may involve a high degree of risk, particularly when compared to other types of investments. Risks related to the economy, the financial markets, our industry, our investing activity, our other business activities, our financial results, the amount of dividends we distribute, the manner in which we conduct our business, and the way we have structured our operations could result in a reduction in, or the elimination of, the value of our common stock. The level of risk associated with an investment in our common stock may not be suitable for the risk tolerance of many investors. Investors may experience volatile returns and material losses. In addition, the trading volume of our common stock (i.e., its liquidity) may be insufficient to allow investors to sell their common stock when they want to or at a price they consider reasonable.

Our earnings, cash flows, book value, and dividends can be volatile and difficult to predict. Investors in our common stock should not rely on our estimates, projections, or predictions, or on management's beliefs about future events. In particular, the sustainability of our earnings and our cash flows will depend on numerous factors, including our level of business and investment activity, our access to debt and equity financing, the returns we earn, the amount and timing of credit losses, prepayments, the expense of running our business, and other factors, including the risk factors described herein. As a consequence, although we seek to pay a regular common stock dividend that is sustainable, we may reduce our regular dividend rate, or stop paying dividends, in the future for a variety of reasons. We may not provide public warnings of dividend reductions prior to their occurrence. Although we have paid special dividends in the past, we have not paid a special dividend since 2007 and we may not do so in the future. Changes to the amount of dividends we distribute may result in a reduction in the value of our common stock.

A limited number of institutional shareholders own a significant percentage of our common stock, which could have adverse consequences to other holders of our common stock.

As of February 26, 2020, based on filings of Schedules 13D and 13G with the SEC, we believe that five institutional shareholders each owned approximately 5% or more of our outstanding common stock (and we believe one of these shareholders owned approximately 18% of our outstanding common stock) and we believe based on data obtained from other public sources that, overall, institutional shareholders owned, in the aggregate, more than 90% of our outstanding common stock. Furthermore, one or more of these investors or other investors could significantly increase their ownership of our common stock, including through the conversion of outstanding convertible or exchangeable notes into shares of common stock. Significant ownership stakes held by these individual institutions or other investors could have adverse consequences for other shareholders because each of these shareholders will have a significant influence over the outcome of matters submitted to a vote of our shareholders, including the election of our directors and transactions involving a change in control. In addition, should any of these significant shareholders determine to liquidate all or a significant portion of their holdings of our common stock, it could have an adverse effect on the market price of our common stock.

Although, under our charter, shareholders are generally precluded from beneficially owning more than 9.8% of our outstanding common stock, our Board of Directors may amend existing ownership-limitation waivers or grant waivers to other shareholders in the future, in each case in a manner which may allow for increases in the concentration of the ownership of our common stock held by one or more shareholders.

Future sales of our common stock by us or by our officers and directors may have adverse consequences for investors.

We may issue additional shares of common stock, or securities convertible into, or exchangeable for, shares of common stock, in public offerings or private placements, and holders of our outstanding convertible notes or exchangeable securities may convert those securities into shares of common stock. In addition, we may issue additional shares of common stock to participants in our direct stock purchase and dividend reinvestment plan and to our directors, officers, and employees under our employee stock purchase plan, our incentive plan, or other similar plans, including upon the exercise of, or in respect of, distributions on equity awards previously granted thereunder. We are not required to offer any such shares to existing shareholders on a preemptive basis. Therefore, it may not be possible for existing shareholders to participate in future share issuances, which may dilute existing shareholders' interests in us. In addition, if market participants buy shares of common stock, or securities convertible into, or exchangeable for, shares of common stock, in issuances by us in the future, it may reduce or eliminate any purchases of our common stock they might otherwise make in the open market, which in turn could have the effect of reducing the volume of shares of our common stock traded in the marketplace, which could have the effect of reducing the market price and liquidity of our common stock.

At February 26, 2020, our directors and executive officers beneficially owned, in the aggregate, approximately 2% of our common stock. Sales of shares of our common stock by these individuals are generally required to be publicly reported and are tracked by many market participants as a factor in making their own investment decisions. As a result, future sales by these individuals could negatively affect the market price of our common stock.

There is a risk that you may not receive dividend distributions or that dividend distributions may decrease over time. Changes in the amount of dividend distributions we pay, in the tax characterization of dividend distributions we pay, or in the rate at which holders of our common stock are taxed on dividend distributions we pay, may adversely affect the market price of our common stock or may result in holders of our common stock being taxed on dividend distributions at a higher rate than initially expected.

Our dividend distributions are driven by a variety of factors, including our minimum dividend distribution requirements under the REIT tax laws and our REIT taxable income as calculated for tax purposes pursuant to the Internal Revenue Code. We generally intend to distribute to our shareholders at least 90% of our REIT taxable income, although our reported financial results for GAAP purposes may differ materially from our REIT taxable income.

For 2019, we paid four regular quarterly dividends at a rate of $0.30 per share. Our ability to continue to pay future dividends in 2020 may be adversely affected by a number of factors, including the risk factors described herein. In addition, to the extent we determine that future dividends would represent a return of capital to investors, rather than the distribution of income, we may determine to discontinue dividend payments until such time that dividends would again represent a distribution of income. Any reduction or elimination of our payment of dividend distributions would not only reduce the amount of dividends you would receive as a holder of our common stock, but could also have the effect of reducing the market price of our common stock.

The rate at which holders of our common stock are taxed on dividends we pay and the characterization of our dividends - as ordinary income, capital gains, or a return of capital - could have an impact on the market price of our common stock. In addition, after we announce the expected characterization of dividend distributions we have paid, the actual characterization (and, therefore, the rate at which holders of our common stock are taxed on the dividend distributions they have received) could vary from our expectation, including due to errors, changes made in the course of preparing our corporate tax returns, or changes made in response to an IRS audit), with the result that holders of our common stock could incur greater income tax liabilities than expected.

The market price of our common stock could be negatively affected by various factors, including broad market fluctuations.

The market price of our common stock may be negatively affected by various factors, which change from time to time. Some of these factors are:

- Our actual or anticipated financial condition, performance, and prospects and those of our competitors.

- The market for similar securities issued by other REITs and other competitors of ours.

- Changes in the manner that investors and securities analysts who provide research to the marketplace on us analyze the value of our common stock.

- Changes in recommendations or in estimated financial results published by securities analysts who provide research to the marketplace on us, our competitors, or our industry.

- General economic and financial market conditions, including, among other things, actual and projected interest rates, prepayments, and credit performance and the markets for the types of assets we hold or invest in.

- Proposals to significantly change the manner in which financial markets, financial institutions, and related industries, or financial products are regulated under applicable law, or the enactment of such proposals into law or regulation.

- Other events or circumstances which undermine confidence in the financial markets or otherwise have a broad impact on financial markets, such as the sudden instability or collapse of large financial institutions or other significant corporations (whether due to fraud or other factors), terrorist attacks, natural or man-made disasters, the outbreak of pandemic or epidemic disease, or threatened or actual armed conflicts.

Furthermore, these fluctuations do not always relate directly to the financial performance of the companies whose stock prices may be affected. As a result of these and other factors, investors who own our common stock could experience a decrease in the value of their investment, including decreases unrelated to our financial results or prospects.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our principal executive and administrative office is located in Mill Valley, California and we have additional offices, including at the locations listed below. We do not own any properties and lease the space we utilize for our offices. Additional information on our leases is included in *Note 16* to the Financial Statements within this Annual Report on Form 10-K. The following table presents the locations and remaining lease terms of our primary offices.

Executive and Administrative Office Locations and Lease Expirations

Location	Lease Expiration
One Belvedere Place, Suite 300 Mill Valley, CA 94941	2028
8310 South Valley Highway, Suite 425 Englewood, CO 80112	2021
184 Shuman Boulevard, Suite 520 Naperville, IL 60563	2023
19800 MacArthur Boulevard, Suite 1150 Irvine, CA 92612	2021
1920 Main Street, Suite 850 Irvine, CA 92614	2021
650 Fifth Avenue, Suite 2140 New York, NY 10019	2022

ITEM 3. LEGAL PROCEEDINGS

On or about December 23, 2009, the Federal Home Loan Bank of Seattle (the "FHLB-Seattle") filed a complaint in the Superior Court for the State of Washington (case number 09-2-46348-4 SEA) against Redwood Trust, Inc., our subsidiary, Sequoia Residential Funding, Inc. ("SRF"), Morgan Stanley & Co., and Morgan Stanley Capital I, Inc. (collectively, the "FHLB-Seattle Defendants"), which alleged that the FHLB-Seattle Defendants made false or misleading statements in offering materials for a mortgage pass-through certificate (the "Seattle Certificate") issued in the Sequoia Mortgage Trust 2005-4 securitization transaction (the "2005-4 RMBS") and purchased by the FHLB-Seattle. 8% The Seattle Certificate was issued with an original principal amount of approximately$133 million, and, at December 31, 2019, approximately $128 million of principal and $12 million of interest payments had been made in respect of the Seattle Certificate. As of December 31, 2019, the Seattle Certificate had a remaining outstanding principal amount of approximately $6 million. The matter was subsequently resolved and the claims were dismissed by the FHLB Seattle as to all the FHLB Seattle Defendants. At the time the Seattle Certificate was issued, Redwood agreed to indemnify the underwriters of the 2005-4 RMBS, which underwriters were named as defendants in the action, for certain losses and expenses they might incur as a result of claims made against them relating to this RMBS, including, without limitation, certain legal expenses. Regardless of the resolution of this litigation, we could incur a loss as a result of these indemnities.

On or about July 15, 2010, The Charles Schwab Corporation ("Schwab") filed a complaint in the Superior Court for the State of California in San Francisco (case number CGC-10-501610) against SRF and 26 other defendants (collectively, the "Schwab Defendants"), which alleged that the Schwab Defendants made false or misleading statements in offering materials for various residential mortgage-backed securities sold or issued by the Schwab Defendants. Schwab alleged only a claim for negligent misrepresentation under California state law against SRF and sought unspecified damages and attorneys' fees and costs from SRF. Schwab claimed that SRF made false or misleading statements in offering materials for a mortgage pass-through certificate (the "Schwab Certificate") issued in the 2005-4 RMBS and purchased by Schwab. The Schwab Certificate was issued with an original principal amount of approximately $15 million, and, at December 31, 2019, approximately $14 million of principal and $1 million of interest payments had been made in respect of the Schwab Certificate. As of December 31, 2019, the Schwab Certificate had a remaining outstanding principal amount of approximately $1 million. At the time the Schwab Certificate was issued, Redwood agreed to indemnify the underwriters of the 2005-4 RMBS, which underwriters were also named as defendants in the action, for certain losses and expenses they might incur as a result of claims made against them relating to this RMBS, including, without limitation, certain legal expenses. Regardless of the resolution of this litigation, Redwood could incur a loss as a result of these indemnities.

Through certain of our wholly-owned subsidiaries, we have in the past engaged in, and expect to continue to engage in, activities relating to the acquisition and securitization of residential mortgage loans. In addition, certain of our wholly-owned subsidiaries have in the past engaged in activities relating to the acquisition and securitization of debt obligations and other assets through the issuance of collateralized debt obligations (commonly referred to as CDO transactions). Because of this involvement in the securitization and CDO businesses, we could become the subject of litigation relating to these businesses, including additional litigation of the type described above, and we could also become the subject of governmental investigations, enforcement actions, or lawsuits, and governmental authorities could allege that we violated applicable law or regulation in the conduct of our business. As an example, in July 2016 we became aware of a complaint filed by the State of California on April 1, 2016 against Morgan Stanley & Co. and certain of its affiliates alleging, among other things, that there were misleading statements contained in offering materials for 28 different mortgage pass-through certificates purchased by various California investors, including various California public pension systems, from Morgan Stanley and alleging that Morgan Stanley made false or fraudulent claims in connection with the sale of those certificates. Of the 28 mortgage pass-through certificates that were the subject of the complaint, two were Sequoia mortgage pass-through certificates issued in 2004 and two were Sequoia mortgage pass-through certificates issued in 2007. With respect to each of those certificates, our wholly-owned subsidiary, RWT Holdings, Inc., was the sponsor and our wholly-owned subsidiary, Sequoia Residential Funding, Inc., was the depositor. The plaintiffs subsequently withdrew from the litigation their claims based on eight of the 28 mortgage pass-through certificates, including one of the Sequoia mortgage pass-through certificates issued in 2004. We believe this matter was subsequently resolved and the plaintiffs withdrew their remaining claims. At the time these Sequoia mortgage pass-through certificates were issued, Sequoia Residential Funding, Inc. and Redwood Trust agreed to indemnify the underwriters of these certificates for certain losses and expenses they might incur as a result of claims made against them relating to these certificates, including, without limitation, certain legal expenses. Regardless of the resolution of this litigation, we could incur a loss as a result of these indemnities.

In accordance with GAAP, we review the need for any loss contingency reserves and establish reserves when, in the opinion of management, it is probable that a matter would result in a liability and the amount of loss, if any, can be reasonably estimated. Additionally, we record receivables for insurance recoveries relating to litigation-related losses and expenses if and when such amounts are covered by insurance and recovery of such losses or expenses are due. At December 31, 2019, the aggregate amount of loss contingency reserves established in respect of the FHLB-Seattle and Schwab litigation matters described above was $2 million. We review our litigation matters each quarter to assess these loss contingency reserves and make adjustments in these reserves, upwards or downwards, as appropriate, in accordance with GAAP based on our review.

In the ordinary course of any litigation matter, including certain of the above-referenced matters, we have engaged and may continue to engage in formal or informal settlement communications with the plaintiffs or co-defendants. Settlement communications we have engaged in relating to certain of the above-referenced litigation matters are one of the factors that have resulted in our determination to establish the loss contingency reserves described above. We cannot be certain that any of these matters will be resolved through a settlement prior to trial and we cannot be certain that the resolution of these matters, whether through trial or settlement, will not have a material adverse effect on our financial condition or results of operations in any future period.

Future developments (including resolution of substantive pre-trial motions relating to these matters, receipt of additional information and documents relating to these matters (such as through pre-trial discovery), new or additional settlement communications with plaintiffs relating to these matters, or resolutions of similar claims against other defendants in these matters) could result in our concluding in the future to establish additional loss contingency reserves or to disclose an estimate of reasonably possible losses in excess of our established reserves with respect to these matters. Our actual losses with respect to the above-referenced litigation matters may be materially higher than the aggregate amount of loss contingency reserves we have established in respect of these litigation matters, including in the event that any of these matters proceeds to trial and the plaintiff prevails. Other factors that could result in our concluding to establish additional loss contingency reserves or estimate additional reasonably possible losses, or could result in our actual losses with respect to the above-referenced litigation matters being materially higher than the aggregate amount of loss contingency reserves we have established in respect of these litigation matters include that: there are significant factual and legal issues to be resolved; information obtained or rulings made during the lawsuits could affect the methodology for calculation of the available remedies; and we may have additional obligations pursuant to indemnity agreements, representations and warranties, and other contractual provisions with other parties relating to these litigation matters that could increase our potential losses.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is listed and traded on the NYSE under the symbol RWT. At February 18, 2020, our common stock was held by approximately 613 holders of record and the total number of beneficial stockholders holding stock through depository companies was approximately 22,457. At February 26, 2020, there were 114,353,805 shares of common stock outstanding.

The cash dividends declared on our common stock for each full quarterly period during 2019 and 2018 were as follows:

	Common Dividends Declared			
	Record Date	**Payable Date**	**Per Share**	**Dividend Type**
Year Ended December 31, 2019				
Fourth Quarter	12/16/2019	12/30/2019	$ 0.30	Regular
Third Quarter	9/16/2019	9/30/2019	$ 0.30	Regular
Second Quarter	6/14/2019	6/28/2019	$ 0.30	Regular
First Quarter	3/15/2019	3/29/2019	$ 0.30	Regular
Year Ended December 31, 2018				
Fourth Quarter	12/14/2018	12/28/2018	$ 0.30	Regular
Third Quarter	9/14/2018	9/28/2018	$ 0.30	Regular
Second Quarter	6/15/2018	6/29/2018	$ 0.30	Regular
First Quarter	3/15/2018	3/29/2018	$ 0.28	Regular

All dividend distributions are made with the authorization of the board of directors at its discretion and will depend on such items as our GAAP net income, REIT taxable income, financial condition, maintenance of REIT status, and other factors that the board of directors may deem relevant from time to time. The holders of our common stock share proportionally on a per share basis in all declared dividends on common stock. As reported on our Current Report on Form 8-K on January 28, 2020, for dividend distributions made in 2019, we expect our dividends paid in 2019 to be characterized as 73% ordinary dividend income and 27% long-term capital gain dividend income. None of the dividend distributions made in 2019 are expected to be characterized for federal income tax purposes as return of capital or qualified dividends.

During the year ended December 31, 2019, we did not sell any equity securities that were not registered under the Securities Act of 1933, as amended. In February 2018, our Board of Directors approved an authorization for the repurchase of our common stock, increasing the total amount authorized for repurchases of common stock to $100 million, and also authorized the repurchase of outstanding debt securities, including convertible and exchangeable debt. This authorization increased the previous share repurchase authorization approved in February 2016 and has no expiration date. This repurchase authorization does not obligate us to acquire any specific number of shares or securities. Under this authorization, shares or securities may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended. At December 31, 2019, $100 million of this current total authorization remained available for repurchases of shares of our common stock. Like other investments we may make, any repurchases of our common stock or debt securities under this authorization would reduce our available capital described above.

The following table contains information on the shares of our common stock that we purchased or otherwise acquired during the three months ended December 31, 2019.

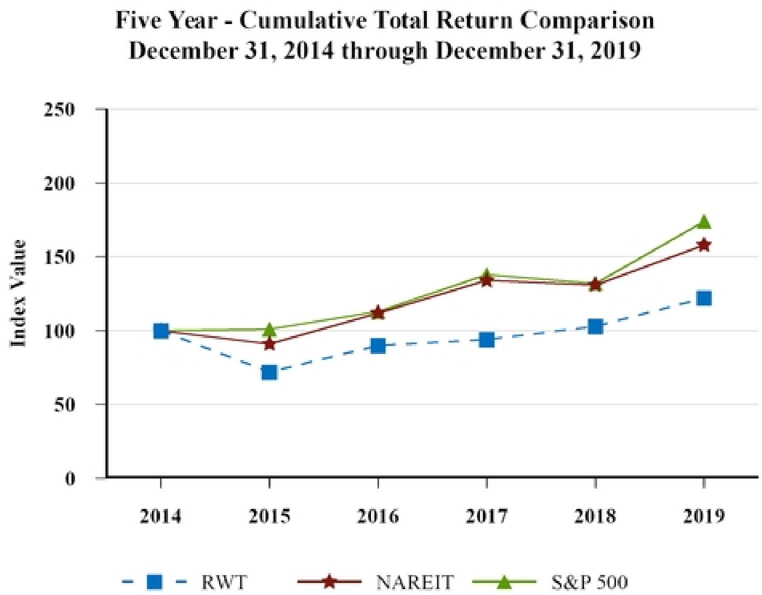
(In Thousands, except Per Share Data)	Total Number of Shares Purchased or Acquired	Average Price per Share Paid	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or approximate dollar value) of Shares that May Yet be Purchased under the Plans or Programs
October 1, 2019 - October 31, 2019	— (1)	$ 16.41	—	$ —
November 1, 2019 - November 30, 2019	—	$ —	—	$ —
December 1, 2019 - December 31, 2019	—	$ —	—	$ 100,000
Total	—	$ —	—	

(1) Represents fewer than 1,000 shares reacquired to satisfy tax withholding requirements related to the vesting of restricted shares.

Information with respect to compensation plans under which equity securities of the registrant are authorized for issuance is set forth in Part II, Item 12 of this Annual Report on Form 10-K.

Performance Graph

The following graph presents a cumulative total return comparison of our common stock, over the last five years, to the S&P Composite-500 Stock Index and the National Association of Real Estate Investment Trusts, Inc. ("NAREIT") Mortgage REIT index. The total returns reflect stock price appreciation and the reinvestment of dividends for our common stock and for each of the comparative indices, assuming that $100 was invested in each on December 31, 2014. The information has been obtained from sources believed to be reliable; but neither its accuracy nor its completeness is guaranteed. The total return performance shown on the graph is not necessarily indicative of future performance of our common stock.



	2014	2015	2016	2017	2018	2019
Redwood Trust, Inc.	100	72	90	94	103	122
FTSE NAREIT Mortgage REIT Index	100	91	112	134	131	158
S&P Composite-500 Index	100	101	113	138	132	174

ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data are qualified in their entirety by, and should be read in conjunction with, the more detailed information contained in the Consolidated Financial Statements and Notes thereto and Management's Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this Annual Report on Form 10-K and in our Annual Reports on Form 10-K as of and for each of the years ended December 31, 2018, 2017, 2016, and 2015. Certain amounts for prior periods have been reclassified to conform to the 2019 presentation.

(In Thousands, except Share Data)	2019	2018	2017	2016	2015
Selected Statement of Operations Data:					
Interest income	$ 622,281	$ 378,717	$ 248,057	$ 246,355	$ 259,432
Interest expense	(479,808)	(239,039)	(108,816)	(88,528)	(95,883)
Net Interest Income	142,473	139,678	139,241	157,827	163,549
Reversal of provision for loan losses	—	—	—	7,102	355
Net Interest Income after Provision	142,473	139,678	139,241	164,929	163,904
Non-interest Income					
Mortgage banking activities, net	87,266	59,566	53,908	38,691	10,972
Investment fair value changes, net	35,500	(25,689)	10,374	(28,574)	(21,357)
Other income	19,257	13,070	12,436	20,691	(730)
Realized gains, net	23,821	27,041	13,355	28,009	36,369
Total non-interest income, net	165,844	73,988	90,073	58,817	25,254
General and administrative expenses	(118,672)	(82,782)	(77,156)	(88,786)	(97,416)
Other expenses	(13,022)	(196)	—	—	—
Net Income before Provision for Income Taxes	176,623	130,688	152,158	134,960	91,742
(Provision for) benefit from income taxes	(7,440)	(11,088)	(11,752)	(3,708)	10,346
Net Income	$ 169,183	$ 119,600	$ 140,406	$ 131,252	$ 102,088
Average common shares – basic	101,120,744	78,724,912	76,792,957	76,747,047	82,945,103
Earnings per share – basic	$ 1.63	$ 1.47	$ 1.78	$ 1.66	$ 1.20
Average common shares – diluted (1)	136,780,594	110,027,770	101,975,008	97,909,090	84,518,395
Earnings per share – diluted	$ 1.46	$ 1.34	$ 1.60	$ 1.54	$ 1.18
Regular dividends declared per common share	$ 1.20	$ 1.18	$ 1.12	$ 1.12	$ 1.12
Selected Balance Sheet Data:					
Total assets	$ 17,995,440	$ 11,937,406	$ 7,039,822	$ 5,483,477	$ 6,220,047
Short-term debt	$ 2,329,145	$ 2,400,279	$ 1,938,682	$ 791,539	$ 1,855,003
Asset-backed securities issued	$ 10,515,475	$ 5,410,073	$ 1,164,585	$ 773,462	$ 1,049,415
Long-term debt, net (2)	$ 2,953,272	$ 2,572,158	$ 2,575,023	$ 2,620,683	$ 2,027,737
Total liabilities	$ 16,168,209	$ 10,588,612	$ 5,827,535	$ 4,334,049	$ 5,073,782
Total stockholders' equity	$ 1,827,231	$ 1,348,794	$ 1,212,287	$ 1,149,428	$ 1,146,265
Number of common shares outstanding	114,353,036	84,884,344	76,599,972	76,834,663	78,162,765
Book value per common share	$ 15.98	$ 15.89	$ 15.83	$ 14.96	$ 14.67
Other Selected Data:					
Average assets	$ 14,255,384	$ 8,190,681	$ 5,918,233	$ 5,893,998	$ 6,015,420
Average debt and ABS issued outstanding	$ 12,364,710	$ 6,751,746	$ 4,544,694	$ 4,617,956	$ 4,505,079
Average stockholders' equity	$ 1,601,259	$ 1,280,287	$ 1,181,056	$ 1,112,313	$ 1,240,345
Net income/average stockholders' equity	10.6%	9.3%	11.9%	11.8%	8.2%

(1) Diluted average common shares for 2019, 2018, 2017, and 2016 include certain convertible notes that were determined to be dilutive for those years.

(2) At December 31, 2019, 2018, 2017, 2016, and 2015, Asset-backed securities issued, net included $0, $0, $0, $0, and $542, respectively, of deferred debt issuance costs, and long-term debt, net included $16,359, $11,411, $10,240, $7,081, and $10,438, respectively, of deferred debt issuance costs.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

INTRODUCTION

Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is intended to provide a reader of our financial statements with a narrative from the perspective of our management on our financial condition, results of operations, liquidity and certain other factors that may affect our future results. Our MD&A is presented in six main sections:

- Overview
- Results of Operations
  - Consolidated Results
  - Segment Results
  - Investments
  - Consolidated VIEs
  - Tax Provision and Taxable Income
- Liquidity and Capital Resources
- Off Balance Sheet Arrangements and Contractual Obligations
- Critical Accounting Policies and Estimates
- New Accounting Standards

Our MD&A should be read in conjunction with the Consolidated Financial Statements and related Notes included in Part II, Item 8, Financial Statements and Supplementary Data of this Annual Report on Form 10-K. References herein to "Redwood," the "company," "we," "us," and "our" include Redwood Trust, Inc. and its consolidated subsidiaries, unless the context otherwise requires. The discussion in this MD&A contains forward-looking statements that involve substantial risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, such as those discussed in the Cautionary Statement in Part 1, Item 1, *Business* and in Part 1, Item 1A, *Risk Factors* of this Annual Report on Form 10-K.

OVERVIEW

Our Business

Redwood Trust, Inc., together with its subsidiaries, is a specialty finance company focused on making credit-sensitive investments in single-family residential and multifamily mortgages and related assets and engaging in mortgage banking activities. Our goal is to provide attractive returns to shareholders through a stable and growing stream of earnings and dividends, as well as through capital appreciation. We operate our business in four segments: Residential Lending, Business Purpose Lending, Multifamily Investments, and Third-Party Residential Investments. Our segments are based on our organizational and management structure, which aligns with how our results are monitored and performance is assessed.

Our primary sources of income are net interest income from our investments and non-interest income from our mortgage banking activities. Net interest income consists of the interest income we earn on investments less the interest expense we incur on borrowed funds and other liabilities. Income from mortgage banking activities is generated through the acquisition and origination of loans and their subsequent sale, securitization, or transfer to our investment portfolios.

Redwood Trust, Inc. has elected to be taxed as a real estate investment trust ("REIT"). We generally refer, collectively, to Redwood Trust, Inc. and those of its subsidiaries that are not subject to subsidiary-level corporate income tax as "the REIT" or "our REIT." We generally refer to subsidiaries of Redwood Trust, Inc. that are subject to subsidiary-level corporate income tax as "our operating subsidiaries" or "our taxable REIT subsidiaries" or "TRS."

For additional information on our business, refer to Part I, Item 1, *Business* of this Annual Report on Form 10-K.

Business Update

Redwood ended 2019 on a strong note, with solid earnings and sustained momentum across our business lines. Our earnings were $0.38 per share for the fourth quarter and we ended the year with earnings of $1.46 per share. Our earnings for the full year were comprised of a healthy balance of investment returns and income from mortgage banking operations, and we made $1.09 billion of investments through a combination of organic and acquisition activity that we believe will help us deliver increased returns to our shareholders in the coming quarters and years.

We recently announced a 6.7% increase to our regular quarterly dividend to shareholders to $0.32 per share for the first quarter of 2020. Our ability to raise our dividend despite the market volatility we experienced over the past year is significant and we believe that it demonstrates the stability of our business model and the diversity of our revenues.

During 2019, we made significant progress on our strategic priorities. Enabled in part by two acquisitions, it was a historic year for our business that set a new foundation for our participation in several distinct areas of housing credit, and allowed our consolidated portfolio of investments to evolve to incorporate a diverse mix of residential, business purpose, and multifamily investments. We now operate out of four principal geographic locations across the United States, and our earnings power is supported by organically created investments and the associated platforms that produce them. Our risk-minded culture and our values, which emphasize passion, integrity, change, relationships, and results, underlie our methodical pursuit to become one of the nation's most innovative investors in housing credit. We continue to look ahead and our strategic priorities for 2020 are focused on capitalizing on regulatory changes and technological innovations to continue to advance our overall relevance to the housing market.

We recently reorganized our business to create a more scalable infrastructure. We believe this will allow us to better manage the evolving opportunities and risks facing our business and to create better visibility into the earnings power of our operating platforms and the investments they create. We now manage our business through four segments. Our new structure provides for centralized strategic decision-making that drives the activities of these segments. In turn, our businesses can operate end-to-end in their respective sectors while benefiting from corporate risk oversight and traditional shared services. Each of our segments currently operates at a slightly different stage of maturity, creating a mix of earnings generation and future prospects.

Reflecting on the macro environment in 2019, it was an unexpected, record year for residential mortgage refinance activity. The Federal Reserve kept interest rates low after three interest rate cuts in 2019 amid global trade tensions and signs of economic weakness. Inflation, meanwhile, remained low and the U.S. consumer balance sheet remained strong, in part driven by an increased propensity to save that is, in turn, putting downward pressure on benchmark interest rates. As we proceed further into 2020, interest rates on 30-year conforming mortgages have fallen once again. This continues to bolster refinance activity, which has increased loan origination volumes year-to-date in 2020. Low rates have also contributed to increased borrower spending power, something that should in theory increase home purchase demand among the cohort of the population that is now entering their prime home buying years.

However, buying power is less impactful when there is limited housing stock. While the interest rate environment has contributed to consistent home price appreciation over the last decade, it also conceals trends that continue to garner our close attention. Most notably, the supply of quality, affordable homes in the United States badly trails new household formation. While this imbalance has greatly supported rising home prices, it has made access to desirable housing more challenging for many - especially low to moderate income families, many of whom are would-be first-time home buyers. An expedient solution being discussed in Washington, D.C. is to relax underwriting standards and make it easier to offer loans with lower down payments to borrowers with higher debt-to-income ratios. While we support expanding homeownership opportunities for all Americans who desire to own their own homes, lowering underwriting standards had significant consequences leading up to the 2008 financial crisis and beyond. Additionally, these solutions ignore the fundamental problem - not enough homes.

At Redwood, our approach to residential mortgage loan underwriting remains unchanged. We emphasize safe, well-structured loans that borrowers can reliably afford. But more importantly, we are advocating for solutions in our business lines that offer more high quality and accessible housing for consumers. For instance, our business purpose lending initiatives focus not only on stabilized rentals, but also bridge lending - where homes are renovated, upgraded, and brought up to current building codes before getting resold or rented to consumers. We are actively expanding our bridge loan lending business to include more robust construction/redevelopment opportunities, including market-leading financing programs for build-to-rent communities, urban infill development, and modular home development, among others. These strategies all complement our residential lending business.

As we look ahead into 2020, we are closely watching the U.S. housing finance regulator (Federal Housing Finance Agency), where its new director is focused on exiting Fannie Mae and Freddie Mac out of conservatorship, reducing their size and impact across the housing sector, and creating a level playing field for private capital to participate in a larger part of the market. We see this regulatory shift as a major opportunity for our residential lending business, and the catalyst for us to invest in our platform to support higher levels of growth. We are now applying recent technological innovations to reimagine our non-agency loan production and distribution workstream. We plan to transform our correspondent loan acquisition platform to be more component-based, allowing us to implement new technologies as they become available rather than through comprehensive systems that remain the standard in the industry. We are also working to automate the revalidation of underwriting data to significantly reduce the time it takes us to purchase non-agency loans from originators, allowing them to recycle capital faster and make more loans. At the moment, technology to assist loan sellers in originating conventional loans that can be seamlessly sold exists only in the Agency origination space. Our goal is to make it a reality in the private sector.

We also see compelling opportunities in our business-purpose lending segment. The business purpose lending platforms we acquired last year originated a total of $2.4 billion of loans in 2019. We also have an active SFR securitization platform which should support our goal to grow profitably and organically generate assets with attractive risk adjusted returns. We have begun the process of combining the 5 Arches and CoreVest platforms under a unified leadership structure, taking the best features from both businesses to position this segment for profitable future growth. Once fully integrated, our platform will possess a wide breadth of financing products and depth of expertise to deliver all-inclusive and customized solutions to residential real estate investors. A unified platform will also allow us to apply our technology advantage to a full suite of products and in the process remove redundant external costs in the day-to-day operation of the business. Importantly, we are still just beginning to understand how business-purpose lending can leverage the broader Redwood platform. For example, we have begun the process of offering single-family rental loan products to our residential loan sellers, secured the ability to pledge single-family rental loans on our FHLB borrowing facility, and lowered our cost of funds through both warehouse financing and securitization.

Our multifamily initiative continues to grow and expand and is quickly emerging as a strategic and complementary aspect of our housing finance strategy. We now designate multifamily investing as a core business at Redwood, with over $475 million of capital invested since 2017. We originate small-balance multifamily loans (both term and bridge) in our business-purpose lending segment - an area of desired growth - however, capital deployment in traditional multifamily has been almost exclusively in programs offered by Freddie Mac. To date, we remain one of the only investors in newly issued Freddie Mac multifamily B-pieces (first loss credit risk) that is not also a multifamily operator. Given recent changes implemented by the FHFA, we are now exploring ways to expand how we provide liquidity to this rapidly growing market.

While we anticipate most of our investing activities to originate from within our residential, business-purpose, and multifamily segments, we continue to dedicate meaningful resources to other third-party investment activities. For over a quarter century, our role as an active investor and liquidity provider has been highly relevant to the mortgage capital markets. This effort will operate in coordination with our other businesses and focus on third-party opportunities that we find attractive, including non-agency RMBS, agency CRT bonds, securities backed by re-performing loans, and other investments. Importantly, this segment also allows us to continue tracking the pertinent markets and manage our capital both opportunistically and for liquidity management purposes.

Over the past two years we believe we have made meaningful progress in diversifying revenues, integrating resources, and positioning Redwood for growth in the years ahead. Our business segments now encompass production and earnings generation potential across a breadth of sectors and collaborate toward a unifying vision of being one of the market’s most innovative mortgage investors.

2019 Financial Overview

This section includes an overview of our2019 financial results. A detailed discussion of our results of operations is presented in the next section of this MD&A. The following table presents selected financial highlights from 2019 and 2018.

Table 1 – Key Earnings and Return Metrics

	Years Ended December 31,			
(In Thousands, except per Share Data)	**2019**		**2018**	
Net income	$	169,183	$	119,600
Earnings per share (diluted EPS)	$	1.46	$	1.34
Return on equity (ROE)		10.6 %		9.3 %
Book value per share	$	15.98	$	15.89
Economic return on book value (1)		8.1 %		7.8 %
REIT taxable income per share	$	1.28	$	1.38
Dividends per share	$	1.20	$	1.18

(1) Economic return on book value is based on the periodic change in GAAP book value per common share plus dividends declared per common share during the period.

Our 2019 results benefited from the continued expansion of our businesses across the broader housing market, including our acquisitions of 5 Arches and CoreVest in the business purpose residential lending space, and further capital deployment into multifamily investments. Through these acquisitions, we established our business purpose loan origination capabilities, which helped drive higher mortgage banking income in 2019, and also deployed a significant amount of capital into attractive business purpose lending ("BPL") investments, which helped drive higher investment returns. Our results also benefited from a recovery in asset prices in the first quarter of 2019, after a significant decrease in value during the fourth quarter of 2018, which negatively impacted our 2018 results. Investment fair values also benefited in 2019 from spread tightening across many investment types, which also created opportunities to sell lower-yielding assets and realize gains. After rotating a significant amount of capital out of lower yielding assets (through sales) and redeploying that capital into higher yielding investments in business purpose, multifamily and reperforming loan assets, we expect our net interest income to grow and the pace and overall amount of securities sales and resulting gains to decrease in 2020, given current market conditions. Although REIT taxable income per share decreased in 2019, we earned a growing amount of more stable net interest income from investments at our REIT, which is an important contributor to supporting our dividend.

Table 2 – Key Operational Metrics

	Years Ended December 31,			
(In Thousands)	**2019**		**2018**	
Capital Deployed	$	1,085,994	$	810,203
Residential Loans Purchased	$	5,901,802	$	7,133,558
Business Purpose Residential Loans Originated	$	1,015,157	$	—

During 2019, we raised $451 million of equity capital, and replaced $201 million of exchangeable debt that matured with new exchangeable debt maturing in six years. We used the proceeds from these issuances along with proceeds from portfolio optimization to increase our capital deployment to $1.09 billion in 2019, which included approximately $530 million deployed into our two acquisitions (including associated financial assets) and the remainder into investment assets. As in the prior year, we continued to deploy a meaningful amount of our capital into business purpose residential loans, multifamily investments, and re-performing loan investments, expanding further into these areas of housing.

Our residential mortgage banking business saw loan purchases decrease in 2019, impacted primarily by increased competition. However, we operated this business with lower capital in 2019, helping to improve its return on equity. Additionally, we saw acquisition volumes begin to increase late in the year and we expect purchase volumes to increase in 2020 given the current interest rate environment. In 2019, through our Sequoia platform, we completed five Select securitizations and three Choice securitizations, which were supplemented by an increasing proportion of whole loans sales.

Our business purpose mortgage banking business, which began in earnest early in 2019 through our acquisition of 5 Arches, steadily grew origination volume throughout the year and saw a significant boost in the fourth quarter when we acquired CoreVest. With the origination capabilities of the combined platforms, we believe origination volume from this business can increase in 2020 as compared to 2019.

Book Value per Share

The following table sets forth the changes in our book value per share for the year ended December 31, 2019.

Table 3 – Changes in Book Value per Share

(In Dollars, per share basis)	**Year Ended December 31, 2019**
Beginning book value per share	$ 15.89
Net income (diluted EPS)	1.46
Changes in unrealized gains on securities, net from:	
Realized gains recognized in net income	(0.15)
Amortization income recognized in net income	(0.06)
Mark-to-market adjustments, net	0.25
Total change in unrealized gains on securities, net	0.04
Dividends	(1.20)
Issuance of common stock	(0.06)
CoreVest acquisition equity consideration	(0.08)
Changes in unrealized losses on derivatives hedging long-term debt	(0.17)
Other, net (1)	0.10
Ending Book Value per Share	$ 15.98

(1) Primarily represents income earned on actual shares outstanding, as we include diluted earnings per common share as a line item within table.

Our GAAP book value per share increased $0.09 per share to $15.98 per share during 2019. This increase was driven primarily by earnings exceeding our dividend payments.

Unrealized gains on our available-for-sale securities increased $0.04 per share during 2019. This decrease primarily resulted from $0.15 per share of previously unrealized net gains that were realized as income from the sale of securities, as well as $0.06 per share of discount accretion income recognized in earnings from the appreciation in the amortized cost basis of our available-for-sale securities. These decreases were offset by positive mark-to-market adjustments on available-for-sale securities primarily resulting from overall credit spread tightening on these investments during 2019.

Lower benchmark interest rates during 2019 resulted in a $0.17 per share decrease to book value from unrealized losses on the derivatives hedging a portion of our long-term debt. At December 31, 2019, the cumulative unrealized loss on these derivatives, which is included in our GAAP book value per share, was $0.45 per share. During 2019, we issued common stock for net proceeds that on a per share basis were lower than our book value per share and were, therefore, slightly dilutive to book value. Additionally, included in the change in book value per share for 2019 was an $0.08 per share decrease from the issuance of restricted common stock related to our acquisition of CoreVest.

RESULTS OF OPERATIONS

Consolidated Results of Operations

Within this *Results of Operations* section, we provide commentary that compares results year-over-year for2019, 2018, and 2017. Most tables include "changes" columns that show the amounts by which the year's results are greater or less than the results from the prior year. Unless otherwise specified, references in this section to increases or decreases in 2019 refer to the change in results from 2018 to 2019, and increases or decreases in 2018 refer to the change in results from 2017 to 2018.

The following table presents the components of our net income for the years endedDecember 31, 2019, 2018, and 2017.

Table 4 – Net Income

	Years Ended December 31,			Changes	
(In Thousands, except per Share Data)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Net Interest Income	$ 142,473	$ 139,678	$ 139,241	$ 2,795	$ 437
Non-interest Income					
Mortgage banking activities, net	87,266	59,566	53,908	27,700	5,658
Investment fair value changes, net	35,500	(25,689)	10,374	61,189	(36,063)
Other income	19,257	13,070	12,436	6,187	634
Realized gains, net	23,821	27,041	13,355	(3,220)	13,686
Total non-interest income, net	165,844	73,988	90,073	91,856	(16,085)
General and administrative expenses	(118,672)	(82,782)	(77,156)	(35,890)	(5,626)
Other expenses	(13,022)	(196)	—	(12,826)	(196)
Net income before income taxes	176,623	130,688	152,158	45,935	(21,470)
Provision for income taxes	(7,440)	(11,088)	(11,752)	3,648	664
Net Income	$ 169,183	$ 119,600	$ 140,406	$ 49,583	$ (20,806)

Net Interest Income

Net interest income increased in 2019, as higher net capital deployment towards multifamily, third party, and business purpose lending investments improved net interest income. This improvement was partially offset by a decrease in net interest income from residential loans held-for-sale at our residential lending segment, as the average balance of loans in inventory awaiting sale or securitization declined in 2019 as compared with 2018. Additionally, higher interest expense on long-term debt in 2019 from a higher average balance of convertible debt further offset the increase from net capital deployment.

We utilize hedges to manage interest rate risk in our investment portfolio and the net interest expense from these instruments is a component of our Investment fair value changes line item, which is discussed below. Net hedge interest expense associated with investment hedges increased in 2019 and on a combined basis, net interest income plus net interest expense on hedges increased by $5 million in 2019, compared to 2018.

Net interest income in 2018 was consistent with 2017, as higher interest income from net capital deployment and higher average yields in 2018 was offset by higher interest expense on short-term floating rate debt facilities and FHLB borrowings from rising benchmark interest rates.

Additional detail on changes in net interest income is provided in the *"Net Interest Income"* section that follows.

Mortgage Banking Activities, Net

Income from mortgage banking activities, net includes results from both our residential and business purpose mortgage banking operations. The $28 million increase in 2019 was due to a $40 million increase from business purpose mortgage banking, partially offset by a $12 million decrease from residential mortgage banking. The increase from business purpose mortgage banking resulted from our acquisitions of 5 Arches and CoreVest in 2019 and the income generated from those operations. The decrease from residential mortgage banking was primarily due to lower gross margins on slightly higher loan purchase commitments in 2019, relative to 2018. The $6 million increase in 2018 was primarily due to an increase in residential loan purchase volume in 2018, relative to 2017, on similar gross margins.

Additional analysis of the changes in this line item is included in the "*Results of Operations by Segment*" section that follows.

Investment Fair Value Changes, Net

Investment fair value changes, net, is primarily comprised of the change in fair values of our investments accounted for under the fair value option and interest rate hedges associated with these investments.

During 2019, the positive investment fair value changes primarily resulted from tightening credit spreads in several investment classes. During 2018, the negative investment fair value changes primarily resulted from widening credit spreads during the fourth quarter, which impacted both our residential securities and our residential loans held-for-investment.

Additional analysis of the changes in this line item is included in the "*Results of Operations by Segment*" section that follows.

Other Income

The $6 million increase in Other income in 2019 primarily resulted from $4 million of business purpose loan administration fee income earned at 5 Arches, as well as a $2 million gain associated with the re-measurement of our initial minority investment and purchase option in 5 Arches upon its acquisition. This increase was partially offset by a decrease in income from our MSR investments as the notional balance of these investments continued to pay down. Details on the composition of Other income is included in *Note 21* in Part II, Item 8 of this Annual Report on Form 10-K

Realized Gains, Net

For 2019, we realized gains of $24 million, primarily from the sale of $110 million of AFS securities and the call of a seasoned Sequoia securitization in the first quarter. For 2018, we realized gains of $27 million, primarily from the sale of $144 million of AFS securities. For 2017, we realized gains of $13 million, primarily from the sale of $90 million of AFS securities.

General and Administrative Expenses

The $36 million increase in general and administrative expenses in 2019 primarily resulted from $28 million of additional expenses from the operations of 5 Arches and CoreVest, which were acquired in March and October of 2019, respectively. The remainder of the increase was primarily due to $7 million in higher compensation expense at the Redwood parent entity (exclusive of 5 Arches and CoreVest), as well as higher systems, consulting, accounting, and legal costs, driven mostly by the acquisition-related expenses associated with 5 Arches and CoreVest. The higher compensation expense at the Redwood parent entity was primarily driven by higher variable compensation, commensurate with improved results in 2019, as well as a higher average employee count in 2019.

The increase in general and administrative expenses in 2018 primarily resulted from higher loan acquisition costs due to higher loan purchase volume in 2018, as well as higher expenses associated with implementing new investment initiatives, including higher personnel costs and legal fees. These increases were partially offset by lower variable compensation expense commensurate with a decline in net income in 2018.

Other Expenses

Other expenses in 2019 primarily consisted of amortization expense from intangible assets and contingent consideration we recorded in connection with acquisition activity during 2019.

Provision for Income Taxes

Our provision for income taxes is almost entirely related to activity at our taxable REIT subsidiaries, which primarily includes our mortgage banking activities, MSR investments, as well as certain other investment and hedging activities associated with these investments.

The decrease in the provision for income taxes for 2019 was driven primarily by lower GAAP income earned at our TRS. Additionally, the provision for 2019 included a $2 million tax benefit resulting from the purchase of 5 Arches.

The decrease in the provision for income taxes for 2018 resulted primarily from a lower corporate tax rate, and lower investment portfolio income at our TRS during the year. The increase in the provision for income taxes in 2017 resulted primarily from higher mortgage banking income in 2017, compared to 2016. This increase was offset by a tax benefit of $8 million from the reduction of our net federal deferred tax liabilities as a result of the Tax Cuts and Jobs Act of 2017 (the "Tax Act") that was enacted in December 2017. For additional detail on income taxes, see the *"Tax Provision and Taxable Income"* section that follows.

Net Interest Income

The following tables present the components of net interest income for the years endedDecember 31, 2019, 2018, and 2017.

Table 5 – Net Interest Income

	Years Ended December 31,								
	2019			2018			2017		
(Dollars in Thousands)	Interest Income/ (Expense)	Average Balance (1)	Yield	Interest Income/ (Expense)	Average Balance (1)	Yield	Interest Income/ (Expense)	Average Balance (1)	Yield
Interest Income									
Residential loans, held-for-sale	$ 39,355	$ 888,690	4.4 %	$ 51,330	$ 1,129,810	4.5 %	$ 38,854	$ 939,273	4.1 %
Residential loans - HFI at Redwood (2)	92,340	2,321,288	4.0 %	94,361	2,345,219	4.0 %	90,970	2,316,375	3.9 %
Residential loans - HFI at Legacy Sequoia (2)	17,640	453,563	3.9 %	20,029	577,175	3.5 %	19,405	700,746	2.8 %
Residential loans - HFI at Sequoia Choice (2)	108,778	2,273,514	4.8 %	69,645	1,452,784	4.8 %	5,133	109,463	4.7 %
Residential loans - HFI at Freddie Mac SLST (2)	57,840	1,531,361	3.8 %	4,453	109,231	4.1 %	—	—	— %
Business purpose residential loans	30,733	446,077	6.9 %	4,333	50,962	8.5 %	—	—	— %
Single-family rental loans - HFI at CAFL	23,072	439,165	5.3 %	—	—	— %	—	—	— %
Multifamily loans - HFI at Freddie Mac K-Series	132,600	3,373,743	3.9 %	21,322	532,020	4.0 %	—	—	— %
Trading securities	70,359	1,119,220	6.3 %	71,350	1,016,613	7.0 %	47,419	713,945	6.6 %
Available-for-sale securities	21,463	182,251	11.8 %	33,728	302,134	11.2 %	43,384	430,395	10.1 %
Other interest income	28,101	605,863	4.6 %	8,166	211,651	3.9 %	2,892	225,610	1.3 %
Total interest income	622,281	13,634,735	4.6 %	378,717	7,727,599	4.9 %	248,057	5,435,807	4.6 %
Interest Expense									
Short-term debt facilities	(73,558)	1,973,542	(3.7)%	(52,832)	1,513,497	(3.5)%	(28,015)	1,075,430	(2.6)%
Short-term debt - servicer advance financing	(11,952)	219,307	(5.4)%	(971)	17,271	(5.6)%	—	—	— %
Short-term debt - convertible notes, net	(10,996)	174,433	(6.3)%	(5,114)	97,035	(5.3)%	(8,836)	182,551	(4.8)%
ABS issued - Legacy Sequoia (2)	(14,418)	445,342	(3.2)%	(16,519)	567,908	(2.9)%	(14,833)	684,733	(2.2)%
ABS issued - Sequoia Choice (2)	(93,354)	2,052,697	(4.5)%	(59,769)	1,317,645	(4.5)%	(4,275)	97,158	(4.4)%
ABS issued - Freddie Mac SLST (2)	(42,574)	1,237,205	(3.4)%	(3,156)	89,172	(3.5)%	—	—	— %
ABS issued - Freddie Mac K-Series	(126,948)	3,184,441	(4.0)%	(19,985)	497,524	(4.0)%	—	—	— %
ABS issued - CAFL	(17,172)	401,467	(4.3)%	—	—	— %	—	—	— %
Long-term debt - FHLBC	(48,999)	1,999,999	(2.4)%	(41,360)	1,999,999	(2.1)%	(21,769)	1,999,999	(1.1)%
Long-term debt - other	(39,837)	676,278	(5.9)%	(39,333)	651,696	(6.0)%	(31,088)	504,822	(6.2)%
Total interest expense	(479,808)	12,364,711	(3.9)%	(239,039)	6,751,747	(3.5)%	(108,816)	4,544,693	(2.4)%
Net Interest Income	$ 142,473			$ 139,678			$ 139,241		

(1) Average balances for residential loans held-for-sale, residential loans held-for-investment, business purpose residential loans, multifamily loans held-for-investment, and trading securities are calculated based upon carrying values, which represent estimated fair values. Average balances for available-for-sale securities and debt are calculated based upon amortized historical cost, except for ABS issued, which is based upon fair value.

(2) Interest income from residential loans held-for-investment ("HFI") at Redwood exclude loans HFI at consolidated Sequoia or Freddie Mac SLST entities. Interest income from residential loans - HFI at Legacy Sequoia and the interest expense from ABS issued - Legacy Sequoia represent activity from our consolidated Legacy Sequoia entities. Interest income from residential loans - HFI at Sequoia Choice and the interest expense from ABS issued - Sequoia Choice represent activity from our consolidated Sequoia Choice entities. Interest income from residential loans - HFI at Freddie Mac SLST and the interest expense from ABS issued - Freddie Mac SLST represent activity from our consolidated Freddie Mac SLST entities.

The following table details how net interest income changed on a consolidated basis as a result of changes in average investment balances ("volume") and changes in interest yields ("rate").

Table 6 – Net Interest Income - Volume and Rate Changes

	Change in Net Interest Income For the Years Ended December 31,					
	2019			2018		
(In Thousands)	**Volume**	**Rate**	**Total**	**Volume**	**Rate**	**Total**
Net Interest Income for the Beginning of the Year			$ 139,678			$ 139,241
Impact of Changes in Interest Income						
Residential loans - HFS	$ (10,955)	$ (1,020)	(11,975)	$ 7,882	$ 4,594	12,476
Residential loans - HFI at Redwood	(963)	(1,058)	(2,021)	1,133	2,258	3,391
Residential loans - HFI at Legacy Sequoia	(4,290)	1,901	(2,389)	(3,422)	4,046	624
Residential loans - HFI at Sequoia Choice	39,345	(212)	39,133	62,992	1,520	64,512
Residential loans - HFI at Freddie Mac SLST	57,976	(4,589)	53,387	4,453	—	4,453
Business purpose residential loans	33,593	(7,193)	26,400	4,333	—	4,333
Single-family rental loans - HFI at CAFL	23,072	—	23,072	—	—	—
Multifamily loans - HFI at Freddie Mac K-Series	113,889	(2,611)	111,278	21,322	—	21,322
Trading securities	7,201	(8,192)	(991)	20,103	3,828	23,931
Available-for-sale securities	(13,383)	1,118	(12,265)	(12,929)	3,273	(9,656)
Other Interest Income	15,209	4,726	19,935	(491)	5,765	5,274
Net changes in interest income	260,694	(17,130)	243,564	105,376	25,284	130,660
Impact of Changes in Interest Expense						
Short-term debt facilities	(16,060)	(4,666)	(20,726)	(11,412)	(13,405)	(24,817)
Short-term debt - servicer advance financing	(11,359)	378	(10,981)	(971)	—	(971)
Short-term debt - convertible notes, net	(4,079)	(1,803)	(5,882)	4,139	(417)	3,722
ABS issued - Legacy Sequoia	3,565	(1,464)	2,101	2,531	(4,217)	(1,686)
ABS issued - Sequoia Choice	(33,342)	(243)	(33,585)	(53,702)	(1,792)	(55,494)
ABS issued - Freddie Mac SLST	(40,632)	1,214	(39,418)	(3,156)	—	(3,156)
ABS issued - Freddie Mac K-Series	(107,934)	971	(106,963)	(19,985)	—	(19,985)
ABS issued - CAFL	(17,172)	—	(17,172)	—	—	—
Long-term debt - FHLBC	—	(7,639)	(7,639)	—	(19,591)	(19,591)
Long-term debt - Other	(1,484)	980	(504)	(9,045)	800	(8,245)
Net changes in interest expense	(228,497)	(12,272)	(240,769)	(91,601)	(38,622)	(130,223)
Net changes in interest income and expense	32,197	(29,402)	2,795	13,775	(13,338)	437
Net Interest Income for the Year Ended			$ 142,473			$ 139,678

The following table presents the components of net interest income by segment for the years ended December 31, 2019, 2018, and 2017.

Table 7 – Net Interest Income by Segment

	Years Ended December 31,			Changes	
(In Thousands)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Net Interest Income by Segment					
Residential Lending	$ 76,200	$ 86,626	$ 92,455	$ (10,426)	$ (5,829)
Business Purpose Lending	18,709	2,336	—	16,373	2,336
Multifamily Investments	9,712	5,726	3,063	3,986	2,663
Third-Party Residential Investments	34,621	41,473	39,149	(6,852)	2,324
Corporate/Other	3,231	3,517	4,574	(286)	(1,057)
Net Interest Income	$ 142,473	$ 139,678	$ 139,241	$ 2,795	$ 437

Additional details regarding the activities impacting net interest income at each segment are included in the "*Results of Operations by Segment*" section that follows.

The Corporate/Other line item in the table above primarily includes net interest income from consolidated Legacy Sequoia entities. The decreases in net interest income from Corporate/Other during 2019 and 2018 were primarily due to lower net interest income from consolidated Legacy Sequoia entities, as loans in these securitizations continued to pay down. Details regarding consolidated Legacy Sequoia entities are included in the "*Results of Consolidated Legacy Sequoia Entities*" section that follows.

Results of Operations by Segment

We report on our business using four segments: Residential Lending, Business Purpose Lending, Multifamily Investments, and Third-Party Residential Investments. Our segments are based on our organizational and management structure, which aligns with how our results are monitored and performance is assessed. For additional information on our segments, refer to *Note 24* in Part II, Item 8 and Part I, Item 1 of this Annual Report on Form 10-K. The following table presents the segment contribution from our four segments reconciled to our consolidated net income for the years ended December 31, 2019, 2018, and 2017.

Table 8 – Segment Results Summary

	Years Ended December 31,			Changes	
(In Thousands)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Segment Contribution from:					
Residential Lending	$ 78,780	$ 104,552	$ 101,977	$ (25,772)	$ 2,575
Business Purpose Lending	17,239	(347)	—	17,586	(347)
Multifamily Investments	36,918	8,820	18,596	28,098	(9,776)
Third-Party Residential Investments	88,321	47,936	70,132	40,385	(22,196)
Corporate/Other	(52,075)	(41,361)	(50,299)	(10,714)	8,938
Net Income	$ 169,183	$ 119,600	$ 140,406	$ 49,583	$ (20,806)

The following sections provide a detailed discussion of the results of operations at each of our four business segments for the years ended December 31, 2019, 2018, and 2017.

The $11 million increase in net expense from Corporate/Other in 2019 primarily resulted from a $9 million increase in corporate general and administrative expenses, as well as $3 million of contingent consideration expense associated with our acquisition of 5 Arches, recorded in Other expenses. These increases were partially offset by a $2 million gain associated with the re-measurement of our initial minority investment and purchase option in 5 Arches. The increase in corporate general and administrative expenses in 2019 was primarily due to $7 million in higher compensation expense, driven mostly by higher variable compensation commensurate with improved results in 2019, as well as higher systems, consulting, accounting, and legal costs, driven mostly by the acquisitions of 5 Arches and CoreVest.

The $9 million improvement from Corporate/Other in 2018 primarily resulted from lower variable compensation expense commensurate with lower GAAP earnings, as well as higher earnings from our consolidated Legacy Sequoia entities in 2018. Details regarding consolidated Legacy Sequoia entities are included in the "*Results of Consolidated Legacy Sequoia Entities*" section that follows.

Residential Lending Segment

Our Residential Lending segment primarily consists of a mortgage loan conduit that acquires residential loans from third-party originators for subsequent sale, securitization, or transfer to our investment portfolio, as well as the investments we retain from these activities. We typically acquire prime, jumbo mortgages and the related mortgage servicing rights on a flow basis from our network of loan sellers and distribute those loans through our Sequoia private-label securitization program or to institutions that acquire pools of whole loans. Our investments in this segment primarily consist of residential mortgage-backed securities ("RMBS") retained from our Sequoia securitizations (some of which we consolidate for GAAP purposes), jumbo whole loans we retained and finance through our Federal Home Loan Bank of Chicago ("FHLBC") member subsidiary, as well as MSRs retained from jumbo whole loans we sold.

The following table presents the components of segment contribution for the Residential Lending segment for the years ended December 31, 2019, 2018, and 2017.

Table 9 – Residential Lending Segment Contribution

	Years Ended December 31,			Changes	
(In Thousands)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Net interest income					
Investments	$ 56,802	$ 62,661	$ 70,515	$ (5,859)	$ (7,854)
Loans held-for-sale	19,398	23,965	21,940	(4,567)	2,025
Total net interest income	76,200	86,626	92,455	(10,426)	(5,829)
Non-interest income					
Mortgage banking activities, net	47,743	59,623	53,908	(11,880)	5,715
Investment fair value changes, net	(27,920)	(21,686)	(25,466)	(6,234)	3,780
Other income	9,210	12,452	12,436	(3,242)	16
Realized gains, net	8,292	7,709	3,907	583	3,802
Total non-interest income, net	37,325	58,098	44,785	(20,773)	13,313
General and administrative expenses	(30,671)	(32,139)	(28,622)	1,468	(3,517)
Segment contribution before income taxes	82,854	112,585	108,618	(29,731)	3,967
Provision for income taxes	(4,074)	(8,033)	(6,641)	3,959	(1,392)
Total Segment Contribution	$ 78,780	$ 104,552	$ 101,977	$ (25,772)	$ 2,575

The following table provides the activity of residential loans held-for-sale at Redwood during the years ended December 31, 2019 and 2018.

Table 10 – Residential Loans Held-for-Sale — Activity

	Years Ended December 31,					
	2019			2018		
(In Thousands)	**Select**	**Choice**	**Total**	**Select**	**Choice**	**Total**
Balance at beginning of period	$ 716,193	$ 332,608	$ 1,048,801	$ 1,101,356	$ 326,589	$ 1,427,945
Acquisitions	3,657,513	2,205,020	5,862,533	4,833,326	2,300,232	7,133,558
Sales	(4,047,210)	(1,085,255)	(5,132,465)	(5,149,243)	(277,061)	(5,426,304)
Transfers between portfolios (1)	(602)	(1,145,375)	(1,145,977)	(29,965)	(2,017,129)	(2,047,094)
Principal repayments	(50,835)	(52,374)	(103,209)	(46,744)	(20,945)	(67,689)
Changes in fair value, net	5,626	1,076	6,702	7,463	20,922	28,385
Balance at End of Period	$ 280,685	$ 255,700	$ 536,385	$ 716,193	$ 332,608	$ 1,048,801

(1) Represents the net transfers of loans from held-for-sale to held-for-investment within our Residential Lending investment portfolio. Includes $1.08 billion and $1.78 billion of Choice loans securitized during the years ended December 31, 2019 and 2018, respectively, which were not treated as sales for GAAP purposes and continue to be reported on our consolidated balance sheets within this segment's investment portfolio.

The following table presents details of our Residential Lending investment portfolio at December 31, 2019 and December 31, 2018.

Table 11 – Residential Lending Investments

(In Thousands)	December 31, 2019	December 31, 2018
Residential loans at Redwood (1)	$ 2,111,897	$ 2,383,932
Residential securities at Redwood	229,074	364,308
Residential securities at consolidated Sequoia Choice entities (2)	254,265	194,372
Other investments	42,224	99,984
Total Segment Investments	$ 2,637,460	$ 3,042,596

(1) Excludes Sequoia Choice loans that we consolidate for GAAP purposes.

(2) Represents our retained economic investment in the consolidated Sequoia Choice securitization entities. For GAAP purposes, we consolidated $2.29 billion of loans and $2.04 billion of ABS issued associated with these investments at December 31, 2019.

See the *Investments* and *Consolidated VIEs* sections that follow for additional details on these investments.

Overview

Segment contribution from our Residential Lending segment decreased during 2019, driven both by lower mortgage banking income and lower overall investment returns. Mortgage banking income decreased due to a lower average balance of loans carried during 2019, resulting in lower net interest income, as well as lower mortgage banking activities income resulting from lower profit margins due to increased competition. Although the overall income from these operations decreased, we ran these operations with less capital in 2019 than 2018, resulting in higher returns on allocated capital year-over-year. The decrease in income from investing activities was primarily due to a lower average balance of investments in this segment in 2019, as we shifted capital from this segment into other segments. For example, as jumbo residential loans that we had financed with FHLB debt paid off, we pledged single-family rental loans to collateralize an increasing portion of our FHLB debt. In addition, as mortgage rates decreased throughout much of the year, we experienced increased loan prepayment rates, which negatively impacted the fair value of our investments held at a premium (including our residential loans at Redwood and our interest only securities), which resulted in higher negative investment fair value changes in 2019.

During the year ended December 31, 2019, our residential mortgage loan conduit purchased $5.86 billion of predominately prime residential jumbo loans, securitized $1.92 billion of jumbo Select loans that were accounted for as sales, and sold $3.22 billion of jumbo loans to third parties. Additionally, we transferred $1.08 billion of jumbo Choice loans that did not qualify for sales accounting treatment under GAAP to Sequoia securitization entities and we had net transfers of $69 million of residential jumbo loans into our Residential Lending investment portfolio that were financed with borrowings from the FHLBC. Our pipeline of loans identified for purchase at December 31, 2019 included $1.83 billion of jumbo loans. At December 31, 2019, our residential mortgage loan conduit had 492 loan sellers, including 184 jumbo sellers and 308 sellers from various FHLB districts participating in the FHLB's MPF Direct program.

We utilize a combination of capital and our residential loan warehouse facilities to manage our inventory of residential loans held-for-sale. At December 31, 2019, we had $186 million of warehouse debt outstanding to fund our residential loans held-for-sale. Jumbo loan warehouse capacity at December 31, 2019 totaled $1.43 billion across four separate counterparties, which should continue to provide sufficient liquidity to fund our residential mortgage banking operations in the near-term.

Net Interest Income

Net interest income from our Residential Lending segment is primarily comprised of net interest income earned from our residential loans held for investment and financed with FHLB debt, net interest income from securities retained from our Sequoia securitizations, and net interest income from our inventory of residential loans held-for-sale prior to sale or securitization.

Net interest income from residential lending investments decreased in 2019, due primarily to higher interest costs on our variable-rate long-term FHLB borrowings during 2019, from higher benchmark interest rates. Additionally, the average balance of our investment portfolio at this segment declined, as capital freed-up from sales and paydowns within this segment were redeployed in our business purpose lending and multifamily investments segments. Residential securities at Redwood decreased from the sale of lower-yielding Sequoia mezzanine securities, and residential securities at consolidated Sequoia Choice entities increased due to the retention of securities from Choice securitizations that were issued in 2019.

The $6 million decrease in 2018 in net interest income was primarily attributable to higher interest expense in 2018 related to our variable-rate borrowings on our residential lending investments, including from FHLB borrowings.

We use a combination of swaps and other derivatives to hedge our exposure to interest rates on our fixed-rate loan and securities investments and their associated variable-rate debt. The interest expense or benefit associated with these hedges is included in our Investment fair value changes, net line item on our financial statements. Including the impact of this hedge interest, our combined net interest income for residential lending investments was $60 million, $62 million, and $59 million in 2019, 2018, and 2017, respectively.

Mortgage Banking Activities, Net

Mortgage banking activities, net, includes the changes in market value of both the loans we hold for sale and commitments for loans we intend to purchase (collectively, our loan pipeline), as well as the effect of derivative instruments we utilize to manage risks associated with our loan pipeline. Our loan sale profit margins are measured over the period from when we commit to purchase a loan and subsequently sell or securitize the loan. Accordingly, these profit margins may encompass positive or negative market valuation adjustments on loans, hedging gains or losses associated with our loan pipeline, and any other related transaction expenses, and may be realized over the course of one or more quarters for financial reporting purposes.

The following table presents the components of residential mortgage banking activities, net. Amounts presented include both the changes in market values for loans that were sold and associated derivative positions that were settled during the periods presented, as well as changes in market values of loans and derivatives outstanding at the end of each period.

Table 12 – Components of Residential Mortgage Banking Activities, Net

	Years Ended December 31,			Changes	
(In Thousands)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Residential Mortgage Banking Activities, Net					
Changes in fair value of:					
Residential loans, at fair value (1)	$ 63,527	$ 21,808	$ 69,373	$ 41,719	$ (47,565)
Risk management derivatives (2)	(17,519)	35,248	(17,529)	(52,767)	52,777
Other income (3)	1,735	2,567	2,064	(832)	503
Total residential mortgage banking activities, net	$ 47,743	$ 59,623	$ 53,908	$ (11,880)	$ 5,715

(1) Includes changes in fair value for loan purchase and forward sale commitments.

(2) Represents market valuation changes of derivatives that are used to manage risks associated with our accumulation of residential loans.

(3) Amounts in this line include other fee income from loan acquisitions and the provision for repurchase expense, presented net.

The decrease in residential mortgage banking activities, net in 2019 was primarily due to lower gross margins on somewhat higher loan purchase commitments in 2019, compared to 2018. Gross margins were towards the higher end of our long-term expectations in 2019, though below our 2018 gross margins, which benefited from significant spread tightening on AAA securities experienced early in 2018. The spread tightening benefited both loan production and the high balance of loans in inventory at the end of 2017, which were subsequently sold in early 2018. The increase in mortgage banking activities, net in 2018 was primarily due to higher loan purchase commitments on similar gross margins in 2018 compared to 2017. We define gross margins as net interest income plus income from mortgage banking activities, divided by loan purchase commitments ("LPCs"). LPCs, adjusted for fallout expectations, were $7.01 billion, $6.44 billion, and $5.89 billion for the years ended December 31, 2019, 2018, and 2017, respectively.

At December 31, 2019, we had a repurchase reserve of $4 million outstanding related to residential loans sold through this segment. For the years ended December 31, 2019 and 2018, we recorded $0.3 million of repurchase provisions and $0.3 million of reversals of provision for repurchases, respectively, that were included in income from mortgage banking activities, net, in this segment. We review our loan repurchase reserves each quarter and adjust them as necessary based on current information available at each reporting date.

Investment Fair Value Changes, Net

The following table presents the components of investment fair value changes for our Residential Lending segment by investment type for the years ended December 31, 2019, 2018, and 2017.

Table 13 – Investment Fair Value Changes, Net from Residential Lending

(In Thousands)	Years Ended December 31, 2019	2018	2017
Investment Fair Value Changes, Net			
Changes in fair value of:			
Residential loans held-for-investment, at Redwood	$ 58,891	$ (29,573)	$ (5,765)
Trading securities	(14,675)	(3,281)	(5,600)
Net investments in Sequoia Choice entities (1)	6,947	443	(323)
Risk-sharing and other investments	(166)	(434)	(1,484)
Risk management derivatives, net	(78,917)	11,159	(12,294)
Investment Fair Value Changes, Net	$ (27,920)	$ (21,686)	$ (25,466)

(1) Includes changes in fair value of the loans held-for-investment and the ABS issued at the entities, which netted together represent the change in value of our investments (senior and subordinate securities) at the consolidated VIEs.

For 2019, the negative investment fair value changes primarily resulted from interest rate volatility, which increased prepayment rates on loans held-for-investments, IO securities, and other premium securities, adversely impacting valuations, net of associated hedges. This decline was partially offset by spread tightening on certain of our net investments in Sequoia Choice entities.

For 2018, the negative investment fair value changes primarily resulted from credit spread widening that occurred in the fourth quarter, impacting both our residential loans and residential trading securities.

Included in the risk management derivatives component of investment fair value changes, net is net interest expense from derivative instruments used to hedge interest rate risk on our financed investments. Net hedge interest expense associated with investment hedges was income of $3 million in 2019, an expense of $0.5 million in 2018, and an expense of $12 million in 2017.

Other Income

Other income was primarily comprised of MSR income and income from our residential loan risk-sharing arrangements with Fannie Mae and Freddie Mac. The $3 million decrease in Other income in 2019 was primarily due to a decrease in income from our MSR investments, as the notional balance of underlying loans continued to pay down.

Realized Gains, Net

Realized gains, net result from sales of available-for-sale securities within this segment. We generally sell securities when their yields fall below our return thresholds and we see opportunities to redeploy the capital into other investments with more attractive risk-adjusted returns. During the past three years, the majority of the securities we sold in this segment were mezzanine securities we retained from Sequoia Select securitizations that experienced significant credit spread tightening as the securitizations have paid-down and experienced minimal losses.

General and Administrative Expenses

General and administrative expenses for this segment primarily include costs associated with the underwriting, purchase and sale of residential loans, as well as costs associated with managing the segment's investment portfolio. General and administrative expenses decreased $1 million during 2019, primarily related to a decrease in loan acquisition costs associated with lower loan purchase volume in 2019 relative to 2018, as well as lower variable compensation expense commensurate with lower returns for this segment in 2019 relative to 2018. General and administrative expenses increased $4 million during 2018, primarily related to an increase in loan acquisition costs associated with the increase in loan purchase volume in 2018 relative to 2017, as well as higher compensation expense as we increased headcount in 2018 and paid higher variable compensation tied to higher earnings in 2018.

Provision for Income Taxes

The provision for income taxes for this segment primarily result from its mortgage banking activities, which are performed at our taxable REIT subsidiary, and is generally correlated to the amount of this segment's contribution before income taxes in relation to the TRS's overall GAAP income and associated tax provision. For 2019, the decrease in the tax provision primarily resulted from decreased TRS GAAP earnings at this segment and, in 2018, the increase primarily resulted from increased TRS GAAP earnings at this segment. For additional detail on income taxes, see the *"Tax Provision and Taxable Income"* section that follows.

Business Purpose Lending Segment

Our Business Purpose Lending segment consists of a platform that originates and acquires business purpose residential loans for subsequent securitization or transfer into our investment portfolio, as well as the investments we retain from these activities. We typically originate single-family rental and residential bridge loans and distribute certain single-family loans through our CoreVest American Finance Lender ("CAFL") private-label securitization program and retain others for investment along with our residential bridge loans. Single-family rental loans are business purpose residential mortgage loans to investors in single-family (1-4 unit) rental properties. Residential bridge loans are business purpose residential mortgage loans to investors rehabilitating and reselling or renting residential properties. Our investments in this segment primarily consist of securities retained from CAFL securitizations (which we consolidate for GAAP purposes), residential bridge loans, and single-family rental loans we finance through our FHLBC member subsidiary.

The following table presents the components of segment contribution for the Business Purpose Lending segment for the years ended December 31, 2019, 2018, and 2017.

Table 14 – Business Purpose Lending Segment Contribution

	Years Ended December 31,			Changes	
(In Thousands)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Net interest income					
Investments	$ 15,469	$ 2,181	$ —	$ 13,288	$ 2,181
Loans held-for-sale	3,240	155	—	3,085	155
Total net interest income	18,709	2,336	—	16,373	2,336
Non-interest income					
Mortgage banking activities, net	39,523	(57)	—	39,580	(57)
Investment fair value changes, net	(6,722)	(29)	—	(6,693)	(29)
Other income	5,852	—	—	5,852	—
Total non-interest income, net	38,653	(86)	—	38,739	(86)
General and administrative expenses	(30,655)	(2,597)	—	(28,058)	(2,597)
Other expenses	(8,521)	—	—	(8,521)	—
Segment contribution before income taxes	18,186	(347)	—	18,533	(347)
Provision for income taxes	(947)	—	—	(947)	—
Total Segment Contribution	$ 17,239	$ (347)	$ —	$ 17,586	$ (347)

The following table provides the business purpose residential loans origination activity at Redwood during theyear ended December 31, 2019.

Table 15 – Business Purpose Residential Loans — Origination Activity

	Year Ended December 31, 2019		
(In Thousands)	**Single-Family Rental HFS**	**Residential Bridge[(1)]**	**Total**
Fair value at beginning of period	$ 28,460	$ —	$ 28,460
Originations	513,802	501,355	1,015,157
Acquisitions	426,654	—	426,654
Sales	(20,426)	(56,485)	(76,911)
Transfers between portfolios (2)	(632,650)	(449,388)	(1,082,038)
Principal repayments	(2,991)	—	(2,991)
Changes in fair value, net	18,716	4,518	23,234
Fair Value at End of Period	$ 331,565	$ —	$ 331,565

(1) Our residential bridge loans are generally originated at our TRS and the majority are transferred to our REIT and a smaller portion sold. Origination fees and any mark-to-market changes on these loans prior to transfer are recognized as mortgage banking income. The loans held at our REIT are classified as held-for-investment, with subsequent fair value changes recorded through Investment fair value changes, net on our consolidated statements of income. For the carrying value and activity of our residential bridge loans held-for-investment, see the *Investments* section that follows.

(2) For single-family rental loans, amounts represent transfers of loans from held-for-sale to held-for-investment, including when loans are securitized (and consolidated for GAAP purposes) or transferred from our TRS to our REIT with the intent to hold for long-term investment. For residential bridge loans, represents the transfer of loans from our TRS to REIT as described in preceding footnote.

The following table presents details of our Business Purpose Lending Investments portfolio atDecember 31, 2019 and December 31, 2018.

Table 16 – Business Purpose Lending Investments

(In Thousands)	**December 31, 2019**	**December 31, 2018**
Single-family rental loans at Redwood (1)	$ 237,620	$ —
Residential bridge loans at Redwood	745,006	112,798
Single-family rental securities at consolidated CAFL entities (2)	191,301	—
Other investments	21,002	10,754
Total Segment Investments	$ 1,194,929	$ 123,552

(1) Excludes loans that we consolidate for GAAP purposes.

(2) Represents our economic investment in securities issued by consolidated CAFL securitization entities. For GAAP purposes, we consolidated $2.19 billion of loans and $2.00 billion of ABS issued associated with these investments at December 31, 2019.

See the *Investments* and *Consolidated VIEs* sections that follow for additional details on these investments.

Overview

Prior to our acquisitions of CoreVest and 5 Arches in 2019, we did not have significant investments in business purpose residential loans and had only acquired a limited amount of business purpose residential loans from 5 Arches in 2018, while we held a minority investment in 5 Arches. Through our acquisition of 5 Arches in March of 2019, we began originating business purpose loans, of which the SFR loans were generally initially held in inventory for future securitization and the bridge loans were generally transferred into our BPL investment portfolio. Later in 2019, we transferred nearly all of the 5 Arches originated SFR loans into our BPL investment portfolio, where they were financed through our FHLB member subsidiary. In October of 2019, we acquired CoreVest and obtained its inventory of single-family rental loans held-for-sale, along with an investment portfolio comprised of bridge loans and retained securities from CAFL securitizations it had previously issued. In November 2019, we issued our first securitization under the CAFL program and retained certain subordinate securities (for GAAP purposes, CAFL securitizations are not treated as sales and we consolidate all CAFL securitization entities onto our balance sheet). In the future, we expect to securitize a portion of our SFR loan originations and transfer a portion into our BPL investment portfolio. In the near-term, we generally expect to transfer the majority of newly originated bridge loans into our BPL investment portfolio.

Results from this segment in 2019 were driven by our BPL mortgage banking operations as well as from our BPL investment portfolio, which both increased meaningfully relative to 2018, due to the acquisitions of 5 Arches and CoreVest. Mortgage banking results for this segment also benefited from spread tightening in the fourth quarter of 2019, as we experienced strong execution on the first securitization we issued under the CAFL program.

During the first two months of 2019, prior to our acquisition of 5 Arches on March 1, 2019, we purchased $19 million of single-family rental loans from 5 Arches. During the period from March 1, 2019 to December 31, 2019, we funded $514 million of single-family rental loans, of which $238 million were transferred to our investment portfolio and financed with FHLB borrowings, and the remaining loans were held-for-sale. During the period from March 1, 2019 to December 31, 2019, we funded $501 million of residential bridge loans, of which $56 million were sold to a third party and the remaining loans were transferred to our BPL investment portfolio.

We utilize a combination of capital and our business purpose loan warehouse facilities to manage our inventory of business purpose residential loans held-for-sale and our business purpose loan investments. Our business purpose residential loan warehouse capacity totaled $1.48 billion across six separate counterparties. In addition, at December 31, 2019, we finance a portion of the CAFL securities we own through a securities repurchase facility.

Net Interest Income

Net interest income from our Business Purpose Lending segment is primarily comprised of net interest income earned from our BPL investments, and to a lesser extent from our inventory of SFR loans held-for-sale from the time we originate or acquire the loans to when securitize them or transfer them to our investment portfolio.

The $16 million increase in net interest income in 2019 was primarily due to a higher average balance of BPL investments during 2019 relative to 2018, as we retained SFR and residential bridge loans from 5 Arches and CoreVest production during 2019 and also acquired the in-place portfolio of residential bridge loans and retained SFR securities from CoreVest during the fourth quarter of 2019. The increase was also driven by a higher average balance of loans held-for-sale during 2019 relative to 2018.

Mortgage Banking Activities, Net

Mortgage banking activities, net, includes loan origination fees and the changes in market value of both the loans we hold for sale and our interest rate lock commitments (collectively, our loan pipeline), as well as the derivative instruments we utilize to manage risks associated with our loan pipeline, from the time we lock a loan with a borrower to when we subsequently securitize the loan or transfer it to our BPL investment portfolio. Accordingly, these profit margins may encompass positive or negative market valuation adjustments on loans, hedging gains or losses associated with our loan pipeline, and any other related transaction expenses, and may be realized over the course of one or more quarters for financial reporting purposes.

The following table presents the components of business purpose mortgage banking activities, net. Amounts presented include both the changes in market values for loans that were sold and associated derivative positions that were settled during the periods presented, as well as changes in market values of loans and derivatives outstanding at the end of each period.

Table 17 – Components of Business Purpose Mortgage Banking Activities, Net

	Years Ended December 31,			Changes	
(In Thousands)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Business Purpose Mortgage Banking Activities, Net					
Changes in fair value of:					
Single-family rental loans, at fair value (1)	$ 17,004	$ 453	$ —	$ 16,551	$ 453
Risk management derivatives (2)	1,796	(510)	—	2,306	(510)
Residential bridge loans, at fair value (3)	4,518	—	—	4,518	—
Other income (4)	16,205	—	—	16,205	—
Total business purpose mortgage banking activities, net	$ 39,523	$ (57)	$ —	$ 39,580	$ (57)

(1) Includes changes in fair value for interest rate lock commitments.

(2) Represents market valuation changes of derivatives that are used to manage risks associated with our accumulation of loans.

(3) Represents the change in fair market value from origination at our TRS to when the loan is sold or transferred to our REIT.

(4) Amounts in this line primarily include loan origination fees.

Increasing origination volumes drove higher income from mortgage banking activities in both 2019 and 2018. Business purpose mortgage banking activities for 2019 included $30 million earned in the fourth quarter, driven both by new origination activity from CoreVest, increased origination activity from 5 Arches, as well as a benefit from spread-tightening on securitization execution for the SFR loans we acquired from CoreVest. We generally would not expect the same spread-tightening in subsequent quarters, dependent on market conditions.

Investment Fair Value Changes, Net

The following table presents the components of investment fair value changes for our Business Purpose Lending segment by investment type for the years ended December 31, 2019, 2018, and 2017.

Table 18 – Investment Fair Value Changes, Net from Business Purpose Lending

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Investment Fair Value Changes, Net			
Single-family rental loans held-for-investment	$ 272	$ —	$ —
Residential bridge loans held-for-investment	(2,139)	(29)	—
REO	(1,045)	—	—
Net investments in CAFL entities (1)	(3,636)	—	—
Other	(174)		
Investment Fair Value Changes, Net	$ (6,722)	$ (29)	$ —

(1) Includes changes in fair value of the loans held-for-investment and the ABS issued at the entities, which netted together represent the change in value of our economic investments (senior and subordinate securities) in securities at the consolidated VIEs.

Residential bridge loans are carried at fair value and generally transferred to our REIT at a premium, which diminishes as the loans mature and ultimately repay, resulting in negative fair value changes over the life of the loans. The change in fair value for our net investments in CAFL entities represents the change in fair value of the underlying securities we own in these consolidated entities and was negative in 2019, primarily due to the receipt of expected cash flows on IO securities we own. During 2019, we recorded $1 million of negative fair value changes related to residential business purpose loans we foreclosed on and carried as REO.

Other Income

Other income at this segment is primarily comprised of fee income earned from the administration of loans for a third-party legacy fund, which is winding down.

General and Administrative Expenses

General and administrative expenses for this segment include costs associated with the origination, purchase and securitization of business purpose residential loans, as well as the management of our BPL investment portfolio. General and administrative expenses increased during 2019 due to the acquisitions of 5 Arches and CoreVest. We expect these expenses to increase in 2020 as we incur a full year of expenses for these operations.

Other Expenses

Other expenses for this segment includes amortization expense from intangible assets we recorded in connection with the acquisitions of 5 Arches and CoreVest for the periods we owned each company during 2019.

Provision for Income Taxes

The provision for income taxes for this segment primarily result from its mortgage banking activities, which are performed at our taxable REIT subsidiary, and is generally correlated to the amount of this segment's contribution before income taxes in relation to the TRS's overall GAAP income and associated tax provision. For 2019, the increase in the tax provision primarily resulted from increased TRS GAAP earnings at this segment. For additional detail on income taxes, see the "Tax Provision and Taxable Income" section that follows.

Multifamily Investments Segment

Our Multifamily Investments segment consists of investments in securities collateralized by multifamily mortgage loans, as well as other investments in multifamily mortgages and related assets. The securities in this segment are primarily comprised of investments in Freddie Mac K-Series securitizations.

The following table presents the components of segment contribution for the Multifamily Investments segment for the years endedDecember 31, 2019, 2018, and 2017.

Table 19 – Multifamily Investments Segment Contribution

	Years Ended December 31,			**Changes**	
(In Thousands)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Net interest income	$ 9,712	$ 5,726	$ 3,063	$ 3,986	$ 2,663
Non-interest income					
Investment fair value changes, net	27,097	3,979	16,196	23,118	(12,217)
Other income	1,484	—	—	1,484	—
Realized gains, net	134	—	—	134	—
Total non-interest income, net	28,715	3,979	16,196	24,736	(12,217)
General and administrative expenses	(1,498)	(869)	(425)	(629)	(444)
Segment contribution before income taxes	36,929	8,836	18,834	28,093	(9,998)
Provision for income taxes	(11)	(16)	(238)	5	222
Total Segment Contribution	$ 36,918	$ 8,820	$ 18,596	$ 28,098	$ (9,776)

The following table presents details of the investments in our Multifamily Investments segment atDecember 31, 2019 and December 31, 2018.

Table 20 – Multifamily Investments

(In Thousands)	**December 31, 2019**	**December 31, 2018**
Multifamily securities at Redwood	$ 404,128	$ 429,079
Multifamily securities at consolidated Freddie Mac K-Series entities (1)	252,285	125,523
Other investments	61,018	15,092
Total Segment Investments	$ 717,431	$ 569,694

(1) Represents our economic investment in securities issued by consolidated Freddie Mac K-Series securitization entities. For GAAP purposes, we consolidated $4.41 billion of loans and $4.16 billion of ABS issued associated with these investments at December 31, 2019.

See the *Investments* and *Consolidated VIEs* sections that follow for additional details on these investments.

Overview

Segment contribution from Multifamily Investments increased in 2019, primarily as a result of positive market valuation changes driven by tightening credit spreads, as well as higher net interest income from a higher average balance of investments.

Beginning in 2018, we began investing in subordinate securities issued from Freddie Mac sponsored K-Series multifamily securitizations. Due to certain rights given to the subordinate securities, we consolidate these securitizations for GAAP purposes and we consolidated three such securitizations in 2018 and two in 2019 as result of securities we purchased in those years. We also invest in mezzanine securities issued by Freddie Mac and Fannie Mae, which represent securities subordinate to senior securities, but senior to the most subordinate bonds in a securitization. While we continued to invest in new mezzanine multifamily securities during 2019, on a net basis we reduced our investment in these assets, as we sold several seasoned securities that had appreciated in price (contributing to higher investment fair value changes in 2019) and had lower current returns. We account for most of the securities in this segment under the fair value option and gains are reflected in investment fair value changes rather than realized gains.

In addition to our multifamily securities investments, our other investments are primarily comprised of an investment in a limited partnership created to acquire multifamily loans from Freddie Mac, and investments in multifamily excess MSRs.

Net Interest Income

The increases in 2019 and 2018 in net interest income from multifamily investments were primarily driven by a higher average balance of investments in each sequential year, as we increased our investments in Freddie Mac K-Series subordinate securities in both years.

Investment Fair Value Changes, Net

The following table presents the components of investment fair value changes for our Multifamily segment by investment type for the years ended December 31, 2019, 2018, and 2017.

Table 21 – Investment Fair Value Changes, Net from Multifamily Investments

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Investment Fair Value Changes, Net			
Changes in fair value of:			
Trading securities	$ 33,233	$ 3,825	$ 15,798
Excess MSRs	(3,570)	(313)	—
Net investments in Freddie Mac K-Series entities (1)	21,430	931	—
Risk management derivatives, net	(23,996)	(464)	98
Valuation adjustments on commercial loans held-for-sale	—	—	300
Investment Fair Value Changes, Net	$ 27,097	$ 3,979	$ 16,196

(1) Includes changes in fair value of the loans held-for-investment and the ABS issued at the entities, which netted together represent the change in value of our investments (subordinate securities) at the consolidated VIEs.

The net positive investment fair value changes for 2019 were primarily driven by tightening credit spreads in our mezzanine securities as well as the subordinate securities we own in the consolidated Freddie Mac K-Series entities. The mezzanine trading securities saw price appreciation from both tightening credit spreads and lower benchmark interest rates in 2019. Nearly all of our risk management derivatives at this segment are used to manage interest rate risk on our mezzanine securities, and in 2019 they decreased in value as a result of declining benchmark interest rates. Our excess MSRs saw negative fair value changes in 2019 primarily related to the receipt of expected cash flows.

Other Income

Other income in this segment includes income from our investment in a multifamily loan fund, which we entered into in January 2019.

General and Administrative Expenses

General and administrative expenses increased over the last two years as we hired additional personnel to manage our growing investment portfolio.

Provision for Income Taxes

The provision for income taxes is generally correlated to the amount of this segment's contribution before income taxes in relation to the TRS's overall GAAP income and associated tax provision. For 2019, the TRS GAAP income earned at this segment was consistent with the prior year.

<u>Third-Party Residential Investments Segment</u>

Our Third-Party Residential Investments segment consists of investments in RMBS issued by third parties, investments in Freddie Mac SLST securitizations (which we consolidate for GAAP purposes), our servicer advance investments, and other residential credit investments not generated through our Residential Lending segment.

The following table presents the components of segment contribution for the Third-Party Residential Investments segment for the years ended December 31, 2019, 2018, and 2017.

Table 22 – Third-Party Residential Investments Segment Contribution

	Years Ended December 31,			Changes	
(In Thousands)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Net interest income	$ 34,621	$ 41,473	$ 39,149	$ (6,852)	$ 2,324
Non-interest income					
Investment fair value changes, net	44,662	(6,957)	27,684	51,619	(34,641)
Realized gains, net	15,395	19,332	10,200	(3,937)	9,132
Total non-interest income, net	60,057	12,375	37,884	47,682	(25,509)
General and administrative expenses	(2,843)	(2,855)	(2,028)	12	(827)
Other expenses	(1,106)	(18)	—	(1,088)	(18)
Segment contribution before income taxes	90,729	50,975	75,005	39,754	(24,030)
Provision for income taxes	(2,408)	(3,039)	(4,873)	631	1,834
Total Segment Contribution	$ 88,321	$ 47,936	$ 70,132	$ 40,385	$ (22,196)

The following table presents details of the investments in our Third-Party Residential Investments segment at December 31, 2019 and December 31, 2018.

Table 23 – Third-Party Residential Investments

(In Thousands)	**December 31, 2019**	**December 31, 2018**
Residential securities at Redwood	$ 466,672	$ 659,107
Residential securities at consolidated Freddie Mac SLST entities (1)	448,893	228,921
Other investments	233,886	312,688
Total Segment Investments	$ 1,149,451	$ 1,200,716

(1) Represents our economic investment in securities issued by consolidated Freddie Mac SLST securitization entities. For GAAP purposes, we consolidated $2.37 billion of loans and $1.92 billion of ABS issued associated with these investments at December 31, 2019.

See the *Investments* and *Consolidated VIEs* sections that follows for additional details on these investments.

Overview

Segment contribution from Third-Party Residential Investments increased during 2019, primarily due to positive investment fair value changes on our investments resulting from tightening credit spreads across much of this portfolio. This increase was partially offset by lower net interest income in 2019 resulting from lower discount accretion on available-for-sale securities, and lower realized gains as we sold fewer AFS securities in 2019.

Net Interest Income

Net interest income from our third-party residential investments decreased $7 million in 2019, primarily due to lower discount accretion from legacy available-for-sale securities, resulting from lower average balances of these investments during 2019. This decline was partially offset by an increase in net interest income from additional investments made in Freddie Mac SLST securities during 2019. Our net investments in these entities (i.e., the securities issued by these entities that we own) are accounted for under the fair value method and a portion of their economic return (related to the discount we purchased these securities at that we expect to receive in the future) is recognized through investment fair value changes.

Investment Fair Value Changes, Net

The following table presents the components of investment fair value changes for our Third-Party Residential Investments segment by investment type for the years ended December 31, 2019, 2018, and 2017.

Table 24 – Investment Fair Value Changes, Net from Third-Party Residential Investments

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Investment Fair Value Changes, Net			
Changes in fair value of:			
Trading securities	$ 37,488	$ (8,599)	$ 29,328
Servicer advance investments	3,001	(701)	—
Excess MSRs	310	2,136	—
Shared home appreciation options	842	—	—
Net investment in Freddie Mac SLST entities [(1)]	27,206	1,271	—
Risk management derivatives, net	(24,185)	(975)	(633)
Impairments on AFS securities	—	(89)	(1,011)
Investment Fair Value Changes, Net	$ 44,662	$ (6,957)	$ 27,684

(1) Includes changes in fair value of the loans held-for-investment and the ABS issued at the entities, which netted together represent the change in value of our investments (subordinate securities) at the consolidated VIEs.

The net positive investment fair value changes for 2019 were primarily driven by tightening credit spreads in our trading securities as well as the subordinate securities we own in the consolidated Freddie Mac SLST entities. The trading securities saw price appreciation from both tightening credit spreads and lower benchmark interest rates in 2019. Nearly all of our risk management derivatives at this segment are used to manage interest rate risk on our trading securities, and in 2019 they decreased in value as a result of declining benchmark interest rates.

The net negative investment fair value changes for 2018 were primarily driven by widening credit spreads in the fourth quarter of 2018.

Realized Gains, Net

Realized gains in this segment resulted from the sale of third-party AFS securities. Our portfolio of third-party AFS securities has decreased due to these sales and most of the new securities we purchase are accounted for under the fair value option. As such, we expect fewer realized gains from this portfolio in the future.

General and Administrative Expenses

General and administrative expenses in this segment are mostly comprised of personnel costs to manage this portfolio and have remained relatively consistent over the past two years.

Other Expenses

Other expenses in 2019 consisted of $1 million of income allocable to co-investors in our servicing advance investments.

Provision for Income Taxes

The provision for income taxes is generally correlated to the amount of this segment's contribution before income taxes in relation to the TRS's overall GAAP income and associated tax provision. For 2019, while the TRS GAAP income earned at this segment increased from the prior year, the decrease in the tax provision primarily resulted from the decrease in our overall tax provision.

Investments

This section presents additional details on our investment assets and their activity during 2019 and 2018.

Residential Loans Held-for-Investment at Redwood Portfolio

The following table provides the activity of residential loans held-for-investment at Redwood during the years ended December 31, 2019 and 2018.

Table 25 – Residential Loans Held-for-Investment at Redwood - Activity

	Years Ended December 31,	
(In Thousands)	**2019**	**2018**
Fair value at beginning of period	$ 2,383,932	$ 2,434,386
Acquisitions	39,269	—
Sales	(9,421)	—
Transfers between portfolios [(1)]	69,431	269,883
Principal repayments	(430,205)	(290,327)
Changes in fair value, net	58,891	(30,010)
Fair Value at End of Period	$ 2,111,897	$ 2,383,932

(1) Represents the net transfers of loans into our Investment Portfolio segment from our Mortgage Banking segment and their reclassification from held-for-sale to held-for-investment.

The following table presents the unpaid principal balances and weighted average coupons for residential real estate loans held-for-investment at fair value by product type at December 31, 2019.

Table 26 – Characteristics of Residential Real Estate Loans Held-for-Investment at Redwood

December 31, 2019		
(Dollars in Thousands)	**Principal Balance**	**Weighted Average Coupon**
Fixed - 30 year	$ 1,770,855	4.16 %
Fixed - 15, 20, & 25 year	54,524	3.71 %
Hybrid	227,399	4.16 %
Total Outstanding Principal	$ 2,052,778	

The outstanding residential loans held-for-investment at Redwood at December 31, 2019 were prime-quality, first-lien loans, of which 96% were originated between 2013 and 2019 and 4% were originated in 2012 and prior years. The weighted average FICO score of borrowers backing these loans was 768 (at origination) and the weighted average loan-to-value ("LTV") ratio was 66% (at origination). At December 31, 2019, two of these loans with an aggregate fair value of $1 million and an unpaid principal balance of $2 million were greater than 90 days delinquent and none of these loans were in foreclosure.

At December 31, 2019, $2.10 billion of residential loans were held by our FHLB-member subsidiary and financed with $1.78 billion of borrowings from the FHLBC. At December 31, 2019, the weighted average maturity of these FHLB borrowings was approximately six years and they had a weighted average cost of 1.88% per annum. While the interest costs on these borrowings is variable and resets every 13 weeks, we utilize various interest rate derivative instruments to hedge our interest rate risk in this portfolio.

Under a final rule published by the Federal Housing Finance Agency in January 2016, our FHLB-member subsidiary will remain an FHLB-member through the five-year transition period for captive insurance companies. Our FHLB-member subsidiary's existing $2.00 billion of FHLB debt, which matures beyond this transition period, is permitted to remain outstanding until its stated maturity. As residential loans pledged as collateral for this debt pay down, we are permitted to pledge additional loans or other eligible assets to collateralize this debt; however, we do not expect to be able to increase our subsidiary's FHLB debt above the existing $2.00 billion.

Business Purpose Residential Loans Portfolio

Single-Family Rental Loans Held-for-Investment at Redwood

The following table provides the activity of single-family rental loans held-for-investment at Redwood during theyear ended December 31, 2019.

Table 27 –Single-Family Rental Loans Held-for-Investment at Redwood - Activity

(In Thousands)		**Year Ended December 31, 2019**
Fair value at beginning of period	$	—
Transfers between portfolios		238,144
Principal repayments		(796)
Changes in fair value, net		272
Fair Value at End of Period	$	237,620

The outstanding single-family rental loans held-for-investment at Redwood atDecember 31, 2019 were first-lien, fixed-rate loans with original maturities offive, seven, or ten years. At December 31, 2019, the weighted average coupon of our single-family rental loans was4.89% and the weighted average remaining loan term wasseven years. At origination, the weighted average LTV ratio of these loans was 68% and the weighted average DSCR was 1.36 times. At December 31, 2019, none of these loans were greater than 90 days delinquent or in foreclosure.

At December 31, 2019, $211 million of single-family rental loans were held by our FHLB-member subsidiary and financed with $185 million of borrowings from the FHLBC. At December 31, 2019, the weighted average maturity of these FHLB borrowings was approximatelysix years and they had a weighted average cost of1.88% per annum.

Residential Bridge Loans Held-for-Investment at Redwood

The following table provides the activity of residential bridge loans held-for-investment at Redwood during theyear ended December 31, 2019.

Table 28 – Residential Bridge Loans Held-for-Investment at Redwood - Activity

(In Thousands)		**Year Ended December 31, 2019**
Fair value at beginning of period	$	112,798
Acquisitions		384,986
Originations [(1)]		449,388
Transfers to REO		(7,775)
Principal repayments		(192,255)
Changes in fair value, net		(2,136)
Fair Value at End of Period	$	745,006

(1) All of our residential bridge loans are originated at our TRS then transferred to our REIT. Origination fees and any mark-to-market changes on these loans prior to transfer are recognized as mortgage banking income. Once the loans are transferred to our REIT, they are classified as held-for-investment, with subsequent fair value changes recorded through Investment fair value changes, net on our consolidated statements of income.

Our $745 million of residential bridge loans held-for-investment atDecember 31, 2019 were comprised of first-lien, fixed-rate, interest-only loans with a weighted average coupon of 8.11% and original maturities of six to 24 months. At origination, the weighted average FICO score of borrowers backing these loans was732 and the weighted average LTV ratio of these loans was 70%. At December 31, 2019, of the 2,653 loans in this portfolio, 31 loans with an aggregate fair value of$12 million and an unpaid principal balance of $14 million were in foreclosure, of which 15 of these loans with an aggregate fair value of$7 million and an unpaid principal balance of$9 million were greater than 90 days delinquent.

To finance our residential bridge loans, we had eight business purpose residential loan warehouse facilities with a total uncommitted borrowing limit of $1.48 billion at December 31, 2019. The weighted average cost of the borrowings outstanding under these facilities during 2019 was 5.09%.

Real Estate Securities Portfolio

The following table sets forth our real estate securities activity by collateral type for the years ended December 31, 2019 and 2018.

Table 29 – Real Estate Securities Activity by Collateral Type

Year Ended December 31, 2019	**Residential**			**Multifamily**	
(In Thousands)	**Senior**	**Mezzanine**	**Subordinate**	**Mezzanine**	**Total**
Beginning fair value	$ 246,285	$ 218,147	$ 558,983	$ 429,079	$ 1,452,494
Transfers [1]	—	—	—	(4,951)	(4,951)
Acquisitions					
Sequoia securities	8,882	—	4,848	—	13,730
Third-party securities	45,063	70,169	81,559	148,611	345,402
Sales					
Sequoia securities	—	(55,312)	(6,362)	—	(61,674)
Third-party securities	(68,661)	(86,754)	(308,350)	(181,752)	(645,517)
Gains on sales and calls, net	9,453	3,059	11,175	134	23,821
Effect of principal payments [2]	(33,855)	(10,594)	(15,678)	(20,444)	(80,571)
Change in fair value, net	(31,308)	13,082	41,915	33,451	57,140
Ending Fair Value [3]	$ 175,859	$ 151,797	$ 368,090	$ 404,128	$ 1,099,874

Year Ended December 31, 2018	Residential			Multifamily	
(In Thousands)	Senior	Mezzanine	Subordinate	Mezzanine	Total
Beginning fair value	$ 249,838	$ 331,452	$ 571,195	$ 324,025	$ 1,476,510
Transfers [(1)]	—	—	—	(17,181)	(17,181)
Acquisitions					
Sequoia securities	29,968	14,204	7,739	—	51,911
Third-party securities	78,868	54,675	250,503	225,521	609,567
Sales					
Sequoia securities	—	(54,743)	(16,953)	—	(71,696)
Third-party securities	(67,333)	(114,222)	(248,957)	(79,741)	(510,253)
Gains on sales and calls, net	16,973	4,354	5,714	—	27,041
Effect of principal payments [(2)]	(35,410)	(8,896)	(9,545)	(28,051)	(81,902)
Change in fair value, net	(26,619)	(8,677)	(713)	4,506	(31,503)
Ending Fair Value	$ 246,285	$ 218,147	$ 558,983	$ 429,079	$ 1,452,494

(1) Represents the derecognition of mezzanine securities we owned in Freddie Mac K-Series securitizations when we began to consolidate the securitizations upon the acquisition of subordinate interests in these entities.

(2) The effect of principal payments reflects the change in fair value due to principal payments, which is calculated as the cash principal received on a given security during the period multiplied by the prior quarter ending price or acquisition price for that security.

(3) At December 31, 2019, excludes $254 million and $191 million of securities retained from our consolidated Sequoia Choice and CAFL securitizations, respectively, as well as $449 million and $252 million of securities we owned that were issued by consolidated Freddie Mac SLST and Freddie Mac K-Series securitizations, respectively. For additional details on our Choice, CAFL, Freddie Mac SLST and multifamily loans, see the subsections titled "*Consolidated Sequoia Choice Entities,*" "*Consolidated CAFL Entities,*" "*Consolidated Freddie Mac SLST Entities,*" and "*Consolidated Freddie Mac K-Series Entities*" that follow.

During the year ended December 31, 2019, we sold $707 million of mostly lower-yielding securities as part of our ongoing portfolio optimization activities.

At December 31, 2019, our securities consisted of fixed-rate assets (86%), adjustable-rate assets (9%), hybrid assets that reset within the next year (4%), and hybrid assets that reset between 12 and 36 months (1%). For the portions of our securities portfolio that are sensitive to changes in interest rates, we seek to minimize this interest rate risk by using various derivative instruments.

We directly finance our holdings of real estate securities with a combination of capital and collateralized debt in the form of repurchase (or "repo") financing. The following table presents the fair value of our residential securities that were financed with repurchase debt at December 31, 2019.

Table 30 – Real Estate Securities Financed with Repurchase Debt

December 31, 2019 (Dollars in Thousands, except Weighted Average Price)	**Real Estate Securities** (1)	**Repurchase Debt**	**Allocated Capital**	**Weighted Average Price** (2)	**Financing Haircut** (3)
Residential Securities					
Senior	$ 72,512	$ (66,474)	$ 6,038	$ 101	8%
Mezzanine (4)	238,024	(210,454)	27,570	103	12%
Re-performing (5)	412,069	(314,825)	97,244	90	24%
Total Residential Securities	722,605	(591,753)	130,852	95	18%
Multifamily Securities (6)	641,541	(504,826)	136,715	89	21%
BPL Securities (7)	127,840	(80,000)	47,840	76	37%
Total Securities	$ 1,491,986	$ (1,176,579)	$ 315,407		

(1) Amounts represent carrying value of securities, which are held at GAAP fair value.

(2) GAAP fair value per $100 of principal. Weighted average price excludes IO securities.

(3) Allocated capital divided by GAAP fair value.

(4) Includes $111 million of securities we owned that were issued by consolidated Sequoia Choice securitizations, which we consolidate in accordance with GAAP.

(5) Includes $382 million of securities we owned that were issued by consolidated Freddie Mac SLST securitizations, which we consolidate in accordance with GAAP.

(6) Includes $252 million of securities we owned that were issued by consolidated Freddie Mac K-Series securitizations, which we consolidate in accordance with GAAP.

(7) Includes $128 million of securities we owned that were issued by consolidated CAFL securitizations, which we consolidate in accordance with GAAP.

At December 31, 2019, we had short-term debt incurred through repurchase facilities of $1.18 billion, which was secured by $1.49 billion of real estate securities (including securities owned in consolidated securitization entities). Our repo borrowings were made under facilities with 10 different counterparties, and the weighted average cost of funds for these facilities during 2019 was approximately 3.35%. Additionally, at December 31, 2019, real estate securities with a fair value of $39 million were financed with long-term FHLBC debt, and real estate securities with a fair value of $250 million (including securities owned in consolidated Sequoia Choice securitization entities), were financed with long-term, non-mark-to-market recourse repurchase debt through our subordinate securities financing facility. The remaining $471 million of our securities, including certain securities we own that were issued by consolidated securitization entities, were financed with capital.

At December 31, 2019, the credit performance on the securities we financed through repurchase facilities generally continued to perform in line with, or better than our expectations. In addition to the allocated capital listed in the table above that directly supports our repurchase facilities (the "financing haircut"), we continue to hold a designated amount of supplemental risk capital available for potential margin calls or future obligations relating to these borrowings.

The following table presents our real estate securities atDecember 31, 2019 and December 31, 2018, categorized by portfolio vintage (the years the securities were issued), and by priority of cash flows (senior, mezzanine, and subordinate). We have additionally separated securities issued through our Sequoia platform or by third parties, including the Agencies.

Table 31 – Real Estate Securities by Vintage and Type

December 31, 2019

(In Thousands)	Sequoia 2012-2019	Third Party 2013-2019	Agency CRT 2018-2019	Third Party <=2008	Total Residential Securities	Multifamily 2016-2019	Total Real Estate Securities
Senior [1]	$ 48,765	$ 101,297	$ —	$ 25,797	$ 175,859	$ —	$ 175,859
Mezzanine [2]	43,980	107,817	—	—	151,797	404,128	555,925
Subordinate [1]	136,329	124,809	96,016	10,936	368,090	—	368,090
Total Securities [3]	$ 229,074	$ 333,923	$ 96,016	$ 36,733	$ 695,746	$ 404,128	$ 1,099,874

December 31, 2018

(In Thousands)	Sequoia 2012-2018	Third Party 2013-2018	Agency CRT 2013-2018	Third Party <=2008	Total Residential Securities	Multifamily 2015-2018	Total Real Estate Securities
Senior [1]	$ 61,179	$ 96,069	$ —	$ 89,037	$ 246,285	$ —	$ 246,285
Mezzanine [2]	99,977	118,170	—	—	218,147	429,079	647,226
Subordinate [1]	130,271	135,826	276,894	15,992	558,983	—	558,983
Total Securities [3]	$ 291,427	$ 350,065	$ 276,894	$ 105,029	$ 1,023,415	$ 429,079	$ 1,452,494

(1) At December 31, 2019 and December 31, 2018, senior Sequoia and third-party securities included $64 million and $82 million of IO securities, respectively. At December 31, 2019 and December 31, 2018, subordinate third-party securities included $6 million and $12 million of IO securities, respectively. Our interest-only securities included $36 million and $43 million of A-IO-S securities at December 31, 2019 and December 31, 2018, respectively, that we retained from certain of our Sequoia securitizations. These securities represent certificated servicing strips and therefore may be negatively impacted by the operating and funding costs related to servicing the associated securitized mortgage loans.

(2) Mezzanine includes securities initially rated AA through BBB- and issued in 2012 or later.

(3) At December 31, 2019, excluded $254 million, $449 million, $252 million, and $191 million of securities we owned that were issued by consolidated Sequoia Choice, Freddie Mac SLST, Freddie Mac K-Series, and CAFL securitizations, respectively. At December 31, 2018, excluded $194 million, $229 million, and $126 million of securities we owned that were issued by consolidated Sequoia Choice, Freddie Mac SLST, and Freddie Mac K-Series securitizations, respectively. For GAAP purposes we consolidated $11.26 billion of loans and $10.11 billion of non-recourse ABS debt associated with these retained securities.

The following tables present the components of the interest income we earned on AFS securities for the years ended December 31, 2019, 2018, and 2017.

Table 32 – Interest Income — AFS Securities

Year Ended December 31, 2019					Yield as a Result of		
(Dollars in Thousands)	Interest Income	Discount (Premium) Amortization	Total Interest Income	Average Amortized Cost	Interest Income	Discount (Premium) Amortization	Total Interest Income
Residential							
Senior	$ 2,082	$ 3,214	$ 5,296	$ 29,555	7.04%	10.87%	17.91%
Mezzanine	692	249	941	17,143	4.04%	1.45%	5.49%
Subordinate	10,768	4,458	15,226	135,553	7.94%	3.29%	11.23%
Total AFS Securities	$ 13,542	$ 7,921	$ 21,463	$ 182,251	7.43%	4.35%	11.78%

Year Ended December 31, 2018					Yield as a Result of		
(Dollars in Thousands)	Interest Income	Discount (Premium) Amortization	Total Interest Income	Average Amortized Cost	Interest Income	Discount (Premium) Amortization	Total Interest Income
Residential							
Senior	$ 6,290	$ 8,174	$ 14,464	$ 106,304	5.92%	7.69%	13.61%
Mezzanine	1,999	838	2,837	47,414	4.22%	1.77%	5.99%
Subordinate	11,341	5,086	16,427	148,416	7.64%	3.43%	11.07%
Total AFS Securities	$ 19,630	$ 14,098	$ 33,728	$ 302,134	6.50%	4.67%	11.16%

Year Ended December 31, 2017					Yield as a Result of		
(Dollars in Thousands)	Interest Income	Discount (Premium) Amortization	Total Interest Income	Average Amortized Cost	Interest Income	Discount (Premium) Amortization	Total Interest Income
Residential							
Senior	$ 8,361	$ 11,176	$ 19,537	$ 153,619	5.44%	7.28%	12.71%
Mezzanine	4,860	2,215	7,075	123,571	3.93%	1.79%	5.72%
Subordinate	11,368	5,404	16,772	153,205	7.42%	3.53%	10.95%
Total AFS Securities	$ 24,589	$ 18,795	$ 43,384	$ 430,395	5.71%	4.37%	10.08%

Mortgage Servicing Rights Portfolio

Our MSRs are held and managed at our taxable REIT subsidiary and typically are acquired together with loans from originators and then separately recognized under GAAP when the MSR is retained and the associated loan is sold to a third party or transferred to a Sequoia residential securitization sponsored by us that meets the GAAP criteria for sale. Although we own the rights to service loans, we contract with sub-servicers to perform these activities. Our receipt of MSR income is not subject to any covenants other than customary performance obligations associated with servicing residential loans. If a sub-servicer we contract with was to fail to perform these obligations, our servicing rights could be terminated and we would evaluate our MSR asset for impairment at that time.

The following table provides the activity for MSRs for the years ended December 31, 2019 and 2018.

Table 33 – MSR Activity

	Years Ended December 31,	
(In Thousands)	**2019**	**2018**
Balance at beginning of period	$ 60,281	$ 63,598
Additions		
MSRs retained from third-party loan sales	868	328
Sold MSRs	—	(1,077)
Market valuation adjustments	(18,925)	(2,568)
Balance at End of Period	$ 42,224	$ 60,281

The following table presents characteristics of our MSR investments and their associated loans at December 31, 2019.

Table 34 – Characteristics of MSR Investments Portfolio

(Dollars in Thousands)	**December 31, 2019**
Unpaid principal balance	$ 4,346,545
Fair value of MSRs	$ 42,224
MSR values as percent of unpaid principal balance	0.97 %
Gross cash yield (1)	0.30 %
Number of loans	6,836
Average loan size	$ 636
Average coupon	3.97 %
Average loan age (months)	64
Average original loan-to-value	67 %
Average original FICO score	771
60+ day delinquencies	0.22 %

(1) Gross cash yield is calculated by dividing the gross servicing fees we received for the year ended December 31, 2019, by the weighted average notional balance of loans associated with MSRs we owned during the year.

At December 31, 2019, nearly all of our MSRs were comprised of base MSRs and within this portfolio we did not own any portion of a servicing right related to any loan where we did not own the entire servicing right. At December 31, 2019 and December 31, 2018, we had $0.4 million and $1 million, respectively, of servicer advances outstanding related to our MSRs, which are presented in Other assets on our consolidated balance sheets.

Servicing Investments

In 2018, we invested in servicer advances and excess MSRs associated with legacy RMBS (See *Note 10* in Part II, Item 8 of this Annual Report on Form 10-K). At December 31, 2019, our servicer advance investments and excess MSRs associated with this investment had a carrying value of $169 million and $16 million, respectively. The following table presents characteristics of the residential mortgage loans underlying these investments at December 31, 2019.

Table 35 – Characteristics of Servicing Investments

(Dollars in Thousands)	**December 31, 2019**
Unpaid principal balance	$ 7,937,704
Number of loans	40,898
Average loan size	$ 194
Average coupon	5.13 %
Average loan age (months)	172
Average original loan-to-value	74 %
Average original FICO score	695
60+ day delinquencies (1)	9.00 %

(1) Includes unpaid principal balance of $467 million, or 6% of total portfolio, of loans in foreclosure or transferred to REO.

Consolidated VIEs

Consolidated Legacy Sequoia Entities

We sponsored Sequoia securitization entities prior to 2012 that are reported on our consolidated balance sheets for financial reporting purposes in accordance with GAAP. Each of these entities is independent of Redwood and of each other and the assets and liabilities of these entities are not, respectively, owned by us or legal obligations of ours. We record the assets and liabilities of the consolidated Legacy Sequoia entities at fair value, based on the estimated fair value of the debt securities (ABS) issued from the securitizations in accordance with GAAP provisions for collateralized financing entities. At December 31, 2019, the estimated fair value of our investments in the consolidated Legacy Sequoia entities was $6 million.

The following tables present the statements of income (loss) for the years endedDecember 31, 2019, 2018, and 2017 and the balance sheets of the consolidated Legacy Sequoia entities at December 31, 2019 and December 31, 2018. All amounts in the statements of income and balance sheets presented below are included in our consolidated financial statements and within the corporate/other section of our segment financial statements.

Table 36 – Consolidated Legacy Sequoia Entities Statements of Income (Loss)

	Years Ended December 31,			Changes	
(In Thousands)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Interest income	$ 17,649	$ 20,036	$ 19,407	$ (2,387)	$ 629
Interest expense	(14,418)	(16,519)	(14,789)	2,101	(1,730)
Net interest income	3,231	3,517	4,618	(286)	(1,101)
Investment fair value changes, net	(1,545)	(1,016)	(8,027)	(529)	7,011
Net Income (Loss) from Consolidated Legacy Sequoia Entities	$ 1,686	$ 2,501	$ (3,409)	$ (815)	$ 5,910

Table 37 – Consolidated Legacy Sequoia Entities Balance Sheets

(In Thousands)	**December 31, 2019**	**December 31, 2018**
Residential loans held-for-investment, at fair value	$ 407,890	$ 519,958
Other assets	1,258	4,911
Total Assets	$ 409,148	$ 524,869
Other liabilities	$ 395	$ 571
Asset-backed securities issued, at fair value	402,465	512,240
Total liabilities	402,860	512,811
Equity (fair value of Redwood's retained investments in entities)	6,288	12,058
Total Liabilities and Equity	$ 409,148	$ 524,869

Net Interest Income at Consolidated Legacy Sequoia Entities

The decreases in net interest income in 2019 and 2018 were primarily attributable to the continued paydown of loans at the consolidated entities.

Investment Fair Value Changes, net at Consolidated Legacy Sequoia Entities

Investment fair value changes, net at consolidated Legacy Sequoia entities includes the change in fair value of the residential loans held-for-investment, REO, and the ABS issued at the entities, which netted together represent the change in value of our retained investments in the consolidated Legacy Sequoia entities. The negative investment fair value changes in each of the years presented was primarily related to a decline in fair value on retained IO securities, as the basis of these assets continues to diminish.

Residential Loans at Consolidated Legacy Sequoia Entities

The following table provides details of residential loan activity at consolidated Legacy Sequoia entities for the years ended December 31, 2019 and 2018.

Table 38 – Residential Loans at Consolidated Legacy Sequoia Entities — Activity

(In Thousands)	Years Ended December 31, 2019	2018
Balance at beginning of period	$ 519,958	$ 632,817
Principal repayments	(116,899)	(146,210)
Transfers to REO	(339)	(4,104)
Changes in fair value, net	5,170	37,455
Balance at End of Period	$ 407,890	$ 519,958

First lien adjustable rate mortgage ("ARM") and hybrid loans comprise all of the loans in the consolidated Legacy Sequoia entities and were primarily originated in 2006 or prior. For outstanding loans at consolidated Legacy Sequoia entities at December 31, 2019, the weighted average FICO score of borrowers backing these loans was 727 (at origination) and the weighted average original LTV ratio was 65% (at origination). At December 31, 2019 and December 31, 2018, the unpaid principal balance of loans at consolidated Legacy Sequoia entities delinquent greater than 90 days was $10 million and $14 million, respectively, of which the unpaid principal balance of loans in foreclosure was $4 million and $5 million, respectively.

Consolidated Sequoia Choice Entities

As of December 31, 2019, we had issued nine securitizations primarily comprised of expanded-prime Choice loans that we consolidate for financial reporting purposes in accordance with GAAP. These entities are independent of Redwood and the assets and liabilities of these entities are not, respectively, owned by us or legal obligations of ours. We record the assets and liabilities of the consolidated Sequoia Choice entities at fair value, based on the estimated fair value of the debt securities (ABS) issued from the securitizations, in accordance with GAAP provisions for collateralized financing entities. At December 31, 2019, our economic investment in the consolidated Sequoia Choice entities had an estimated fair value of $256 million. The securities retained from our consolidated Sequoia Choice entities included senior and subordinate securities of $13 million and $241 million, respectively, at December 31, 2019.

The following tables present the statements of income for the years ended December 31, 2019, 2018, and 2017 and the balance sheets of the consolidated Sequoia Choice entities at December 31, 2019 and December 31, 2018. All amounts in the statements of income and balance sheets presented below are included in our consolidated financial statements and are included in our Residential Lending segment.

Table 39 – Consolidated Sequoia Choice Entities Statements of Income

(In Thousands)	Years Ended December 31, 2019	2018	2017	Changes '19/'18	'18/'17
Interest income	$ 108,798	$ 69,645	$ 5,133	$ 39,153	$ 64,512
Interest expense	(93,354)	(59,769)	(4,275)	(33,585)	(55,494)
Net interest income	15,444	9,876	858	5,568	9,018
Investment fair value changes, net	6,947	444	(323)	6,503	767
Net Income from Consolidated Sequoia Choice Entities	$ 22,391	$ 10,320	$ 535	$ 12,071	$ 9,785

Table 40 – Consolidated Sequoia Choice Entities Balance Sheets

(In Thousands)	**December 31, 2019**	**December 31, 2018**
Residential loans, held-for-investment, at fair value	$ 2,291,463	$ 2,079,382
Other assets	9,851	10,010
Total Assets	$ 2,301,314	$ 2,089,392
Other liabilities	$ 7,759	$ 8,202
Asset-backed securities issued, at fair value	2,037,198	1,885,010
Total liabilities	2,044,957	1,893,212
Equity (fair value of Redwood's retained investments in entities)	256,357	196,180
Total Liabilities and Equity	$ 2,301,314	$ 2,089,392

The following table presents residential loan activity at the consolidated Sequoia Choice entities for the years endedDecember 31, 2019 and 2018.

Table 41 – Residential Loans Held-for-Investment at Consolidated Sequoia Choice Entities - Activity

	Years Ended December 31,	
(In Thousands)	**2019**	**2018**
Balance at beginning of period	$ 2,079,382	$ 620,062
New securitization issuance	1,076,671	1,777,229
Principal repayments	(849,357)	(305,252)
Changes in fair value, net	(15,233)	(12,657)
Balance at End of Period	$ 2,291,463	$ 2,079,382

The outstanding loans held-for-investment at our Sequoia Choice entities atDecember 31, 2019 were primarily comprised of prime-quality, first-lien, 30-year, fixed-rate loans originated in 2017 or 2018. The gross weighted average coupon of these loans was 4.73%, the weighted average FICO score of borrowers backing these loans was744 (at origination) and the weighted average original LTV ratio was 75% (at origination). At December 31, 2019, nine of these loans with an aggregate unpaid principal balance of $7 million were greater than 90 days delinquent and three of these loans with an aggregate unpaid principal balance of$2 million was in foreclosure. At December 31, 2018, three of these loans with an aggregate unpaid principal balance of$2 million were greater than 90 days delinquent and none of these loans were in foreclosure.

Consolidated Freddie Mac SLST Entities

Beginning in 2018, we invested in certain subordinate securities backed by pools of seasoned re-performing and, to a lesser extent, non-performing residential mortgage loans that were issued by certain Freddie Mac SLST securitization entities and we were required to consolidate these entities for financial reporting purposes in accordance with GAAP. These entities are independent of Redwood and the assets and liabilities of these entities are not, respectively, owned by us or legal obligations of ours. We record the assets and liabilities of the consolidated Freddie Mac SLST entities at fair value, based on the estimated fair value of the debt securities (ABS) issued from the securitizations, in accordance with GAAP provisions for collateralized financing entities. At December 31, 2019, our economic investment in the consolidated Freddie Mac SLST entities had an estimated fair value of $451 million, and was comprised of subordinate securities.

The following tables present the statements of income for the years ended December 31, 2019, 2018, and 2017 and the balance sheets of the consolidated Freddie Mac SLST entities at December 31, 2019 and December 31, 2018. All amounts in the statements of income and balance sheets presented below are included in our consolidated financial statements and are included in our Third-Party Residential Investments segment.

Table 42 – Consolidated Freddie Mac SLST Entities Statements of Income

	Years Ended December 31,			Changes	
(In Thousands)	2019	2018	2017	'19/'18	'18/'17
Interest income	$ 57,840	$ 4,453	$ —	$ 53,387	$ 4,453
Interest expense	(42,574)	(3,156)	—	(39,418)	(3,156)
Net interest income	15,266	1,297	—	13,969	1,297
Investment fair value changes, net	27,206	1,271	—	25,935	1,271
Net Income from Consolidated Freddie Mac SLST Entities	$ 42,472	$ 2,568	$ —	$ 39,904	$ 2,568

Table 43 – Consolidated Freddie Mac SLST Entities Balance Sheets

(In Thousands)	December 31, 2019	December 31, 2018
Residential loans, held-for-investment, at fair value	$ 2,367,215	$ 1,222,669
Other assets	7,758	3,926
Total Assets	$ 2,374,973	$ 1,226,595
Other liabilities	$ 5,374	$ 2,907
Asset-backed securities issued, at fair value	1,918,322	993,748
Total liabilities	1,923,696	996,655
Equity (fair value of Redwood's investments in entities)	451,277	229,940
Total Liabilities and Equity	$ 2,374,973	$ 1,226,595

The following table presents residential loan activity at the consolidated Freddie Mac SLST entity for the years ended December 31, 2019 and 2018.

Table 44 – Residential Loans Held-for-Investment at Consolidated Freddie Mac SLST Entities - Activity

	Years Ended December 31,	
(In Thousands)	2019	2018
Balance at beginning of period	$ 1,222,669	$ —
Consolidation of residential loans held in securitization trusts	1,190,995	1,206,645
Principal repayments	(109,537)	(5,272)
Transfers to REO	(495)	—
Changes in fair value, net	63,583	21,296
Balance at End of Period	$ 2,367,215	$ 1,222,669

The outstanding re-performing and non-performing residential loans held-for-investment at the Freddie Mac SLST entities at December 31, 2019 were first-lien, fixed- or step-rate loans that have been modified. At securitization, the weighted average FICO score of borrowers backing these loans was 600 and the weighted average LTV ratio of these loans was 73%. At December 31, 2019, 587 of these loans with an aggregate unpaid principal balance of $135 million were greater than 90 days delinquent and 208 of these loans with an aggregate unpaid principal balance of $33 million were in foreclosure. At December 31, 2018, 306 of these loans with an aggregate unpaid principal balance of $51 million were greater than 90 days delinquent and none of these loans were in foreclosure. Due to the credit profile of re-performing and non-performing loans, our investment in the subordinate securities issued by the Freddie Mac SLST entities was made based on an expectation of defaults and credit losses that will occur on the underlying pool of residential mortgage loans, which was reflected in our purchase price yield. At December 31, 2019, delinquencies and credit losses in the portfolio remained in line with our expectations.

Consolidated Freddie Mac K-Series Entities

Beginning in 2018, we invested in certain subordinate securities issued by Freddie Mac K-Series securitization entities and were required to consolidate these entities for financial reporting purposes in accordance with GAAP. Each of these entities is independent of Redwood and of each other and the assets and liabilities of these entities are not, respectively, owned by us or legal obligations of ours. We record the assets and liabilities of the consolidated Freddie Mac K-Series entities at fair value, based on the estimated fair value of the debt securities (ABS) issued from the securitizations, in accordance with GAAP provisions for collateralized financing entities. At December 31, 2019, our economic investment in the consolidated Freddie Mac K-Series entities had an estimated fair value of $253 million, and was comprised of subordinate securities.

The following tables present the statements of income for the years ended December 31, 2019, 2018, and 2017 and the balance sheets of the consolidated Freddie Mac K-Series entities at December 31, 2019 and December 31, 2018. All amounts in the statements of income and balance sheets presented below are included in our consolidated financial statements and are included in our Multifamily Investments segment.

Table 45 – Consolidated Freddie Mac K-Series Entities Statements of Income

	Years Ended December 31,			Changes	
(In Thousands)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Interest income	$ 132,600	$ 21,322	$ —	$ 111,278	$ 21,322
Interest expense	(126,948)	(19,985)	—	(106,963)	(19,985)
Net interest income	5,652	1,337	—	4,315	1,337
Investment fair value changes, net	21,430	931	—	20,499	931
Net Income from Consolidated Freddie Mac K-Series Entities	$ 27,082	$ 2,268	$ —	$ 24,814	$ 2,268

Table 46 – Consolidated Freddie Mac K-Series Entities Balance Sheets

(In Thousands)	**December 31, 2019**	**December 31, 2018**
Multifamily loans, held-for-investment, at fair value	$ 4,408,524	$ 2,144,598
Other assets	13,539	6,595
Total Assets	$ 4,422,063	$ 2,151,193
Other liabilities	$ 12,887	$ 6,239
Asset-backed securities issued, at fair value	4,156,239	2,019,075
Total liabilities	4,169,126	2,025,314
Equity (fair value of Redwood's investments in entities)	252,937	125,879
Total Liabilities and Equity	$ 4,422,063	$ 2,151,193

The following table presents multifamily loan activity at the consolidated Freddie Mac K-Series entities for the years endedDecember 31, 2019 and 2018.

Table 47 – Multifamily Loans Held-for-Investment at Consolidated Freddie Mac K-Series Entities - Activity

	Years Ended December 31,	
(In Thousands)	**2019**	**2018**
Balance at beginning of period	$ 2,144,598	$ —
Consolidation of multifamily loans held in securitization trusts	2,162,385	2,099,916
Principal repayments	(28,543)	(1,873)
Changes in fair value, net	130,084	46,555
Balance at End of Period	$ 4,408,524	$ 2,144,598

The outstanding multifamily loans held-for-investment at the Freddie Mac K-Series entities atDecember 31, 2019 were first lien, fixed-rate loans that were primarily originated between 2015 and 2017 and had original loan terms of seven to ten years and an original weighted average LTV ratio of 69%. At December 31, 2019, the weighted average coupon of these loans was 4.13% and the weighted average loan term wassix years. At both December 31, 2019 and December 31, 2018, none of these loans were greater than 90 days delinquent or in foreclosure.

Consolidated CAFL Entities

As a result of our acquisition of CoreVest in the fourth quarter of 2019, which included the acquisition of certain subordinate and IO securities in CAFL securitizations, we were required to consolidate certain CAFL entities for financial reporting purposes in accordance with GAAP. Each of these entities is independent of Redwood and of each other and the assets and liabilities of these entities are not, respectively, owned by us or legal obligations of ours. We record the assets and liabilities of the consolidated CAFL entities at fair value, based on the estimated fair value of the debt securities (ABS) issued from the securitizations, in accordance with GAAP provisions for collateralized financing entities. At December 31, 2019, our economic investment in the consolidated CAFL entities had an estimated fair value of $195 million, and was comprised of subordinate and interest-only securities.

The following tables present the statements of income for the years endedDecember 31, 2019, 2018, and 2017 and the balance sheets of the consolidated CAFL entities at December 31, 2019 and December 31, 2018. All amounts in the statements of income and balance sheets presented below are included in our consolidated financial statements and are included in our Business Purpose Lending segment.

Table 48 – Consolidated CAFL Entities Statements of Income

	Years Ended December 31,			Changes	
(In Thousands)	**2019**	**2018**	**2017**	**'19/'18**	**'18/'17**
Interest income	$ 23,072	$ —	$ —	$ 23,072	$ —
Interest expense	(17,173)	—	—	(17,173)	—
Net interest income	5,899	—	—	5,899	—
Investment fair value changes, net	(3,636)	—	—	(3,636)	—
Net Income from Consolidated CAFL Entities	$ 2,263	$ —	$ —	$ 2,263	$ —

Table 49 – Consolidated CAFL Entities Balance Sheets

(In Thousands)	December 31, 2019	December 31, 2018
Single-family rental loans, held-for-investment, at fair value	$ 2,192,552	$ —
Other assets	11,367	—
Total Assets	$ 2,203,919	$ —
Other liabilities	$ 7,485	$ —
Asset-backed securities issued, at fair value	2,001,251	—
Total liabilities	2,008,736	—
Equity (fair value of Redwood's investments in entities)	195,183	—
Total Liabilities and Equity	$ 2,203,919	$ —

The following table presents single-family rental loan activity at the consolidated CAFL entities for the years endedDecember 31, 2019 and 2018.

Table 50 – Single-Family Rental Loans Held-for-Investment at Consolidated CAFL Entities - Activity

	Years Ended December 31,	
(In Thousands)	2019	2018
Balance at beginning of period	$ —	$ —
Consolidation of single-family rental loans held in securitization trusts	1,829,281	
New securitization issuances	394,506	—
Principal repayments	(17,611)	—
Transfers to REO	1,057	—
Changes in fair value, net	(14,681)	—
Balance at End of Period	$ 2,192,552	$ —

The outstanding single-family rental loans held-for-investment at CAFL entities atDecember 31, 2019 were first lien, fixed-rate loans with original maturities of five, seven, or ten years. At December 31, 2019, the weighted average coupon of our single-family rental loans was5.70% and the weighted average remaining loan term was seven years. At origination, the weighted average LTV ratio of these loans was 68% and the weighted average debt service coverage ratio was 1.35 times. At December 31, 2019, 18 of these loans with an aggregate unpaid principal balance of$29 million were greater than 90 days delinquent and five of these loans with an aggregate unpaid principal balance of $9 million were in foreclosure.

Tax Provision and Taxable Income

Tax Provision under GAAP

For the years ended December 31, 2019, 2018, and 2017, we recorded tax provisions of $7 million, $11 million, and $12 million, respectively. Our tax provision is primarily derived from GAAP net income or loss at our TRS, as we do not book a material tax provision associated with income generated at our REIT. Our TRS income is generally earned from our mortgage banking activities, MSRs, and other non-REIT eligible security investments.

Taxable Income

The following table summarizes our taxable income and distributions to shareholders for the years ended December 31, 2019, 2018, and 2017. For each of these periods, we had no undistributed REIT taxable income, after the application of net operating loss carryforwards.

Table 51 – Taxable Income

	Years Ended December 31,		
(In Thousands except per Share Data)	**2019 est. (1)**	**2018**	**2017**
REIT taxable income	$ 136,255	$ 110,161	$ 90,122
Taxable REIT subsidiary income	56,650	58,551	31,675
Total Taxable Income	$ 192,905	$ 168,712	$ 121,797
REIT taxable income per share	$ 1.28	$ 1.38	$ 1.17
Total taxable income per share	$ 1.82	$ 2.13	$ 1.59
Distributions to shareholders	$ 126,139	$ 94,134	$ 86,271
Distributions to shareholders per share	$ 1.20	$ 1.18	$ 1.12

(1) Our tax results for the year ended December 31, 2019 are estimates until we file tax returns for 2019.

Taxable Income Distribution Requirement

As a REIT, we are required to distribute at least 90% of our taxable income, after the application of available federal net operating loss carryforwards (NOLs), to our shareholders. For 2019, our estimated REIT taxable income of $136 million exceeded our available NOLs by $98 million, and therefore our minimum dividend distribution requirement was $88 million. The following table details our federal NOLs and capital loss carryforwards available as of December 31, 2019.

Table 52 - Federal Net Operating and Capital Loss Carryforwards

	Loss Carryforward Expiration by Period					
(In Thousands)	**1 to 3 Years**	**3 to 5 Years**	**5 to 15 Years**	**After 15 Years**	**No Expiration**	**Total**
REIT Loss Carryforwards						
Net operating loss	$ —	$ —	$ (28,488)	$ —	$ —	$ (28,488)
Capital loss	—	—	—	—	—	—
Total REIT Loss Carryforwards	$ —	$ —	$ (28,488)	$ —	$ —	$ (28,488)
TRS Loss Carryforwards						
Net operating loss	$ —	$ —	$ —	$ —	$ (374)	$ (374)
Capital loss	—	—	—	—	—	—
Total TRS Loss Carryforwards	$ —	$ —	$ —	$ —	$ (374)	$ (374)

At December 31, 2018, we maintained $39 million of NOLs at the REIT level. In order to utilize these carryforwards, taxable income must exceed our dividend distributions. During 2019, we distributed $126 million to shareholders, which was less than our estimated taxable income of $136 million. We therefore expect to report REIT taxable income on our 2019 federal income tax return after the application of a dividends paid deduction. As a result, we expect $10 million of our federal NOLs at the REIT level to be utilized in 2019. Federal NOLs at the REIT level do not expire until 2029.

The Tax Act created a limitation on the annual usage of REIT NOLs to 80% of REIT taxable income, effective with respect to NOLs arising in taxable years beginning after December 31, 2017. We do not expect this to materially impact our REIT.

Our TRS NOL carryforwards were acquired in the 5 Arches acquisition. They were generated after December 31, 2017 and therefore carry forward indefinitely. These NOLs are subject to the Separate Return Limitation Year ("SRLY") rules, which can limit the usage of the NOLs. However, we do not expect this to prevent us from utilizing these NOLs over time.

Tax Characteristics of Distributions to Shareholders

For the year ended December 31, 2019, we declared and distributed four regular quarterly dividends totaling $126 million ($1.20 per share). Under the federal income tax rules applicable to REITs, the taxable portion of any distribution to shareholders is determined by (i) taxable income of the REIT, exclusive of the dividends paid deduction and NOLs; and (ii) net capital gains recognized by the REIT, exclusive of capital loss carryforwards. The income or loss generated at our TRS does not directly affect the tax characterization of our dividends.

Our 2019 dividend distributions are expected to be characterized for federal income tax purposes as 73% ordinary dividend income and 27% long-term capital gain dividend income. Under the federal income tax rules applicable to REITs, none of the 2019 dividend distributions are expected to be characterized as a return of capital or qualified dividends.

Beginning in 2018, the Tax Act provides that individual taxpayers may generally deduct 20% of their ordinary REIT dividends from taxable income. This results in a maximum federal effective tax rate of 29.6% on an individual taxpayer's ordinary REIT dividends, compared to the highest marginal rate of 37%. This deduction does not apply to REIT dividends classified as qualified dividends or long-term capital gains dividends, as those dividends are taxed at a maximum rate of 20% for individuals.

Differences between Estimated Total Taxable Income and GAAP Income

Differences between estimated taxable income and GAAP income are largely due to the following: (i) we cannot establish loss reserves for future anticipated events for tax but we can for GAAP, as realized credit losses are expensed when incurred for tax and these losses can be anticipated through lower yields on assets or through loss provisions for GAAP; (ii) the timing, and possibly the amount, of some expenses (e.g., certain compensation expenses) are different for tax than for GAAP; (iii) since amortization and impairments differ for tax and GAAP, the tax and GAAP gains and losses on sales may differ, resulting in differences in realized gains on sale; (iv) at the REIT and certain TRS entities, unrealized gains and losses on market valuation adjustments of loans, securities and derivatives are not recognized for tax until the instrument is sold or extinguished; (v) for tax, basis may not be assigned to mortgage servicing rights retained when whole loans are sold resulting in lower tax gain on sale; (vi) for tax, we do not consolidate securitization entities as we do under GAAP; and, (vii) dividend distributions to our REIT from our TRS are included in REIT taxable income, but not GAAP income. As a result of these differences in accounting, our estimated taxable income can vary significantly from our GAAP income during certain reporting periods.

For tax years beginning after December 31, 2018, the Tax Act may require acceleration of discount accretion for federal income tax purposes for debt instruments with original issue discount. We have evaluated the effects of this change, and it did not have a material income tax effect for us.

The tax basis in assets and liabilities at the REIT was $6.35 billion and $4.68 billion, respectively, at December 31, 2019. The GAAP basis in assets and liabilities at the REIT was $16.22 billion and $14.52 billion, respectively, at December 31, 2019. The primary difference in both the tax and GAAP assets and liabilities is attributable to securitization entities that are consolidated for GAAP reporting purposes but not for tax purposes.

The tables below reconcile our estimated total taxable income to our GAAP income for theyears ended December 31, 2019, 2018, and 2017.

Table 53 – Differences between Estimated Total Taxable Income and GAAP Net Income

	Year Ended December 31, 2019				
(In Thousands, except per Share Data)	**REIT (Est.)**	**TRS (Est.)**	**Total Tax (Est.)**	**GAAP**	**Differences**
Interest income	$ 263,087	$ 57,393	$ 320,480	$ 622,281	$ (301,801)
Interest expense	(130,326)	(53,224)	(183,550)	(479,808)	296,258
Net interest income	132,761	4,169	136,930	142,473	(5,543)
Realized credit losses	(534)	—	(534)	—	(534)
Mortgage banking activities, net	—	80,146	80,146	87,266	(7,120)
Investment fair value changes, net	(1,727)	6,034	4,307	35,500	(31,193)
General and administrative expenses	(46,781)	(62,956)	(109,737)	(118,672)	8,935
Other income	10,041	13,356	23,397	19,257	4,140
Realized gains, net	43,540	19,073	62,613	23,821	38,792
Other expenses	(667)	(2,684)	(3,351)	(13,022)	9,671
Provision for income taxes	(378)	(488)	(866)	(7,440)	6,574
Net Income	$ 136,255	$ 56,650	$ 192,905	$ 169,183	$ 23,722
Income per basic common share	$ 1.28	$ 0.54	$ 1.82	$ 1.63	$ 0.19

	Year Ended December 31, 2018				
(In Thousands, except per Share Data)	**REIT**	**TRS**	**Total Tax**	**GAAP**	**Differences**
Interest income	$ 212,522	$ 52,878	$ 265,400	$ 378,717	$ (113,317)
Interest expense	(96,126)	(43,021)	(139,147)	(239,039)	99,892
Net interest income	116,396	9,857	126,253	139,678	(13,425)
Realized credit losses	(1,738)	—	(1,738)	—	(1,738)
Mortgage banking activities, net	—	57,212	57,212	59,566	(2,354)
Investment fair value changes, net	5,513	(586)	4,927	(25,689)	30,616
General and administrative expenses	(41,065)	(36,957)	(78,022)	(82,782)	4,760
Other income	1,762	15,822	17,584	13,070	4,514
Realized gains, net	30,001	13,098	43,099	27,041	16,058
Other expenses	(409)	344	(65)	(196)	131
Provision for income taxes	(299)	(239)	(538)	(11,088)	10,550
Net Income	$ 110,161	$ 58,551	$ 168,712	$ 119,600	$ 49,112
Income per basic common share	$ 1.38	$ 0.75	$ 2.13	$ 1.47	$ 0.66

	Year Ended December 31, 2017				
(In Thousands, except per Share Data)	REIT	TRS	Total Tax	GAAP	Differences
Interest income	$ 186,214	$ 38,865	$ 225,079	$ 248,057	$ (22,978)
Interest expense	(59,875)	(29,787)	(89,662)	(108,816)	19,154
Net interest income	126,339	9,078	135,417	139,241	(3,824)
Realized credit losses	(3,442)	—	(3,442)	—	(3,442)
Mortgage banking activities, net	—	44,143	44,143	53,908	(9,765)
Investment fair value changes, net	(16,483)	5,292	(11,191)	10,374	(21,565)
General and administrative expenses	(41,589)	(31,614)	(73,203)	(77,156)	3,953
Other income (1)	26,382	4,943	31,325	12,436	18,889
Realized gains, net	(735)	(1)	(736)	13,355	(14,091)
Provision for income taxes	(350)	(166)	(516)	(11,752)	11,236
Net Income	$ 90,122	$ 31,675	$ 121,797	$ 140,406	$ (18,609)
Income per basic common share	$ 1.17	$ 0.42	$ 1.59	$ 1.78	$ (0.19)

(1) For 2017, other income at the REIT is primarily comprised of dividend income from our TRS.

Potential Taxable Income Volatility

We expect period-to-period volatility in our estimated taxable income. A description of the factors that can cause this volatility is provided below.

Recognition of Gains and Losses on Sale

Since the computation of amortization and impairments on assets may differ for tax and GAAP and many of our assets held for investment purposes are marked-to-market for GAAP, but not for tax, the tax and GAAP basis on assets sold or called may differ, resulting in differences in gains and losses on sale or call. In addition, capital losses in excess of capital gains are generally disallowed and carry forward to future tax years. Subsequent capital gains realized for tax may be offset by prior capital losses and, thus, not affect taxable income. At December 31, 2019, we had no capital loss carryforwards at the REIT or TRS level.

Prepayments on Securities

We have retained certain IO securities since the time they were issued from Sequoia securitizations we sponsored and purchased additional third-party IO securities. Our tax basis in these securities was $159 million at December 31, 2019. The return on IOs is sensitive to prepayments and, to the extent prepayments vary period to period, income from these IOs will vary. Typically, fast prepayments reduce yields and slow prepayments increase yields. We are not permitted to recognize a negative yield under tax accounting rules, so during periods of fast prepayments our periodic premium expense for tax purposes can be relatively low and the tax cost basis for these securities may not be significantly reduced. Currently, our tax basis is above the fair values for these IOs in the aggregate. If a securitization is called, the remaining tax basis in the IO is expensed, creating an ordinary loss at the call date.

Prepayments also affect the taxable income recognition on other securities we own. For tax purposes, we are required to use particular prepayment assumptions for the remaining lives of each security. As actual prepayment speeds vary, the yield we recognize for tax purposes will be adjusted accordingly. Thus, to the extent actual prepayments differ from our long-term assumptions or vary from period to period, the yield recognized will also vary and this difference could be material.

Credit Losses on Securities and Loans

To determine estimated taxable income, we are generally not permitted to anticipate, or reserve for, credit losses on investments which are generally purchased at a discount. For tax purposes, we accrue the entire purchase discount on a security into taxable income over the expected life of the security. Estimated taxable income is reduced when actual credit losses occur. As we have no credit reserves or allowances for tax, any future credit losses on securities or loans will have a more significant impact on tax earnings than on GAAP earnings and may create significant taxable income volatility to the extent the level of credit losses fluctuates during reporting periods. Credit losses are based on our tax basis, which differs from our basis for GAAP purposes. We anticipate an additional $14 million of credit losses for tax on securities, based on our projection of principal balance losses and assuming a similar tax basis as we have recently experienced, although the timing of actual losses is difficult to accurately project.

Our estimated total taxable income for the years endedDecember 31, 2019, 2018, and 2017 included $1 million, $2 million, and $3 million, respectively, in realized credit losses on investments.

Compensation Expense

The total tax expense for equity award compensation is dependent upon varying factors such as the timing of payments of dividend equivalent rights, the distribution of deferred stock units and performance stock units, and the cash deferrals to and withdrawals from our Executive Deferred Compensation Plan. For GAAP purposes, the total expense associated with an equity award is determined at the award date and is recognized over the vesting period. For tax, the total expense is recognized at the date of distribution or exercise, not the award date. In addition, some compensation may not be deductible for tax if it exceeds certain levels. An exception may apply to performance-based compensation that is paid pursuant to a written and binding contract in effect before November 2, 2017. Thus, the total amount of compensation expense, as well as the timing, could be significantly different for tax than for GAAP.

As an example, for GAAP we expense the grant date fair value of performance stock units (PSUs) granted over the vesting term of those PSUs (regardless of the degree to which the performance conditions for vesting are ultimately satisfied, if at all), whereas for tax the value of the PSUs that actually vest in accordance with the performance conditions of those awards and are subsequently distributed to the award recipient is recorded as an expense on the date of distribution. For example, if no PSUs under a particular grant ultimately vest, due to the failure to satisfy the performance conditions, no tax expense will be recorded for those PSUs, even though we would have already recorded expense for GAAP equal to the grant date fair value of the PSU awards. Conversely, for example, if performance is such that a number of shares of common stock equal to 200% of the PSU award ultimately vest and are delivered to the award recipient, expense for tax will equal the common stock value on the date of distribution of 200% of the number of PSUs originally granted. This expense for tax could significantly exceed the recorded expense for GAAP.

In addition, since the timing of distributions of deferred stock units, performance stock units, or cash out of the Executive Deferred Compensation Plan is based on employees' deferral elections, it can be difficult to project when the tax expense will occur.

Mortgage Servicing Rights

For GAAP purposes, we recognize MSRs through the direct acquisition of servicing rights from third parties or through the retention of MSRs associated with residential loans that we have acquired and subsequently sold to non-consolidated securitization entities or to third parties. For tax purposes, basis in our MSR assets is recognized through the direct acquisition of servicing rights from third parties, or to the extent that a retained MSR entitles us to receive a servicing fee in excess of so-called normal servicing (or the right to receive reasonable compensation for services to be performed under the mortgage serving contract). Tax basis in our normal MSR assets is not recognized when MSRs are retained from sales of loans to non-consolidated securitization entities or to third parties, thereby creating a favorable temporary GAAP to tax difference from sale of the loans. For the year ended December 31, 2019, we retained $1 million of MSRs from jumbo loan sales for which no tax basis was recognized. No other material tax basis in our MSR assets was recognized in 2019.

For GAAP purposes, mortgage servicing fee income, net of servicing expense, as well as changes in the estimated fair value of our MSRs, is recognized on our consolidated statements of income over the life of the MSR asset. For tax purposes, only mortgage servicing fee income, net of servicing expense is recognized as taxable income. Any MSR where basis is recognized for tax purposes through acquisition is amortized as a tax expense over a finite life.

Periodic changes in the market values of MSRs are recorded through the income statement for GAAP purposes, but not for tax purposes. Only when MSRs are sold will a tax gain or loss be recognized. As tax basis is not recognized for retained MSRs and the rules for writing-off tax basis of purchased MSRs are restrictive, the tax gain from the sale of MSRs can be substantial.

LIQUIDITY AND CAPITAL RESOURCES

Summary

In addition to the proceeds from equity and debt capital-raising transactions, our principal sources of cash consist of borrowings under mortgage loan warehouse facilities, securities repurchase agreements, payments of principal and interest we receive from our investment portfolios, and cash generated from our operating activities. Our most significant uses of cash are to purchase and originate mortgage loans for our mortgage banking operations, to fund investments in residential loans, to purchase investment securities and make other investments, to repay principal and interest on our warehouse facilities, repurchase agreements, and long-term debt, to make dividend payments on our capital stock, and to fund our operations.

At December 31, 2019, our total capital was $2.60 billion and included $1.83 billion of equity capital and $0.79 billion of convertible notes and long-term debt on our consolidated balance sheet, including $245 million of convertible debt due in 2023, $200 million of convertible debt due in 2024, $201 million of exchangeable debt due in 2025, and $140 million of trust-preferred securities due in 2037.

As of December 31, 2019, our cash and liquidity capital included $260 million of capital available for investment. While we believe our available capital, together with additional liquidity we believe we can source through continued portfolio optimization (including collateralized borrowings or assets sales), is sufficient to fund our operations and currently contemplated investment activities and to repay existing debt, we may raise equity or debt capital from time to time to acquire assets and make long-term investments to expand our investment portfolio, including funding large purchases of portfolios of residential, multifamily, or business purpose residential loans or securities, or other portfolio investments, for acquisitions (which could include acquisitions to expand our mortgage banking operating platforms), or for other purposes. To the extent we seek to raise additional capital, our approach will continue to be based on what we believe to be in the best interests of our shareholders.

We are subject to risks relating to our liquidity and capital resources, including risks relating to incurring debt under residential loan warehouse facilities, securities repurchase facilities, and other short- and long-term debt facilities and other risks relating to our use of derivatives. A further discussion of these risks is set forth below under the heading "*Risks Relating to Debt Incurred under Short- and Long-Term Borrowing Facilities*" and in Part I, Item 1A - Risk Factors of this Annual Report on Form 10-K.

Cash Flows and Liquidity for the Year Ended December 31, 2019

Cash flows from our mortgage banking activities and our investments can be volatile from quarter to quarter depending on many factors, including the timing and amount of loan and securities acquisitions and sales and repayments, the profitability of mortgage banking activities, as well as changes in interest rates, prepayments, and credit losses. Therefore, cash flows generated in the current period are not necessarily reflective of the long-term cash flows we will receive from these investments or activities.

Cash Flows from Operating Activities

Cash flows from operating activities were negative $1.17 billion in 2019. This amount includes the net cash utilized during the period from the purchase and sale of residential mortgage loans associated with our mortgage banking activities. Purchases of loans are financed to a large extent with short-term debt, for which changes in cash are included as a component of financing activities. Excluding cash flows from the purchase, sale, and principal payments of loans classified as held-for-sale, cash flows from operating activities were negative $76 million in 2019, positive $100 million in 2018, and positive $37 million in 2017. The variance in these amounts from 2019 to 2018 was largely attributable to cash outflows for the net settlements of derivatives and payment of margin on derivatives agreements, which totaled $175 million in 2019, compared to net cash inflows of $35 million in 2018.

Cash Flows from Investing Activities

During 2019, our net cash provided by investing activities was $1.03 billion and primarily resulted from proceeds from principal payments on loans held-for-investment and sales of real estate securities. Although we generally intend to hold our investment securities as long-term investments, we may sell certain of these securities in order to manage our interest rate risk and liquidity needs, to meet other operating objectives, and to adapt to market conditions. We cannot predict the timing and impact of future sales of investment securities, if any.

Because many of our investment securities are financed through repurchase agreements, a significant portion of the proceeds from any sales or principal payments of our investment securities could be used to repay balances under these financing sources. Similarly, all or a significant portion of cash flows from principal payments of loans at consolidated securitization entities would generally be used to repay ABS issued by those entities.

During 2019, we deployed capital into several new investments, including the acquisitions of 5 Arches and CoreVest, multifamily and re-performing residential loan securities, business purpose residential loans, shared home appreciation options, and a limited partnership to acquire light-renovation multifamily loans.

As presented in the "*Supplemental Noncash Information*" subsection of our consolidated statements of cash flows, during 2019, 2018, and 2017, we transferred residential loans between held-for-sale and held-for-investment classification, retained securities from Sequoia securitizations we sponsored, and consolidated certain multifamily and re-performing residential securitization trusts which represent significant non-cash transactions that were not included in cash flows from investing activities.

Cash Flows from Financing Activities

During 2019, our net cash provided by financing activities was $225 million. This primarily resulted from proceeds of $1.40 billion from the issuance of asset-backed securities from our Sequoia Choice and CAFL securitizations, proceeds of $451 million from the issuance of common stock, and proceeds of $387 million from the issuance of exchangeable notes and borrowings under our subordinate securities financing facility. These cash inflows were partially offset by $1.12 billion of repayments of ABS issued, $741 million of net repayments of short-term debt, and the distribution of $129 million of dividends.

In February 2020, the Board of Directors declared a regular dividend of $0.32 per share for the first quarter of 2020, which is payable on March 30, 2020 to shareholders of record on March 16, 2020.

In accordance with the terms of our outstanding deferred stock units and restricted stock units, which are stock-based compensation awards, each time we declare and pay a dividend on our common stock, we are required to make a dividend equivalent payment in that same per share amount on each outstanding deferred stock unit and restricted stock unit.

Repurchase Authorization

In February 2018, our Board of Directors approved an authorization for the repurchase of our common stock, increasing the total amount authorized for repurchases of common stock to $100 million, and also authorized the repurchase of outstanding debt securities, including convertible and exchangeable debt. This authorization increased the previous share repurchase authorization approved in February 2016 and has no expiration date. This repurchase authorization does not obligate us to acquire any specific number of shares or securities. Under this authorization, shares or securities may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended. At December 31, 2019, $100 million of the current authorization remained available for the repurchase of shares of our common stock. Like other investments we may make, any repurchases of our common stock or debt securities under this authorization would reduce our available capital described above.

Leverage

Our debt-to-equity leverage ratio increased during 2019, as we increased the amount of borrowings we utilized to finance our investments, including through additional short-term and long-term borrowings. Additionally, our leverage ratio is impacted by the amount of loans we hold for sale at our mortgage banking businesses and our amount of undeployed capital available for investment. At December 31, 2019, we estimate we had approximately $260 million of capital available for investment. As this capital is deployed, our leverage ratio is expected to increase, all other factors being equal, as we generally make investments in loans, securities, and other assets with a combination of capital and borrowings secured by the assets we invest in. In general, higher leverage creates greater liquidity risk as the amount of our equity relative to borrowings decreases, including liquidity risks of the types described in Part I, Item 1A of this Annual Report on Form 10-K under the heading "*Risk Factors*," and in Part II, Item 7A of this Annual Report on Form 10-K under the heading "*Market Risks*."

Short-Term Debt

In the ordinary course of our business, we use recourse debt through several different types of borrowing facilities and use cash borrowings under these facilities to, among other things, fund the acquisition and origination of residential and multifamily loans (including those we acquire and originate in anticipation of securitization), finance investments in securities and other investments, and otherwise fund our business and operations.

At December 31, 2019, we had four short-term residential loan warehouse facilities with a total outstanding debt balance of $186 million (secured by residential loans with an aggregate fair value of $202 million) and a total uncommitted borrowing limit of $1.43 billion. In addition, at December 31, 2019, we had an aggregate outstanding short-term debt balance of $1.18 billion under 10 securities repurchase facilities, which were secured by securities with a fair market value of $619 million. In addition, at December 31, 2019, the fair value of our real estate securities pledged as collateral included $111 million of securities retained from our consolidated Sequoia Choice securitizations, as well as $382 million and $252 million of securities we owned that were issued by consolidated Freddie Mac SLST and Freddie Mac K-series securitizations, respectively. We also had a secured line of credit with no outstanding debt balance and a total borrowing limit of $10 million (secured by securities with a fair market value of $3 million) at December 31, 2019.

To finance our business purpose residential loan investments, at December 31, 2019, we had eight business purpose residential loan warehouse facilities with a total outstanding debt balance of $814 million (secured by business purpose residential loans with an aggregate fair value of $988 million) and a total uncommitted borrowing limit of $1.48 billion.

Servicer advance financing consists of non-recourse short-term securitization debt used to finance servicer advance investments we made beginning in the fourth quarter of 2018. At December 31, 2019, the fair value of servicer advances, cash and restricted cash pledged as collateral was $176 million. At December 31, 2019, the accrued interest payable balance on this debt was $0.2 million and the unamortized capitalized commitment costs were $1 million.

During the fourth quarter of 2018, $201 million principal amount of 5.625% exchangeable senior notes and $1 million of unamortized deferred issuance costs were reclassified from long-term debt to short-term debt as the maturity of the notes was less than one year as of November 2018. In November 2019, we repaid these $201 million exchangeable notes and all related accrued interest in full. See *Note 15* for additional information on our convertible notes.

During 2019, the highest balance of our short-term debt outstanding was $3.30 billion.

Long-Term Debt

FHLBC Borrowings

In July 2014, our FHLB-member subsidiary entered into a borrowing agreement with the Federal Home Loan Bank of Chicago. At December 31, 2019, under this agreement, our subsidiary could incur borrowings up to $2.00 billion, also referred to as “advances,” from the FHLBC secured by eligible collateral, including, but not limited to residential and business purpose mortgage loans. During the year ended December 31, 2019, our FHLB-member subsidiary made no additional borrowings under this agreement. Under a final rule published by the Federal Housing Finance Agency in January 2016, our FHLB-member subsidiary will remain an FHLB member through a five-year transition period for captive insurance companies. Our FHLB-member subsidiary's existing $2.00 billion of FHLB debt, which matures beyond this transition period, is permitted to remain outstanding until stated maturity. As mortgage loans pledged as collateral for this debt pay down, we are permitted to pledge additional loans or other eligible assets to collateralize this debt; however, we do not expect to be able to increase our subsidiary's FHLB debt above the existing $2.00 billion maximum.

At December 31, 2019, $2.00 billion of advances were outstanding under this agreement, which were classified as long-term debt, with a weighted average interest rate of 1.88% per annum and a weighted average maturity of six years. At December 31, 2019, accrued interest payable on these borrowings was $7 million. Advances under this agreement are charged interest based on a specified margin over the FHLBC’s 13-week discount note rate, which resets every 13 weeks. At December 31, 2019, our total advances under this agreement were secured by residential mortgage loans with a fair value of $2.10 billion, single-family rental loans with a fair value of $211 million, securities with a fair value of $39 million, and $59 million of restricted cash. This agreement also requires our subsidiary to purchase and hold stock in the FHLBC in an amount equal to a specified percentage of outstanding advances. At December 31, 2019, our subsidiary held $43 million of FHLBC stock that is included in Other assets on our consolidated balance sheets.

Subordinate Securities Financing Facility

In the third quarter of 2019, a subsidiary of Redwood entered into a repurchase agreement providing non-mark-to-market recourse debt financing. The financing is fully and unconditionally guaranteed by Redwood, with an interest rate of approximately 4.21% through September 2022. The financing facility may be terminated, at our option, in September 2022, and has a final maturity in September 2024, provided that the interest rate on amounts outstanding under the facility increases between October 2022 and September 2024. At December 31, 2019, we had borrowings under this facility totaling $185 million, net of $1 million of deferred issuance costs, for a carrying value of $184 million. At December 31, 2019, the fair value of real estate securities pledged as collateral under this long-term debt facility was $250 million, which included $125 million of securities retained from our consolidated Sequoia Choice securitizations. This facility is included in Long-term debt, net on our consolidated balance sheets at December 31, 2019.

Convertible Notes

In September 2019, one of our taxable subsidiaries issued $201 million principal amount of 5.75% exchangeable senior notes due 2025. After deducting the underwriting discount and offering costs, we received approximately $195 million of net proceeds. Including amortization of deferred debt issuance costs, the weighted average interest expense yield on these exchangeable notes is approximately 6.3% per annum. At December 31, 2019, the outstanding principal amount of these notes was $201 million and the accrued interest payable balance on this debt was $3 million.

In June 2018, we issued $200 million principal amount of 5.625% convertible senior notes due 2024 at an issuance price of 99.5%. After deducting the issuance discount, the underwriting discount and offering costs, we received approximately $194 million of net proceeds. Including amortization of deferred debt issuance costs and the debt discount, the weighted average interest expense yield on these convertible notes is approximately 6.2% per annum. At December 31, 2019, the outstanding principal amount of these notes was $200 million and the accrued interest payable on this debt was $5 million.

In August 2017, we issued $245 million principal amount of 4.75% convertible senior notes due 2023. After deducting the underwriting discount and issuance costs, we received approximately $238 million of net proceeds. Including amortization of deferred debt issuance costs, the weighted average interest expense yield on these convertible notes is approximately 5.3% per annum. At December 31, 2019, the outstanding principal amount of these notes was $245 million and the accrued interest payable balance on this debt was $4 million.

In November 2014, one of our taxable subsidiaries issued $205 million principal amount of 5.625% exchangeable senior notes due 2019. After deducting the underwriting discount and issuance costs, we received approximately $198 million of net proceeds. Including amortization of deferred debt issuance costs, the weighted average interest expense yield on these exchangeable notes is approximately 6.3% per annum. During the year ended December 31, 2016, we repurchased $4 million par value of these notes at a discount and recorded a gain on extinguishment of debt of $0.3 million in Realized gains, net on our consolidated statements of income. During the fourth quarter of 2018, $201 million principal amount of 5.625% exchangeable senior notes and $1 million of unamortized deferred issuance costs were reclassified from long-term debt to short-term debt as the maturity of the notes was less than one year as of November 2018. In November 2019, we repaid these $201 million exchangeable notes and all related accrued interest in full. See *Note 15* for additional information on our convertible notes.

Trust Preferred Securities and Subordinated Notes

At December 31, 2019, we had trust preferred securities and subordinated notes outstanding of $100 million and $40 million, respectively, issued by us in 2006 and 2007. This debt requires quarterly interest payments at a floating rate equal to three-month LIBOR plus 2.25% and must be redeemed no later than 2037. Prior to 2014, we entered into interest rate swaps with aggregate notional values totaling $140 million to hedge the variability in this long-term debt interest expense. Including hedging costs and amortization of deferred debt issuance costs, the weighted average interest expense yield on our trust preferred securities and subordinated notes is approximately 6.9% per annum. These swaps are accounted for as cash flow hedges with all interest recorded as a component of net interest income and other valuation changes recorded as a component of equity.

Asset-Backed Securities

At December 31, 2019, there were $425 million (principal balance) of loans owned at consolidated Legacy Sequoia securitization entities, which were funded with $420 million (principal balance) of ABS issued at these entities. At December 31, 2019, there were $2.24 billion (principal balance) of loans owned at consolidated Sequoia Choice securitization entities, which were funded with $1.98 billion (principal balance) of ABS issued at these entities. At December 31, 2019, there were $2.43 billion (principal balance) of loans owned at the consolidated Freddie Mac SLST securitization entity, which were funded with $1.84 billion (principal balance) of ABS issued at this entity. At December 31, 2019, there were $4.20 billion (principal balance) of loans owned at the consolidated Freddie Mac K-Series securitization entities, which were funded with $3.84 billion (principal balance) of ABS issued at these entities. At December 31, 2019, there were $2.08 billion (principal balance) of loans owned at the consolidated CAFL securitization entities, which were funded with $1.88 billion (principal balance) of ABS issued at these entities. The loans and ABS issued from these entities are reported at estimated fair value. See the subsections titled "*Consolidated Legacy Sequoia Entities,*" "*Consolidated Sequoia Choice Entities," "Consolidated Freddie Mac SLST Entities," "Consolidated Freddie Mac K-Series Entities,"* and *"Consolidated CAFL Entities"* in the *Results of Operations* section of this MD&A for additional details on these entities.

Risks Relating to Debt Incurred under Short- and Long-Term Borrowing Facilities

As described above under the heading "*Results of Operations*," in the ordinary course of our business, we use debt financing obtained through several different types of borrowing facilities to, among other things, finance the acquisition and origination of residential and multifamily mortgage loans (including those we acquire and originate in anticipation of sale or securitization), and finance investments in securities and other investments. We may also use short- and long-term borrowings to fund other aspects of our business and operations, including the repurchase of shares of our common stock. Debt incurred under these facilities is generally either the direct obligation of Redwood Trust, Inc., or the direct obligation of subsidiaries of Redwood Trust, Inc. and guaranteed by Redwood Trust, Inc.

Residential and Business Purpose Loan Warehouse Facilities One source of our short-term debt financing is secured borrowings under residential loan warehouse facilities that, as of December 31, 2019, were in place with four different financial institution counterparties. In addition, as of December 31, 2019, we had eight business purpose loan warehouse facilities secured by single-family rental loans and residential bridge loans, in place with six financial institution counterparties. Under the four residential loan warehouse facilities, we had an aggregate borrowing limit of $1.43 billion at December 31, 2019, and under the eight business purpose loan warehouse facilities we had an aggregate borrowing limit of $1.48 billion at December 31, 2019. However, these facilities (except one business purpose loan warehouse facility secured by residential bridge loans) are uncommitted, which means that any request we make to borrow funds under these facilities may be declined for any reason, even if at the time of the borrowing request we have then-outstanding borrowings that are less than the borrowing limits under these facilities. Short-term financing for residential or business purpose mortgage loans is obtained under these facilities by our transfer of mortgage loans to the counterparty in exchange for cash proceeds (in an amount less than 100% of the principal amount of the transferred mortgage loans), and our covenant to reacquire those loans from the counterparty for the same amount plus a financing charge.

In order to obtain financing for a residential or business purpose loan under these facilities, the loan must initially (and continuously while the financing remains outstanding) meet certain eligibility criteria, including, without limitation, that the loan is not in a delinquent status, except that certain business purpose loan facilities may allow a loan to continue to be financed if it becomes delinquent, if it meets specified conditions. In addition, under these warehouse facilities, residential or business purpose loans can only be financed for a maximum period, which period would not generally exceed 364 days. We generally intend to repay the short-term financing of a loan under one of these facilities at or prior to the expiration of that financing with the proceeds of a securitization or other sale of that loan, through the proceeds of other short-term borrowings, or with other equity or long-term debt capital. While a residential or business purpose loan is financed under a warehouse facility, to the extent the market value of the loan declines (which market value is generally determined by the counterparty under the facility), we are required to either immediately reacquire the loan or meet a margin requirement to pledge additional collateral, such as cash or additional residential loans, in an amount at least equal to the decline in value. See further discussion below under the heading "*Margin Call Provisions Associated with Short-Term Debt and Other Debt Financing*"

Because these warehouse facilities are uncommitted (except one business purpose loan warehouse facility secured by residential bridge loans), at any given time we may not be able to obtain additional financing under them when we need it, exposing us to, among other things, liquidity risks of the types described in Part I, Item 1A of this Annual Report on Form 10-K under the heading "*Risk Factors*," and in Part II, Item 7A of this Annual Report on Form 10-K under the heading "*Market Risks*." In addition, with respect to residential or business purpose loans that at any given time are already being financed through these warehouse facilities, we are exposed to market, credit, liquidity, and other risks of the types described in Part I, Item 1A of this Annual Report on Form 10-K under the heading " *Risk Factors*," and in Part II, Item 7A of this Annual Report on Form 10-K under the heading "*Market Risks*," if and when those loans become ineligible to be financed, decline in value, or have been financed for the maximum term permitted under the applicable facility.

Under our residential and business purpose loan warehouse facilities, we also make various representations and warranties and have agreed to certain covenants, events of default, and other terms that if breached or triggered can result in our being required to immediately repay all outstanding amounts borrowed under these facilities and these facilities being unavailable to use for future financing needs. In particular, the terms of these facilities include financial covenants, cross-default provisions, judgment default provisions, and other events of default (such as, for example, events of default triggered by one of the following: a change in control over Redwood, regulatory investigation or enforcement action against Redwood, Redwood's failure to continue to qualify as a REIT for tax purposes, or Redwood's failure to maintain the listing of its common stock on the New York Stock Exchange). Under a cross-default provision, an event of default is triggered (and the warehouse facility becomes unavailable and outstanding amounts borrowed thereunder become due and payable) if an event of default or similar event occurs under another borrowing or credit facility we maintain in excess of a specified amount. Under a judgment default provision, an event of default is triggered (and the warehouse facility becomes unavailable and outstanding amounts borrowed thereunder become due and payable) if a judgment for damages in excess of a specified amount is entered against us in any litigation and we are unable to promptly satisfy the judgment. Financial covenants included in these warehouse facilities are further described below under the heading "*Financial Covenants Associated with Short-Term Debt and Other Debt Financing*."

These residential and business purpose loan warehouse facilities could also become unavailable and outstanding amounts borrowed thereunder could become immediately due and payable if there is a material adverse change in our business. If we breach or trigger the representations and warranties, covenants, events of default, or other terms of our warehouse facilities, we are exposed to liquidity and other risks, including of the type described in Part I, Item 1A of this Annual Report on Form 10-K under the heading "*Risk Factors*," and in Part II, Item 7A of this Annual Report on Form 10-K under the heading "*Market Risks*."

In addition to the residential and business purpose loan warehouse facilities described above, in the ordinary course of business we may seek to establish additional warehouse facilities that may be of a similar or greater size and may have similar or more restrictive terms. In the event a counterparty to one or more of our warehouse facilities becomes insolvent or unable or unwilling to perform its obligations under the facility, we may be unable to access short-term financing we need or fail to recover the full value of our mortgage loans financed.

Securities Repurchase Facilities. Another source of short-term debt financing is through securities repurchase facilities we have established with various different financial institution counterparties. Under these facilities we do not have an aggregate borrowing limit; however, these facilities are uncommitted, which means that any request we make to borrow funds under these facilities may be declined for any reason. Short-term financing for securities is obtained under these facilities by our transfer of securities to the counterparty in exchange for cash proceeds (in an amount less than 100% of the fair value of the transferred securities), and our covenant to reacquire those securities from the counterparty for the same amount plus a financing charge.

Under these securities repurchase facilities, securities are financed for a fixed period, which would not generally exceed 90 days. We generally intend to repay the short-term financing of a security under one of these facilities through a renewal of that financing with the same counterparty, through a sale of the security, or with other equity or long-term debt capital. While a security is financed under a securities repurchase facility, to the extent the value of the security declines (which value is generally determined by the counterparty under the facility), we are required to either immediately reacquire the security or meet a margin requirement to pledge additional collateral, such as cash or U.S. Treasury securities, in an amount at least equal to the decline in value. See further discussion below under the heading "*Margin Call Provisions Associated with Short-Term Debt and Other Debt Financing*."

At the end of the fixed period applicable to the financing of a security under a securities repurchase facility, if we intend to continue to obtain financing for that security we would typically request the same counterparty to renew the financing for an additional fixed period. If the same counterparty does not renew the financing, it may be difficult for us to obtain financing for that security under one of our other securities repurchase facilities, due to the fact that the financial institution counterparties to our securities repurchase facilities generally only provide financing for securities that we purchased from them or one of their affiliates.

Because our securities repurchase facilities are uncommitted, at any given time we may not be able to obtain additional financing under them when we need it, exposing us to, among other things, liquidity risks of the types described in Part I, Item 1A of this Annual Report on Form 10-K under the heading "*Risk Factors*," and in Part II, Item 7A of this Annual Report on Form 10-K under the heading "*Market Risks*." In addition, with respect to securities that at any given time are already being financed through our securities repurchase facilities, we are exposed to market, credit, liquidity, and other risks of the types described in Part I, Item 1A of this Annual Report on Form 10-K under the heading "*Risk Factors*," and in Part II, Item 7A of this Annual Report on Form 10-K under the heading "*Market Risks*," if and when those securities decline in value, or have been financed for the maximum term permitted under the applicable facility.

Under our securities repurchase facilities, we also make various representations and warranties and have agreed to certain covenants, events of default, and other terms (including of the type described above under the heading "*Residential and Business Purpose Loan Warehouse Facilities*") that if breached or triggered can result in our being required to immediately repay all outstanding amounts borrowed under these facilities and these facilities being unavailable to use for future financing needs. In particular, the terms of these facilities include financial covenants, cross-default provisions, judgment default provisions, and other events of default (including of the type described above under the heading "*Residential and Business Purpose Loan Warehouse Facilities*"). Financial covenants included in our repurchase facilities are further described below under the heading "*Financial Covenants Associated with Short-Term Debt and Other Debt Financing*"

Our securities repurchase facilities could also become unavailable and outstanding amounts borrowed thereunder could become immediately due and payable if there is a material adverse change in our business. If we breach or trigger the representations and warranties, covenants, events of default, or other terms of our securities repurchase facilities, we are exposed to liquidity and other risks, including of the type described in Part I, Item 1A of this Annual Report on Form 10-K under the heading "*Risk Factors*," and in Part II, Item 7A of this Annual Report on Form 10-K under the heading "*Market Risks*."

In the ordinary course of business we may seek to establish additional securities repurchase facilities that may have similar or more restrictive terms. In the event a counterparty to one or more of our securities repurchase facilities becomes insolvent or unable or unwilling to perform its obligations under the facility, we may be unable to access the short-term financing we need or fail to recover the full value of our securities financed.

Other Short-Term Debt Facility. We also maintain a $10 million committed line of short-term credit from a bank, which is secured by our pledge of certain mortgage-backed securities we own. This bank line of credit is an additional source of short-term financing for us. Similar to the uncommitted warehouse and securities repurchase facilities described herein, under this committed line we make various representations and warranties and have agreed to certain covenants, events of default, and other terms that if breached or triggered can result in our being required to immediately repay all outstanding amounts borrowed under this facility and this facility being unavailable to use for future financing needs. The margin call provisions and financial covenants included in this committed line are further described below under the headings "*Margin Call Provisions Associated with Short-Term Debt and Other Debt Financing*" and "*Financial Covenants Associated with Short-Term Debt and Other Debt Financing*" When we use this committed line to incur short-term debt we are exposed to the market, credit, liquidity, and other types of risks described above with respect to residential loan warehouse and securities repurchase facilities.

Servicer Advance Financing. In connection with our servicer advance investments, we consolidate an entity that was formed to finance servicing advances and for which we, through our control of an affiliated entity majority owned by Redwood (the "SA Buyer") formed to invest in servicer advance investments and excess MSRs, are the primary beneficiary. The servicer advance financing consists of non-recourse short-term securitization debt, secured by servicer advances. We consolidate the securitization entity that issued the debt, but the securitization entity is independent of Redwood and the assets and liabilities are not owned by and are not legal obligations of Redwood.

SA Buyer has agreed to purchase all future arising servicer advances under certain residential mortgage servicing agreements. SA Buyer relies, in part, on its members to make committed capital contributions in order to pay the purchase price for future servicer advances. A failure by any or all of the members to make such capital contributions for amounts required to fund servicer advances could result in an event of default under our servicer advance financing and a complete loss of our investment in SA Buyer and its servicer advance investments and excess MSRs. Additionally, to the extent that the servicer of the underlying mortgage loans (who is unaffiliated with us except through its co-investment in SA Buyer and the securitization entity) fails to recover the servicer advances in which we have invested, or takes longer than we expect to recover such advances, the value of our investment could be adversely affected and we could fail to achieve our expected return and suffer losses.

The outstanding balance of servicer advances securing the financing is not likely to be repaid on or before the maturity date of such financing arrangement. We expect to request the same counterparty or another one of our financing sources to renew or refinance the financing for an additional fixed period; however, there can be no assurance that we will be able to extend the financing arrangement upon the expiration of its stated term, which subjects us to a number of risks. A financing source that elects to extend or refinance may charge higher interest rates and impose more onerous terms upon us, including without limitation, lowering the amount of financing that can be extended against the servicer advances being financed. If we are unable to renew or refinance the servicer advance financing, the securitization entity will be required to repay the outstanding balance of the financing on the related maturity date. Additionally, there may be substantial increases in the interest rates under the financing arrangement if the debt is not repaid, extended or refinanced prior to the expected repayment date, which may be before the related maturity date. If the securitization entity is unable to pay the outstanding balance of the notes, the financing counterparty may foreclose on the servicer advances pledged as collateral.

Under this servicer advance financing, SA Buyer and the securitization entity, along with the servicer, make various representations and warranties and have agreed to certain covenants, events of default, and other terms that if breached or triggered can result in acceleration of all outstanding amounts borrowed under this facility and this facility being unavailable to use for future financing needs. We do not have the direct ability to control the servicer's compliance with such covenants and tests and the failure of SA Buyer, the securitization entity, or the servicer to satisfy any such covenants or tests could result in a partial or total loss on our investment. The financial covenants of SA Buyer included in this servicer advance financing are further described below under the heading "*Financial Covenants Associated with Short-Term Debt and Other Debt Financing*."

FHLB Borrowing Facility. Our wholly-owned subsidiary, RWT Financial, LLC, is a party to a secured borrowing facility with the Federal Home Loan Bank of Chicago (FHLBC) that was put into place in July 2014. Borrowings under this facility, also referred to as "advances," are required to be secured by eligible collateral including, but not limited to, residential and business purpose mortgage loans and residential mortgage-backed securities. Under a final rule published by the Federal Housing Finance Agency in January 2016, our FHLB-member subsidiary will remain an FHLB member through the five-year transition period for captive insurance companies. Our FHLB-member subsidiary's existing $2.00 billion of FHLB debt, which matures beyond this transition period, is permitted to remain outstanding until stated maturity. As residential or business purpose loans pledged as collateral for this debt pay down, we are permitted to pledge additional loans or other eligible assets to collateralize this debt; however, we do not expect to be able to increase our subsidiary's FHLB debt above the existing $2.00 billion maximum. At December 31, 2019, $2.00 billion of advances were outstanding under this facility.

Similar to the uncommitted warehouse and securities repurchase facilities described herein, under this facility we make various representations and warranties and have agreed to certain covenants, events of default, and other terms that if breached or triggered can result in our being required to immediately repay all outstanding amounts borrowed under this facility. In particular, the terms of this facility permit the acceleration of the amortization of amounts borrowed through the facility if the FHLBC determines, in its sole discretion, that our creditworthiness or the creditworthiness of our FHLB-member subsidiary does not meet the minimum requirements of the FHLBC. Outstanding amounts borrowed under this facility could become immediately due and payable if the FHLBC determines there has been a material adverse change in our financial condition, or that we have breached or otherwise not complied with the terms of the FHLBC's credit policy. Additionally, the FHLBC may increase the required amount of collateral at any time as a result of a change in its credit policy or as a result of our credit deterioration, in which case we may be required to deliver additional collateral in the form of cash or other eligible collateral. Factors that may affect the FHLB's judgment of our or our FHLB member subsidiary's creditworthiness, financial condition, or compliance with its credit policy include, among other things, increases in levels of indebtedness, increases in debt-to-capital ratios, or decreases in stockholders' equity. The margin call provisions and financial covenants included in this facility are further described below under the headings "*Margin Call Provisions Associated with Short-Term Debt and Other Debt Financing*" and "*Financial Covenants Associated with Short-Term Debt and Other Debt Financing*" When we use this facility to incur debt we are exposed to the market, credit, liquidity, and other types of risks described above with respect to residential loan warehouse and securities repurchase facilities.

Our access to financing under this facility is also subject to the risks described under the heading "*Risk Factors - Federal regulations may limit, eliminate, or reduce the attractiveness of our subsidiary's ability to use borrowings from the Federal Home Loan Bank of Chicago to finance the mortgage loans and securities it holds and acquires, which could negatively impact our business and operating results"* in Part I, Item 1A of this Annual Report on Form 10-K.

Subordinate Securities Financing Facility. Another source of long-term debt financing is through a subordinate securities financing facility providing non-mark-to-market recourse debt financing on a portfolio of subordinate securities. Financing for the securities was obtained under this facility by our transfer of securities to the counterparty in exchange for cash proceeds (in an amount less than 100% of the fair value of the transferred securities), and our covenant to reacquire those securities from the counterparty for the same amount plus a financing charge. The financing is fully and unconditionally guaranteed by Redwood. The financing facility may be terminated, at our option, in September 2022, and has a final maturity in September 2024. At December 31, 2019, we had borrowings under this facility totaling $185 million, net of $1 million of deferred issuance costs, for a carrying value of $184 million. At December 31, 2019, the fair value of real estate securities pledged as collateral under this long-term debt facility was $250 million, which included $125 million of securities retained from our consolidated Sequoia Choice securitizations. In addition to the subordinate securities financing facility described above, in the ordinary course of business we may seek to establish additional long-term securities repurchase facilities that may be of a similar or greater size and may have similar or more restrictive terms.

Similar to the uncommitted warehouse and securities repurchase facilities described herein, under this facility we make various representations and warranties and have agreed to certain covenants, events of default, and other terms that if breached or triggered can result in our being required to immediately repay all outstanding amounts borrowed under this facility and this facility being unavailable to use for future financing needs. In particular, outstanding amounts borrowed under this facility could become immediately due and payable if there is a failure to pay any amounts due under the facility, the failure to repurchase the securities by the final maturity date, or upon the insolvency of Redwood, as guarantor. If we breach or trigger the representations and warranties, covenants, events of default, or other terms of this subordinate securities financing facility, we are exposed to liquidity and other risks, including of the type described in Part I, Item 1A of this Annual Report on Form 10-K under the heading "*Risk Factors*," and in Part II, Item 7A of this Annual Report on Form 10-K under the heading "*Market Risks*."

Financial Covenants Associated With Short-Term Debt and Other Debt Financing

Set forth below is a summary of the financial covenants associated with our short-term debt and other debt financing facilities.

- Residential and Business Purpose Loan Warehouse Facilities. As noted above, one source of our short-term debt financing is secured borrowings under residential and business purpose loan warehouse facilities we have established and, as of December 31, 2019, were in place with several different financial institution counterparties. Financial covenants included in these warehouse facilities are as follows and at December 31, 2019, and through the date of this Annual Report on Form 10-K, we were in compliance with each of these financial covenants:
  - Maintenance of a minimum dollar amount of stockholders' equity/tangible net worth at Redwood.
  - Maintenance of a minimum dollar amount of cash and cash equivalents at Redwood or maintenance of an amount of cash and cash equivalents in excess of a specified percentage of outstanding short-term recourse indebtedness.
  - Maintenance of a maximum ratio of consolidated recourse indebtedness to stockholders' equity and tangible net worth at Redwood.
  - With respect to residential loan warehouse facilities, maintenance of uncommitted residential loan warehouse facilities with a specified level of unused borrowing capacity.
- Securities Repurchase Facilities. As noted above, another source of our short-term debt financing is through secured borrowings under securities repurchase facilities we have established with various financial institution counterparties. Financial covenants included in these securities repurchase facilities are as follows and at December 31, 2019, and through the date of this Annual Report on Form 10-K, we were in compliance with each of these financial covenants:
  - Maintenance of a minimum dollar amount of stockholders' equity/tangible net worth at Redwood.
  - Maintenance of a minimum dollar amount of cash and cash equivalents at Redwood.
  - Maintenance of a maximum ratio of consolidated recourse indebtedness to consolidated adjusted tangible net worth at Redwood.
- Committed Line of Credit. As noted above, we also maintain a $10 million committed line of short-term credit from a bank, which is secured by our pledge of certain mortgage-backed securities we own. The types of financial covenants included in this bank line of credit are a subset of the covenants summarized above.
- Servicer Advance Financing. As noted above, servicer advance financing consists of non-recourse short-term securitization debt, secured by servicing advances. Financial covenants associated with this financing facility are as follows and at December 31, 2019, and through the date of this Annual Report on Form 10-K, we were in compliance with each of these financial covenants:
  - Maintenance of a minimum dollar amount of stockholders' equity/tangible net worth at SA Buyer.
  - Maintenance of a minimum dollar amount of cash and cash equivalents at SA Buyer.
- FHLB Borrowing Facility. As noted above, a wholly-owned subsidiary of ours, RWT Financial, also maintains a borrowing facility with the FHLBC, borrowings under which are required to be secured by eligible collateral including, but not limited to, residential and business purpose mortgage loans and residential mortgage-backed securities. Financial covenants included in this facility are as follows and at December 31, 2019, and through the date of this Annual Report on Form 10-K, we were in compliance with each of these financial covenants:
  - Maintenance by RWT Financial of a maximum ratio of total liabilities (excluding debt subordinated to the FHLBC and non-recourse debt) to stockholders' equity and debt subordinated to the FHLBC.
  - Maintenance by RWT Financial of a minimum level of unencumbered assets based on the level of indebtedness to the FHLBC.
  - Maintenance of a maximum ratio of total liabilities (excluding non-recourse debt) to stockholders' equity at Redwood.
  - Maintenance of a minimum dollar amount of cash and cash equivalents, excess qualifying collateral, or undrawn borrowing capacity by RWT Financial (solely if certain servicing remittance-related conditions are not met).

As noted above, at December 31, 2019, and through the date of this Annual Report on Form 10-K, we were in compliance with the financial covenants associated with our short-term debt and other debt financing facilities. In particular, with respect to: (i) financial covenants that require us to maintain a minimum dollar amount of stockholders' equity or tangible net worth at Redwood, at December 31, 2019 our level of stockholders' equity and tangible net worth resulted in our being in compliance with these covenants by more than $200 million; and (ii) financial covenants that require us to maintain recourse indebtedness below a specified ratio at Redwood, at December 31, 2019 our level of recourse indebtedness resulted in our being in compliance with these covenants at a level such that we could incur at least $600 million in additional recourse indebtedness.

Margin Call Provisions Associated With Short-Term Debt and Other Debt Financing

- Residential and Business Purpose Loan Warehouse Facilities. As noted above, one source of our short-term debt financing is secured borrowings under residential and business purpose loan warehouse facilities we have established and, as of December 31, 2019, were in place with several different financial institution counterparties. These warehouse facilities include the margin call provisions described below (except two business purpose loan warehouse facilities secured by residential bridge loans, which have no margin call provisions) and during the twelve months ended December 31, 2019, and through the date of this Annual Report on Form 10-K, we complied with any margin calls received from creditors under these warehouse facilities:
    - If at any time the market value (as determined by the creditor) of any residential mortgage loan financed under a facility declines, then the creditor may demand that we transfer additional collateral to the creditor (in the form of cash, U.S. Treasury obligations (in certain cases), or additional residential mortgage loans) with a value equal to the amount of the decline. If we receive any such demand, (i) under two of our residential loan warehouse facilities, we would generally be required to transfer the additional collateral on the same day (although demands received after a certain time would only require the transfer of additional collateral on the following business day) and (ii) under two of our residential loan warehouse facilities and our business purpose loan warehouse facilities (except two business purpose loan warehouse facilities secured by residential bridge loans with no margin call provisions), we would generally be required to transfer the additional collateral on the following business day. The value of additional residential and business purpose mortgage loans transferred as additional collateral is determined by the creditor.
- Securities Repurchase Facilities. Another source of our short-term debt financing is through secured borrowings under securities repurchase facilities we have established with various financial institution counterparties. These repurchase facilities include the margin call provisions described below and during the twelve months ended December 31, 2019, and through the date of this Annual Report on Form 10-K, we complied with any margin calls received from creditors under these repurchase facilities:
    - If at any time the market value (as determined by the creditor) of any securities financed under a facility declines, then the creditor may demand that we transfer additional collateral to the creditor (in the form of cash, U.S. Treasury obligations, or additional securities) with a value equal to the amount of the decline. If we receive any such demand, we would generally be required to transfer the additional collateral on the same day. The value of additional securities transferred as additional collateral is determined by the creditor.
- Committed Line of Credit. As noted above, we also maintain a $10 million committed line of short-term credit from a bank, which is secured by our pledge of certain mortgage-backed securities we own. Margin call provisions included in this bank line of credit are as follows and during the twelve months ended December 31, 2019, and through the date of this Annual Report on Form 10-K, we complied with any margin calls received from this creditor under this line of credit:
    - If at any time the total market value (as determined by two broker-dealers) of the securities that are pledged as collateral under this facility declines to a value less than the outstanding amount of borrowings under this facility, then the creditor may demand that we transfer additional collateral to the creditor (in the form of cash, U.S. Treasury obligations, or additional securities) with a value equal to the amount of the difference. If we receive any such demand, we would generally be required to transfer the additional collateral within two business days. The value of additional collateral pledged is determined by the creditor.

- FHLB Borrowing Facility. As noted above, a wholly-owned subsidiary of ours, RWT Financial, also maintains a borrowing facility with the FHLBC, borrowings under which are required to be secured by eligible collateral including, but not limited to, residential mortgage loans and residential mortgage-backed securities. This facility includes the margin call provisions described below during the twelve months ended December 31, 2019, and through the date of this Annual Report on Form 10-K, we complied with any margin calls received from the creditor under this facility.
  - If at any time the aggregate market value (as determined by the FHLBC) of the residential mortgage loans and residential mortgage-backed securities pledged as collateral under this facility declines to a value less than the required collateral level, or if any collateral ceases to be qualifying collateral under the terms of this facility, we would be required to promptly deliver additional collateral sufficient to maintain the required collateral level. The value of additional loans or securities transferred as additional collateral is determined by the FHLBC.

OFF BALANCE SHEET ARRANGEMENTS AND CONTRACTUAL OBLIGATIONS

In the normal course of business, we engage in financial transactions that may not be recorded on the balance sheet. For additional information on our commitments and contingencies, refer to *Note 16* in Part II, Item 8 of this Annual Report.

The following table presents our contractual obligations and commitments at December 31, 2019, as well as the obligations of the securitization entities that we consolidate for financial reporting purposes.

Table 54 – Contractual Obligations and Commitments

December 31, 2019	Payments Due or Commitment Expiration by Period				
(In Millions)	Less Than 1 Year	1 to 3 Years	3 to 5 Years	After 5 Years	Total
Obligations of Redwood					
Short-term debt	$ 2,177	$ —	$ —	$ —	$ 2,177
Convertible notes	—	—	445	201	646
Anticipated interest payments on convertible notes	34	69	57	12	172
FHLBC borrowings	—	—	470	1,530	2,000
Anticipated interest payments on FHLBC borrowings	58	106	106	38	308
Other long-term debt	—	185	—	140	325
Anticipated interest payments on other long-term debt (1)	17	33	19	114	183
Accrued interest payable	20	—	—	—	20
Operating leases	3	4	3	6	16
Commitment to fund partnerships	37	—	—	—	37
Total Redwood Obligations and Commitments	$ 2,346	$ 397	$ 1,100	$ 2,041	$ 5,884
Obligations of Consolidated Securitization Entities for Financial Reporting Purposes					
Consolidated ABS (2)	$ —	$ —	$ —	$ 9,962	$ 9,962
Anticipated interest payments on ABS (3)	403	770	694	1,697	3,564
Non-recourse short-term debt	153	—	—	—	153
Accrued interest payable	34	—	—	—	34
Total Obligations of Securitization Entities Consolidated for Financial Reporting Purposes	590	770	694	11,659	13,713
Total Consolidated Obligations and Commitments	$ 2,936	$ 1,167	$ 1,794	$ 13,700	$ 19,597

(1) Includes anticipated interest payments related to hedges.

(2) All consolidated ABS issued are collateralized by real estate loans. Although the stated maturity is as shown, the ABS obligations will pay down as the principal balances of these real estate loans or securities pay down. The amount shown is the principal balance of the ABS issued and not necessarily the value reported in our consolidated financial statements.

(3) The anticipated interest payments on consolidated ABS issued is calculated based on the contractual maturity of the ABS and therefore assumes no prepayments of the principal outstanding at December 31, 2019.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reported periods. Actual results could differ from those estimates. A discussion of critical accounting policies and the possible effects of changes in estimates on our consolidated financial statements is included in *Note 2 — Basis of Presentation and Note 3 — Summary of Significant Accounting Policies* included in Part II, Item 8 of this Annual Report on Form 10-K. Management discusses the ongoing development and selection of these critical accounting policies with the audit committee of the board of directors.

We expect quarter-to-quarter GAAP earnings volatility from our business activities. This volatility can occur for a variety of reasons, including the timing and amount of purchases, sales, calls, and repayment of consolidated assets, changes in the fair values of consolidated assets and liabilities, increases or decreases in earnings from mortgage banking activities, and certain non-recurring events. In addition, the amount or timing of our reported earnings may be impacted by technical accounting issues and estimates, some of which are described below.

Changes in the Fair Value of Loans Held at Fair Value

We have elected the fair value option for our residential loans held-for-sale, residential loans held-for-investment, and business purpose residential loans. As such, these loans are carried on our consolidated balance sheets at their estimated fair value and changes in the fair values of these loans are recorded in Mortgage banking activities, net or Investment fair value changes, net on our consolidated statements of income in the period in which the valuation change occurs. Periodic fluctuations in the values of these investments are inherently volatile and thus can lead to significant period-to-period GAAP earnings volatility.

The fair value of loans is affected by, among other things, changes in interest rates, credit performance, prepayments, and market liquidity. To the extent interest rates change or market liquidity and or credit conditions materially change, the value of these loans could decline, which could have a material effect on reported earnings.

Changes in Fair Values of Securities

Our securities are classified as either trading or AFS securities, and in both cases are carried on our consolidated balance sheets at their estimated fair values. In addition, we invest in securities of certain securitization entities that we are required to consolidate for GAAP reporting purposes. We have elected to account for these entities as collateralized financing entities and use the fair value of the ABS issued by these entities (which we determined to be more observable) to determine the fair value of the loans held at these entities. For trading securities and collateralized financing entities, changes in fair values are recorded in Investment fair value changes, net on our consolidated statements of income in the period in which the valuation change occurs. Periodic fluctuations in the values of these investments are inherently volatile and thus can lead to significant period-to-period GAAP earnings volatility.

For AFS securities, cumulative unrealized gains and losses are recorded as a component of Accumulated other comprehensive income in our consolidated balance sheets. Unrealized gains are not credited to current earnings and unrealized losses are not charged against current earnings to the extent they are temporary in nature. Certain factors may require us, however, to recognize declines in the values of AFS securities as other-than-temporary impairments and record them through our current earnings. Factors that determine other-than-temporary-impairment include a change in our ability or intent to hold AFS securities, adverse changes to projected cash flows of assets, or the likelihood that declines in the fair values of assets would not return to their previous levels within a reasonable time. Impairments on AFS securities can lead to significant period-to-period GAAP earnings volatility. In addition, sales of securities in large unrealized gain or loss positions that are not impaired can lead to significant period-to-period GAAP earnings volatility.

Changes in Fair Values of Mortgage Servicing Rights

Mortgage servicing rights are carried on our consolidated balance sheets at their estimated fair values, with changes in fair values recorded in the consolidated statements of income as a component of Other income. Periodic fluctuations in the values of our mortgage servicing rights can be caused by actual prepayments on the underlying loans, changes in assumptions regarding future projected prepayments on the underlying loans, and changes in the discount rate assumptions used to value mortgage servicing rights, among other factors. Periodic fluctuations in the values of these investments are inherently volatile and can lead to significant period-to-period GAAP earnings volatility.

Changes in Fair Values of Servicer Advance Investments

Servicer advance investments are carried on our consolidated balance sheets at their estimated fair values, with changes in fair values recorded in our consolidated statements of income in Investment fair value changes, net. Periodic fluctuations in the values of our servicer advance investments can be caused by changes in the actual and anticipated balance of servicing advances outstanding, actual and anticipated prepayments on the underlying loans, and changes in the discount rate assumptions used to value servicer advance investments. Periodic fluctuations in the values of these investments are inherently volatile and can lead to significant period-to-period GAAP earnings volatility.

Changes in Fair Values of Excess MSRs

Excess MSRs are carried on our consolidated balance sheets at their estimated fair values, with changes in fair values recorded in our consolidated statements of income in Investment fair value changes, net. Periodic fluctuations in the values of our excess MSRs can be caused by actual prepayments on the underlying loans, changes in assumptions regarding future projected prepayments on the underlying loans, actual or anticipated changes in delinquencies, and changes in the discount rate assumptions used to value excess MSRs. Periodic fluctuations in the values of these investments are inherently volatile and can lead to significant period-to-period GAAP earnings volatility.

Changes in Fair Values of Shared Home Appreciation Options

Shared home appreciation options are carried on our consolidated balance sheets at their estimated fair values, with changes in fair values recorded in our consolidated statements of income in Investment fair value changes, net. Periodic fluctuations in the values of our shared home appreciation options can be caused by changes in the discount rate assumptions used to value shared home appreciation options, changes in assumptions regarding future projected home values, and changes in assumptions regarding future projected prepayment rates. Periodic fluctuations in the values of these investments are inherently volatile and can lead to significant period-to-period GAAP earnings volatility.

Changes in Fair Values of Derivative Financial Instruments

We generally use derivatives as part of our mortgage banking activities (e.g., to manage risks associated with loans we plan to acquire and subsequently sell or securitize), in relation to our residential investments (to manage risks associated with our securities, MSRs, and held-for-investment loans), and to manage variability in debt interest expense indexed to adjustable rates, and cash flows on assets and liabilities that have different coupon rates (fixed rates versus floating rates, or floating rates based on different indices). The nature of the instruments we use and the accounting treatment for the specific assets, liabilities, and derivatives may therefore lead to volatility in our periodic earnings, even when we are meeting our hedging objectives.

Some of our derivatives are accounted for as trading instruments with all associated changes in value recorded through our consolidated statements of income. Changes in value of the assets and liabilities we manage by using derivatives may not be accounted for similarly. This could lead to reported income and book values in specific periods that do not necessarily reflect the economics of our risk management strategy. Even when the assets and liabilities are similarly accounted for as trading instruments, periodic changes in their values may not coincide as other market factors (e.g., supply and demand) may affect certain instruments and not others at any given time.

Changes in Fair Values of Goodwill and Intangible Assets

In connection with our acquisitions of CoreVest and 5 Arches, a portion of the purchase price of each acquisition was allocated to goodwill and intangible assets. Accounting standards require that we test goodwill and intangible assets for impairment at least annually (or more frequently if impairment indicators arise). The assessments to determine if goodwill or intangible assets are impaired requires significant judgement to develop assumptions and estimates. If we determine goodwill or intangible assets are impaired, we will be required to write down the value of these assets, up to their entire balance. Any write-down would have a negative effect on our consolidated financial statements.

Changes in Mortgage Banking Income

The amount of income that can be earned from mortgage banking activities is primarily dependent on the volume of loans we are able to acquire and any potential profit we earn upon the sale or securitization of these loans. Our ability to acquire loans and the volume of loans we acquire is dependent on many factors that are beyond our control, including general economic conditions and changes in interest rates, loan origination volumes industry-wide and at the sellers we purchase our loans from, increased regulation, and competition from other financial institutions. Our profitability from mortgage banking activities is also dependent on many factors, including our ability to effectively hedge certain risks related to changes in interest rates and other factors that are beyond our control, including changes in market credit risk pricing. Additionally, our income from mortgage banking activities is generally generated over the period from when we identify a loan for purchase until we subsequently sell or securitize the loan. This income may encompass positive or negative market valuation adjustments on loans, hedging gains or losses associated with related risk management activities, and any other related transaction expenses, and may be realized unevenly over the course of one or more quarters for financial reporting purposes. Additional factors that could impact our profitability are discussed in Part I, Item 1A - *Risk Factors* of this Annual Report on Form 10-K and above, under the headings "*Changes in the Fair Value of Loans Held at Fair Value*" and "*Changes in Fair Values of Derivative Financial Instruments*." Changes in the volumes of loans acquired or originated in connection with our mortgage banking activities and our profitability on these activities can lead to significant period-to-period GAAP earnings volatility.

Changes in Yields for Securities

The yields we project on available-for-sale real estate securities can have a significant effect on the periodic interest income we recognize for financial reporting purposes. Yields can vary as a function of credit results, prepayment rates, and interest rates. If estimated future credit losses are less than our prior estimate, credit losses occur later than expected, or prepayment rates are faster than expected (meaning the present value of projected cash flows is greater than previously expected for assets acquired at a discount to principal balance), the yield over the remaining life of the security may be adjusted upwards. If estimated future credit losses exceed our prior expectations, credit losses occur more quickly than expected, or prepayments occur more slowly than expected (meaning the present value of projected cash flows is less than previously expected for assets acquired at a discount to principal balance), the yield over the remaining life of the security may be adjusted downward.

Changes in the actual maturities of real estate securities may also affect their yields to maturity. Actual maturities are affected by the contractual lives of the associated mortgage collateral, periodic payments of principal, and prepayments of principal. Therefore, actual maturities of AFS securities are generally shorter than stated contractual maturities. Stated contractual maturities are generally greater than 10 years. There is no assurance that our assumptions used to estimate future cash flows or the current period's yield for each asset will not change in the near term, and any change could be material.

Changes in Loss Contingency Reserves

We may be exposed to various loss contingencies, including, without limitation, those described in *Note 16* to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K. In accordance with FASB guidance on accounting for contingencies, we review the need for any loss contingency reserves and establish them when, in the opinion of management, it is probable that a matter would result in a liability, and the amount of loss, if any, can be reasonably estimated. The establishment of a loss contingency reserve, the subsequent increase in a reserve or release of reserves previously established, or the recognition of a loss in excess of previously established reserves, can occur as a result of various factors and events that affect management's opinion of whether the standard for establishing, increasing, or continuing to maintain, a reserve has been met. Changes in the loss contingency reserves can lead to significant period-to-period GAAP earnings volatility.

Changes in Provision for Taxes

Our provision for income taxes is primarily the result of GAAP income or losses generated at our TRS. Deferred tax assets/liabilities are generated by temporary differences in GAAP income and taxable income at our taxable subsidiaries and are a significant component of our GAAP provision for income taxes. In assessing the realizability of deferred tax assets, we consider whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. We consider historical and projected future taxable income and capital gains as well as tax planning strategies in making this assessment. We determine the extent to which realization of this deferred asset is not assured and establish a valuation allowance accordingly. The estimate of net deferred tax assets and associated valuation allowances could change in future periods to the extent that actual or revised estimates of future taxable income during the carry-forward periods change from current expectations, causing significant period-to-period GAAP earnings volatility.

Market Risks

We seek to manage risks inherent in our business — including but not limited to credit risk, interest rate risk, prepayment risk, liquidity risk, and fair value risk — in a prudent manner designed to enhance our earnings and dividends and preserve our capital. In general, we seek to assume risks that can be quantified from historical experience, to actively manage such risks, and to maintain capital levels consistent with these risks. Information concerning the risks we are managing, how these risks are changing over time, and potential GAAP earnings and taxable income volatility we may experience as a result of these risks is discussed under the caption "*Risk Factors*" of this Annual Report on Form 10-K, under the caption "*Risks Relating to Debt Incurred under Short- and Long-Term Borrowing Facilities*" within this MD&A, and under the caption "*Quantitative and Qualitative Disclosures About Market Risk"* of this Annual Report on Form 10-K.

Other Risks

In addition to the market and other risks described above, our business and results of operations are subject to a variety of types of risks and uncertainties, including, among other things, those described under the caption "*Risk Factors*" of this Annual Report on Form 10-K.

NEW ACCOUNTING STANDARDS

A discussion of new accounting standards and the possible effects of these standards on our consolidated financial statements is included in *Note 3 — Summary of Significant Accounting Policies* included in Part II, Item 8 of this Annual Report on Form 10-K.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risks

We seek to manage risks inherent in our business - including but not limited to credit risk, interest rate risk, prepayment risk, inflation risk, and fair value and liquidity risk - in a prudent manner designed to enhance our earnings and dividends and preserve our capital. In general, we seek to assume risks that can be quantified from historical experience, to actively manage such risks, and to maintain capital levels consistent with these risks. This section presents a general overview of these risks. Additional information concerning the risks we are managing, how these risks are changing over time, and potential GAAP earnings and taxable income volatility we may experience as a result of these risks is further discussed in Part I, Item 1A and Part II, Item 7 of this Annual Report on Form 10-K.

Credit Risk

Integral to our business is assuming credit risk through our ownership of real estate loans, securities and other investments as well as through our reliance on the creditworthiness of business counterparties. We believe the securities and loans we purchase are priced to generate an expected return that compensates us for the underlying credit risk associated with these investments. Nevertheless, there may be significant credit losses associated with these investments should they perform worse than we expect on a credit basis. For additional details, refer to Part I, Item 1A of this Annual Report on Form 10-K and see the risk factor titled *"The nature of the assets we hold and the investments we make expose us to credit risk that could negatively impact the value of those assets and investments, our earnings, dividends, cash flows, and access to liquidity, or otherwise negatively affect our business."*

We manage our credit risks by analyzing the extent of the risk we are taking and reviewing whether we believe the appropriate underwriting criteria are met, and we utilize systems and staff to monitor the ongoing credit performance of our loans and securities. To the extent we find the credit risks on specific assets are changing adversely, we may be able to take actions, such as selling the affected investments, to mitigate potential losses. However, we may not always be successful in analyzing risks, reviewing underwriting criteria, foreseeing adverse changes in credit performance or in effectively mitigating future credit losses and the ability to sell an asset may be limited due to the structure of the asset or the absence of a liquid market for the asset.

Residential Loans and Securities

Our residential loans (including business purpose residential loans) and securities backed by residential loans are generally secured by real property. Credit losses on real estate loans and securities can occur for many reasons, including: poor origination practices; fraud; poor underwriting; poor servicing practices; weak economic conditions; increases in payments required to be made by borrowers; declines in the value of real estate; natural disasters, the effects of climate change (including flooding, drought, and severe weather) and other natural events; uninsured property loss; over-leveraging of the borrower; costs of remediation of environmental conditions, such as indoor mold; acts of war or terrorism; changes in legal protections for lenders and other changes in law or regulation; and personal events affecting borrowers, such as reduction in income, job loss, divorce, or health problems. In addition, if the U.S. economy or the housing market were to weaken (and that weakening was in excess of what we anticipated), credit losses could increase beyond levels that we have anticipated.

Credit losses on business purpose real estate loans can occur for many of the reasons noted above for residential real estate loans. Moreover, these types of real estate loans may not be fully amortizing and, therefore, the borrower's ability to repay the principal when due may depend upon the ability of the borrower to refinance or sell the property at maturity. Business purpose real estate loans are particularly sensitive to conditions in the rental housing market and to demand for rental residential properties.

With respect to most of the legacy Sequoia securitization entities sponsored by us that we consolidate and for a portion of the loans underlying residential loan securities we have acquired from securitizations sponsored by others, the interest rate is adjustable. Accordingly, when short-term interest rates rise, required monthly payments from homeowners may rise under the terms of these loans, and this may increase borrowers' delinquencies and defaults that can lead to additional credit losses.

We may also own some securities backed by loans that are not prime quality such as re-performing and non-performing loans, Alt-A quality loans, and subprime loans, that have substantially higher credit risk characteristics than prime-quality loans. Consequently, we can expect these lower credit-quality loans to have higher rates of delinquency and loss, and if such losses differ from our assumptions, we could incur credit losses. In addition, we may invest in riskier loan types with the potential for higher delinquencies and losses as compared to regular amortization loans, but believe these securities offer us the opportunity to generate attractive risk-adjusted returns as a result of attractive pricing and the manner in which these securitizations are structured. Nevertheless, there remains substantial uncertainty about the future performance of these assets.

Additionally, we own residential mortgage credit risk transfer (or "CRT") securities issued by Fannie Mae and Freddie Mac ("the Agencies"), for which we assume credit risk both on the residential loans that the securities reference, as well as corporate credit risk from the Agencies, as our investments in the securities are not secured by the reference loans.

Multifamily Loans and Securities

Multifamily loans we may acquire, invest in, or originate are generally secured by real property. The multifamily securities we invest in are primarily subordinate positions in securitizations sponsored by Freddie Mac that are comprised of loans collateralized by multifamily properties. We also own and may continue to invest in other third-party sponsored multifamily mortgage-backed securities, including securities sponsored by Fannie Mae. Credit losses on these real estate loans and securities can occur for many of the reasons noted above for residential and business-purpose real estate loans, including: poor origination practices; fraud; faulty appraisals; documentation errors; poor underwriting; legal errors; poor servicing practices; weak economic conditions; decline in the value of properties; declining rents on single and multifamily residential rental properties; special hazards; earthquakes and other natural events; over-leveraging of the borrower or on the property; reduction in market rents and occupancies and poor property management practices; and changes in legal protections for lenders. In addition, if the U.S. economy or were to weaken (and that weakening was in excess of what we anticipated), credit losses could increase beyond levels that we have anticipated. Moreover, the principal balance of multifamily loans may be significantly larger than the residential and business-purpose real estate loans we own.

Counterparties

We are also exposed to credit risk with respect to our business and lender counterparties. For example, counterparties we acquire loans from, lend to, or invest in, make representations and warranties and covenants to us, and may also indemnify us against certain losses. To the extent we have suffered a loss and are entitled to enforce those agreements to recover damages, if our counterparties are insolvent or unable or unwilling to comply with these agreements we would suffer a loss due to the credit risk associated with our counterparties. As an example, under short-term borrowing facilities and certain swap and other derivative agreements, we sometimes transfer assets as collateral to our counterparties. To the extent a counterparty is not able to return this collateral to us if and when we are entitled to its return, we could suffer a loss due to the credit risk associated with that counterparty.

In addition, because we rely on the availability of credit under committed and uncommitted borrowing facilities to fund our business and investments, our counterparties' willingness and ability to extend credit to us under these facilities is a significant counterparty risk (and is discussed further below under the heading "Fair Value and Liquidity Risks").

In connection with our servicer advance investments, the partnership entity (the "SA Buyer") formed to invest in servicer advance investments and excess MSRs, has agreed to purchase all future arising servicer advances under certain residential mortgage servicing agreements. SA Buyer relies, in part, on its members to make committed capital contributions in order to pay the purchase price for future servicer advances. A failure by any or all of the members to make such capital contributions for amounts required to fund servicer advances could result in an event of default under our servicer advance financing and a complete loss of our investment in SA Buyer and its servicer advance investments and excess MSRs.

The outstanding balance of servicer advances securing the financing is not likely to be repaid on or before the maturity date of such financing arrangement. We expect to request the same counterparty or another one of our financing sources to renew or refinance the financing for an additional fixed period, however, there can be no assurance that we will be able to extend the financing arrangement upon the expiration of its stated term, which subjects us to a number of risks. A financing source that elects to extend or refinance may charge higher interest rates and impose more onerous terms upon us, including without limitation, lowering the amount of financing that can be extended against the servicer advances being financed. If we are unable to renew or refinance the servicer advance financing, the securitization entity will be required to repay the outstanding balance of the financing on the related maturity date. Additionally, there may be substantial increases in the interest rates under the financing arrangement if the notes are not repaid, extended or refinanced prior to the expected repayment date, which may be before the related maturity date. If the securitization entity is unable to pay the outstanding balance of the notes, the financing counterparty may foreclose on the servicer advances pledged as collateral.

Under our servicer advance financing, the consolidated partnership (SA Buyer) and the securitization entity, along with the servicer (who is unaffiliated with us except through their co-investment in SA Buyer and the securitization entity), make various representations and warranties and have agreed to certain covenants, events of default, and other terms that if breached or triggered can result in acceleration of all outstanding amounts borrowed under this facility and this facility being unavailable to use for future financing needs. We do not have the direct ability to control the servicer's compliance with such covenants and tests and the failure of SA Buyer, the securitization entity, or the servicer to satisfy any such covenants or tests could result in a partial or total loss on our investment.

Interest Rate Risk

Changes in interest rates and the shape of the yield curve can affect the cash flows and fair values of our assets, liabilities, and derivative financial instruments and, consequently, affect our earnings and reported equity. Our general strategy with respect to interest rates is to maintain an asset/liability posture (including hedges) that assumes some interest rate risks but not to such a degree that the achievement of our long-term goals would likely be adversely affected by changes in interest rates. Accordingly, we are willing to accept short-term volatility of earnings and changes in our reported equity in order to accomplish our goal of achieving attractive long-term returns. For additional details, refer to Part I, Item 1A of this Annual Report on Form 10-K and see the risk factor titled *"Interest rate fluctuations can have various negative effects on us and could lead to reduced earnings and increased volatility in our earnings."*

We invest in securities, residential loans, and other mortgage-related assets, which all expose us to interest rate risk. Additionally, we acquire and originate residential loans, then sell or securitize these assets. We are exposed to interest rate risk during the "accumulation" period - the period from when we enter into agreements to purchase the loans with the intention of selling or securitizing them at a future date.

To mitigate this interest rate risk, we use derivative financial instruments for risk management purposes. We may also use derivative financial instruments in an effort to maintain a close match between pledged assets and debt. However, we generally do not attempt to completely hedge changes in interest rates, and at times, we may be subject to more interest rate risk than we generally desire in the long term. Changes in interest rates will have an impact on the values and cash flows of our assets and corresponding liabilities.

Prepayment Risk

Prepayment risks exist in many of the assets on our consolidated balance sheets. In general, discount securities benefit from faster prepayment rates on the underlying real estate loans while premium securities (such as certain IOs we own), and mortgage servicing assets benefit from slower prepayments on the underlying loans. In addition, loans held for investment at premiums also benefit from slower prepayments whereas loans held at discounts benefit from faster prepayments. For additional details, refer to Part I, Item 1A of this Annual Report on Form 10-K and see the risk factor titled *"Changes in prepayment rates of mortgage loans could reduce our earnings, dividends, cash flows, and access to liquidity."*

When we make investments that are subject to prepayment risk, we apply a reasonable baseline prepayment range in determining expected returns. If actual prepayment rates deviate from our baseline expectations, it could have an adverse change to our expected returns. In order to mitigate this risk, we may use derivative financial instruments. We caution that prepayment rates are difficult to predict or anticipate, and adverse changes in the rate of prepayment could reduce our cash flows, earnings, and dividends.

Inflation Risk

Virtually all of our consolidated assets and liabilities are financial in nature. As a result, changes in interest rates and other factors drive our performance more directly than does inflation. That said, changes in interest rates generally correlate with inflation rates or changes in inflation rates, and therefore adverse changes in inflation or changes in inflation expectations can lead to lower returns on our investments than originally anticipated.

Our consolidated financial statements are prepared in accordance with GAAP. Our activities and balance sheets are measured with reference to historical cost or fair value without considering inflation.

Fair Value and Liquidity Risks

To fund our assets we may use a variety of debt alternatives in addition to equity capital that present us with fair value and liquidity risks. We seek to manage these risks, including by maintaining what we believe to be adequate cash and capital levels.

We acquire and originate residential loans and then sell or securitize them as part of our mortgage banking operations. Changes in the fair value of the loans, once sold or securitized, do not have an impact on our liquidity. However, changes in fair values during the accumulation period (while these loans are typically funded with short-term debt before they are sold or securitized) may impact our liquidity. We also own residential loans that are held-for-investment and may be financed with borrowings from the FHLBC or funded with short-term debt. We would be exposed to liquidity risk to the extent the values of these loans decline and/or the counterparties we use to finance these investments adversely change our borrowing requirements. We attempt to mitigate our liquidity risk from FHLBC borrowings and short-term financing facilities by setting aside adequate capital, in addition to amounts required by our financing counterparties.

Many of the securities we acquire are funded with a combination of our capital and short-term debt facilities. For the securities we acquire with a combination of capital and short-term debt, we would be exposed to liquidity risk to the extent the values of these investments decline and/or the counterparties we use to finance these investments adversely change our borrowing requirements. We attempt to mitigate our liquidity risk from short-term financing facilities by setting aside adequate capital.

Under our borrowing facilities, interest rate swaps and other derivatives agreements, we pledge assets as security for our payment obligations and make various representations and warranties and agree to certain covenants, events of default, and other terms. In addition, our borrowing facilities are generally uncommitted, meaning that each time we request a new borrowing under a facility the lender has the option to decline to extend credit to us. The terms of these facilities and agreements typically include financial covenants (such as covenants to maintain a minimum amount of tangible net worth or stockholders' equity and/or a minimum amount of liquid assets and/or a maximum amount of recourse debt to equity), margin requirements (which typically require us to pledge additional collateral if and when the value of previously pledged collateral declines), operating covenants (such as covenants to conduct our business in accordance with applicable laws and regulations and covenants to provide notice of certain events to creditors), representations and warranties (such as representations and warranties relating to characteristics of pledged collateral, our exposure to litigation and/or regulatory enforcement actions and the absence of material adverse changes to our financial condition, our operations, or our business prospects), and events of default (such as a breach of covenant or representation/warranty and cross-defaults, under which an event of default is triggered under a credit facility if an event of default or similar event occurs under another credit facility). For additional details, refer to Part II, Item 7 of this Annual Report on Form 10-K and see the discussion titled *"Risks Relating to Debt Incurred under Short- and Long-Term Borrowing Facilities."*

Quantitative Information on Market Risk

Our future earnings are sensitive to a number of market risk factors and changes in these factors may have a variety of secondary effects that, in turn, will also impact our earnings and equity. To supplement the discussion above of the market risks we face, the following table incorporates information that may be useful in analyzing certain market risks that may affect our consolidated balance sheet at December 31, 2019. The table presents principal cash flows and related average interest rates for material interest rate sensitive assets and liabilities by year of repayment. The forward curve (future interest rates as implied by the yield structure of debt markets) at December 31, 2019, was used to project the average coupon rates for each year presented. The timing of principal cash flows includes assumptions on the prepayment speeds of assets based on their recent prepayment performance and future prepayment performance consistent with the forward curve. Our future results depend greatly on the credit performance of the underlying loans (this table assumes no credit losses), future interest rates, prepayments, and our ability to invest our existing cash and future cash flow.

Quantitative Information on Market Risk

		Principal Amounts Maturing and Effective Rates During Period						December 31, 2019	
(Dollars in Thousands)		2020	2021	2022	2023	2024	Thereafter	Principal Balance	Fair Value
Interest rate sensitive assets [(1)]									
Residential Loans - HFS [(2)]									
Adjustable Rate	Principal	$ 141	$ —	$ —	$ —	$ —	$ —	$ 141	$ 105
	Interest Rate	3.80%	N/A	N/A	N/A	N/A	N/A		
Fixed Rate	Principal	433,045	—	—	—	—	—	433,045	442,525
	Interest Rate	4.25%	N/A	N/A	N/A	N/A	N/A		
Hybrid	Principal	91,883	—	—	—	—	—	91,883	93,755
	Interest Rate	3.88%	N/A	N/A	N/A	N/A	N/A		
Residential Loans - HFI at Redwood									
Fixed Rate	Principal	368,311	313,962	267,633	228,140	194,475	452,858	1,825,379	1,879,316
	Interest Rate	4.14%	4.14%	4.14%	4.14%	4.14%	4.14%		
Hybrid	Principal	36,102	32,377	29,037	26,041	23,354	80,488	227,399	232,581
	Interest Rate	4.16%	4.16%	4.16%	4.16%	4.16%	4.16%		
Residential Loans - HFI at Sequoia									
Adjustable Rate	Principal	123,220	96,536	74,975	58,097	44,870	27,132	424,830	407,890
	Interest Rate	3.24%	3.05%	3.10%	3.15%	3.23%	3.23%		
Fixed Rate	Principal	633,849	454,606	326,162	234,043	167,948	424,072	2,240,680	2,291,463
	Interest Rate	5.05%	5.04%	5.03%	5.03%	5.03%	5.03%		
Residential Loans - HFI at Freddie Mac SLST									
Fixed Rate	Principal	170,826	168,829	158,007	147,930	138,477	1,643,965	2,428,034	2,367,215
	Interest Rate	4.08%	4.29%	4.30%	4.30%	4.29%	4.29%		
Business Purpose Residential Loans - HFS									
Fixed Rate	Principal	321,636	—	—	—	—	—	321,636	331,565
	Interest Rate	4.96%	N/A	N/A	N/A	N/A	N/A		
Business Purpose Residential Loans - HFI at Redwood									
Fixed Rate	Principal	523,837	218,691	—	2,406	39,105	189,700	973,739	982,626
	Interest Rate	7.35%	6.37%	4.89%	4.89%	4.89%	4.83%		
Single-Family Rental Loans - HFI at CAFL									
Fixed Rate	**Principal**	26,990	28,569	30,240	32,008	33,881	1,926,526	2,078,214	2,192,552
	Interest Rate	5.70%	5.70%	5.70%	5.70%	5.70%	5.70%		
Multifamily Loans - HFI at Freddie Mac K-Series									
Fixed Rate	Principal	26,651	46,189	57,042	115,528	162,911	3,786,679	4,195,000	4,408,524
	Interest Rate	4.07%	4.06%	4.06%	4.06%	4.07%	4.07%		

Quantitative Information on Market Risk

(Dollars in Thousands)		Principal Amounts Maturing and Effective Rates During Period 2020	2021	2022	2023	2024	Thereafter	December 31, 2019 Principal Balance	Fair Value
Interest rate sensitive assets (continued)									
Residential Senior Securities									
Adjustable Rate	Principal	$ 2,042	$ 1,609	$ 1,261	$ 985	$ 766	$ 2,231	$ 8,894	$ 8,868
	Interest Rate	3.11%	2.96%	3.01%	3.05%	3.12%	3.21%		
Fixed Rate (3)	Principal	11,330	9,636	8,208	13,802	11,726	28,889	83,591	150,062
	Interest Rate	3.82%	3.82%	3.83%	3.87%	3.88%	3.73%		
Hybrid	Principal	3,893	3,100	2,458	1,942	1,528	4,517	17,438	16,929
	Interest Rate	3.67%	3.55%	3.53%	3.53%	3.53%	3.42%		
Residential Subordinate Securities									
Adjustable Rate	Principal	35	26	20	15	12	3,790	3,898	3,076
	Interest Rate	3.51%	3.51%	3.51%	3.52%	3.53%	3.55%		
Fixed Rate	Principal	8,322	8,906	10,117	13,682	17,738	573,041	631,806	459,837
	Interest Rate	4.53%	4.56%	4.53%	4.45%	4.39%	4.11%		
Hybrid	Principal	3,577	2,885	1,948	1,488	1,139	55,735	66,772	56,974
	Interest Rate	3.46%	3.45%	3.51%	3.53%	3.55%	3.44%		
Multifamily Securities									
Adjustable Rate	Principal	18,754	16,517	10,790	6,714	7,814	28,759	89,348	89,721
	Interest Rate	4.27%	4.14%	4.19%	4.23%	4.16%	3.80%		
Fixed Rate	Principal	—	—	—	—	—	316,723	316,723	314,407
	Interest Rate	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%		
Interest rate sensitive liabilities									
Asset-Backed Securities Issued									
Sequoia Entities									
Adjustable Rate	Principal	103,064	80,704	62,834	48,501	37,215	87,738	420,056	402,465
	Interest Rate	2.44%	2.20%	2.27%	2.34%	2.37%	2.37%		
Fixed Rate	Principal	608,613	434,727	309,701	211,626	138,184	276,868	1,979,719	2,037,198
	Interest Rate	4.32%	4.33%	4.35%	4.39%	4.46%	4.46%		
Freddie Mac SLST Entities									
Fixed Rate	Principal	187,139	147,030	137,884	106,397	98,603	1,165,629	1,842,682	1,918,322
	Interest Rate	3.16%	3.16%	3.16%	3.15%	3.16%	3.16%		
Freddie Mac K-Series Entities									
Adjustable Rate	Principal	9,830	16,083	16,905	17,657	18,340	5,418	84,233	85,411
	Interest Rate	2.57%	2.60%	2.62%	2.67%	2.83%	2.83%		
Fixed Rate	Principal	16,821	30,106	40,137	97,871	144,571	3,431,050	3,760,556	4,070,828
	Interest Rate	2.75%	2.75%	2.75%	2.76%	2.79%	2.79%		
CAFL Entities									
Fixed Rate	Principal	86,295	178,527	264,627	269,450	427,801	648,307	1,875,007	2,001,251
	Interest Rate	3.49%	3.40%	3.22%	2.84%	2.69%	2.69%		
Short-term Debt	Principal	2,329,145	—	—	—	—	—	2,329,145	2,329,145
	Interest Rate	3.41%	N/A	N/A	N/A	N/A	N/A		

Quantitative Information on Market Risk

(Dollars in Thousands)		Principal Amounts Maturing and Effective Rates During Period 2020	2021	2022	2023	2024	Thereafter	December 31, 2019 Principal Balance	Fair Value
Interest rate sensitive liabilities (continued)									
Long-Term Debt									
FHLBC Borrowings	Principal	$ —	$ —	$ —	$ —	$ 470,171	$ 1,529,828	$ 1,999,999	$ 1,999,999
	Interest Rate	1.90%	1.83%	1.87%	1.95%	2.04%	2.14%		
Convertible Notes	Principal	—	—	—	245,000	200,000	201,250	646,250	661,985
	Interest Rate	5.89%	5.89%	5.89%	5.89%	6.25%	6.30%		
Subordinate Securities Financing Facility									
	Principal	—	—	184,666	—	—	—	184,666	184,666
	Interest Rate	—	—	—	N/A	N/A	N/A		
Other Long-Term Debt	Principal	—	—	—	—	—	139,500	139,500	99,045
	Interest Rate	6.86%	6.86%	6.86%	6.86%	6.86%	6.86%		
Interest Rate Agreements									
Interest Rate Swaps									
(Purchased)	Notional Amount	25,000	75,000	420,000	535,000	508,000	1,316,300	2,879,300	(138,843)
	Receive Strike Rate	1.70%	1.63%	1.67%	1.75%	1.84%	2.19%		
	Pay Strike Rate	2.35%	2.35%	2.35%	2.42%	2.62%	2.81%		
(Sold)	Notional Amount	—	—	75,000	30,000	317,000	551,500	973,500	7,173
	Receive Strike Rate	1.93%	1.93%	1.94%	1.95%	1.84%	1.82%		
	Pay Strike Rate	1.70%	1.63%	1.67%	1.75%	1.84%	2.08%		

(1) For the key assumptions and sensitivity analysis for assets retained from securitizations, refer to *Note 4* in Part II, Item 8 of this Annual Report.

(2) As we generally expect our residential loans held-for-sale to be sold within one year, we have only presented principal amounts and effective rates through 2020.

(3) The fair value of fixed-rate senior securities includes $64 million of interest-only securities, for which there is no principal at December 31, 2019.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Consolidated Financial Statements of Redwood Trust, Inc. and Notes thereto, together with the Reports of Independent Registered Public Accounting Firm thereon, are set forth on pages F-1 through F-111 of this Annual Report on Form 10-K and incorporated herein by reference.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

We have adopted and maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed on our reports under the Securities Exchange Act of 1934, as amended (the Exchange Act), is recorded, processed, summarized, and reported within the time periods specified in the U.S. Securities and Exchange Commission's rules and forms and that the information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by Rule 13a-15(b) of the Exchange Act, we have carried out an evaluation, under the supervision and with the participation of management, including our chief executive officer and chief financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the quarter covered by this report. Based on the foregoing, our chief executive officer and chief financial officer concluded that our disclosure controls and procedures were effective at a reasonable assurance level.

Management of Redwood Trust, Inc., together with its consolidated subsidiaries (the Company, or Redwood), is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed under the supervision of our chief executive officer and chief financial officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our consolidated financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles (GAAP).

As of the end of our 2019 fiscal year, management conducted an assessment of the effectiveness of our internal control over financial reporting based on the framework established in Internal Control - Integrated Framework released by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in 2013. Based on this assessment, management has determined that the Company's internal control over financial reporting as of December 31, 2019, was effective. Management's evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019 did not include internal controls over financial reporting that had not yet been integrated for CoreVest, which we acquired in October 2019. Assessment of a recently acquired business may be omitted from management's reporting on internal control over financial reporting in the year of acquisition under SEC guidelines. CoreVest comprised approximately 17% of our total assets as of December 31, 2019 and approximately 12% of net income for the year ended December 31, 2019.

Except as described in the preceding paragraph, there have been no changes in our internal control over financial reporting during the fourth quarter of 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Our internal control over financial reporting includes policies and procedures that pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets; provide reasonable assurances that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures are being made only in accordance with authorizations of management and the board of directors of Redwood; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our consolidated financial statements.

The Company's internal control over financial reporting as of December 31, 2019, has been audited by Grant Thornton LLP, an independent registered public accounting firm, as stated in their report appearing on page F-4, which expresses an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2019.

ITEM 9B. OTHER INFORMATION

On November 8, 2019, Redwood disclosed the departure of its Principal Accounting Officer, and following that departure named Collin Cochrane to also serve as its Principal Accounting Officer. In connection with this additional role and the related responsibilities, Redwood has entered into a letter agreement with Mr. Cochrane relating to his compensation terms. In particular, on February 28, 2020, Redwood agreed to provide Mr. Cochrane a $500,000 cash award, payment of which is subject to continued employment through March 1, 2022 (subject to accelerated payment, in addition to his discretionary full-year or pro-rated annual bonus, in the event of a termination without cause prior to March 1, 2022). Redwood also agreed to maintain Mr. Cochrane's target bonus for 2020 at the same level that was applicable in 2019 and to provide Mr. Cochrane accelerated vesting of DSU and PSU equity awards that are outstanding but unvested as of February 28, 2020 in the event of termination without cause prior to the otherwise scheduled vesting date for such equity awards.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by Item 10 is incorporated herein by reference to the definitive Proxy Statement to be filed with the SEC pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 11 is incorporated herein by reference to the definitive Proxy Statement to be filed with the SEC pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by Item 12 is incorporated herein by reference to the definitive Proxy Statement to be filed with the SEC pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 13 is incorporated herein by reference to the definitive Proxy Statement to be filed with the SEC pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by Item 14 is incorporated herein by reference to the definitive Proxy Statement to be filed with the SEC pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

Documents filed as part of this report:

(1) Consolidated Financial Statements and Notes thereto

(2) Schedules to Consolidated Financial Statements: Schedule IV - Mortgage Loans on Real Estate

All other Consolidated Financial Statements schedules not included have been omitted because they are either inapplicable or the information required is provided in the Company's Consolidated Financial Statements and Notes thereto, included in Part II, Item 8, of this Annual Report on Form 10-K.

(3) Exhibits:

Exhibit Number	Exhibit
3.1	Articles of Amendment and Restatement of the Registrant, effective July 6, 1994 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 3.1, filed on August 6, 2008)
3.1.1	Articles Supplementary of the Registrant, effective August 10, 1994 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 3.1.1, filed on August 6, 2008)
3.1.2	Articles Supplementary of the Registrant, effective August 11, 1995 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 3.1.2, filed on August 6, 2008)
3.1.3	Articles Supplementary of the Registrant, effective August 9, 1996 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 3.1.3, filed on August 6, 2008)
3.1.4	Certificate of Amendment of the Registrant, effective June 30, 1998 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 3.1.4, filed on August 6, 2008)
3.1.5	Articles Supplementary of the Registrant, effective April 7, 2003 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 3.1.5, filed on August 6, 2008)
3.1.6	Articles of Amendment of the Registrant, effective June 12, 2008 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 3.1.6, filed on August 6, 2008)
3.1.7	Articles of Amendment of the Registrant, effective May 19, 2009 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 3.1, filed on May 21, 2009)
3.1.8	Articles of Amendment of the Registrant, effective May 24, 2011 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 3.1, filed on May 20, 2011)
3.1.9	Articles of Amendment of the Registrant, effective May 18, 2012 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 3.1, filed on May 21, 2012)
3.1.10	Articles of Amendment of the Registrant, effective May 16, 2013 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 3.1, filed on May 21, 2013)
3.1.11	Articles of Amendment of the Registrant, effective May 15, 2019 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 3.1, filed on May 17, 2019)
3.2.1	Amended and Restated Bylaws of the Registrant, as adopted on March 5, 2008 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 3.1, filed on March 11, 2008)
3.2.2	First Amendment to Amended and Restated Bylaws of the Registrant, as adopted on May 17, 2012 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 3.2, filed on May 21, 2012)
3.2.3	Second Amendment to Amended and Restated Bylaws of the Registrant, as adopted on May 22, 2018 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 3.1, filed on May 23, 2018)
4.1	Description of Redwood Trust, Inc. Common Stock (filed herewith)
4.2	Form of Common Stock Certificate (incorporated by reference to the Registrant's Registration Statement on Form S-11 (No. 333-08363), Exhibit 4.3, filed on August 6, 1996)

Exhibit Number	Exhibit
4.3	Indenture dated as of October 1, 2001 between Sequoia Mortgage Trust 5 and Bankers Trust Company of California, N.A., as Trustee (incorporated by reference to Sequoia Mortgage Funding Corporation's Current Report on Form 8-K, Exhibit 99.1, filed on November 15, 2001)
4.4	Indenture dated as April 1, 2002 between Sequoia Mortgage Trust 6 and Deutsche Bank National Trust Company, as Trustee (incorporated by reference to Sequoia Mortgage Funding Corporation's Current Report on Form 8-K, Exhibit 99.1, filed on May 13, 2002)
4.5	Junior Subordinated Indenture dated as of December 12, 2006 between the Registrant and The Bank of New York Trust Company, National Association, as Trustee (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 1.4, filed on December 12, 2006)
4.6	Amended and Restated Trust Agreement dated December 12, 2006 among the Registrant, The Bank of New York Trust Company, National Association, The Bank of New York (Delaware), the Administrative Trustees (as named therein) and the several holders of the Preferred Securities from time to time (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 1.3, filed on December 12, 2006)
4.7	Purchase Agreement dated December 12, 2006 among the Registrant, Redwood Capital Trust I and Merrill Lynch International (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 1.1, filed on December 12, 2006)
4.8	Purchase Agreement dated December 12, 2006 among the Registrant, Redwood Capital Trust I and Bear, Stearns & Co. Inc. (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 1.2, filed on December 12, 2006)
4.9	Subordinated Indenture dated as of May 23, 2007 between the Registrant and Wilmington Trust Company (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 1.2, filed on May 23, 2007)
4.10	Purchase Agreement dated May 23, 2007 between the Registrant and Obsidian CDO Warehouse, LLC (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 1.1, filed on May 23, 2007)
4.11	Indenture, dated March 6, 2013, between Redwood Trust, Inc. and Wilmington Trust, National Association, as Trustee (incorporated by reference to the Registrant's Current Report on Form 8-K/A, Exhibit 4.1, filed on March 6, 2013)
4.12	Second Supplemental Indenture, dated August 18, 2017, between Redwood Trust, Inc. and Wilmington Trust, National Association, as Trustee (including the form of 4.75% Convertible Senior Note due 2023) (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 4.2, filed on August 18, 2017)
4.13	Third Supplemental Indenture, dated June 25, 2018, between Redwood Trust, Inc. and Wilmington Trust, National Association, as Trustee (including the form of 5.625% Convertible Senior Note due 2024) (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 4.2, filed on June 25, 2018)
4.14	Indenture, by and among Redwood Trust, Inc., RWT Holdings, Inc., and Wilmington Trust, National Association, as Trustee, dated as of September 24, 2019 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 99.1, filed on September 25, 2019)
9.1	Waiver Agreement dated as of November 15, 2007 between the Registrant and Davis Selected Advisors, L.P. (incorporated by reference to the Registrant's Annual Report on Form 10-K, Exhibit 9.1, filed on March 5, 2008)
9.2	Amendment of Waiver Agreement dated as of January 16, 2008 between Registrant and Davis Selected Advisors, L.P. (incorporated by reference to the Registrant's Annual Report on Form 10-K, Exhibit 9.2, filed on March 5, 2008)
10.1*	2014 Incentive Award Plan (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 10.1, filed on May 23, 2014)
10.2*	Amended and Restated 2014 Incentive Award Plan (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 10.2, filed on May 22, 2018)
10.3*	Form of Redwood Trust, Inc. Deferred Stock Unit Award Agreement under 2014 Incentive Award Plan (2014) (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.2, filed on August 8, 2014)
10.4*	Form of Redwood Trust, Inc. Performance Stock Unit Award Agreement under 2014 Incentive Award Plan (2014) (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 10.1, filed on December 19, 2016)

Exhibit Number	Exhibit
10.5*	Form of Redwood Trust, Inc. Restricted Stock Award Agreement under 2014 Incentive Award Plan (2014) (incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q, Exhibit 10.4, filed on August 8, 2014)
10.6*	Amended and Restated 1994 Executive and Non-Employee Director Stock Option Plan, as last amended January 24, 2002 (incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q, Exhibit 10.14.5, filed on May 15, 2002)
10.7*	2002 Incentive Plan, as amended through May 16, 2013 (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 10.1, filed on May 21, 2013)
10.8*	Form of Restricted Stock Award Agreement under 2002 Incentive Plan – Pre-December 2011 (incorporated by reference to the Registrant’s Annual Report on Form 10-K, Exhibit 10.8.3, filed on March 16, 2005)
10.9*	Form of Deferred Stock Unit Award Agreement under 2002 Incentive Plan – Pre-December 2011 (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 10.1, filed on December 2, 2010)
10.10*	Form of Performance Stock Unit Award Agreement under 2002 Incentive Plan – Pre-December 2011 (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 10.2, filed on December 2, 2010)
10.11*	Form of Restricted Stock Award Agreement under 2002 Incentive Plan (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 10.3, filed on December 8, 2011)
10.12*	Form of Deferred Stock Unit Award Agreement under 2002 Incentive Plan (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 10.1, filed on December 8, 2011)
10.13*	Form of Performance Stock Unit Award Agreement under 2002 Incentive Plan – December 2011 (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 10.2, filed on December 8, 2011)
10.14*	Form of Performance Stock Unit Award Agreement under 2002 Incentive Plan – December 2012 (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 10.1, filed on December 11, 2012)
10.15*	Form of Performance Stock Unit Award Agreement under 2014 Incentive Plan (2016 Form) (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 10.1, filed on December 14, 2016)
10.16*	Form of Performance Stock Unit Award Agreement under 2014 Incentive Plan (2017 Form) (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 10.1, filed on December 14, 2017)
10.17*	Form of Deferred Stock Unit Award Agreement under 2014 Incentive Plan (2018 Form of Award Agreement) (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 10.1, filed on December 17, 2018)
10.18*	Form of Performance Stock Unit Award Agreement under 2014 Incentive Plan (2018 Form of Award Agreement) (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 10.2, filed on December 17, 2018)
10.19*	Form of Letter Agreement Amendment to Equity Awards Under 2014 Incentive Plan (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 10.3, filed on December 17, 2018)
10.20*	Form of Restricted Stock Unit Award Agreement (2018 Form of Award Agreement) (incorporated by reference to the Registrant's Annual Report on Annual 10-K, Exhibit 10.23, filed on March 1, 2019)
10.21*	Form of Performance Stock Unit Award Agreement under 2014 Incentive Plan (2019 Form of Award Agreement) (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 10.1, filed on December 13, 2019)
10.22*	2002 Redwood Trust, Inc. Employee Stock Purchase Plan, as amended through May 15, 2019 (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 10.1, filed on May 17, 2019)
10.23*	Executive Deferred Compensation Plan, as amended and restated on December 10, 2008 (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 10.1, filed on January 14, 2009)
10.24*	First Amendment to Amended and Restated Executive Deferred Compensation Plan, effective as of November 23, 2013 (incorporated by reference to the Registrant’s Annual Report on Form 10-K, Exhibit 10.15, filed on February 26, 2014)
10.25*	Second Amendment to Amended and Restated Executive Deferred Compensation Plan (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.1, filed on November 8, 2018)

Exhibit Number	Exhibit
10.26*	Direct Stock Purchase and Dividend Reinvestment Plan (incorporated by reference to the Plan text included in the Registrant’s Prospectus Supplement filed on September 5, 2012)
10.27*	Summary of the Registrant’s Compensation Arrangements for Non-Employee Directors (incorporated by reference to the “Director Compensation” section of the Registrant’s Definitive Proxy Statement filed on March 28, 2018)
10.28*	Revised Form of Indemnification Agreement for Directors and Executive Officers (incorporated by reference to the Registrant’s Current Report on Form 8-K, Exhibit 99.3, filed on November 16, 2009)
10.29	Office Building Lease, dated February 27, 2003 (incorporated by reference to the Registrant’s Annual Report on Form 10-K, Exhibit 10.30.2, filed on March 12, 2004)
10.30	Office Building Lease (second floor), dated July 31, 2006 (incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q, Exhibit 10.1, filed November 2, 2006)
10.31	Second Amendment to Lease, dated July 31, 2006 (incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q, Exhibit 10.3, filed November 2, 2006)
10.32	Office Building Lease, effective as of and dated as of June 1, 2012 (incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q, Exhibit 10.1, filed November 3, 2011)
10.33	First Amendment to Lease, effective as of May 25, 2017, between AG-SKB Belvedere Owner, L.P. and the Registrant (incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q, Exhibit 10.1, filed on August 4, 2017)
10.34	Second Amendment to Lease, effective as of December 27, 2017, between AG-SKB Belvedere Owner, L.P. and the Registrant (incorporated by reference to the Registrant's Annual Report on Form 10-K, Exhibit 10.30, filed on February 28, 2018)
10.35	Lease Agreement, dated as of January 11, 2013, between MG-Point, LLC, as Landlord, and the Registrant, as Tenant (incorporated by reference to the Registrant’s Annual Report on Form 10-K, Exhibit 10.22, filed on February 26, 2013)
10.36	First Amendment to Lease, effective as of June 27, 2013, between MG-Point, LLC, as Landlord, and the Registrant, as Tenant (incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q, Exhibit 10.4, filed August 8, 2013)
10.37	Second Amendment to Lease, effective as of June 23, 2014, between MG-Point, LLC, as Landlord, and the Registrant, as Tenant (incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q, Exhibit 10.7, filed August 8, 2014)
10.38	Third Amendment to Lease, effective as of January 22, 2020, between ARTIS HRA Inverness Point, LP (successor-in-interest to MG-Point, LLC), as Landlord, and the Registrant, as Tenant (filed herewith)
10.39	Lease, between SRI Nine Main Plaza LLC and CoreVest American Finance Lender LLC (formerly known as Colony American Finance Lender, LLC), dated as of October 7, 2015 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.3, filed on November 8, 2019)
10.40	First Amendment to Lease, between Broadway Michelson LLC (as successor to SRI Nine Main Plaza LLC) and CoreVest American Finance Lender LLC, dated as of May 21, 2018 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.4, filed on November 8, 2019)
10.41	Lease, between the Irvine Company LLC and 5 Arches, LLC, dated as of January 27, 2015 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.5, filed on November 8, 2019)
10.42	First Amendment to Lease, between the Irvine Company LLC and 5 Arches, LLC, dated as of September 9, 2016 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.6, filed on November 8, 2019)
10.43	Second Amendment to Lease, between the Irvine Company LLC and 5 Arches, LLC, dated as of September 30, 2016 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.7, filed on November 8, 2019)
10.44	Assignment and Assumption of Lease, between 5 Arches, LLC and 5 Arch Group, LLC, dated as of October 10, 2016 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.8, filed on November 8, 2019)

Exhibit Number	Exhibit
10.45	Third Amendment to Lease, between the Irvine Company LLC and 5 Arch Group, LLC, dated as of November 17, 2016 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.9, filed on November 8, 2019)
10.46	Fourth Amendment to Lease, between Newport Gateway Office LLC (as successor in interest to the Irvine Company LLC) and 5 Arch Group, LLC, dated as of May 11, 2018 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.10, filed on November 8, 2019)
10.47	Fifth Amendment to Lease and Consent to Assignment, between Newport Gateway Office LLC (as successor in interest to the Irvine Company LLC) and 5 Arch Group, LLC, dated as of February 28, 2019 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.11, filed on November 8, 2019)
10.48*	Amended and Restated Employment Agreement, dated as of February 22, 2017, by and between Martin S. Hughes and the Registrant (incorporated by reference to the Registrant's Annual Report on Form 10-K, Exhibit 10.31, filed February 24, 2017)
10.49*	Amended and Restated Employment Agreement, dated as of May 22, 2018, by and between Martin S. Hughes and the Registrant (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.2, filed August 8, 2018)
10.50*	Amended and Restated Employment Agreement, dated as of March 31, 2009, by and between Brett D. Nicholas and the Registrant (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.3, filed on May 5, 2009)
10.51*	First Amendment to Amended and Restated Employment Agreement, by and between Brett D. Nicholas and the Registrant, dated as of March 17, 2010 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 10.2, filed on March 18, 2010)
10.52*	Second Amendment to Amended and Restated Employment Agreement, by and between Brett D. Nicholas and the Registrant, dated as of February 24, 2011 (incorporated by reference to the Registrant's Annual Report on Form 10-K, Exhibit 10.24, filed on February 24, 2011)
10.53*	Third Amendment to Amended and Restated Employment Agreement, by and between Brett D. Nicholas and the Registrant, dated as of May 17, 2012 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 10.4, filed on May 21, 2012)
10.54*	Fourth Amendment to Amended and Restated Employment Agreement, by and between Brett D. Nicholas and the Registrant, dated as of December 14, 2012 (incorporated by reference to the Registrant's Annual Report on Form 10-K, Exhibit 10.36, filed on February 26, 2013)
10.55*	Fifth Amendment to Amended and Restated Employment Agreement, by and between Brett D. Nicholas and the Registrant, dated as of August 6, 2014 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.6, filed on August 8, 2014)
10.56*	Sixth Amendment to Amended and Restated Employment Agreement, by and between Brett D. Nicholas and the Registrant, dated as of August 5, 2015 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.1, filed on November 6, 2015)
10.57*	Amended and Restated Employment Agreement, by and between Christopher J. Abate and the Registrant, dated as of February 22, 2017 (incorporated by reference to the Registrant's Annual Report on Form 10-K, Exhibit 10.49, filed on February 24, 2017)
10.58*	Second Amended and Restated Employment Agreement, dated as of May 22, 2018, by and between Christopher J. Abate and the Registrant (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.3, filed August 8, 2018)
10.59*	Third Amended and Restated Employment Agreement, dated as of May 7, 2019, by and between Christopher J. Abate and the Registrant (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.1, filed on May 9, 2019)
10.58*	Fourth Amended and Restated Employment Agreement, dated as of August 6, 2019, by and between Christopher J. Abate and the Registrant (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.1, filed on August 8, 2019)
10.59*	Employment Agreement, by and between Fred J. Matera and the Registrant, dated as of January 1, 2016 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 10.2, filed on January 4, 2016)

Exhibit Number	Exhibit
10.60*	Amended and Restated Employment Agreement, by and between Andrew P. Stone and the Registrant, dated as of February 22, 2017 (incorporated by reference to the Registrant's Annual Report on Form 10-K, Exhibit 10.51, filed on February 24, 2017)
10.61*	Second Amended and Restated Employment Agreement, dated as of May 22, 2018, by and between Andrew P. Stone and the Registrant (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.5, filed August 8, 2018)
10.62*	Third Amended and Restated Employment Agreement, dated as of May 7, 2019, by and between Andrew P. Stone and the Registrant (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.2, filed on May 9, 2019)
10.63*	Fourth Amended and Restated Employment Agreement, dated as of August 6, 2019, by and between Andrew P. Stone and the Registrant (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.3, filed on August 8, 2019)
10.64*	Employment Agreement, by and between Dashiell I. Robinson and the Registrant, dated as of August 8, 2017 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.1, filed on November 7, 2017)
10.65*	Side Letter Agreement, by and between Dashiell I. Robinson and the Registrant, dated as of August 8, 2017 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.2, filed on November 7, 2017)
10.66*	First Amendment to Employment Agreement, by and between Dashiell I. Robinson and the Registrant, dated as of May 22, 2018 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.4, filed August 8, 2018)
10.67*	First Amended and Restated Employment Agreement, dated as of May 7, 2019, by and between Dashiell I. Robinson and the Registrant (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.3, filed on May 9, 2019)
10.68*	Second Amended and Restated Employment Agreement, dated as of August 6, 2019, by and between Dashiell I. Robinson and the Registrant (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.2, filed on August 8, 2019)
10.69	Advances, Collateral Pledge, and Security Agreement between the Federal Home Loan Bank of Chicago and RWT Financial, LLC, dated as of July 16, 2014 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.8, filed on August 8, 2014)
10.70	Financial Covenant Supplement to Advances, Collateral Pledge, and Security Agreement between the Federal Home Loan Bank of Chicago and RWT Financial, LLC, dated as of July 16, 2014 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.9, filed on August 8, 2014)
10.71	Guaranty, dated July 16, 2014, given by Redwood Trust, Inc. in favor of the Federal Home Loan Bank of Chicago (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.10, filed on August 8, 2014)
10.72	Second Supplement to Advances, Collateral Pledge and Security Agreement between the Federal Home Loan Bank of Chicago and RWT Financial, LLC, dated as of February 19, 2015 (incorporated by reference to the Registrant's Annual Report on Form 10-K, Exhibit 10.53, filed on February 25, 2015)
10.73	Amendment to Advances, Collateral Pledge, and Security Agreement between the Federal Home Loan Bank of Chicago and RWT Financial, LLC, dated as of October 31, 2017 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 10.3, filed on November 7, 2017)
10.74	Amendment No. 1 to the Distribution Agreement by and among Wells Fargo Securities, LLC, J.P. Morgan Securities LLC, Credit Suisse Securities (USA) LLC, Goldman Sachs & Co. LLC and JMP Securities LLC, dated May 9, 2019 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 1.1, filed on May 10, 2019)
10.75	Distribution Agreement by and among Redwood Trust, Inc., Wells Fargo Securities, LLC, J.P. Morgan Securities LLC, Credit Suisse Securities (USA) LLC, Goldman Sachs & Co. LLC, and JMP Securities LLC, dated November 14, 2018 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 1.1, filed on November 15, 2018)

Exhibit Number	Exhibit
10.76	Equity Interests Purchase Agreement by and among Redwood Trust, Inc., RWT Holdings, Inc., CF CoreVest Parent I LLC, CF CoreVest Parent II LLC, CoreVest Management Partners LLC, and the Management Holders dated October 14, 2019 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 99.1, filed on October 15, 2019)
10.77*	Letter Agreement, between Collin L. Cochrane and the Registrant, dated as of February 28, 2020 (filed herewith)
21	List of Subsidiaries (filed herewith)
23	Consent of Grant Thornton LLP (filed herewith)
31.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
31.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
32.1	Certification of the Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith)
32.2	Certification of the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith)
101	Pursuant to Rule 405 of Regulation S-T, the following financial information from the Registrant's Annual Report on Form 10-K for the period ended December 31, 2019, is filed in XBRL-formatted interactive data files: (i) Consolidated Balance Sheets at December 31, 2019 and 2018; (ii) Consolidated Statements of Income for the years ended December 31, 2019, 2018, and 2017; (iii) Statements of Consolidated Comprehensive (Loss) Income for the years ended December 31, 2019, 2018, and 2017; (iv) Consolidated Statements of Changes in Equity for the years ended December 31, 2019, 2018, and 2017; (v) Consolidated Statements of Cash Flows for the years ended December 31, 2019, 2018, and 2017; and (vi) Notes to Consolidated Financial Statements.
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* Indicates exhibits that include management contracts or compensatory plan or arrangements.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, hereunto duly authorized.

REDWOOD TRUST, INC.

Date: March 2, 2020

By: /s/ CHRISTOPHER J. ABATE
Christopher J. Abate
Chief Executive Officer

Pursuant to the requirements the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ CHRISTOPHER J. ABATE Christopher J. Abate	Director and Chief Executive Officer (Principal Executive Officer)	March 2, 2020
/s/ COLLIN L. COCHRANE Collin L. Cochrane	Chief Financial Officer (Principal Financial and Accounting Officer)	March 2, 2020
/s/ RICHARD D. BAUM Richard D. Baum	Director, Chairman of the Board	March 2, 2020
/s/ DOUGLAS B. HANSEN Douglas B. Hansen	Director	March 2, 2020
/s/ MARIANN BYERWALTER Mariann Byerwalter	Director	March 2, 2020
/s/ DEBORA D. HORVATH Debora D. Horvath	Director	March 2, 2020
/s/ GREG H. KUBICEK Greg H. Kubicek	Director	March 2, 2020
/s/ FRED J. MATERA Fred J. Matera	Director	March 2, 2020
/s/ JEFFREY T. PERO Jeffrey T. Pero	Director	March 2, 2020
/s/ GEORGANNE C. PROCTOR Georganne C. Proctor	Director	March 2, 2020

REDWOOD TRUST, INC.

CONSOLIDATED FINANCIAL STATEMENTS,
REPORTS OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
For Inclusion in Annual Report on Form 10-K Filed With
Securities and Exchange Commission
December 31, 2019

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS AND SCHEDULES
REDWOOD TRUST, INC.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders
Redwood Trust, Inc.

Opinion on the financial statements

We have audited the accompanying consolidated balance sheets of Redwood Trust, Inc. (a Maryland corporation) and subsidiaries (the “Company”) as ofDecember 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2019 and the related notes and financial statement schedule included under Item 15(a) (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018 and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company’s internal control over financial reporting as of December 31, 2019, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), and our report dated March 2, 2020 expressed an unqualified opinion.

Basis for opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical audit matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Fair value measurements of certain real estate securities, and beneficial interests in consolidated Sequoia Choice and Freddie Mac Seasoned Loans Structured Transaction (“SLST”) securitization entities holding residential loans, consolidated CoreVest American Finance Lender (“CAFL”) securitization entities holding business purpose residential loans, and consolidated Freddie Mac K-Series securitization entities holding multifamily loans

As described further in Note 5 to the consolidated financial statements, the Company owns real estate securities, which are recorded at fair value on a recurring basis. Some of these real estate securities result in the consolidation of the underlying securitization entities as required by ASC 810, Consolidation. The Company has elected to account for consolidated securitization entities as Collateralized Finance Entities (“CFEs”) and has elected to measure the financial assets of its CFEs using the fair value of the financial liabilities issued by those entities, which management has determined to be more observable. The real estate securities and beneficial interests in consolidated securitization entities, are priced individually by the Company utilizing market comparable pricing and discounted cash flow analysis valuation techniques.

We identified the fair value measurements of certain investment securities, specifically certain subordinate securities, as well the beneficial interests in consolidated Sequoia Choice and Freddie Mac SLST securitization entities holding residential loans, consolidated CAFL securitization entities holding business purpose residential loans, and consolidated Freddie Mac K-Series securitization entities holding multifamily loans (together, "Investments") as a critical audit matter.

The principal considerations for our determination that the fair value measurement of these Investments was a critical audit matter are as follows. There is limited observable market data available for these Investments as they trade infrequently and, as such, the fair value measurement requires management to make complex judgments in order to identify and select the significant assumptions, which include the discount rate, prepayment rate, default rate and loss severity. In addition, the fair value measurements of the Investments are highly sensitive to changes in the significant assumptions and underlying market conditions and are material to the consolidated financial statements. As a result, obtaining sufficient appropriate audit evidence related to the fair value measurements required significant auditor subjectivity.

Our audit procedures related to the fair value measurements of these Investments included the following, among others. We tested the design and operating effectiveness of relevant controls including, among others, management's validation of the inputs to the valuations, and management's review of the significant assumptions against available market data. Further, we involved firm valuation specialists to independently determine the fair value measurement for a sample of the Investments and compared them to management's fair value measurement for reasonableness.

Fair value measurements of unsecuritized single-family rental loans

As described further in Note 7 to the consolidated financial statements, the Company purchases and originates Single-Family Rental Loans ("SFR Loans"), which are both held for sale and held for investment, and in each case recorded at fair value on a recurring basis. The unsecuritized SFR loans are priced by the Company using market comparable information that estimates the proceeds the Company would receive in a hypothetical securitization of the loans. We identified the fair value measurement of these SFR Loans as a critical audit matter.

The principal considerations for our determination that the fair value measurements of these SFR Loans was a critical audit matter are as follows. In determining the fair value measurement, there is limited observable market data available for the SFR Loans, and the secondary market for such SFR Loans is limited. As such, the fair value measurements require management to make complex judgements in order to determine the significant valuation assumptions, which include the assumed senior credit spread and assumed subordinate credit spread. In addition, the fair value measurements of the SFR Loans are highly sensitive to changes in these significant assumptions and underlying market conditions and are material to the consolidated financial statements. As a result, obtaining sufficient appropriate audit evidence related to the fair value measurements required significant auditor subjectivity.

Our audit procedures related to the fair value measurements of these SFR Loans included the following, among others. We tested the design and operating effectiveness of controls relating to the fair value measurements of these SFR Loans, including controls over the determination of the valuation of these SFR Loans. Such controls include management's validation of the inputs to the valuations, management's review of the significant assumptions to the valuation against recent market transactions of similar products, and management's recalculation of the valuation on the basis of such inputs and assumptions. Further, for the portfolio of SFR Loans, we reviewed and tested management's process in determining the fair value measurements. This included agreeing the inputs used in the valuation to loan agreements and other source documents for a sample of SFR Loans. We also involved firm valuation specialists to assess the appropriateness of the significant assumptions used by management in their valuations by comparing to relevant observable market data, benchmark yields for similar asset classes, or both.

Valuation of intangible asset related to the Company's acquisition of CoreVest

As described further in Note 2 to the consolidated financial statements, the Company entered into an equity interests purchase agreement, pursuant to which it acquired a 100% equity interest in CoreVest American Finance Lender LLC and several of its affiliates ("CoreVest"). In accounting for this transaction, the Company performed a purchase price allocation and recorded underlying assets acquired and liabilities assumed based on their estimated fair values using the information available as of the acquisition date, with the excess of the purchase price allocated to goodwill. In performing the purchase price allocation, the Company identified and recorded a borrower network asset. We identified the valuation of this intangible asset as a critical audit matter.

The principal consideration for our determination that the valuation of the borrower network was a critical audit matter is due to the significant measurement uncertainty in determining the fair value of this asset. The fair value determination was sensitive to significant assumptions including the discount rate and the prospective financial information, which are unobservable. As such, there is inherent subjectivity and high estimation uncertainty in management's judgment in identifying and determining the significant valuation assumptions and to conclude upon the appropriate valuation. As a result, obtaining sufficient appropriate audit evidence related to the assumptions required significant auditor subjectivity.

Our audit procedures related to the valuation of the borrower network included the following, among others. We evaluated the methodologies and tested the significant assumptions and underlying data used by the Company. Such testing included assessing the reasonableness of the prospective financial information that was the basis of the valuation. In addition, we involved a firm valuation specialist to assist in evaluating the methodology as well as evaluating the significant assumptions in the fair value estimate by comparing the discount rate to relevant observable market data.

/s/ GRANT THORNTON LLP

We have served as the Company's auditor since 2005.

Newport Beach, California
March 2, 2020

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders
Redwood Trust, Inc.

Opinion on internal control over financial reporting

We have audited the internal control over financial reporting of Redwood Trust, Inc. (a Maryland corporation) and subsidiaries (the “Company”) as ofDecember 31, 2019, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated financial statements of the Company as of and for the year ended December 31, 2019, and our report dated March 2, 2020 expressed an unqualified opinion on those financial statements.

Basis for opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Our audit of, and opinion on, the Company’s internal control over financial reporting does not include the internal control over financial reporting for CoreVest American Finance Lender, LLC and certain affiliated entities (collectively “CoreVest”), wholly-owned subsidiaries, whose financial statements reflect total assets and net income constituting approximately 17% and 12%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2019. As indicated in in the accompanying Management’s Report, CoreVest was acquired during the fourth quarter of 2019. Management’s assertion on the effectiveness of the Company’s internal control over financial reporting excluded internal control over financial reporting of CoreVest.

Definition and limitations of internal control over financial reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ GRANT THORNTON LLP

Newport Beach, California
March 2, 2020

REDWOOD TRUST, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(In Thousands, except Share Data)	December 31, 2019		December 31, 2018	
ASSETS (1)				
Residential loans, held-for-sale, at fair value	$	536,385	$	1,048,801
Residential loans, held-for-investment, at fair value		7,178,465		6,205,941
Business purpose residential loans, held-for-sale, at fair value		331,565		28,460
Business purpose residential loans, held-for-investment, at fair value		3,175,178		112,798
Multifamily loans, held-for-investment, at fair value		4,408,524		2,144,598
Real estate securities, at fair value		1,099,874		1,452,494
Other investments		358,130		438,518
Cash and cash equivalents		196,966		175,764
Restricted cash		93,867		29,313
Goodwill		88,675		—
Intangible assets		72,789		—
Accrued interest receivable		71,058		47,105
Derivative assets		35,701		35,789
Other assets		348,263		217,825
Total Assets	$	17,995,440	$	11,937,406
LIABILITIES AND EQUITY (1)				
Liabilities				
Short-term debt (2)	$	2,329,145	$	2,400,279
Accrued interest payable		60,655		42,528
Derivative liabilities		163,424		84,855
Accrued expenses and other liabilities		146,238		78,719
Asset-backed securities issued, at fair value		10,515,475		5,410,073
Long-term debt, net		2,953,272		2,572,158
Total liabilities		16,168,209		10,588,612
Commitments and Contingencies (see *Note 16*)				
Equity				
Common stock, par value $0.01 per share, 270,000,000 and 180,000,000 shares authorized; 114,353,036 and 84,884,344 issued and outstanding		1,144		849
Additional paid-in capital		2,269,617		1,811,422
Accumulated other comprehensive income		41,513		61,297
Cumulative earnings		1,579,124		1,409,941
Cumulative distributions to stockholders		(2,064,167)		(1,934,715)
Total equity		1,827,231		1,348,794
Total Liabilities and Equity	$	17,995,440	$	11,937,406

(1) Our consolidated balance sheets include assets of consolidated variable interest entities ("VIEs") that can only be used to settle obligations of these VIEs and liabilities of consolidated VIEs for which creditors do not have recourse to Redwood Trust, Inc. or its affiliates. At December 31, 2019 and December 31, 2018, assets of consolidated VIEs totaled $11,931,869 and $6,331,191, respectively. At December 31, 2019 and December 31, 2018, liabilities of consolidated VIEs totaled $10,717,072 and $5,709,807, respectively. See *Note 4* for further discussion.

(2) Includes $201 million of convertible notes at December 31, 2018, which were reclassified from Long-term debt, net to Short-term debt as the maturity of the notes was less than one year as of the date presented. See *Note 13* for further discussion.

The accompanying notes are an integral part of these consolidated financial statements.

REDWOOD TRUST, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME

	Years Ended December 31,		
(In Thousands, except Share Data)	**2019**	**2018**	**2017**
Interest Income			
Residential loans	$ 315,953	$ 239,818	$ 154,362
Business purpose residential loans	53,805	4,333	—
Multifamily loans	132,600	21,322	—
Real estate securities	91,822	105,078	90,803
Other interest income	28,101	8,166	2,892
Total interest income	622,281	378,717	248,057
Interest Expense			
Short-term debt	(96,506)	(58,917)	(36,851)
Asset-backed securities issued	(294,466)	(99,429)	(19,108)
Long-term debt	(88,836)	(80,693)	(52,857)
Total interest expense	(479,808)	(239,039)	(108,816)
Net Interest Income	142,473	139,678	139,241
Non-interest Income			
Mortgage banking activities, net	87,266	59,566	53,908
Investment fair value changes, net	35,500	(25,689)	10,374
Other income	19,257	13,070	12,436
Realized gains, net	23,821	27,041	13,355
Total non-interest income, net	165,844	73,988	90,073
General and administrative expenses	(118,672)	(82,782)	(77,156)
Other expenses	(13,022)	(196)	—
Net Income before Provision for Income Taxes	176,623	130,688	152,158
Provision for income taxes	(7,440)	(11,088)	(11,752)
Net Income	$ 169,183	$ 119,600	$ 140,406
Basic earnings per common share	$ 1.63	$ 1.47	$ 1.78
Diluted earnings per common share	$ 1.46	$ 1.34	$ 1.60
Basic weighted average shares outstanding	101,120,744	78,724,912	76,792,957
Diluted weighted average shares outstanding	136,780,594	110,027,770	101,975,008

The accompanying notes are an integral part of these consolidated financial statements.

REDWOOD TRUST, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Net Income	$ 169,183	$ 119,600	$ 140,406
Other comprehensive (loss) income:			
Net unrealized gain (loss) on available-for-sale securities	17,077	(7,298)	22,864
Reclassification of unrealized gain on available-for-sale securities to net income	(19,967)	(25,561)	(10,536)
Net unrealized (loss) gain on interest rate agreements	(16,894)	8,908	1,022
Reclassification of unrealized loss on interest rate agreements to net income	—	—	45
Total other comprehensive (loss) income	(19,784)	(23,951)	13,395
Total Comprehensive Income	$ 149,399	$ 95,649	$ 153,801

The accompanying notes are an integral part of these consolidated financial statements.

REDWOOD TRUST, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

For the Year Ended December 31, 2019

(In Thousands, except Share Data)	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Income	Cumulative Earnings	Cumulative Distributions to Stockholders	Total
December 31, 2018	84,884,344	$ 849	$ 1,811,422	$ 61,297	$ 1,409,941	$ (1,934,715)	$ 1,348,794
Net income	—	—	—	—	169,183	—	169,183
Other comprehensive loss	—	—	—	(19,784)	—	—	(19,784)
Issuance of common stock	28,724,645	288	441,884	—	—	—	442,172
Direct stock purchase and dividend reinvestment plan	399,838	4	6,303	—	—	—	6,307
Employee stock purchase and incentive plans	344,209	3	(4,949)	—	—	—	(4,946)
Non-cash equity award compensation	—	—	14,957	—	—	—	14,957
Common dividends declared ($1.20 per share)	—	—	—	—	—	(129,452)	(129,452)
December 31, 2019	114,353,036	$ 1,144	$ 2,269,617	$ 41,513	$ 1,579,124	$ (2,064,167)	$ 1,827,231

For the Year Ended December 31, 2018

(In Thousands, except Share Data)	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Income	Cumulative Earnings	Cumulative Distributions to Stockholders	Total
December 31, 2017	76,599,972	$ 766	$ 1,673,845	$ 85,248	$ 1,290,341	$ (1,837,913)	$ 1,212,287
Net income	—	—	—	—	119,600	—	119,600
Other comprehensive loss	—	—	—	(23,951)	—	—	(23,951)
Issuance of common stock	8,738,319	88	142,140	—	—	—	142,228
Direct stock purchase and dividend reinvestment plan	113,004	1	1,705	—	—	—	1,706
Employee stock purchase and incentive plans	473,878	4	(4,470)	—	—	—	(4,466)
Non-cash equity award compensation	—	—	13,736	—	—	—	13,736
Share repurchases	(1,040,829)	(10)	(15,534)	—	—	—	(15,544)
Common dividends declared ($1.18 per share)	—	—	—	—	—	(96,802)	(96,802)
December 31, 2018	84,884,344	$ 849	$ 1,811,422	$ 61,297	$ 1,409,941	$ (1,934,715)	$ 1,348,794

For the Year Ended December 31, 2017

(In Thousands, except Share Data)	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Income	Cumulative Earnings	Cumulative Distributions to Stockholders	Total
December 31, 2016	76,834,663	$ 768	$ 1,676,486	$ 71,853	$ 1,149,935	$ (1,749,614)	$ 1,149,428
Net income	—	—	—	—	140,406	—	140,406
Other comprehensive income	—	—	—	13,395	—	—	13,395
Employee stock purchase and incentive plans	375,651	4	(3,838)	—	—	—	(3,834)
Non-cash equity award compensation	—	—	10,378	—	—	—	10,378
Share repurchases	(610,342)	(6)	(9,181)	—	—	—	(9,187)
Common dividends declared ($1.12 per share)	—	—	—	—	—	(88,299)	(88,299)
December 31, 2017	76,599,972	$ 766	$ 1,673,845	$ 85,248	$ 1,290,341	$ (1,837,913)	$ 1,212,287

The accompanying notes are an integral part of these consolidated financial statements.

REDWOOD TRUST, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Cash Flows From Operating Activities:			
Net income	$ 169,183	$ 119,600	$ 140,406
Adjustments to reconcile net income to net cash used in operating activities:			
Amortization of premiums, discounts, and debt issuance costs, net	(5,066)	(13,687)	(18,250)
Depreciation and amortization of non-financial assets	10,133	1,308	1,213
Originations of held-for-sale loans	(569,915)	—	—
Purchases of held-for-sale loans	(5,823,547)	(7,162,131)	(5,705,842)
Proceeds from sales of held-for-sale loans	5,198,089	5,383,313	3,903,147
Principal payments on held-for-sale loans	106,183	66,892	52,956
Net settlements of derivatives	(66,059)	51,115	(9,950)
Non-cash equity award compensation expense	14,957	13,736	10,378
Market valuation adjustments	(97,006)	(24,069)	(51,484)
Realized gains, net	(23,821)	(27,041)	(13,355)
Net change in:			
Accrued interest receivable and other assets	(83,210)	(41,849)	(17,562)
Accrued interest payable, deferred tax liabilities, and accrued expenses and other liabilities	4,502	21,080	(4,820)
Net cash used in operating activities	(1,165,577)	(1,611,733)	(1,713,163)
Cash Flows From Investing Activities:			
Originations of loans held-for-investment	(448,189)	—	—
Purchases of loans held-for-investment	(49,489)	(147,523)	—
Proceeds from sales of loans held-for-investment	9,422	—	—
Principal payments on loans held-for-investment	1,751,303	781,063	523,561
Purchases of real estate securities	(345,403)	(609,568)	(600,875)
Purchases of residential securities held in consolidated securitization trust	(193,212)	(227,649)	—
Purchases of multifamily securities held in consolidated securitization trusts	(99,221)	(107,411)	—
Proceeds from sales of real estate securities	707,357	582,331	228,420
Principal payments on real estate securities	84,303	84,495	77,778
Purchases of servicer advance investments	(69,610)	(395,813)	—
Principal repayments from servicer advance investments	203,876	94,644	—
Acquisition of 5 Arches, net of cash acquired	(3,714)	(9,999)	—
Acquisition of CoreVest, net of cash acquired	(451,626)	—	—
Net investment in participation in loan warehouse facility	38,209	(38,209)	—
Net investment in multifamily loan fund	(40,467)	—	—
Other investing activities, net	(67,677)	(19,113)	51,494
Net cash provided by (used in) investing activities	1,025,862	(12,752)	280,378

REDWOOD TRUST, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Cash Flows From Financing Activities:			
Proceeds from borrowings on short-term debt	6,452,566	6,975,965	4,895,889
Repayments on short-term debt	(7,193,677)	(6,711,264)	(4,036,634)
Proceeds from issuance of asset-backed securities	1,397,126	1,658,848	567,100
Repayments on asset-backed securities issued	(1,123,119)	(459,171)	(205,163)
Proceeds from issuance of long-term debt	387,053	199,000	245,000
Deferred debt issuance costs	(7,023)	(4,977)	(7,380)
Repayments on long-term debt	(1,137)	—	—
Net proceeds from issuance of common stock	450,710	142,601	302
Net payments on repurchase of common stock	—	(16,315)	(8,417)
Taxes paid on equity award distributions	(5,471)	(4,839)	(4,136)
Dividends paid	(129,452)	(96,802)	(88,299)
Other financing activities, net	(2,105)	(291)	(137)
Net cash provided by financing activities	225,471	1,682,755	1,358,125
Net increase (decrease) in cash and cash equivalents	85,756	58,270	(74,660)
Cash, cash equivalents and restricted cash at beginning of period(1)	205,077	146,807	221,467
Cash, cash equivalents and restricted cash at end of period(1)	$ 290,833	$ 205,077	$ 146,807
Supplemental Cash Flow Information:			
Cash paid during the period for:			
Interest	$ 452,216	$ 207,014	$ 103,279
Taxes	7,963	10,594	2,746
Supplemental Noncash Information:			
Real estate securities retained from loan securitizations	$ 13,729	$ 51,911	$ 79,662
Retention of mortgage servicing rights from loan securitizations and sales	868	328	7,387
Consolidation of residential loans held in securitization trust	1,190,995	1,206,645	—
Consolidation of residential ABS issued	997,783	978,996	—
Consolidation of multifamily loans held in securitization trusts	2,162,385	2,099,916	—
Consolidation of multifamily ABS issued	2,058,214	1,975,324	—
Consolidation of single-family rental loans held in securitization trusts	1,829,281	—	—
Consolidation of single-family rental ABS issued	1,656,023	—	—
Transfers from loans held-for-sale to loans held-for-investment	1,801,560	2,062,809	1,245,430
Transfers from loans held-for-investment to loans held-for-sale	22,808	15,717	98,854
Transfers from residential loans to real estate owned	8,609	4,104	4,220
Right-of-use asset obtained in exchange for operating lease liability	13,094	—	—

(1) Cash, cash equivalents, and restricted cash at December 31, 2019 included cash and cash equivalents of $197 million and restricted cash of $94 million; at December 31, 2018 included cash and cash equivalents of $176 million and restricted cash of $29 million; and at December 31, 2017 included cash and cash equivalents of $145 million and restricted cash of $2 million.

The accompanying notes are an integral part of these consolidated financial statements.

Note 1. Organization

Redwood Trust, Inc., together with its subsidiaries, is a specialty finance company focused on making credit-sensitive investments in single-family residential and multifamily mortgages and related assets and engaging in mortgage banking activities. Our goal is to provide attractive returns to shareholders through a stable and growing stream of earnings and dividends, as well as through capital appreciation. We operate our business in four segments: Residential Lending, Business Purpose Lending, Multifamily Investments, and Third-Party Residential Investments.

Our primary sources of income are net interest income from our investments and non-interest income from our mortgage banking activities. Net interest income consists of the interest income we earn on investments less the interest expense we incur on borrowed funds and other liabilities. Income from mortgage banking activities is generated through the origination and acquisition of loans, and their subsequent sale, securitization, or transfer to our investment portfolios.

Redwood Trust, Inc. has elected to be taxed as a real estate investment trust (“REIT”) under the Internal Revenue Code of 1986, as amended (the “Internal Revenue Code”), beginning with its taxable year ended December 31, 1994. We generally refer, collectively, to Redwood Trust, Inc. and those of its subsidiaries that are not subject to subsidiary-level corporate income tax as “the REIT” or “our REIT.” We generally refer to subsidiaries of Redwood Trust, Inc. that are subject to subsidiary-level corporate income tax as “our taxable REIT subsidiaries” or “TRS.”

Redwood was incorporated in the State of Maryland on April 11, 1994, and commenced operations on August 19, 1994. On March 1, 2019, Redwood completed the acquisition of 5 Arches, LLC ("5 Arches"), at which time 5 Arches became a wholly-owned subsidiary of Redwood. On October 15, 2019, Redwood acquired CoreVest American Finance Lender, LLC and certain affiliated entities ("CoreVest"), at which time CoreVest became wholly owned by Redwood. References herein to “Redwood,” the “company,” “we,” “us,” and “our” include Redwood Trust, Inc. and its consolidated subsidiaries, unless the context otherwise requires. Refer to Item 1 - *Business* in this Annual Report on Form 10-K for additional information on our business.

Note 2. Basis of Presentation

The consolidated financial statements presented herein are at December 31, 2019 and December 31, 2018, and for the years ended December 31, 2019, 2018, and 2017. These consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP") — as prescribed by the Financial Accounting Standards Board’s (“FASB”) Accounting Standards Codification (“ASC”) — and the rules and regulations of the Securities and Exchange Commission ("SEC"). In the opinion of management, all normal and recurring adjustments to present fairly the financial condition of the Company at December 31, 2019 and 2018, and results of operations for all periods presented have been made.

Principles of Consolidation

In accordance with GAAP, we determine whether we must consolidate transferred financial assets and variable interest entities (“VIEs”) for financial reporting purposes. We currently consolidate the assets and liabilities of certain Sequoia securitization entities issued prior to 2012 where we maintain an ongoing involvement ("Legacy Sequoia"), as well as entities formed in connection with the securitization of Redwood Choice expanded-prime loans ("Sequoia Choice"). We also consolidate the assets and liabilities of certain Freddie Mac K-Series and Freddie Mac Seasoned Loans Structured Transaction ("SLST") securitizations we invested in beginning in 2018. Finally, we consolidated the assets and liabilities of certain CoreVest American Finance Lender ("CAFL") securitizations beginning in the fourth quarter of 2019, in connection with our acquisition of CoreVest. Each securitization entity is independent of Redwood and of each other and the assets and liabilities are not owned by and are not legal obligations of Redwood Trust, Inc. Our exposure to these entities is primarily through the financial interests we have purchased or retained, although for the consolidated Sequoia and CAFL entities we are exposed to certain financial risks associated with our role as a sponsor, servicing administrator, or depositor of these entities or as a result of our having sold assets directly or indirectly to these entities.

Note 2. Basis of Presentation - (continued)

For financial reporting purposes, the underlying loans owned at the consolidated Sequoia and Freddie Mac SLST entities are shown under Residential loans held-for-investment at fair value, the underlying loans at the consolidated Freddie Mac K-Series are shown under Multifamily loans held-for-investment, at fair value, and the underlying single-family rental loans at the consolidated CAFL entities are shown under Business purpose loans held-for-investment, at fair value, on our consolidated balance sheets. The asset-backed securities (“ABS”) issued to third parties by these entities are shown under ABS issued. In our consolidated statements of income, we recorded interest income on the loans owned at these entities and interest expense on the ABS issued by these entities as well as other income and expenses associated with these entities' activities. See *Note 14* for further discussion on ABS issued.

Beginning in 2018, we consolidated two partnerships ("Servicing Investment" entities) through which we have invested in servicing-related assets. We maintain an 80% ownership interest in each entity and have determined that we are the primary beneficiary of these partnerships.

Beginning in the first quarter of 2019, we consolidated 5 Arches, an originator of business purpose residential loans, pursuant to the exercise of our purchase option and the acquisition of the remaining equity in the company. In the fourth quarter of 2019, we acquired and consolidated CoreVest, an originator and portfolio manager of business purpose residential loans.

See *Note 4* for further discussion on principles of consolidation.

Use of Estimates

The preparation of financial statements requires us to make a number of significant estimates. These include estimates of fair value of certain assets and liabilities, amounts and timing of credit losses, prepayment rates, and other estimates that affect the reported amounts of certain assets and liabilities as of the date of the consolidated financial statements and the reported amounts of certain revenues and expenses during the reported periods. It is likely that changes in these estimates (e.g., valuation changes due to supply and demand, credit performance, prepayments, interest rates, or other reasons) will occur in the near term. Our estimates are inherently subjective in nature and actual results could differ from our estimates and the differences could be material.

Acquisition of 5 Arches, LLC

In May 2018, Redwood acquired a 20% minority interest in 5 Arches for $10 million in cash, with a one-year option to purchase all remaining equity in the company. On March 1, 2019, we completed the acquisition of the remaining 80% interest in 5 Arches, an originator of business purpose residential loans. At closing, we paid approximately $13 million of cash and the remaining $27 million in consideration will be paid in a mix of cash and Redwood common stock over the next two years.

Acquisition of CoreVest

On October 15, 2019, we acquired CoreVest, an originator and portfolio manager of business purpose residential loans. Aggregate consideration for this acquisition totaled approximately $492 million, net of in-place financing on existing assets. The consideration consisted of $482 million of cash and $10 million of restricted stock awards issued to the CoreVest management team. Based on the terms of the equity interest purchase agreement, we determined that the $10 million of shares should be accounted for as compensation expense for post-combination services, and therefore, it is not included in the GAAP purchase price allocated to the assets and liabilities acquired.

Note 2. Basis of Presentation - (continued)

During 2019, we accounted for the acquisitions of 5 Arches and CoreVest under the acquisition method of accounting pursuant to ASC 805. We performed the purchase price allocations and recorded underlying assets acquired and liabilities assumed based on their estimated fair values using the information available as of each acquisition date, with the excess of the purchase price allocated to goodwill. Through December 31, 2019, there were no significant changes to our purchase price allocations, which are summarized in the following table.

Table 2.1 – Purchase Price Allocations

(In Thousands)	**5 Arches**	**CoreVest**
Acquisition Date	**March 1, 2019**	**October 15, 2019**
Purchase price:		
Cash	$ 12,575	$ 482,311
Contingent consideration, at fair value	24,621	—
Purchase option, at fair value	5,082	—
Equity method investment, at fair value	8,052	—
Total consideration	$ 50,330	$ 482,311
Allocated to:		
Business purpose residential loans, at fair value	$ 2,022	$ 2,610,490
Cash and cash equivalents	2,128	30,685
Restricted cash	9,082	—
Other assets	5,473	67,420
Goodwill	28,747	59,928
Intangible assets	24,800	56,500
Deferred tax asset	—	2,577
Total assets acquired	72,252	2,827,600
Asset-backed securities issued, at fair value	—	1,656,023
Short-term debt, net	3,800	663,275
Accrued expenses and other liabilities	13,920	25,991
Deferred tax liability	4,202	—
Total liabilities assumed	21,922	2,345,289
Total net assets acquired	$ 50,330	$ 482,311

Because we owned a 20% noncontrolling interest in 5 Arches immediately before obtaining full control, we remeasured our initial minority investment and purchase option at their acquisition-date fair values using the income approach, which resulted in a gain of $2 million that was recorded in Other income on our consolidated statements of income during the three months ended March 31, 2019.

We recognized $2 million of acquisition costs related our acquisitions of 5 Arches and CoreVest during the year ended December 31, 2019. These costs primarily related to accounting, consulting, and legal expenses and are included in our General and administrative expenses on our consolidated statements of income.

Note 2. Basis of Presentation - (continued)

In connection with the acquisitions of 5 Arches and CoreVest, we identified and recorded finite-lived intangible assets totaling $25 million and $57 million, respectively. The amortization period for each of these assets and the activity for the year ended December 31, 2019 is summarized in the table below.

Table 2.2 – Intangible Assets – Activity

(Dollars in Thousands)	Carrying Value at December 31, 2018	Additions	Amortization Expense	Carrying Value at December 31, 2019	Weighted Average Amortization Period (in years)
5 Arches					
Broker network	$ —	$ 18,100	$ (3,017)	$ 15,083	5
Non-compete agreements	—	2,900	(806)	2,094	3
Loan administration fees on existing loan assets	—	2,600	(2,167)	433	1
Tradename	—	1,200	(333)	867	3
Total 5 Arches	—	24,800	(6,323)	18,477	5
CoreVest					
Borrower network	—	45,300	(1,348)	43,952	7
Non-compete agreements	—	6,600	(458)	6,142	3
Tradename	—	2,800	(194)	2,606	3
Developed technology	—	1,800	(188)	1,612	2
Total CoreVest	—	56,500	(2,188)	54,312	6
Total	$ —	$ 81,300	$ (8,511)	$ 72,789	6

All of our intangible assets are amortized on a straight-line basis. Estimated future amortization expense is summarized in the table below.

Table 2.3 – Intangible Asset Amortization Expense by Year

December 31, 2019 **(In Thousands)**	5 Arches	CoreVest	Total
2020	$ 5,420	$ 10,505	$ 15,925
2021	4,987	10,317	15,304
2022	3,848	8,952	12,800
2023	3,620	6,471	10,091
2024	602	6,471	7,073
2025 and thereafter	—	11,596	11,596
Total Future Intangible Asset Amortization	$ 18,477	$ 54,312	$ 72,789

We recorded total goodwill of $89 million in 2019 as a result of the total consideration exceeding the fair value of the net assets acquired from 5 Arches and CoreVest. The goodwill was attributed to the expected business synergies and expansion into business purpose loan markets, as well as access to the knowledgeable and experienced workforces continuing to provide services to the business. We expect $75 million of this goodwill to be deductible for tax purposes. For reporting purposes, we included the intangible assets and goodwill from these acquisitions within the Business Purpose Lending segment.

Note 2. Basis of Presentation - (continued)

The following table presents the goodwill activity for the year ended December 31, 2019.

Table 2.4 – Goodwill – Activity

	Year Ended December 31, 2019		
(In Thousands)	**5 Arches**	**CoreVest**	**Total**
Beginning balance	$ —	$ —	$ —
Goodwill recognized from acquisition	28,747	59,928	88,675
Impairment	—	—	—
Ending Balance	$ 28,747	$ 59,928	$ 88,675

The liability resulting from the contingent consideration arrangement with 5 Arches was recorded at its acquisition-date fair value of $25 million as part of total consideration for the acquisition of 5 Arches. At December 31, 2019, the estimated fair value of this contingent liability was $28 million and was recorded as a component of Accrued expenses and other liabilities on our consolidated balance sheets. During the year ended December 31, 2019, we recorded $3 million of contingent consideration expense through Other expenses on our consolidated statements of income. See *Note 16* for additional information on our contingent consideration liability.

The following unaudited pro forma financial information presents Net interest income, Non-interest income, and Net income of Redwood, 5 Arches, and CoreVest combined, as if the acquisitions occurred as of January 1, 2018. These pro forma amounts have been adjusted to include the amortization of intangible assets and acquisition-related compensation expense for both periods, and to exclude the income statement impacts related to our equity method investment in 5 Arches. The unaudited pro forma financial information is not intended to represent or be indicative of the consolidated financial results of operations that would have been reported if the acquisition had been completed as of January 1, 2018 and should not be taken as indicative of our future consolidated results of operations.

During the period from March 1, 2019 to December 31, 2019, 5 Arches had net interest income of less than $0.1 million, non-interest income of $19 million, and net income of $3 million. In addition, 5 Arches had intangible asset amortization expense of $6 million for this period. During the period from October 15, 2019 to December 31, 2019, CoreVest had net interest income of $11 million, non-interest income of $19 million, and net income of $22 million. In addition, CoreVest had intangible asset amortization expense of $2 million for this period.

Table 2.5 – Unaudited Pro Forma Financial Information

	Years Ended December 31,	
(In Thousands)	**2019**	**2018**
Supplementary pro forma information:		
Net interest income	$ 167,680	$ 165,849
Non-interest income	193,519	103,179
Net income	185,896	118,125

Note 3. Summary of Significant Accounting Policies

Significant Accounting Policies

<u>Business Combinations</u>

We use the acquisition method of accounting for business combinations, under which the purchase price is allocated to the fair values of the assets acquired and liabilities assumed at the acquisition date. The excess of the purchase price over the amount allocated to the assets acquired and liabilities assumed is recorded as goodwill. Acquisition-related costs are expensed as incurred.

Note 3. Summary of Significant Accounting Policies - (continued)

Fair Value Measurements

Our consolidated financial statements include assets and liabilities that are measured at their estimated fair values in accordance with GAAP. A fair value measurement represents the price at which an orderly transaction would occur between willing market participants at the measurement date.

We develop fair values for financial assets or liabilities based on available inputs and pricing that is observed in the marketplace. After considering all available indications of the appropriate rate of return that market participants would require, we consider the reasonableness of the range indicated by the results to determine an estimate that is most representative of fair value.

The markets for many of the assets that we invest in and issue are generally illiquid. Establishing fair values for illiquid assets and liabilities is inherently subjective and is often dependent upon our estimates and modeling assumptions. If we determine that either the volume and/or level of trading activity for an asset or liability has significantly decreased from normal market conditions, or price quotations or observable inputs are not associated with orderly transactions, the market inputs that we obtain might not be relevant. For example, broker or pricing service quotes might not be relevant if an active market does not exist for the financial asset or liability. The nature of the quote (for example, whether the quote is an indicative price or a binding offer) is also evaluated.

In circumstances where relevant market inputs cannot be obtained, increased analysis and management judgment are required to estimate fair value. This generally requires us to establish internal assumptions about future cash flows and appropriate risk-adjusted discount rates. Regardless of the valuation inputs we apply, the objective of fair value measurement for assets is unchanged from what it would be if markets were operating at normal activity levels and/or transactions were orderly; that is, to determine the current exit price.

See *Note 5* for further discussion on fair value measurements.

Fair Value Option

We have the option to measure eligible financial assets, financial liabilities, and commitments at fair value on an instrument-by-instrument basis. This option is available when we first recognize a financial asset or financial liability or enter into a firm commitment. Subsequent changes in the fair value of assets, liabilities, and commitments where we have elected the fair value option are recorded in our consolidated statements of income.

We elect the fair value option for certain residential loans, business purpose residential loans, interest-only (“IO”) and certain subordinate securities, MSRs, servicer advance investments, excess MSRs, and certain of our other investments. We generally elect the fair value option for residential loans that are held-for-sale, due to our intent to sell or securitize the loans in the near-term. We elect the fair value option for our IO and certain subordinate securities, and MSRs, for which we generally hedge market interest rate risk. As such, we seek to offset interest rate related changes in the values of these investments with changes in the values of their associated hedges through our consolidated statements of income. In addition, we elect the fair value option for the assets and liabilities of our consolidated Sequoia, Freddie Mac SLST, Freddie Mac K-Series, and CAFL entities in accordance with GAAP accounting for collateralized financing entities ("CFEs").

See *Note 5* for further discussion on the fair value option.

Real Estate Loans

Residential Loans - Held-for-Sale at Fair Value

Residential loans held-for-sale include loans that we are marketing for sale to third parties, including transfers to securitization entities that we plan to sponsor. We generally elect the fair value option for residential loans that we purchase with the intent to sell to third parties or transfer to Sequoia securitizations. Coupon interest is recognized as revenue when earned and deemed collectible or until a loan becomes more than 90 days past due, at which point the loan is placed on nonaccrual status and any accrued interest is reversed against interest income. When a seriously delinquent loan previously placed on nonaccrual status has cured, meaning all delinquent principal and interest have been remitted by the borrower, the loan is placed back on accrual status. Changes in fair value for these loans are recurring and are reported through our consolidated statements of income in Mortgage banking activities, net.

Note 3. Summary of Significant Accounting Policies - (continued)

Residential Loans - Held-for-Investment At Fair Value

Certain loans that were originally purchased with the intent to sell as part of our residential mortgage banking operations, and for which we elected the fair value option at acquisition, were subsequently reclassified to held-for-investment ("HFI") when the loans were transferred to our Federal Home Loan Bank of Chicago ("FHLBC") member subsidiary and pledged as collateral for borrowings made from the FHLBC. As of December 31, 2019, our current intent is to hold these loans for longer-term investment while they are financed by the FHLBC.

Coupon interest for these loans is recognized as revenue when earned and deemed collectible or until a loan becomes more than 90 days past due, at which point the loan is placed on nonaccrual status and any accrued interest is reversed against interest income. When a seriously delinquent loan previously placed on nonaccrual status has cured, meaning all delinquent principal and interest have been remitted by the borrower, the loan is placed back on accrual status.

In addition, we record residential loans held at consolidated Sequoia and Freddie Mac SLST entities at fair value. In accordance with accounting guidance for CFEs, we use the fair value of the ABS issued by these entities (which we determined to be more observable) to determine the fair value of the loans held at these entities. Coupon interest for these loans is recognized as revenue based on amounts expected to be paid to the securities issued by these entities.

Changes in fair value for these loans are recurring and are reported through our consolidated statements of income in Investment fair value changes, net.

Business Purpose Residential Loans - Held-for-Sale at Fair Value

We originate business purpose residential loans, including single-family rental loans through our business purpose lending platform. Single-family rental loans are mortgage loans secured by 1-4 unit residential real estate that the borrower owns as an investment property and rents to residential tenants. We classify single-family rental loans as held-for-sale at fair value when we originate these loans with the intent to transfer to securitization entities.

Coupon interest for these loans is recognized as revenue when earned and deemed collectible or until a loan becomes more than 90 days past due, at which point the loan is placed on nonaccrual status and any accrued interest is reversed against interest income. When a seriously delinquent loan previously placed on nonaccrual status has cured, meaning all delinquent principal and interest have been remitted by the borrower, the loan is placed back on accrual status. Changes in fair value are recurring and reported through our consolidated statements of income in Mortgage banking activities, net.

Business Purpose Residential Loans - Held-for-Investment at Fair Value

We also originate residential bridge loans through our business purpose lending platform. Residential bridge loans are mortgage loans generally secured by unoccupied residential real estate that the borrower owns as an investment and that is being renovated, rehabilitated or constructed. Residential bridge loans are classified as held-for-investment at fair value if we intend to hold these loans to maturity.

Certain single-family rental loans that were originated with the intent to sell as part of our business purpose mortgage banking operations, and for which we elected the fair value option at acquisition, were subsequently reclassified to held-for-investment ("HFI") when the loans were transferred to our Federal Home Loan Bank of Chicago ("FHLBC") member subsidiary and pledged as collateral for borrowings made from the FHLBC. As of December 31, 2019, our current intent is to hold these loans for longer-term investment while they are financed by the FHLBC.

Coupon interest for these loans is recognized as revenue when earned and deemed collectible or until a loan becomes more than 90 days past due, at which point the loan is placed on nonaccrual status and any accrued interest is reversed against interest income. When a seriously delinquent loan previously placed on nonaccrual status has cured, meaning all delinquent principal and interest have been remitted by the borrower, the loan is placed back on accrual status.

In addition, we record residential loans held at consolidated CAFL entities at fair value. In accordance with accounting guidance for CFEs, we use the fair value of the ABS issued by these entities (which we determined to be more observable) to determine the fair value of the loans held at these entities. Coupon interest for these loans is recognized as revenue based on amounts expected to be paid to the securities issued by these entities.

Note 3. Summary of Significant Accounting Policies - (continued)

Changes in fair value for these loans are recurring and reported through our consolidated statements of income in Investment fair value changes, net.

Multifamily Loans, Held-for-Investment at Fair Value

Multifamily loans are mortgage loans secured by multifamily properties, held in Freddie Mac-sponsored K-series securitization trusts that we consolidate. In accordance with accounting guidance for CFEs, we use the fair value of the ABS issued by the Freddie Mac K-Series entities (which we determined to be more observable) to determine the fair value of the loans held at these entities. Coupon interest for these loans is recognized as revenue based on amounts expected to be paid to the securities issued by these entities. Changes in fair value for the assets and liabilities of these trusts are recurring and are reported through our consolidated statements of income in Investment fair value changes, net.

Repurchase Reserves

We sell and have sold residential and business purpose residential mortgage loans to various parties, including (1) securitization trusts, (2) Fannie Mae and Freddie Mac (“the Agencies”), and (3) banks and other financial institutions that purchase mortgage loans for investment or private label securitization. We may be required to repurchase mortgage loans we have sold, or loans associated with MSRs we have purchased, in the event of a breach of specified contractual representations and warranties made in connection with these sales and purchases. With respect to MSRs we purchased, if the associated residential loan was sold to one of the Agencies (which was typically the case), that Agency can require us, as the owner of the MSR, to repurchase the residential loan in the event of such a breach of representations and warranties even though we were not the party that sold the associated loan to that Agency. In January 2016, we discontinued the acquisition and aggregation of conforming loans for resale to the Agencies.

We do not originate residential mortgage loans and believe the initial risk of loss due to loan repurchases (i.e., due to a breach of representations and warranties) would generally be a contingency to the companies from whom we acquired the loans or MSRs. However, in some cases, such as where loans or MSRs were acquired from companies that have since become insolvent, we may have to bear the loss associated with a loan repurchase. Furthermore, even if we do not have to ultimately bear such a loss because we can recover from the company that sold us the loan or the MSR, there could be a delay in making that recovery.

We establish reserves for mortgage repurchase liabilities related to various representations and warranties that reflect management’s estimate of losses for loans for which we could have a repurchase obligation, based on a combination of factors. Such factors can include estimated future defaults and loan repurchase rates, the potential severity of loss in the event of defaults, and the probability of our being liable for a repurchase obligation. We establish a reserve at the time loans are sold and MSRs are purchased and continually update our reserve estimate during its life. The reserve for mortgage loan repurchase losses is included in other liabilities on our consolidated balance sheets and the related expense is included as a component of Mortgage banking activities, net on our consolidated statements of income.

See *Note 16* for further discussion on the residential repurchase reserves.

Real Estate Securities, at Fair Value

Our securities primarily consist of mortgage-backed securities (“MBS”) collateralized by residential and multifamily mortgage loans. We classify our real estate securities as trading or available-for-sale securities.

Trading Securities

We primarily denote trading securities as those securities where we have adopted the fair value option. Trading securities are carried at their estimated fair values. Coupon interest is recognized as interest income when earned and deemed collectible. Changes in the fair value of securities designated as trading securities are reported in Investment fair value changes, net on our consolidated statements of income.

Note 3. Summary of Significant Accounting Policies - (continued)

Available-for-Sale Securities

AFS securities are carried at their estimated fair value with unrealized gains and losses excluded from earnings (except when an other-than-temporary impairment (“OTTI”) is recognized, as discussed below) and reported in Accumulated other comprehensive income (“AOCI”), a component of stockholders’ equity.

Interest income on AFS securities is accrued based on their outstanding principal balance and contractual terms and interest income is recognized based on the security’s effective interest rate. In order to calculate the effective interest rate, we must project cash flows over the remaining life of each security and make assumptions with regards to interest rates, prepayment rates, the timing and amount of credit losses, and other factors. On at least a quarterly basis, we review and, if appropriate, make adjustments to our cash flow projections based on input and analysis received from external sources, internal models, and our own judgments about interest rates, prepayment rates, the timing and amount of credit losses, and other factors. Changes in cash flows from those originally projected, or from those estimated at the last evaluation, may result in a prospective change in the yield and interest income recognized on these securities or in the recognition of OTTI as discussed below.

For AFS securities purchased and held at a discount, a portion of the discount may be designated as non-accretable purchase discount (“credit reserve”), based on the cash flows we have projected for the security. The amount designated as credit reserve may be adjusted over time, based on our periodic evaluation of projected cash flows. If the performance of a security with a credit reserve is more favorable than previously forecasted, a portion of the credit reserve may be reallocated to accretable discount and recognized into interest income over time. Conversely, if the performance of a security with a credit reserve is less favorable than forecasted, the amount designated as credit reserve may be increased, or impairment charges and write-downs of such securities to a new cost basis could result.

When the fair value of an AFS security is less than its amortized cost at the reporting date, the security is considered impaired. We assess our impaired securities at least quarterly to determine if the impairment is temporary or other-than-temporary (resulting in an OTTI). If we either - (i) intend to sell the impaired security; (ii) will more likely than not be required to sell the impaired security before it recovers in value; or (iii) if there has been an adverse change in cash flows - the impairment is deemed an OTTI. In the case of criteria (i) and (ii), we record the entire difference between the security’s estimated fair value and its amortized cost at the reporting date as an impairment through market valuation adjustments on our consolidated statements of income. If there has been an adverse change in cash flows, only the portion of the OTTI related to “credit” losses is recognized through other market valuation adjustments on our consolidated statements of income, with the remaining “non-credit” portion recognized through AOCI on our consolidated balance sheets. If the first two criteria are not met and there has not been an adverse change in cash flows, the impairment is considered temporary and the entire unrealized loss is recognized through AOCI on our consolidated balance sheets.

For impaired AFS securities, to determine if there has been an adverse change in cash flows and if any portion of a resulting OTTI is related to credit losses, we compare the present value of the cash flows expected to be collected as of the current financial reporting date to the amortized cost basis of the security. The discount rate used to calculate the present value of expected future cash flows is the current yield used for income recognition purposes. If the present value of the current expected cash flows is less than the amortized cost basis, there has been an adverse change and the security is considered OTTI with the difference between these two amounts representing the credit loss. The determination as to whether an OTTI exists and, if so, the amount of credit impairment recognized in earnings is subjective, and based on information available at the time of the assessment as well as our estimates of future performance and cash flows. As a result, the timing and amount of OTTI constitute a material estimate that is susceptible to significant change.

See *Note 9* for further discussion on real estate securities.

Note 3. Summary of Significant Accounting Policies - (continued)

Other Investments

Servicer Advance Investments

Our servicer advance investments are comprised of outstanding servicer advances receivable, the requirement to purchase all future servicer advances made with respect to a specified pool of residential mortgage loans and a fee component of the related MSR. We have elected to record these investments at fair value. We recognize income from our servicer advance investments when earned and deemed collectible and record the income as a component of Other interest income in our consolidated statements of income. Our servicer advance investments are marked-to-market on a recurring basis with changes in the fair value reported in Investment fair value changes, net on our consolidated statements of income.

See *Note 10* for further discussion on our servicer advance investments.

MSRs

We recognize MSRs through the retention of servicing rights associated with residential mortgage loans that we acquired and subsequently transferred to third parties when the transfer meets the GAAP criteria for sale accounting, or through the direct acquisition of MSRs sold by third parties.

We contract with licensed sub-servicers to perform servicing functions for loans associated with our MSRs. We have elected the fair value option for all of our MSRs, and they are initially recognized and subsequently carried at their estimated fair values. Servicing fee income from MSRs is recorded on a cash basis when received. Net servicing income and changes in the estimated fair value of MSRs are reported in Other income on our consolidated statements of income.

See *Note 10* for further discussion on MSRs.

Participation in Loan Warehouse Facility

During 2018, we invested in a subordinated participation in a revolving mortgage loan warehouse facility of one of our loan sellers. We accounted for this subordinated participation interest as a loan receivable at amortized cost, and all associated interest income was recorded as a component of Other interest income in our consolidated statements of income. During the first quarter of 2019, our agreement associated with this investment was terminated and the balance outstanding under this agreement was repaid.

Excess MSRs

Our excess MSR investments represent the right to receive a portion of mortgage servicing cash flows in excess of amounts paid for the underlying mortgage loans to be serviced. As owners of excess MSRs, we are not required to be a licensed servicer, and we are not required to assume any servicing duties, advance obligations or liabilities associated with the loan pool underlying the MSR. We have elected to record these investments at fair value. We recognize income from Excess MSRs when it is earned and deemed collectible and record the income as a component of Other interest income in our consolidated statements of income. Changes in fair value are recurring and are reported through our consolidated statements of income in Investment fair value changes, net.

See *Note 10* for further discussion on excess MSRs.

Investment in Multifamily Loan Fund

In January 2019, we invested in a limited partnership created to acquire floating rate, light-renovation multifamily loans from Freddie Mac. We account for our ownership interest in this partnership using the equity method of accounting as we are able to exert significant influence over but do not control the activities of the investee. We assess our investment for impairment whenever events or changes in circumstances indicate that the carrying amount of our investment might not be recoverable. We have elected to record our share of earnings or losses from this investment on a one-quarter lag, as a component of Other income on our consolidated statements of income.

Note 3. Summary of Significant Accounting Policies - (continued)

Shared Home Appreciation Options

During 2019, we invested in shared home appreciation options that allow us to share in both home price appreciation and depreciation. We have elected to record these investments at fair value and report changes in fair value through Investment fair value changes, net on our consolidated statements of income.

See *Note 10* for further discussion on shared home appreciation options.

Investment in 5 Arches

During 2018, we acquired a 20% minority interest in 5 Arches, LLC ("5 Arches"), an originator and asset manager of business purpose residential mortgage loans. We accounted for our ownership interest in 5 Arches using the equity method of accounting as we were able to exert significant influence over but not control the activities of the investee. On March 1, 2019, we completed the acquisition of the remaining 80% interest in 5 Arches and consolidated their assets and liabilities onto our balance sheet.

Cash and Cash Equivalents

Cash and cash equivalents include non-restricted cash and highly liquid investments with original maturities of three months or less. The Company maintains its cash and cash equivalents with major financial institutions. Accounts at these institutions are guaranteed by the Federal Deposit Insurance Corporation ("FDIC") up to $250,000 for each bank. The Company is exposed to credit risk for amounts held in excess of the FDIC limit. The Company does not anticipate nonperformance by these institutions.

Restricted Cash

Restricted cash primarily includes cash held in association with borrowings from the Federal Home Loan Bank of Chicago, cash held at our consolidated Servicing Investment entities, and cash associated with our risk-sharing transactions with the Agencies, as well as cash collateral for certain consolidated securitization entities.

Goodwill and Intangible Assets

Significant judgment is required to estimate the fair value of intangible assets and in assigning their estimated useful lives. Accordingly, we typically seek the assistance of independent third-party valuation specialists for significant intangible assets. The fair value estimates are based on available historical information and on future expectations and assumptions we deem reasonable. We generally use an income-based valuation method to estimate the fair value of intangible assets, which discounts expected future cash flows to present value using estimates and assumptions we deem reasonable.

Determining the estimated useful lives of intangible assets also requires judgment. Our assessment as to which intangible assets are deemed to have finite or indefinite lives is based on several factors including economic barriers of entry for the acquired business, retention trends, and our operating plans, among other factors. Finite-lived intangible assets are amortized over their estimated useful lives on a straight-line basis and reviewed for impairment if indicators are present. Additionally, useful lives are evaluated each reporting period to determine if revisions to the remaining periods of amortization are warranted.

Goodwill is tested for impairment annually or more frequently if indicators of impairment exist. We have elected to make the first day of our fiscal fourth quarter the annual impairment assessment date for goodwill. We first assess qualitative factors to determine whether it is more likely than not that the fair value is less than the carrying value. If, based on that assessment, we believe it is more likely than not that the fair value is less than the carrying value, then a two-step quantitative goodwill impairment test is performed. At December 31, 2019, no impairment of goodwill was identified.

Note 3. Summary of Significant Accounting Policies - (continued)

Accrued Interest Receivable

Accrued interest receivable includes interest that is due and payable to us and deemed collectible. Cash interest is generally received within thirty days of recording the receivable. For financial assets where we have elected the fair value option, the associated accrued interest receivable on these assets is measured at fair value. For financial assets where we have not elected the fair value option, the associated accrued interest carrying values approximate fair values.

Derivative Financial Instruments

Derivative financial instruments we typically utilize include swaps, swaptions, financial futures contracts, and “To Be Announced” (“TBA”) contracts. These derivatives are primarily used to manage interest rate risk associated with our operations. In addition, we enter into certain residential loan purchase commitments (“LPCs”), interest rate lock commitments ("IRLCs"), and residential loan forward sale commitments (“FSCs”) that are treated as derivatives for financial reporting purposes. All derivative financial instruments are recorded at their estimated fair value on our consolidated balance sheets. Derivatives with positive fair values to us are reported as assets and derivatives with negative fair values to us are reported as liabilities. We classify each derivative as either (i) a trading instrument (no specific hedging designation for financial reporting purposes) or (ii) a hedge of a forecasted transaction or of the variability of cash flows to be received or paid related to a recognized asset or liability (cash flow hedge).

Changes in the fair values of derivatives accounted for as trading instruments, including any associated interest income or expense, are recorded in our consolidated statements of income through Other income if they are used to manage risks associated with our MSR investments, through Mortgage banking activities, net if they are used to manage risks associated with our mortgage banking activities, or through Investment fair value changes, net if they are used to manage risks associated with our investments. Valuation changes related to residential LPCs, IRLCs, and FSCs are included in Mortgage banking activities, net on our consolidated statements of income.

Changes in the fair values of derivatives accounted for as cash flow hedges, to the extent they are effective, are recorded in Accumulated other comprehensive income, a component of equity on our consolidated balance sheets. Interest income or expense, and any ineffectiveness associated with these derivatives, are recorded as a component of net interest income in our consolidated statements of income. We measure the effective portion of cash flow hedges by comparing the change in fair value of the expected future variable cash flows of the derivative hedging instruments with the change in fair value of the expected future variable cash flows of the hedged item.

We will discontinue a designated cash flow hedge relationship if (i) we determine that the hedging derivative is no longer expected to be effective in offsetting changes in the cash flows of the designated hedged item; (ii) the derivative expires or is sold, terminated, or exercised; (iii) the derivative is de-designated as a cash flow hedge; or (iv) it is probable that a forecasted transaction associated with the hedged item will not occur by the end of the originally specified time period. To the extent we de-designate or terminate a cash flow hedging relationship and the associated hedged item continues to exist, any unrealized gain or loss of the cash flow hedge at the time of de-designation remains in accumulated other comprehensive income and is amortized using the straight-line method through interest expense over the remaining life of the hedged item.

Swaps and Swaptions

Interest rate swaps are agreements in which (i) one counterparty exchanges a stream of fixed interest payments for another counterparty’s stream of variable interest cash flows; or (ii) each counterparty exchanges variable interest cash flows that are referenced to different indices. Interest rate swaptions are agreements that provide the owner the right but not the obligation to enter into an underlying interest rate swap with a counterparty in the future. We enter into swap and swaptions primarily to reduce significant changes in our income or equity caused by interest rate volatility. Certain of these interest rate agreements may be designated as cash flow hedges.

Interest Rate Futures

Interest rate futures are futures contracts based on U.S. Treasury notes, U.S. dollar-denominated interest rate swaps, or U.S. dollar-denominated interest rate indices.

Note 3. Summary of Significant Accounting Policies - (continued)

TBA Agreements

TBA agreements are forward contracts to purchase mortgage-backed securities that will be issued by a U.S. government sponsored enterprise in the future. We purchase or sell these derivatives to offset - to varying degrees - changes in the values of mortgage products for which we have exposure to interest rate volatility.

Loan Purchase and Forward Sale Commitments

We use the term LPCs to refer to agreements with third-party residential loan originators to purchase residential loans at a future date that qualify as a derivative under GAAP and we use the term FSCs to refer to agreements with third-parties to sell residential loans at a future date that also qualify as derivatives under GAAP. LPCs and FSCs are recorded at their estimated fair values on our consolidated balance sheets and changes in fair value are recurring and are reported through our consolidated statements of income in Mortgage banking activities, net.

Interest Rate Lock Commitments

IRLCs are agreements we have made with third-party borrowers for single-family rental loans that will be originated and held for sale. IRLCs qualify as derivatives under GAAP and are recorded at their estimated fair values on our consolidated balance sheets. Changes in fair value are recurring and are reported through our consolidated statements of income in Mortgage banking activities, net.

See *Note 11* for further discussion on derivative financial instruments.

Deferred Tax Assets and Liabilities

Our deferred tax assets/liabilities are generated by temporary differences in GAAP and taxable income at our taxable subsidiaries. These differences generally reflect differing accounting treatments for GAAP and tax, such as accounting for mortgage servicing rights, security discount and premium amortization, credit losses, asset impairments, and certain valuation estimates. As a result of these differences, we may recognize taxable income in periods prior to when we recognize income for GAAP. When this occurs, we pay the tax liability as required and establish a deferred tax asset. As the income is subsequently realized in future periods under GAAP, the deferred tax asset is reduced. We may also recognize GAAP income in periods prior to when we recognize income for tax. When this occurs, we establish a deferred tax liability for GAAP. As the income is subsequently realized in future periods for tax, the deferred tax liability is reduced.

We may also record deferred tax assets/liabilities resulting from GAAP and tax basis differences of assets and liabilities acquired in a business combination at our taxable subsidiaries. These deferred tax assets/liabilities generally do not affect our GAAP income at the time of establishment as the offsetting accounting entry is recorded in GAAP goodwill. They also do not generally affect GAAP income when they are subsequently realized as the deferred tax provision or benefit resulting from the realization is offset by a corresponding current tax benefit or provision.

In assessing the realizability of deferred tax assets, we consider whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. We consider historical and projected future taxable income and capital gains as well as tax planning strategies in making this assessment. We determine the extent to which realization of this deferred asset is not assured and establish a valuation allowance accordingly. The estimate of net deferred tax assets could change in future periods to the extent that actual or revised estimates of future taxable income during the carryforward periods change from current expectations.

Other Assets and Other Liabilities

Other assets primarily consists of margin receivable, FHLBC stock, pledged collateral, investment receivable, right-of-use asset, fixed assets and leasehold improvements, and REO. Other liabilities primarily consists of accrued compensation, payable to minority partner, guarantee obligations, lease liability, deferred tax liabilities, margin payable, and residential loan and MSR repurchase reserves. See *Note 12* for further discussion.

Note 3. Summary of Significant Accounting Policies - (continued)

FHLBC Stock

In accordance with its borrowing agreement with the FHLBC, our FHLB-member subsidiary is required to purchase and hold stock in the FHLBC in an amount equal to a specified percentage of outstanding advances. FHLBC stock is considered a non-marketable, long-term investment, and is carried at cost. Because this stock can only be redeemed or sold at its par value, and only to the FHLBC, carrying value, or cost, approximates fair value. Dividends received from FHLBC stock are recorded in Other income in our consolidated statements of income.

Margin Receivable and Payable

Margin receivable and payable result from margin calls between us and our derivatives, master repurchase agreements, and warehouse facilities counterparties, whereby we or the counterparty were required to post collateral.

Agency Risk-Sharing - Other Assets and Liabilities

During 2014 and 2015, we entered into various risk-sharing arrangements with Fannie Mae and Freddie Mac. Under these arrangements, we committed to assume the first 1.00% or 2.25% (depending on the arrangement) of losses realized on reference pools of conforming residential mortgage loans that we acquired and then sold to the Agencies. As part of these risk-sharing arrangements, during the 10-year term of our first Fannie Mae arrangement, we receive monthly cash payments from Fannie Mae based on the monthly outstanding unpaid principal balance of the reference pool of loans, and for our Freddie Mac and our subsequent Fannie Mae arrangements, the Agencies charged us a reduced guarantee fee for the reference loans we delivered to them in exchange for mortgage-backed securities, which we then sold.

Under these arrangements we are required to pledge assets to the Agencies to collateralize our risk-sharing commitments to them throughout the terms of the arrangements. These pledged assets are held by a third-party custodian for the benefit of the Agencies. To the extent approved losses are incurred, the custodian will transfer collateral to the Agencies. As a result of these transactions, we recorded “pledged collateral” in the other assets line item, and “guarantee obligations” in the other liabilities line item, on our consolidated balance sheets. In addition, for the first Fannie Mae transaction, we recorded a “guarantee asset” in the other assets line item on our consolidated balance sheets.

The guarantee obligations represent our commitments to assume losses under these arrangements. We amortize the guarantee obligations over the 10-year terms of the arrangements based primarily on changes in the outstanding unpaid principal balance of loans in the reference pools, with a portion of the liabilities treated as a credit reserve that is not amortized into income. In addition, each period we assess the need for a separate loss allowance related to these arrangements, based on our estimate of credit losses inherent in the reference pools of loans.

Income from cash payments received under the first Fannie Mae risk-sharing arrangement and income related to the amortization of the guarantee obligations of all three arrangements are recorded in Other income, and market valuation changes of the guarantee asset are recorded in Investment fair value changes, net on our consolidated statements of income.

Our consolidated balance sheets include assets of the special purpose entities ("SPEs") associated with these risk-sharing arrangements (i.e., the "pledged collateral" referred to above) that can only be used to settle obligations of these SPEs and liabilities of these SPEs for which the creditors of these SPEs (the Agencies) do not have recourse to Redwood Trust, Inc. or its affiliates. At December 31, 2019 and December 31, 2018, assets of such SPEs totaled $48 million and $47 million, respectively, and liabilities of such SPEs totaled $14 million and $17 million, respectively.

See *Note 16* for further discussion on loss contingencies — risk-sharing.

Note 3. Summary of Significant Accounting Policies - (continued)

REO

REO property acquired through, or in lieu of, foreclosure is initially recorded at fair value, and subsequently reported at the lower of its carrying amount or fair value (less estimated cost to sell). Changes in the fair value of an REO property that has a fair value at or below its carrying amount are recorded in Investment fair value changes, net on our consolidated statements of income.

See *Note 12* for further discussion on other assets.

Contingent Consideration

In relation to our acquisition of 5 Arches, we recorded contingent consideration liabilities that represent the estimated fair value (at the date of acquisition) of our obligation to make certain earn-out payments that are contingent on 5 Arches loan origination volumes exceeding certain specified thresholds. These liabilities are carried at fair value and periodic changes in their estimated fair value are recorded through Other expenses on our consolidated statements of income. The estimate of the fair value of contingent consideration requires significant judgment regarding assumptions about future operating results, discount rates, and probabilities of projected operating result scenarios.

Leases

Upon adoption of ASU 2016-02, "Leases," in the first quarter of 2019, we recorded a lease liability and right-of-use asset on our consolidated balance sheets. The lease liability is equal to the present value of our remaining lease payments discounted at our incremental borrowing rate and the right-of-use asset is equal to the lease liability adjusted for our deferred rent liability at the adoption of this accounting standard. As lease payments are made, the lease liability is reduced to the present value of the remaining lease payments and the right-of-use asset is reduced by the difference between the lease expense (straight-lined over the lease term) and the theoretical interest expense amount (calculated using the incremental borrowing rate). See *Note 16* for further discussion on leases.

Short-Term Debt

Short-term debt includes borrowings under master repurchase agreements, loan warehouse facilities, and other forms of borrowings that expire within one year with various counterparties. These borrowings are typically collateralized by cash, loans, or securities, and in some cases may be unsecured. If the value (as determined by the applicable counterparty) of the collateral securing those borrowings decreases, we may be subject to margin calls during the period the borrowings are outstanding. In instances where we do not satisfy the margin calls within the required time frame, the counterparty may retain the collateral and pursue any outstanding debt amount from us. Short-term debt also includes non-recourse short-term borrowings used to finance servicer advance investments.

See *Note 13* for further discussion on short-term debt.

Accrued Interest Payable

Accrued interest payable includes interest that is due and payable to third parties. Interest is generally paid within one to three months of recording the payable, based upon our remittance requirements, and is paid semi-annually for our convertible and exchangeable debt. Interest on our FHLB borrowings is paid every 13 weeks. For borrowings where we have elected the fair value option, the associated accrued interest on these liabilities is measured at fair value. For financial liabilities where we have not elected the fair value option, the associated accrued interest carrying values approximate fair values.

Asset-Backed Securities Issued

ABS issued represents asset-backed securities issued through the Legacy Sequoia, Sequoia Choice, Freddie Mac K-Series, Freddie Mac SLST, and CAFL securitization entities. Assets at these entities are held in the custody of securitization trustees and are not owned by Redwood. These trustees collect principal and interest payments (less servicing and related fees) from the assets and make corresponding principal and interest payments to the ABS investors. In accordance with accounting guidance for CFEs, we account for the ABS issued under our consolidated entities at fair value, with periodic changes in fair value recorded in Investment fair value changes, net on our consolidated statements of income.

Note 3. Summary of Significant Accounting Policies - (continued)

See *Note 14* for further discussion on ABS issued.

<u>*Long-Term Debt*</u>

FHLBC Borrowings

FHLBC borrowings include amounts borrowed by our FHLB-member subsidiary, also referred to as “advances,” from the Federal Home Loan Bank of Chicago that are secured by eligible collateral, including, but not limited to, residential mortgage loans, single-family rental loans, and residential mortgage-backed securities. FHLBC borrowings are carried at their unpaid principal balance and interest on advances is paid every 13 weeks from when each respective advance is made. If the value (as determined by the FHLBC) of the collateral securing those borrowings decreases, we may be subject to margin calls during the period the borrowings are outstanding. In instances where we do not satisfy the margin calls within the required time frame, the FHLBC may foreclose upon the collateral and pursue any outstanding debt amount from us.

Subordinate securities financing facility

Borrowings under our subordinate securities financing facility are secured by real estate securities and carried at unpaid principal balance net of any unamortized deferred issuance costs. Interest on this facility is paid monthly.

See *Note 15* for further discussion on our subordinate securities financing facility.

Convertible Notes

Convertible notes include unsecured convertible and exchangeable debt that are carried at their unpaid principal balance net of any unamortized deferred issuance costs. Interest on the notes is payable semiannually until such time the notes mature or are converted or exchanged into shares. If converted or exchanged by a holder, the holder of the notes would receive shares of our common stock.

Trust Preferred Securities and Subordinated Notes

Trust preferred securities and subordinated notes are carried at their unpaid principal balance net of any unamortized deferred issuance costs. This long-term debt is unsecured and interest is paid quarterly until it is redeemed in whole or matures at a future date.

Deferred Debt Issuance Costs

Deferred debt issuance costs are expenses associated with the issuance of long-term debt. These expenses typically include underwriting, rating agency, legal, accounting, and other fees. Deferred debt issuance costs are included in the carrying value of the related long-term debt issued and are amortized as an adjustment to interest expense using the interest method, based upon the actual and estimated repayment schedules of the related long-term debt issued.

See *Note 15* for further discussion on long-term debt.

<u>*Equity*</u>

Accumulated Other Comprehensive Income (Loss)

Net unrealized gains and losses on real estate securities available-for-sale and interest rate agreements designated as cash flow hedges are reported as components of Accumulated other comprehensive income on our consolidated statements of changes in stockholders' equity and our consolidated balance sheets. Net unrealized gains and losses on securities and interest rate agreements held by our taxable subsidiaries that are reported in other comprehensive income are adjusted for the effects of taxation and may create deferred tax assets or liabilities.

Note 3. Summary of Significant Accounting Policies - (continued)

Earnings per Common Share

Basic earnings per common share ("EPS") is computed by dividing net income allocated to common shareholders by the weighted average common shares outstanding. Net income allocated to common shareholders represents net income less income allocated to participating securities (as described herein). Diluted EPS is computed by dividing income allocated to common shareholders by the weighted average common shares outstanding plus amounts representing the dilutive effect of share-based payment awards. In addition, if the assumed conversion or exchange of convertible or exchangeable debt into common shares is dilutive, diluted EPS is adjusted by adding back the periodic interest expense (net of any tax effects) associated with dilutive convertible or exchangeable debt to net income and adding the shares issued in an assumed conversion or exchange to the diluted weighted average share count.

The two-class method is an earnings allocation formula under which EPS is calculated for common stock and participating securities according to dividends declared and participating rights in undistributed earnings. Under this method, all earnings (distributed and undistributed) are allocated between participating securities and common shares based on their respective rights to receive dividends or dividend equivalents. GAAP defines vested and unvested share-based payment awards containing nonforfeitable rights to dividends or dividend equivalents as participating securities that are included in computing EPS under the two-class method.

See *Note 17* for further discussion on equity.

Incentive Plans

In May 2018, our shareholders approved an amendment to the 2014 Redwood Trust, Inc. Incentive Plan ("Incentive Plan") for executive officers, employees, and non-employee directors, which increased the number of shares available under the Incentive Plan. The Incentive Plan provides for the grant of restricted stock, deferred stock, deferred stock units, performance-based awards (including performance stock units), dividend equivalents, stock payments, restricted stock units, and other types of awards to eligible participants. Long-term incentive awards granted under the Incentive Plan generally vest over a three- or four-year period. Awards made under the Incentive Plan to officers and other employees in lieu of the payment in cash of a portion of annual bonuses earned generally vest immediately, but are subject to a three-year mandatory holding period. Deferred stock units, restricted stock units, and restricted stock awards have attached dividend equivalent rights, resulting in the payment of dividend equivalents each time we pay a common stock dividend. Non-employee directors are also provided annual awards under the Incentive Plan that generally vest immediately. The cost of the awards is generally amortized over the vesting period on a straight-line basis. Upon adoption of ASU 2016-09 in 2016, we elected to begin accounting for forfeitures on employee equity awards as they occur.

Employee Stock Purchase Plan

In 2013, our shareholders approved an amendment to our previously amended 2002 Redwood Trust, Inc. Employee Stock Purchase Plan ("ESPP") to increase the number of shares available under the ESPP. The purpose of the ESPP is to give our employees an opportunity to acquire an equity interest in the Company through the purchase of shares of common stock at a discount. The ESPP allows eligible employees to purchase common stock at 85% of its fair value, subject to certain limits. Fair value as defined under the ESPP is the lesser of the closing market price of the common stock on the first day of the calendar year or the last day of the calendar quarter.

Executive Deferred Compensation Plan

In 2018, our Board of Directors approved an amendment to our 2002 Executive Deferred Compensation Plan ("EDCP") to increase the number of shares available to non-employee directors to defer certain cash payments and dividends into DSUs. The EDCP allows eligible employees and directors to defer portions of current salary and certain other forms of compensation. The Company matches some deferrals. Compensation deferred under the EDCP is recorded as a liability on our consolidated balance sheets. The EDCP allows for the investment of deferrals in either an interest crediting account or DSUs.

Note 3. Summary of Significant Accounting Policies - (continued)

401(k) Plan

We offer a tax-qualified 401(k) Plan to all employees for retirement savings. Under this Plan, employees are allowed to defer and invest up to 100% of their cash earnings, subject to the maximum 401(k) Plan contribution limit set forth by the Internal Revenue Service. We match some employee contributions to encourage participation and to provide a retirement planning benefit to employees. Plan matching contributions made by the Company for the years ended December 31, 2019, 2018, and 2017 were $0.7 million, $0.6 million, and $0.5 million, respectively. Vesting of the 401(k) Plan matching contributions is based on the employee's tenure at the Company, and over time an employee becomes increasingly vested in matching contributions.

See *Note 18* for further discussion on equity compensation plans.

Taxes

We have elected to be taxed as a REIT under the Internal Revenue Code and the corresponding provisions of state law. To qualify as a REIT we must distribute at least 90% of our annual REIT taxable income to shareholders (not including taxable income retained in our taxable subsidiaries) within the time frame set forth in the Internal Revenue Code and also meet certain other requirements related to assets, income, and stock ownership. We assess our tax positions for all open tax years and record tax benefits only if tax positions meet a more-likely-than-not threshold in accordance with GAAP guidance on accounting for uncertain tax positions. We classify interest and penalties on material uncertain tax positions as interest expense and general and administrative expenses, respectively, in our consolidated statements of income.

See *Note 23* for further discussion on taxes.

Recent Accounting Pronouncements

Newly Adopted Accounting Standards Updates ("ASUs")

In July 2019, the FASB issued ASU 2019-07, "Codification Updates to SEC Sections - Amendments to SEC Paragraphs Pursuant to SEC Final Rule Releases No. 33-10532, Disclosure Update and Simplification, and Nos. 33-10231 and 33-10442, Investment Company Reporting Modernization, and Miscellaneous Updates (SEC Update)." This new guidance amends certain SEC paragraphs in the FASB Accounting Standards Codification pursuant to the issuance of various SEC Final Rule Releases, and is effective immediately. We adopted this guidance, as required, in the third quarter of 2019, which did not have a material impact on our consolidated financial statements.

In July 2018, the FASB issued ASU 2018-09, "Codification Improvements." This new guidance is intended to clarify, correct, and make minor improvements to the FASB Accounting Standards Codification. The transition and effective dates are based on the facts and circumstances of each amendment, with some amendments becoming effective upon issuance of this ASU and others becoming effective for annual periods beginning after December 15, 2018. We adopted this guidance, as required, which did not have a material impact on our consolidated financial statements.

In February 2018, the FASB issued ASU 2018-02, "Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." This new guidance allows a reclassification from accumulated other comprehensive income ("AOCI") to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act of 2017 (the "Tax Act"). This new guidance is effective for fiscal years beginning after December 15, 2018. However, we did not elect to reclassify any income tax effects of the Tax Act from AOCI to retained earnings as we did not have any tax effects related to the Tax Act remaining in AOCI at December 31, 2018. Our policy is to release any stranded income tax effects from AOCI to income tax expense on an investment-by-investment basis.

Note 3. Summary of Significant Accounting Policies - (continued)

In August 2017, the FASB issued ASU 2017-12, "Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities." This new guidance amends previous guidance to better align an entity's risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. This new guidance is effective for fiscal years beginning after December 15, 2018. Additionally, in October 2018, the FASB issued ASU 2018-16, "Derivatives and Hedging (Topic 815): Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes," which permits the use of the OIS rate based on SOFR as a U.S. benchmark interest rate for hedge accounting purposes under Topic 815. The amendments in this update are required to be adopted concurrently with the amendments in ASU 2017-12. We adopted this guidance, as required, in the first quarter of 2019, which did not have a material impact on our consolidated financial statements.

In July 2017, the FASB issued ASU 2017-11, "Earnings Per Share (Topic 260); Distinguishing Liabilities from Equity (Topic 480); Derivatives and Hedging (Topic 815): (Part I) Accounting for Certain Financial Instruments with Down Round Features, (Part II) Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception." This new guidance changes the classification analysis of certain equity-linked financial instruments (or embedded conversion options) with down round features. This new guidance is effective for fiscal years beginning after December 15, 2018. We adopted this guidance, as required, in the first quarter of 2019, which did not have a material impact on our consolidated financial statements.

In March 2017, the FASB issued ASU 2017-08, "Receivables - Nonrefundable Fees and Other Costs (Subtopic 310-20)." This new guidance shortens the amortization period for certain callable debt securities purchased at a premium by requiring the premium to be amortized to the earliest call date. This new guidance is effective for fiscal years beginning after December 15, 2018. We adopted this guidance, as required, in the first quarter of 2019, which did not have a material impact on our consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, "Leases." This new guidance requires lessees to recognize most leases on their balance sheet as a right-of-use asset and a lease liability. This new guidance retains a dual lease accounting model, which requires leases to be classified as either operating or capital leases for lessees, for purposes of income statement recognition. This new guidance is effective for fiscal years beginning after December 15, 2018. In July 2018, the FASB issued ASU 2018-10, "Codification Improvements to Topic 842, Leases," which provides more specific guidance on certain aspects of Topic 842. Additionally, in July 2018, the FASB issued ASU 2018-11, "Leases (Topic 842): Targeted Improvements." This new ASU introduces an additional transition method which allows entities to apply the new standard at the adoption date and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. In March 2019, the FASB issued ASU 2019-01, "Leases (Topic 842): Codification Improvements," which is intended to clarify Codification guidance. We adopted this guidance, as required, in the first quarter of 2019, which did not have a material impact on our consolidated financial statements. We elected the package of practical expedients under the transition guidance within this standard, which allowed us to carry forward the classifications of each of our existing leases as operating leases. In connection with the adoption of this guidance, at December 31, 2019, our lease liability was $13 million, which represented the present value of our remaining lease payments discounted at our incremental borrowing rate and was recorded in Accrued expenses and other liabilities on our consolidated balance sheets. At December 31, 2019, our right-of-use asset was$12 million, which was equal to the lease liability adjusted for our deferred rent liability at adoption and was recorded in Other assets on our consolidated balance sheets. We will continue to record lease expense on a straight-line basis and have included required lease disclosures within *Note 16.*

Other Recent Accounting Pronouncements

In January 2020, the FASB issued ASU 2020-01, "Investments - Equity Securities (Topic 321), Investments - Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815)." This new guidance clarifies the interaction of the accounting for equity securities, equity method investments, and certain forward contracts and purchased options. This new guidance is effective for fiscal years beginning after December 15, 2020. Early adoption is permitted. We plan to adopt this new guidance by the required date and do not anticipate that this update will have a material impact on the consolidated financial statements.

Note 3. Summary of Significant Accounting Policies - (continued)

In December 2019, the FASB issued ASU 2019-12, "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes." This new guidance simplifies the accounting for income taxes by removing certain exceptions to the general principles in Topic 740 and by clarifying and amending existing guidance. This new guidance is effective for fiscal years beginning after December 15, 2020. Early adoption is permitted. We plan to adopt this new guidance by the required date and do not anticipate that this update will have a material impact on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement." This new guidance amends previous guidance by removing and modifying certain existing fair value disclosure requirements, while adding other new disclosure requirements. This new guidance is effective for fiscal years beginning after December 15, 2019. Early adoption is permitted and entities may elect to early adopt the removal or modification of disclosures immediately and delay adoption of the new disclosure requirements until their effective date. We plan to adopt this new guidance by the required date and do not anticipate that this update will have a material impact on our consolidated financial statements.

In January 2017, the FASB issued ASU 2017-04, "Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment." This new guidance simplifies the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test. This new guidance is effective for fiscal years beginning after December 15, 2019. Early adoption is permitted for interim and annual goodwill impairment tests performed on testing dates after January 1, 2017. We plan to adopt this new guidance by the required date and do not anticipate that this update will have a material impact on our consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments - Credit Losses." This new guidance provides a new impairment model that is based on expected losses rather than incurred losses to determine the allowance for credit losses. This new guidance is effective for fiscal years beginning after December 15, 2019. Early adoption is permitted for fiscal years beginning after December 15, 2018. In November 2018, the FASB issued ASU 2018-19, "Codification Improvements to Topic 326, Financial Instruments - Credit Losses," which clarifies the scope of the amendments in ASU 2016-13. In April 2019, the FASB issued ASU 2019-04, "Codification Improvements to Topic 326, Financial Instruments - Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments," which is intended to clarify this guidance. In May 2019, the FASB issued ASU 2019-05, "Financial Instruments - Credit Losses (Topic 326): Targeted Transition Relief," which provides an option to irrevocably elect the fair value option for certain financial assets previously measured at amortized cost. In November 2019, the FASB issued ASU 2019-11, "Codification Improvements to Topic 326, Financial Instruments - Credit Losses," which is intended to clarify Codification guidance. In February 2020, the FASB issued ASU 2020-02, "Financial Instruments - Credit Losses (Topic 326) and Leases (Topic 842) - Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 119 and Update to SEC Section on Effective Date Related to Accounting Standards Update No. 2016-02, Leases (Topic 842) (SEC Update)," which amends certain sections of the guidance. We currently have only a small balance of loans receivable that are not carried at fair value and would be subject to this new guidance for allowance for credit losses. Separately, we account for our available-for-sale securities under the other-than-temporary impairment ("OTTI") model for debt securities. This new guidance requires that credit impairments on our available-for-sale securities be recorded in earnings using an allowance for credit losses, with the allowance limited to the amount by which the security's fair value is less than its amortized cost basis. Subsequent reversals in credit loss estimates are recognized in income. We plan to adopt this new guidance by the required date and do not anticipate that these updates will have a material impact on our consolidated financial statements as nearly all of our financial instruments are carried at fair value and changes in fair values of these instruments are recorded on our consolidated statements of income in the period in which the valuation change occurs. We will continue evaluating these new standards and caution that any changes in our business or additional amendments to these standards could change our initial assessment.

Balance Sheet Netting

Certain of our derivatives and short-term debt are subject to master netting arrangements or similar agreements. Under GAAP, in certain circumstances we may elect to present certain financial assets, liabilities and related collateral subject to master netting arrangements in a net position on our consolidated balance sheets. However, we do not report any of these financial assets or liabilities on a net basis, and instead present them on a gross basis on our consolidated balance sheets.

Note 3. Summary of Significant Accounting Policies - (continued)

The table below presents financial assets and liabilities that are subject to master netting arrangements or similar agreements categorized by financial instrument, together with corresponding financial instruments and corresponding collateral received or pledged at December 31, 2019 and December 31, 2018.

Table 3.1 – Offsetting of Financial Assets, Liabilities, and Collateral

				Gross Amounts Not Offset in Consolidated Balance Sheet (1)		
December 31, 2019 (In Thousands)	**Gross Amounts of Recognized Assets (Liabilities)**	**Gross Amounts Offset in Consolidated Balance Sheet**	**Net Amounts of Assets (Liabilities) Presented in Consolidated Balance Sheet**	**Financial Instruments**	**Cash Collateral (Received) Pledged**	**Net Amount**
Assets (2)						
Interest rate agreements	$ 19,020	$ —	$ 19,020	$ (14,178)	$ (915)	$ 3,927
TBAs	5,755	—	5,755	(5,755)	—	—
Interest rate futures	137	—	137	—	—	137
Total Assets	$ 24,912	$ —	$ 24,912	$ (19,933)	$ (915)	$ 4,064
Liabilities (2)						
Interest rate agreements	$ (148,765)	$ —	$ (148,765)	$ 14,178	$ 134,587	$ —
TBAs	(13,359)	—	(13,359)	5,755	6,673	(931)
Loan warehouse debt	(432,126)	—	(432,126)	432,126	—	—
Security repurchase agreements	(1,096,578)	—	(1,096,578)	1,096,578	—	—
Total Liabilities	$ (1,690,828)	$ —	$ (1,690,828)	$ 1,548,637	$ 141,260	$ (931)

Note 3. Summary of Significant Accounting Policies - (continued)

December 31, 2018 (In Thousands)	Gross Amounts of Recognized Assets (Liabilities)	Gross Amounts Offset in Consolidated Balance Sheet	Net Amounts of Assets (Liabilities) Presented in Consolidated Balance Sheet	Gross Amounts Not Offset in Consolidated Balance Sheet [1] Financial Instruments	Gross Amounts Not Offset in Consolidated Balance Sheet [1] Cash Collateral (Received) Pledged	Net Amount
Assets [2]						
Interest rate agreements	$ 28,211	$ —	$ 28,211	$ (28,211)	$ —	$ —
TBAs	4,665	—	4,665	(3,391)	(835)	439
Total Assets	$ 32,876	$ —	$ 32,876	$ (31,602)	$ (835)	$ 439
Liabilities [2]						
Interest rate agreements	$ (70,908)	$ —	$ (70,908)	$ 28,211	$ 42,697	$ —
TBAs	(13,215)	—	(13,215)	3,391	5,620	(4,204)
Loan warehouse debt	(860,650)	—	(860,650)	860,650	—	—
Security repurchase agreements	(988,890)	—	(988,890)	988,890	—	—
Total Liabilities	$ (1,933,663)	$ —	$ (1,933,663)	$ 1,881,142	$ 48,317	$ (4,204)

(1) Amounts presented in these columns are limited in total to the net amount of assets or liabilities presented in the prior column by instrument. In certain cases, there is excess cash collateral or financial assets we have pledged to a counterparty (which may, in certain circumstances, be a clearinghouse) that exceed the financial liabilities subject to a master netting arrangement or similar agreement. Additionally, in certain cases, counterparties may have pledged excess cash collateral to us that exceeds our corresponding financial assets. In each case, any of these excess amounts are excluded from the table although they are separately reported in our consolidated balance sheets as assets or liabilities, respectively.

(2) Interest rate agreements and TBAs are components of derivatives instruments on our consolidated balance sheets. Loan warehouse debt, which is secured by residential mortgage loans, and security repurchase agreements are components of Short-term debt on our consolidated balance sheets.

For each category of financial instrument set forth in the table above, the assets and liabilities resulting from individual transactions within that category between us and a counterparty are subject to a master netting arrangement or similar agreement with that counterparty that provides for individual transactions to be aggregated and treated as a single transaction. For certain categories of these instruments, some of our transactions are cleared and settled through one or more clearinghouses that are substituted as our counterparty. References herein to master netting arrangements or similar agreements include the arrangements and agreements governing the clearing and settlement of these transactions through the clearinghouses. In the event of the termination and close-out of any of those transactions, the corresponding master netting agreement or similar agreement provides for settlement on a net basis. Any such settlement would include the proceeds of the liquidation of any corresponding collateral, subject to certain limitations on termination, settlement, and liquidation of collateral that may apply in the event of the bankruptcy or insolvency of a party. Such limitations should not inhibit the eventual practical realization of the principal benefits of those transactions or the corresponding master netting arrangement or similar agreement and any corresponding collateral.

Note 4. Principles of Consolidation

GAAP requires us to consider whether securitizations we sponsor and other transfers of financial assets should be treated as sales or financings, as well as whether any VIEs that we hold variable interests in – for example, certain legal entities often used in securitization and other structured finance transactions – should be included in our consolidated financial statements. The GAAP principles we apply require us to reassess our requirement to consolidate VIEs each quarter and therefore our determination may change based upon new facts and circumstances pertaining to each VIE. This could result in a material impact to our consolidated financial statements during subsequent reporting periods.

Note 4. Principles of Consolidation - (continued)

Analysis of Consolidated VIEs

At December 31, 2019, we consolidated Legacy Sequoia, Sequoia Choice, Freddie Mac K-Series and Freddie Mac SLST securitization entities that we determined were VIEs and for which we determined we were the primary beneficiary. Additionally, beginning in the fourth quarter of 2019, we consolidated certain CAFL securitization entities that we determined were VIEs and for which we determined we were the primary beneficiary. Each of these entities is independent of Redwood and of each other and the assets and liabilities of these entities are not owned by and are not legal obligations of ours. Our exposure to these entities is primarily through the financial interests we have retained, although for the consolidated Sequoia and CAFL entities we are exposed to certain financial risks associated with our role as a sponsor, servicing administrator, or depositor of these entities or as a result of our having sold assets directly or indirectly to these entities. At December 31, 2019, the estimated fair value of our investments in the consolidated Legacy Sequoia, Sequoia Choice, Freddie Mac SLST, Freddie Mac K-Series, and CAFL entities was $6 million, $256 million, $451 million, $253 million, and $195 million, respectively.

Beginning in 2018, we consolidated two Servicing Investment entities formed to invest in servicing-related assets that we determined were VIEs and for which we determined we were the primary beneficiary. At December 31, 2019, we held an 80% ownership interest in, and were responsible for the management of, each entity. See *Note 10* for a further description of these entities and the investments they hold and *Note 12* for additional information on the minority partner's interest. Additionally, beginning in 2018, we consolidated an entity that was formed to finance servicer advances, that we determined was a VIE and for which we, through our control of one of the aforementioned partnerships, were the primary beneficiary. The servicer advance financing consists of non-recourse short-term securitization debt, secured by servicing advances. We consolidate the securitization entity, but the securitization entity is independent of Redwood and the assets and liabilities are not owned by and are not legal obligations of Redwood. See *Note 13* for additional information on the servicer advance financing. At December 31, 2019, the estimated fair value of our investment in the Servicing Investment entities was $53 million.

The following table presents a summary of the assets and liabilities of these VIEs.

Table 4.1 – Assets and Liabilities of Consolidated VIEs

December 31, 2019 (Dollars in Thousands)	Legacy Sequoia	Sequoia Choice	Freddie Mac SLST	Freddie Mac K-Series	CAFL	Servicing Investment	Total Consolidated VIEs
Residential loans, held-for-investment	$ 407,890	$ 2,291,463	$ 2,367,215	$ —	$ —	$ —	$ 5,066,568
Business purpose residential loans, held-for-investment	—	—	—	—	2,192,552	—	2,192,552
Multifamily loans, held-for-investment	—	—	—	4,408,524	—	—	4,408,524
Other investments	—	—	—	—	—	184,802	184,802
Cash and cash equivalents	—	—	—	—	—	9,015	9,015
Restricted cash	143	27	—	—	—	21,766	21,936
Accrued interest receivable	655	9,824	7,313	13,539	9,572	4,869	45,772
Other assets	460	—	445	—	1,795	—	2,700
Total Assets	$ 409,148	$ 2,301,314	$ 2,374,973	$ 4,422,063	$ 2,203,919	$ 220,452	$ 11,931,869
Short-term debt	$ —	$ —	$ —	$ —	$ —	$ 152,554	$ 152,554
Accrued interest payable	395	7,732	5,374	12,887	7,485	187	34,060
Accrued expenses and other liabilities	—	27	—	—	—	14,956	14,983
Asset-backed securities issued	402,465	2,037,198	1,918,322	4,156,239	2,001,251	—	10,515,475
Total Liabilities	$ 402,860	$ 2,044,957	$ 1,923,696	$ 4,169,126	$ 2,008,736	$ 167,697	$ 10,717,072
Number of VIEs	20	9	2	5	10	3	49

Note 4. Principles of Consolidation - (continued)

December 31, 2018 (Dollars in Thousands)	Legacy Sequoia	Sequoia Choice	Freddie Mac SLST	Freddie Mac K-Series	CAFL	Servicing Investment	Total Consolidated VIEs
Residential loans, held-for-investment	$ 519,958	$ 2,079,382	$ 1,222,669	$ —	$ —	$ —	$ 3,822,009
Multifamily loans, held-for-investment	—	—	—	2,144,598	—	—	2,144,598
Other investments	—	—	—	—	—	312,688	312,688
Restricted cash	146	1,022	—	—	—	25,363	26,531
Accrued interest receivable	822	8,988	3,926	6,595	—	1,091	21,422
Other assets	3,943	—	—	—	—	—	3,943
Total Assets	$ 524,869	$ 2,089,392	$ 1,226,595	$ 2,151,193	$ —	$ 339,142	$ 6,331,191
Short-term debt	$ —	$ —	$ —	$ —	$ —	$ 262,740	$ 262,740
Accrued interest payable	571	7,180	2,907	6,239	—	483	17,380
Accrued expenses and other liabilities	—	1,022	—	—	—	18,592	19,614
Asset-backed securities issued	512,240	1,885,010	993,748	2,019,075	—	—	5,410,073
Total Liabilities	$ 512,811	$ 1,893,212	$ 996,655	$ 2,025,314	$ —	$ 281,815	$ 5,709,807
Number of VIEs	20	6	1	3	—	3	33

We consolidate the assets and liabilities of certain Sequoia and CAFL securitization entities, as we did not meet the GAAP sale criteria at the time we transferred financial assets to these entities. Our involvement in consolidated Sequoia and CAFL entities continues in the following ways: (i) we continue to hold subordinate investments in each entity, and for certain entities, more senior investments; (ii) we maintain certain discretionary rights associated with our sponsorship of, or our subordinate investments in, each entity; and (iii) we continue to hold a right to call the assets of certain entities (once they have been paid down below a specified threshold) at a price equal to, or in excess of, the current outstanding principal amount of the entity's asset-backed securities issued. These factors have resulted in our continuing to consolidate the assets and liabilities of these Sequoia and CAFL entities in accordance with GAAP.

We consolidate the assets and liabilities of certain Freddie Mac K-Series and SLST securitization trusts resulting from our investment in subordinate securities issued by these trusts and in the case of certain CAFL securitizations, resulting from securities acquired through our acquisition of CoreVest. Additionally, we consolidate the assets and liabilities of Servicing Investment entities from our investment in servicer advance investments and excess MSRs. In each case, we maintain certain discretionary rights associated with the ownership of these investments that we determined reflected a controlling financial interest, as we have both the power to direct the activities that most significantly impact the economic performance of the VIEs and the right to receive benefits of and the obligation to absorb losses from the VIEs that could potentially be significant to the VIEs.

Analysis of Unconsolidated VIEs with Continuing Involvement

Since 2012, we have transferred residential loans to48 Sequoia securitization entities sponsored by us that are still outstanding as ofDecember 31, 2019 and accounted for these transfers as sales for financial reporting purposes, in accordance with ASC 860. We also determined we were not the primary beneficiary of these VIEs as we lacked the power to direct the activities that will have the most significant economic impact on the entities. For certain of these transfers to securitization entities, for the transferred loans where we held the servicing rights prior to the transfer and continued to hold the servicing rights following the transfer, we recorded MSRs on our consolidated balance sheets, and classified those MSRs as Level 3 assets. We also retained senior and subordinate securities in these securitizations that we classified as Level 3 assets. Our continuing involvement in these securitizations is limited to customary servicing obligations associated with retaining servicing rights (which we retain a third-party sub-servicer to perform) and the receipt of interest income associated with the securities we retained.

Note 4. Principles of Consolidation - (continued)

During the first quarter of 2019, the master servicer forone of our unconsolidated Sequoia entities exercised their right to call the securitization and paid off the underlying securities. We realized a $4 million gain related to the called securities, which was recognized through Realized gains, net on our consolidated statements of income. In connection with this called securitization, Redwood acquired $39 million of residential real estate loans that were subsequently sold or were held in our held-for-investment portfolio at Redwood at December 31, 2019.

During the years ended December 31, 2019 and 2018, we transferred residential loans tofive and eight Sequoia securitization entities sponsored by us, respectively, and accounted for these transfers as sales for financial reporting purposes. The following table presents information related to securitization transactions that occurred during the years ended December 31, 2019 and 2018.

Table 4.2 – Securitization Activity Related to Unconsolidated VIEs Sponsored by Redwood

	Years Ended December 31,	
(In Thousands)	**2019**	**2018**
Principal balance of loans transferred	$ 1,872,910	$ 3,188,358
Trading securities retained, at fair value	8,882	52,859
AFS securities retained, at fair value	4,847	7,739

The following table summarizes the cash flows during the years endedDecember 31, 2019 and 2018 between us and the unconsolidated VIEs sponsored by us and accounted for as sales since 2012.

Table 4.3 – Cash Flows Related to Unconsolidated VIEs Sponsored by Redwood

	Years Ended December 31,	
(In Thousands)	**2019**	**2018**
Proceeds from new transfers	$ 1,912,334	$ 3,175,900
MSR fees received	11,857	13,417
Funding of compensating interest, net	(368)	(122)
Cash flows received on retained securities	27,045	28,614

The following table presents the key weighted average assumptions used to measure MSRs and securities retained at the date of securitization for securitizations completed during 2019 and 2018.

Table 4.4 – Assumptions Related to Assets Retained from Unconsolidated VIEs Sponsored by Redwood

	Year Ended December 31, 2019		Year Ended December 31, 2018	
At Date of Securitization	**Senior IO Securities**	**Subordinate Securities**	**Senior IO Securities**	**Subordinate Securities**
Prepayment rates	25 %	15 %	9 %	10 %
Discount rates	14 %	7 %	14 %	5 %
Credit loss assumptions	0.20 %	0.20 %	0.20 %	0.20 %

Note 4. Principles of Consolidation - (continued)

The following table presents additional information at December 31, 2019 and December 31, 2018, related to unconsolidated VIEs sponsored by Redwood and accounted for as sales since 2012.

Table 4.5 – Unconsolidated VIEs Sponsored by Redwood

(In Thousands)	December 31, 2019	December 31, 2018
On-balance sheet assets, at fair value:		
Interest-only, senior and subordinate securities, classified as trading	$ 88,425	$ 129,111
Subordinate securities, classified as AFS	140,649	162,314
Mortgage servicing rights	40,254	58,572
Maximum loss exposure (1)	$ 269,328	$ 349,997
Assets transferred:		
Principal balance of loans outstanding	$ 10,299,442	$ 10,580,216
Principal balance of loans 30+ days delinquent	41,809	21,805

(1) Maximum loss exposure from our involvement with unconsolidated VIEs pertains to the carrying value of our securities and MSRs retained from these VIEs and represents estimated losses that would be incurred under severe, hypothetical circumstances, such as if the value of our interests and any associated collateral declines to zero. This does not include, for example, any potential exposure to representation and warranty claims associated with our initial transfer of loans into a securitization.

The following table presents key economic assumptions for assets retained from unconsolidated VIEs and the sensitivity of their fair values to immediate adverse changes in those assumptions at December 31, 2019 and December 31, 2018.

Table 4.6 – Key Assumptions and Sensitivity Analysis for Assets Retained from Unconsolidated VIEs Sponsored by Redwood

December 31, 2019 (Dollars in Thousands)	MSRs	Senior Securities (1)	Subordinate Securities
Fair value at December 31, 2019	$ 40,254	$ 48,765	$ 180,309
Expected life (in years) (2)	6	6	14
Prepayment speed assumption (annual CPR) (2)	11%	14%	16%
Decrease in fair value from:			
10% adverse change	$ 1,643	$ 1,908	$ 205
25% adverse change	3,913	5,086	1,434
Discount rate assumption (2)	11%	12%	5%
Decrease in fair value from:			
100 basis point increase	$ 1,447	$ 1,079	$ 18,127
200 basis point increase	2,795	2,482	33,630
Credit loss assumption (2)	N/A	0.21%	0.21%
Decrease in fair value from:			
10% higher losses	N/A	$ —	$ 1,804
25% higher losses	N/A	—	4,520

Note 4. Principles of Consolidation - (continued)

December 31, 2018 **(Dollars in Thousands)**	**MSRs**	**Senior Securities (1)**	**Subordinate Securities**
Fair value at December 31, 2018	$ 58,572	$ 61,178	$ 230,247
Expected life (in years)(2)	8	7	15
Prepayment speed assumption (annual CPR) (2)	7%	10%	9%
Decrease in fair value from:			
10% adverse change	$ 1,668	$ 2,151	$ 201
25% adverse change	4,027	5,127	1,372
Discount rate assumption (2)	11%	12%	6%
Decrease in fair value from:			
100 basis point increase	$ 2,323	$ 2,190	$ 21,982
200 basis point increase	4,493	4,226	40,641
Credit loss assumption (2)	N/A	0.20%	0.20%
Decrease in fair value from:			
10% higher losses	N/A	$ —	$ 1,387
25% higher losses	N/A	—	3,471

(1) Senior securities included $49 million and $61 million of interest-only securities at December 31, 2019 and December 31, 2018, respectively.

(2) Expected life, prepayment speed assumption, discount rate assumption, and credit loss assumption presented in the tables above represent weighted averages.

Analysis of Unconsolidated Third-Party VIEs

Third-party VIEs are securitization entities in which we maintain an economic interest, but do not sponsor. Our economic interest may include several securities and other investments from the same third-party VIE, and in those cases, the analysis is performed in consideration of all of our interests. The following table presents a summary of our interests in third-party VIEs at December 31, 2019, grouped by asset type.

Table 4.7 – Third-Party Sponsored VIE Summary

(In Thousands)	**December 31, 2019**
Mortgage-Backed Securities	
Senior	$ 127,094
Mezzanine	508,195
Subordinate	235,510
Total Mortgage-Backed Securities	870,799
Excess MSR	16,216
Total Investments in Third-Party Sponsored VIEs	$ 887,015

We determined that we are not the primary beneficiary of these third-party VIEs, as we do not have the required power to direct the activities that most significantly impact the economic performance of these entities. Specifically, we do not service or manage these entities or otherwise solely hold decision making powers that are significant. As a result of this assessment, we do not consolidate any of the underlying assets and liabilities of these third-party VIEs – we only account for our specific interests in them.

Our assessments of whether we are required to consolidate a VIE may change in subsequent reporting periods based upon changing facts and circumstances pertaining to each VIE. Any related accounting changes could result in a material impact to our financial statements.

Note 5. Fair Value of Financial Instruments

For financial reporting purposes, we follow a fair value hierarchy established under GAAP that is used to determine the fair value of financial instruments. This hierarchy prioritizes relevant market inputs in order to determine an “exit price” at the measurement date, or the price at which an asset could be sold or a liability could be transferred in an orderly process that is not a forced liquidation or distressed sale. Level 1 inputs are observable inputs that reflect quoted prices for identical assets or liabilities in active markets. Level 2 inputs are observable inputs other than quoted prices for an asset or liability that are obtained through corroboration with observable market data. Level 3 inputs are unobservable inputs (e.g., our own data or assumptions) that are used when there is little, if any, relevant market activity for the asset or liability required to be measured at fair value.

In certain cases, inputs used to measure fair value fall into different levels of the fair value hierarchy. In such cases, the level at which the fair value measurement falls is determined based on the lowest level input that is significant to the fair value measurement. Our assessment of the significance of a particular input requires judgment and considers factors specific to the asset or liability being measured.

Note 5. Fair Value of Financial Instruments - (continued)

The following table presents the carrying values and estimated fair values of assets and liabilities that are required to be recorded or disclosed at fair value at December 31, 2019 and December 31, 2018.

Table 5.1 – Carrying Values and Fair Values of Assets and Liabilities

	December 31, 2019		December 31, 2018	
(In Thousands)	**Carrying Value**	**Fair Value**	**Carrying Value**	**Fair Value**
Assets				
Residential loans, held-for-sale at fair value	$ 536,385	$ 536,509	$ 1,048,801	$ 1,048,821
Residential loans, held-for-investment	7,178,465	7,178,465	6,205,941	6,205,941
Business purpose residential loans, held-for-sale	331,565	331,565	28,460	28,460
Business purpose residential loans, held-for-investment	3,175,178	3,175,178	112,798	112,798
Multifamily loans	4,408,524	4,408,524	2,144,598	2,144,598
Trading securities	860,540	860,540	1,118,612	1,118,612
Available-for-sale securities	239,334	239,334	333,882	333,882
Servicer advance investments (1)	169,204	169,204	300,468	300,468
MSRs (1)	42,224	42,224	60,281	60,281
Participation in loan warehouse facility (1)	—	—	39,703	39,703
Excess MSRs (1)	31,814	31,814	27,312	27,312
Shared home appreciation options (1)	45,085	45,085	—	—
Cash and cash equivalents	196,966	196,966	175,764	175,764
Restricted cash	93,867	93,867	29,313	29,313
Accrued interest receivable	71,058	71,058	47,105	47,105
Derivative assets	35,701	35,701	35,789	35,789
REO (2)	9,462	10,389	3,943	4,396
Margin receivable (2)	209,776	209,776	100,773	100,773
FHLBC stock (2)	43,393	43,393	43,393	43,393
Guarantee asset (2)	1,686	1,686	2,618	2,618
Pledged collateral (2)	32,945	32,945	42,433	42,433
Liabilities				
Short-term debt facilities	$ 2,176,591	$ 2,176,591	$ 1,937,920	$ 1,937,920
Short-term debt - servicer advance financing	152,554	152,554	262,740	262,740
Accrued interest payable	60,655	60,655	42,528	42,528
Margin payable (3)	1,700	1,700	835	835
Guarantee obligation (3)	14,009	13,754	16,711	16,774
Contingent consideration (3)	28,484	28,484	—	—
Derivative liabilities	163,424	163,424	84,855	84,855
ABS issued at fair value	10,515,475	10,515,475	5,410,073	5,410,073
FHLBC long-term borrowings	1,999,999	1,999,999	1,999,999	1,999,999
Subordinate securities financing facility	183,520	184,666	—	—
Convertible notes, net	631,125	661,985	633,196	618,271
Trust preferred securities and subordinated notes, net	138,628	99,045	138,582	102,533

(1) These investments are included in Other investments on our consolidated balance sheets.

(2) These assets are included in Other assets on our consolidated balance sheets.

(3) These liabilities are included in Accrued expenses and other liabilities on our consolidated balance sheets.

Note 5. Fair Value of Financial Instruments - (continued)

During the years ended December 31, 2019 and 2018, we elected the fair value option for $333 million and $654 million of securities, respectively, $6.99 billion and $8.38 billion of residential loans (principal balance), respectively, $4.02 billion and $168 million of business purpose residential loans (principal balance), respectively, $1.43 billion and $2.13 billion of multifamily loans (principal balance), respectively, $70 million and $396 million of servicer advance investments, respectively, and $8 million and $25 million of excess MSRs, respectively. Additionally, during the year ended December 31, 2019, we elected the fair value option for $43 million of shared home appreciation options. We anticipate electing the fair value option for all future purchases of residential and business purpose residential loans that we intend to sell to third parties or transfer to securitizations, as well as for certain securities we purchase, including IO securities and fixed-rate securities rated investment grade or higher.

The following table presents the assets and liabilities that are reported at fair value on our consolidated balance sheets on a recurring basis at December 31, 2019 and December 31, 2018, as well as the fair value hierarchy of the valuation inputs used to measure fair value.

Table 5.2 – Assets and Liabilities Measured at Fair Value on a Recurring Basis

December 31, 2019		**Fair Value Measurements Using**		
(In Thousands)	**Carrying Value**	**Level 1**	**Level 2**	**Level 3**
Assets				
Residential loans	$ 7,714,745	$ —	$ —	$ 7,714,745
Business purpose residential loans	3,506,743	—	—	3,506,743
Multifamily loans	4,408,524	—	—	4,408,524
Trading securities	860,540	—	—	860,540
Available-for-sale securities	239,334	—	—	239,334
Servicer advance investments	169,204	—	—	169,204
MSRs	42,224	—	—	42,224
Excess MSRs	31,814	—	—	31,814
Shared home appreciation options	45,085	—	—	45,085
Derivative assets	35,701	6,531	19,020	10,150
Pledged collateral	32,945	32,945	—	—
FHLBC stock	43,393	—	43,393	—
Guarantee asset	1,686	—	—	1,686
Liabilities				
Contingent consideration	$ 28,484	$ —	$ —	$ 28,484
Derivative liabilities	163,424	13,368	148,766	1,290
ABS issued	10,515,475	—	—	10,515,475

Note 5. Fair Value of Financial Instruments - (continued)

December 31, 2018 (In Thousands)	Carrying Value	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Assets				
Residential loans	$ 7,254,631	$ —	$ —	$ 7,254,631
Business purpose residential loans	141,258	—	—	141,258
Multifamily loans	2,144,598	—	—	2,144,598
Trading securities	1,118,612	—	—	1,118,612
Available-for-sale securities	333,882	—	—	333,882
Servicer advance investments	300,468	—	—	300,468
MSRs	60,281	—	—	60,281
Excess MSRs	27,312	—	—	27,312
Derivative assets	35,789	4,665	28,211	2,913
Pledged collateral	42,433	42,433	—	—
FHLBC stock	43,393	—	43,393	—
Guarantee asset	2,618	—	—	2,618
Liabilities				
Derivative liabilities	$ 84,855	$ 13,215	$ 70,908	$ 732
ABS issued	5,410,073	—	—	5,410,073

The following table presents additional information about Level 3 assets and liabilities measured at fair value on a recurring basis for the years ended December 31, 2019 and December 31, 2018.

Table 5.3 – Changes in Level 3 Assets and Liabilities Measured at Fair Value on a Recurring Basis

	Assets								
(In Thousands)	Residential Loans	Business Purpose Residential Loans	Multifamily Loans	Trading Securities	AFS Securities	Servicer Advance Investments	MSRs	Excess MSRs	Shared Home Appreciation Options
Beginning balance - December 31, 2018	$ 7,254,631	$ 141,258	$ 2,144,598	$ 1,118,612	$ 333,882	$ 300,468	$ 60,281	$ 27,312	$ —
Acquisitions	7,092,866	2,639,615	2,162,386	332,593	26,539	69,610	868	7,762	44,243
Originations	—	1,015,436	—	—	—	—	—	—	—
Sales	(5,141,886)	(76,909)	—	(597,122)	(110,069)	—	—	—	—
Principal paydowns	(1,609,220)	(213,655)	(28,543)	(44,600)	(39,704)	(203,876)	—	—	—
Gains (losses) in net income, net	119,132	7,423	130,083	56,008	24,580	3,002	(18,925)	(3,260)	842
Unrealized losses in OCI, net	—	—	—	—	4,106	—	—	—	—
Other settlements, net (1)	(778)	(6,425)	—	(4,951)	—	—	—	—	—
Ending balance - December 31, 2019	$ 7,714,745	$ 3,506,743	$ 4,408,524	$ 860,540	$ 239,334	$ 169,204	$ 42,224	$ 31,814	$ 45,085

Note 5. Fair Value of Financial Instruments - (continued)

Table 5.3 – Changes in Level 3 Assets and Liabilities Measured at Fair Value on a Recurring Basis (continued)

	Assets		Liabilities	
(In Thousands)	Guarantee Asset	Derivatives (2)	Contingent Consideration	ABS Issued
Beginning balance - December 31, 2018	$ 2,618	$ 2,181	$ —	$ 5,410,073
Acquisitions	—	—	25,267	6,098,462
Principal paydowns	—	—	—	(1,112,437)
Gains (losses) in net income, net	(932)	62,220	3,217	119,377
Other settlements, net (1)	—	(55,541)	—	—
Ending balance - December 31, 2019	$ 1,686	$ 8,860	$ 28,484	$ 10,515,475

	Assets								
(In Thousands)	Residential Loans	Business Purpose Residential Loans	Multifamily Loans	Trading Securities	AFS Securities	Servicer Advance Investments	MSRs	Excess MSRs	Guarantee Asset
Beginning balance - December 31, 2017	$ 5,114,317	$ —	$ —	$ 968,844	$ 507,666	$ —	$ 63,598	$ —	$ 2,869
Acquisitions	8,338,724	167,777	2,099,916	653,739	7,739	395,813	328	25,489	—
Sales	(5,425,168)	—	—	(438,304)	(143,644)	—	(1,077)	—	—
Principal paydowns	(814,122)	(27,382)	(1,873)	(40,050)	(44,446)	(94,644)	—	—	—
Gains (losses) in net income, net	44,627	863	46,555	(8,436)	41,051	(701)	(2,568)	1,823	(251)
Unrealized gains in OCI, net	—	—	—	—	(34,484)	—	—	—	—
Other settlements, net (1)	(3,747)	—	—	(17,181)	—	—	—	—	—
Ending balance - December 31, 2018	$ 7,254,631	$ 141,258	$ 2,144,598	$ 1,118,612	$ 333,882	$ 300,468	$ 60,281	$ 27,312	$ 2,618

		Liabilities
(In Thousands)	Derivatives (2)	ABS Issued
Beginning balance - December 31, 2017	$ 1,714	$ 1,164,585
Acquisitions	—	4,613,168
Principal paydowns	—	(459,173)
Gains (losses) in net income, net	(1,214)	91,493
Other settlements, net (1)	1,681	—
Ending balance - December 31, 2018	$ 2,181	$ 5,410,073

(1)Other settlements, net for residential and business purpose residential loans represents the transfer of loans to REO, and for derivatives, the settlement of forward sale commitments and the transfer of the fair value of loan purchase or interest rate lock commitments at the time loans are acquired to the basis of residential and single-family rental loans. Other settlements, net for trading securities relates to the consolidation of Freddie Mac K-Series securitization entities.

(2) For the purpose of this presentation, derivative assets and liabilities, which consist of loan purchase commitments, forward sale commitments, and interest rate lock commitments, are presented on a net basis.

Note 5. Fair Value of Financial Instruments - (continued)

The following table presents the portion of gains or losses included in our consolidated statements of income that were attributable to Level 3 assets and liabilities recorded at fair value on a recurring basis and held at December 31, 2019, 2018, and 2017. Gains or losses incurred on assets or liabilities sold, matured, called, or fully written down during the years ended December 31, 2019, 2018, and 2017 are not included in this presentation.

Table 5.4 – Portion of Net Gains (Losses) Attributable to Level 3 Assets and Liabilities Still Held at December 31, 2019, 2018, and 2017 Included in Net Income

	Included in Net Income		
	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Assets			
Residential loans at Redwood	$ 67,470	$ (17,757)	$ 523
Residential loans at consolidated Sequoia entities	(10,062)	24,799	17,727
Residential loans at consolidated Freddie Mac SLST entities	63,583	21,295	—
Business purpose residential loans	14,603	445	—
Single-family rental loans at consolidated CAFL entities	(14,681)	—	—
Multifamily loans at consolidated Freddie Mac K-Series entities	130,083	46,555	—
Trading securities	18,865	(12,256)	28,612
Available-for-sale securities	—	(89)	(1,011)
Servicer advance investments	3,001	(702)	—
MSRs	(11,957)	1,942	1,277
Excess MSRs	(3,260)	1,824	—
Shared home appreciation options	842	—	—
Loan purchase and interest rate lock commitments	10,190	2,913	3,243
Loan forward sale commitments	—	—	2,177
Other assets - Guarantee asset	(932)	(251)	(1,223)
Liabilities			
Loan purchase commitments	$ (1,290)	$ (732)	$ (3,706)
Contingent consideration	(3,217)	—	—
ABS issued	(130,421)	(71,468)	(29,187)

Note 5. Fair Value of Financial Instruments - (continued)

The following table presents information on assets recorded at fair value on a non-recurring basis at December 31, 2019 and December 31, 2018. This table does not include the carrying value and gains or losses associated with the asset types below that were not recorded at fair value on our consolidated balance sheets at December 31, 2019 and December 31, 2018.

Table 5.5 – Assets and Liabilities Measured at Fair Value on a Non-Recurring Basis

December 31, 2019 (In Thousands)	Carrying Value	Fair Value Measurements Using			Gain (Loss) for Year Ended December 31, 2019
		Level 1	Level 2	Level 3	
Assets					
REO	$ 4,051	$ —	$ —	$ 4,051	$ (1,363)

December 31, 2018 (In Thousands)	Carrying Value	Fair Value Measurements Using			Gain (Loss) for Year Ended December 31, 2018
		Level 1	Level 2	Level 3	
Assets					
REO	$ 2,225	$ —	$ —	$ 2,225	$ (131)

The following table presents the net market valuation gains and losses recorded in each line item of our consolidated statements of income for the years ended December 31, 2019, 2018, and 2017.

Note 5. Fair Value of Financial Instruments - (continued)

Table 5.6 – Market Valuation Gains and Losses, Net

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Mortgage Banking Activities, Net			
Residential loans held-for-sale, at fair value	$ 3,267	$ 23,144	$ 31,493
Residential loan purchase and forward sale commitments	60,260	(1,336)	37,880
Single-family rental loans held-for-sale, at fair value	15,043	375	—
Single-family rental loan purchase and interest rate lock commitments	1,961	78	—
Residential bridge loans	4,518	—	—
Risk management derivatives, net	(15,723)	34,739	(17,529)
Total mortgage banking activities, net (1)	$ 69,326	$ 57,000	$ 51,844
Investment Fair Value Changes, Net			
Residential loans held-for-investment at Redwood	$ 58,891	$ (29,573)	$ (5,765)
Single-family rental loans held-for-investment	272	—	—
Residential bridge loans held-for-investment	(2,139)	(29)	—
Trading securities	56,046	(8,055)	39,526
Commercial loans held-for-sale	—	—	300
Servicer advance investments	3,001	(701)	—
Excess MSRs	(3,260)	1,823	—
Shared home appreciation options	842	—	—
REO	(1,045)	—	—
Net investments in Legacy Sequoia entities (2)	(1,545)	(1,016)	(8,027)
Net investments in Sequoia Choice entities (2)	6,947	443	(323)
Net investments in Freddie Mac SLST entities (2)	27,206	1,271	—
Net investments in Freddie Mac K-Series entities (2)	21,430	931	—
Net investments in CAFL entities (2)	(3,636)	—	—
Other investments	(341)	(434)	(1,484)
Risk management derivatives, net	(127,169)	9,740	(12,842)
Impairments on AFS securities	—	(89)	(1,011)
Total investment fair value changes, net	$ 35,500	$ (25,689)	$ 10,374
Other Income			
MSRs	$ (18,856)	$ (2,508)	$ (10,166)
Risk management derivatives, net	8,595	(4,734)	(568)
Gain on re-measurement of 5 Arches investment	2,441	—	—
Total other income (3)	$ (7,820)	$ (7,242)	$ (10,734)
Total Market Valuation Gains, Net	$ 97,006	$ 24,069	$ 51,484

(1) Mortgage banking activities, net presented above does not include fee income or provisions for repurchases that are components of Mortgage banking activities, net presented on our consolidated statements of income, as these amounts do not represent market valuation changes.

(2) Includes changes in fair value of the residential loans held-for-investment, REO and the ABS issued at the entities, which netted together represent the change in value of our investments at the consolidated VIEs.

(3) Other income presented above does not include net MSR fee income or provisions for repurchases for MSRs, as these amounts do not represent market valuation adjustments.

Note 5. Fair Value of Financial Instruments - (continued)

Valuation Policy

We maintain policies that specify the methodologies we use to value different types of financial instruments. Significant changes to the valuation methodologies are reviewed by members of senior management to confirm the changes are appropriate and reasonable. Valuations based on information from external sources are performed on an instrument-by-instrument basis with the resulting amounts analyzed individually against internal calculations as well as in the aggregate by product type classification. Initial valuations are performed by our portfolio management groups using the valuation processes described below. Our finance department then independently reviews all fair value estimates using available market, portfolio, and industry information to ensure they are reasonable. Finally, members of senior management review all fair value estimates, including an analysis of the methodology and valuation changes from prior reporting periods.

Valuation Process

We estimate fair values for financial assets or liabilities based on available inputs observed in the marketplace as well as unobservable inputs. We primarily use two pricing valuation techniques: market comparable pricing and discounted cash flow analysis. Market comparable pricing is used to determine the estimated fair value of certain instruments by incorporating known inputs and performance metrics, such as observed prepayment rates, delinquencies, severities, credit support, recent transaction prices, pending transactions, or prices of other similar instruments. Discounted cash flow analysis techniques generally consist of developing an estimate of future cash flows that are expected to occur over the life of an instrument and then discounting those cash flows at a rate of return that results in an estimate of fair value. After considering all available indications of the appropriate rate of return that market participants would require, we consider the reasonableness of the range indicated by the results to determine an estimate that is most representative of fair value. We also consider counterparty credit quality and risk as part of our fair value assessments.

Note 5. Fair Value of Financial Instruments - (continued)

The following table provides quantitative information about the significant unobservable inputs used in the valuation of our Level 3 assets and liabilities measured at fair value.

Table 5.7 – Fair Value Methodology for Level 3 Financial Instruments

December 31, 2019 (Dollars in Thousands, except Input Values)	Fair Value	Unobservable Input	Input Values: Range	Input Values: Weighted Average
Assets				
Residential loans, at fair value:				
Jumbo fixed-rate loans	$ 2,113,977	Prepayment rate (annual CPR)	20 - 20 %	20 %
		Whole loan spread to TBA price	$ 0.53 - $ 1.63	$ 1.62
		Whole loan spread to swap rate	95 - 375 bps	170 bps
Jumbo hybrid loans	326,336	Prepayment rate (annual CPR)	15 - 15 %	15 %
		Whole loan spread to swap rate	80 - 345 bps	134 bps
Jumbo loans committed to sell	207,864	Whole loan committed sales price	$ 101.85 - $ 102.96	$ 102.41
Loans held by Legacy Sequoia [1]	407,890	Liability price	N/A	N/A
Loans held by Sequoia Choice [1]	2,291,463	Liability price	N/A	N/A
Loans held by Freddie Mac SLST [1]	2,367,215	Liability price	N/A	N/A
Business purpose residential loans:				
Single-family rental loans	569,185	Senior credit spread	100 - 105 bps	103 bps
		Subordinate credit spread	135 - 1,400 bps	299 bps
		Senior credit support	33 - 40 %	34 %
		IO discount rate	6 - 9 %	8 %
		Prepayment rate (annual CPR)	5 - 5 %	5 %
Single-family rental loans held by CAFL	2,192,552	Liability price	N/A	N/A
Residential bridge loans	745,006	Discount rate	6 10 %	7 %
Multifamily loans held by Freddie Mac K-Series [1]	4,408,524	Liability price	N/A	N/A
Trading and AFS securities	1,099,874	Discount rate	3 - 40 %	5 %
		Prepayment rate (annual CPR)	5 - 50 %	16 %
		Default rate	— - 7 %	1 %
		Loss severity	— - 30 %	5 %
Servicer advance investments	169,204	Discount rate	5 - 5 %	5 %
		Prepayment rate (annual CPR)	8 - 15 %	14 %
		Expected remaining life [2]	2 - 2 year	2 year
		Mortgage servicing income	8 - 13 bps	10 bps
MSRs	42,224	Discount rate	11 - 12 %	11 %
		Prepayment rate (annual CPR)	5 - 44 %	11 %
		Per loan annual cost to service	$ 82 - $ 82	$ 82
Excess MSRs	31,814	Discount rate	11 - 16 %	14 %
		Prepayment rate (annual CPR)	9 - 14 %	11 %
		Excess mortgage servicing amount	8 - 18 bps	13 bps

Note 5. Fair Value of Financial Instruments - (continued)

Table 5.7 – Fair Value Methodology for Level 3 Financial Instruments (continued)

December 31, 2019 (Dollars in Thousands, except Input Values)	Fair Value	Unobservable Input	Input Values Range			Input Values Weighted Average	
Assets (continued)							
Shared home appreciation options	$ 45,085	Discount rate	11	-	11	%	11 %
		Prepayment rate (annual CPR)	10	-	30	%	23 %
		Home price appreciation	3	-	3	%	3 %
Guarantee asset	1,686	Discount rate	11	-	11	%	11 %
		Prepayment rate (annual CPR)	15	-	15	%	15 %
REO	4,051	Loss severity	17	-	55	%	26 %
Residential loan purchase commitments, net	8,419	MSR multiple	0.7	-	4.3	x	2.8 x
		Pull-through rate	8	-	100	%	75 %
		Whole loan spread to TBA price	$ 0.53	-	$ 1.63		$ 1.62
		Whole loan spread to swap rate - fixed rate	115	-	375	bps	253 bps
		Prepayment rate (annual CPR)	15	-	20	%	20 %
		Whole loan spread to swap rate - hybrid	115	-	155	bps	131 bps
Single-family rental interest rate lock commitments	440	Senior credit spread	105	-	105	bps	105 bps
		Subordinate credit spread	140	-	1,400	bps	299 bps
		Senior credit support	33	-	33	%	33 %
		IO discount rate	6	-	7	%	7 %
		Prepayment rate (annual CPR)	5	-	5	%	5 %
		Pull-through rate	100	-	100	%	100 %
Liabilities							
ABS issued (1)							
At consolidated Sequoia entities	2,439,663	Discount rate	3	-	30	%	4 %
		Prepayment rate (annual CPR)	17	-	43	%	26 %
		Default rate	—	-	7	%	— %
		Loss severity	—	-	65	%	1 %
At consolidated Freddie Mac SLST entities	1,918,322	Discount rate	3	-	13	%	3 %
		Prepayment rate (annual CPR)	6	-	6	%	6 %
		Default rate	17	-	18	%	17 %
		Loss severity	30	-	30	%	30 %
At consolidated Freddie Mac K-Series entities (4)	4,156,239	Discount rate	1	-	9	%	3 %
		Non-IO prepayment rate (annual CPR)	—	-	—	%	— %
		IO prepayment rate (annual CPY/CPP)	—	-	100	%	94 %
At consolidated CAFL entities (4)	2,001,251	Discount rate	2	-	30	%	4 %
		Prepayment rate (annual CPR)	—	-	5	%	— %
Contingent consideration	28,484	Discount rate	23	-	23	%	23 %
		Probability of outcomes (3)	100	-	100	%	100 %

Note 5. Fair Value of Financial Instruments - (continued)

Footnotes to Table 5.7

(1) The fair value of the loans held by consolidated entities was based on the fair value of the ABS issued by these entities, including securities we own, which we determined were more readily observable in accordance with accounting guidance for collateralized financing entities. At December 31, 2019, the fair value of securities we owned at the consolidated Sequoia, Freddie Mac SLST, Freddie Mac K-Series and CAFL entities was $264 million, $449 million, $252 million, and $191 million, respectively.

(2) Represents the estimated average duration of outstanding servicer advances at a given point in time (not taking into account new advances made with respect to the pool).

(3) Represents the probability of a full payout of contingent purchase consideration.

(4) As a market convention, certain securities are priced to a no-loss yield and therefore do not include default and loss severity assumptions.

Determination of Fair Value

A description of the instruments measured at fair value as well as the general classification of such instruments pursuant to the Level 1, Level 2, and Level 3 valuation hierarchy is listed herein. We generally use both market comparable information and discounted cash flow modeling techniques to determine the fair value of our Level 3 assets and liabilities. Use of these techniques requires determination of relevant inputs and assumptions, some of which represent significant unobservable inputs as indicated in the preceding table. Accordingly, a significant increase or decrease in any of these inputs – such as anticipated credit losses, prepayment rates, interest rates, or other valuation assumptions – in isolation would likely result in a significantly lower or higher fair value measurement.

Residential loans at Redwood

Estimated fair values for residential loans are determined using models that incorporate various observable inputs, including pricing information from whole loan sales and securitizations. Certain significant inputs in these models are considered unobservable and are therefore Level 3 in nature. Significant pricing inputs obtained from market whole loan transaction activity include indicative spreads to indexed TBA prices and indexed swap rates for fixed-rate loans and indexed swap rates for hybrid loans (Level 3). Significant pricing inputs obtained from market securitization activity include indicative spreads to indexed TBA prices for senior MBS and indexed swap rates for subordinate MBS, senior credit support levels, and assumed future prepayment rates (Level 3). These assets would generally decrease in value based upon an increase in the credit spread, prepayment speed, or credit support assumptions.

Residential loans, business purpose residential loans, and multifamily loans at consolidated entities

We have elected to account for our consolidated securitization entities as collateralized financing entities in accordance with GAAP. A CFE is a variable interest entity that holds financial assets and issues beneficial interests in those assets, and these beneficial interests have contractual recourse only to the related assets of the CFE. Accounting guidance for CFEs allows companies to elect to measure both the financial assets and financial liabilities of a CFE using the more observable of the fair value of the financial assets or fair value of the financial liabilities. Pursuant to this guidance, we use the fair value of the ABS issued by the CFEs (which we determined to be more observable) to determine the fair value of the loans held at these entities, whereby the net assets we consolidate in our financial statements related to these entities represent the estimated fair value of our retained interests in the CFEs.

Business purpose residential loans

Business purpose residential loans include single-family rental loans and residential bridge loans that are generally illiquid in nature and trade infrequently. Significant inputs in the valuation analysis are predominantly Level 3 in nature, due to the lack of readily available market quotes and related inputs.

Estimated fair values for our single-family rental loans are determined using models that incorporate various inputs, including pricing information from market comparable securitizations. Certain significant inputs in these models are considered unobservable and are therefore Level 3 in nature. Significant pricing inputs obtained from market activity include indicative spreads to indexed swap rates for senior and subordinate MBS, IO MBS discount rates, senior credit support levels, and assumed future prepayment rates (Level 3). These assets would generally decrease in value based upon an increase in the credit spread, prepayment speed, or credit support assumptions.

Prices for our residential bridge loans are determined using discounted cash flow modeling, which incorporates a primary significant unobservable input of discount rate. These assets would generally decrease in value based upon an increase in the discount rate.

Note 5. Fair Value of Financial Instruments - (continued)

Real estate securities

Real estate securities include residential, multifamily, and other mortgage-backed securities that are generally illiquid in nature and trade infrequently. Significant inputs in the valuation analysis are predominantly Level 3 in nature, due to the lack of readily available market quotes and related inputs. For real estate securities, we utilize both market comparable pricing and discounted cash flow analysis valuation techniques. Relevant market indicators that are factored into the analysis include bid/ask spreads, the amount and timing of credit losses, interest rates, and collateral prepayment rates. Estimated fair values are based on applying the market indicators to generate discounted cash flows (Level 3). These cash flow models use significant unobservable inputs such as a discount rate, prepayment rate, default rate and loss severity. The estimated fair value of our securities would generally decrease based upon an increase in discount rate, default rates, loss severities, or a decrease in prepayment rates.

As part of our securities valuation process, we request and consider indications of value from third-party securities dealers. For purposes of pricing our securities at December 31, 2019, we received dealer price indications on 83% of our securities, representing 94% of our carrying value. In the aggregate, our internal valuations of the securities for which we received dealer price indications were within 1% of the aggregate average dealer valuations. Once we receive the price indications from dealers, they are compared to other relevant market inputs, such as actual or comparable trades, and the results of our discounted cash flow analysis. In circumstances where relevant market inputs cannot be obtained, increased reliance on discounted cash flow analysis and management judgment are required to estimate fair value.

Derivative assets and liabilities

Our derivative instruments include swaps, swaptions, TBAs, interest rate futures, loan purchase commitments, and forward sale commitments. Fair values of derivative instruments are determined using quoted prices from active markets, when available, or from valuation models and are supported by valuations provided by dealers active in derivative markets. Fair values of TBAs and interest rate futures are generally obtained using quoted prices from active markets (Level 1). Our derivative valuation models for swaps and swaptions require a variety of inputs, including contractual terms, market prices, yield curves, credit curves, measures of volatility, prepayment rates, and correlations of certain inputs. Model inputs can generally be verified and model selection does not involve significant management judgment (Level 2).

LPC, IRLC and FSC fair values for residential jumbo and single-family rental loans are estimated based on the estimated fair values of the underlying loans (as described in "*Residential loans at Redwood*" and "*Business purpose residential loans"* above). In addition, fair values for LPCs and IRLCs are estimated based on the probability that the mortgage loan will be purchased or originated (the "Pull-through rate") (Level 3).

For other derivatives, valuations are based on various factors such as liquidity, bid/ask spreads, and credit considerations for which we rely on available market inputs. In the absence of such inputs, management’s best estimate is used (Level 3).

Servicer advance investments

Estimated fair values for servicer advance investments are determined through internal pricing models that estimate future cash flows and utilize certain significant inputs that are considered unobservable and are therefore Level 3 in nature. Our estimations of cash flows include the combined cash flows of all of the components that comprise the servicer advance investments: existing advances, the requirement to purchase future advances, the recovery of advances, and the right to a portion of the associated mortgage servicing fee ("mortgage servicing income"). The valuation technique is based on discounted cash flows. Significant inputs used in the valuations included prepayment rate (of the loans underlying the investments), mortgage servicing income, servicer advance WAL (the weighted-average expected remaining life of servicer advances), and discount rate. These assets would generally decrease in value based upon an increase in prepayment rates, an increase in servicer advance WAL, or an increase in discount rate, or a decrease in mortgage servicing income.

Note 5. Fair Value of Financial Instruments - (continued)

MSRs

MSRs include the rights to service jumbo residential mortgage loans. Significant inputs in the valuation analysis are predominantly Level 3, due to the nature of these instruments and the lack of readily available market quotes. Changes in the fair value of MSRs occur primarily due to the collection/realization of expected cash flows, as well as changes in valuation inputs and assumptions. Estimated fair values are based on applying the inputs to generate the net present value of estimated future MSR income (Level 3). These discounted cash flow models utilize certain significant unobservable inputs including market discount rates, assumed future prepayment rates of serviced loans, and the market cost of servicing. An increase in these unobservable inputs would generally reduce the estimated fair value of the MSRs.

As part of our MSR valuation process, we received a valuation estimate from a third-party valuations firm. In the aggregate, our internal valuation of the MSRs were within 2% of the third-party valuation.

Excess MSRs

Estimated fair values for excess MSRs are determined through internal pricing models that estimate future cash flows and utilize certain significant inputs that are considered unobservable and are therefore Level 3 in nature. The valuation technique is based on discounted cash flows. Significant unobservable inputs used in the valuations included prepayment rate (of the loans underlying the investments), the amount of excess servicing income expected to be received ("excess mortgage servicing income"), and discount rate. These assets would generally decrease in value based upon an increase in prepayment rates or discount rate, or a decrease in excess mortgage servicing income.

Shared Home Appreciation Options

Estimated fair values for shared home appreciation options are determined through internal pricing models that estimate future cash flows and utilize certain significant unobservable inputs such as forecasted home price appreciation, prepayment rates, and discount rate, and are therefore Level 3 in nature. The valuation technique is based on discounted cash flows. An increase in discount rate, or a decrease in expected future home values combined with a decrease in prepayment rates, would generally reduce the estimated fair value of the shared home appreciation options.

FHLBC stock

Our Federal Home Loan Bank ("FHLB") member subsidiary is required to purchase Federal Home Loan Bank of Chicago ("FHLBC") stock under a borrowing agreement between our FHLB-member subsidiary and the FHLBC. Under this agreement, the stock is redeemable at face value, which represents the carrying value and fair value of the stock (Level 2).

Guarantee asset

The guarantee asset represents the estimated fair value of cash flows we are contractually entitled to receive related to a risk-sharing arrangement with Fannie Mae. Significant inputs in the valuation analysis are Level 3, due to the nature of this asset and the lack of market quotes. The fair value of the guarantee asset is determined using a discounted cash flow model, for which significant unobservable inputs include assumed future prepayment rates and market discount rate (Level 3). An increase in prepayment rates or discount rate would generally reduce the estimated fair value of the guarantee asset.

Pledged collateral

Pledged collateral consists of cash and U.S. Treasury securities held by a custodian in association with certain agreements we have entered into. Treasury securities are carried at their fair value, which is determined using quoted prices in active markets (Level 1).

Cash and cash equivalents

Cash and cash equivalents include cash on hand and highly liquid investments with original maturities of three months or less. Fair values equal carrying values (Level 1).

Note 5. Fair Value of Financial Instruments - (continued)

Restricted cash

Restricted cash primarily includes interest-earning cash balances related to risk-sharing transactions with the Agencies, cash held in association with borrowings from the FHLBC, cash held at Servicing Investment entities, and cash held at consolidated Sequoia entities for the purpose of distribution to investors and reinvestment. Due to the short-term nature of the restrictions, fair values approximate carrying values (Level 1).

Accrued interest receivable and payable

Accrued interest receivable and payable includes interest due on our assets and payable on our liabilities. Due to the short-term nature of when these interest payments will be received or paid, fair values approximate carrying values (Level 1).

Real estate owned

Real estate owned ("REO") includes properties owned in satisfaction of foreclosed loans. Fair values are determined using available market quotes, appraisals, broker price opinions, comparable properties, or other indications of value (Level 3).

Margin receivable

Margin receivable reflects cash collateral we have posted with our various derivative and debt counterparties as required to satisfy margin requirements. Fair values approximate carrying values (Level 2).

Contingent consideration

Contingent consideration is related to our acquisition of 5 Arches and is estimated and recorded at fair value as part of purchase consideration. Each reporting period we estimate the change in fair value of the contingent consideration, and such change is recognized in our consolidated statements of income, unless it is determined to be a measurement period adjustment. The estimate of the fair value of contingent consideration requires significant judgment and assumptions to be made about future operating results, discount rates, and probabilities of projected operating result scenarios (Level 3).

Short-term debt

Short-term debt includes our credit facilities for residential and business purpose residential loans and real estate securities as well as non-recourse short-term borrowings used to finance servicer advance investments. As these borrowings are secured and subject to margin calls and as the rates on these borrowings reset frequently to market rates, we believe that carrying values approximate fair values (Level 2).

ABS issued

ABS issued includes asset-backed securities issued through the Legacy Sequoia, Sequoia Choice, and CAFL securitization entities, as well as securities issued by certain third-party Freddie Mac K-Series and SLST securitization entities that we consolidate. These instruments are generally illiquid in nature and trade infrequently. Significant inputs in the valuation analysis are predominantly Level 3, due to the nature of these instruments and the lack of readily available market quotes. For ABS issued, we utilize both market comparable pricing and discounted cash flow analysis valuation techniques. Relevant market indicators factored into the analysis include bid/ask spreads, the amount and timing of collateral credit losses, interest rates, and collateral prepayment rates. Estimated fair values incorporate market indicators as well as other significant unobservable inputs to generate discounted cash flows (Level 3). These cash flow models use significant unobservable inputs such as discount rate, prepayment rate, default rate, loss severity and credit support. A decrease in credit losses or discount rates, or an increase in prepayment rates, would generally cause the fair value of the ABS issued to decrease (i.e., become a larger liability).

Note 5. Fair Value of Financial Instruments - (continued)

FHLBC borrowings

FHLBC borrowings include amounts borrowed from the FHLBC that are secured, generally by residential mortgage loans. As these borrowings are secured and subject to margin calls and as the rates on these borrowings reset frequently to market rates, we believe that carrying values approximate fair values (Level 2).

Financial Instruments Carried at Amortized Cost

Participation in loan warehouse facility

Our participation in a loan warehouse facility was carried at amortized cost (Level 2).

Guarantee obligations

In association with our risk-sharing transactions with the Agencies, we have made certain guarantees which are carried on our balance sheet at amortized cost (Level 3).

Subordinate securities financing facility

Borrowings under our subordinate securities financing facility are secured by real estate securities and carried at unpaid principal balance net of any unamortized deferred issuance costs (Level 3).

Convertible notes

Convertible notes include unsecured convertible and exchangeable senior notes that are carried at their unpaid principal balance net of any unamortized deferred issuance costs. The fair value of the convertible notes is determined using quoted prices in generally active markets (Level 2).

Trust preferred securities and subordinated notes

Trust preferred securities and subordinated notes are carried at their unpaid principal balance net of any unamortized deferred issuance costs (Level 3).

Note 6. Residential Loans

We acquire residential loans from third-party originators and may sell or securitize these loans or hold them for investment.The following table summarizes the classifications and carrying values of the residential loans owned at Redwood and at consolidated Sequoia and Freddie Mac SLST entities at December 31, 2019 and December 31, 2018.

Table 6.1 – Classifications and Carrying Values of Residential Loans

December 31, 2019		**Legacy**	**Sequoia**	**Freddie Mac**	
(In Thousands)	**Redwood**	**Sequoia**	**Choice**	**SLST**	**Total**
Held-for-sale at fair value	$ 536,385	$ —	$ —	$ —	$ 536,385
Held-for-investment at fair value	2,111,897	407,890	2,291,463	2,367,215	7,178,465
Total Residential Loans	$ 2,648,282	$ 407,890	$ 2,291,463	$ 2,367,215	$ 7,714,850

December 31, 2018		**Legacy**	**Sequoia**	**Freddie Mac**	
(In Thousands)	**Redwood**	**Sequoia**	**Choice**	**SLST**	**Total**
Held-for-sale at fair value	$ 1,048,801	$ —	$ —	$ —	$ 1,048,801
Held-for-investment at fair value	2,383,932	519,958	2,079,382	1,222,669	6,205,941
Total Residential Loans	$ 3,432,733	$ 519,958	$ 2,079,382	$ 1,222,669	$ 7,254,742

Note 6. Residential Loans - (continued)

At December 31, 2019, we owned mortgage servicing rights associated with $2.03 billion (principal balance) of consolidated residential loans purchased from third-party originators. The value of these MSRs is included in the carrying value of the associated loans on our consolidated balance sheets. We contract with licensed sub-servicers that perform servicing functions for these loans.

Residential Loans Held-for-Sale

At Fair Value

At December 31, 2019, we owned 669 loans held-for-sale at fair value with an aggregate unpaid principal balance of $525 million and a fair value of $536 million, compared to 1,484 loans with an aggregate unpaid principal balance of $1.03 billion and a fair value of $1.05 billion at December 31, 2018. At December 31, 2019, one of these loans with a fair value of $0.6 million and an unpaid principal balance of $0.7 million was greater than 90 days delinquent and none of these loans were in foreclosure. At December 31, 2018, one of these loans with a fair value of $0.6 million and an unpaid principal balance of $0.7 million was greater than 90 days delinquent and none of these loans were in foreclosure.

During the years ended December 31, 2019 and 2018, we purchased $5.73 billion and $7.07 billion (principal balance) of loans, respectively, for which we elected the fair value option, and we sold $6.07 billion and $7.11 billion (principal balance) of loans, respectively, for which we recorded net market valuation gains of $3 million and $23 million, respectively, through Mortgage banking activities, net on our consolidated statements of income.

Residential Loans Held-for-Investment at Fair Value

At Redwood

At December 31, 2019, we owned 2,940 held-for-investment loans at Redwood with an aggregate unpaid principal balance of $2.05 billion and a fair value of $2.11 billion, compared to 3,296 loans with an aggregate unpaid principal balance of $2.39 billion and a fair value of $2.38 billion at December 31, 2018. At December 31, 2019, two of these loans with a total fair value of $1 million and an unpaid principal balance of $2 million were greater than 90 days delinquent and none of these loans were in foreclosure. At December 31, 2018, two of these loans with an aggregate fair value and unpaid principal balance of $1 million were greater than 90 days delinquent and none of these loans were in foreclosure.

During the years ended December 31, 2019 and 2018, we transferred loans with a fair value of $69 million and $286 million, respectively, from held-for-sale to held-for-investment. During the years ended December 31, 2019 and 2018, we transferred loans with a fair value of $23 million and $16 million, respectively, from held-for-investment to held-for-sale.

During the years ended December 31, 2019 and 2018, we recorded a net market valuation gain of $59 million and a net market valuation loss of $30 million, respectively, on residential loans held-for-investment at fair value through Investment fair value changes, net on our consolidated statements of income.

The outstanding loans held-for-investment at Redwood at December 31, 2019 were prime-quality, first-lien loans, of which 96% were originated between 2013 and 2019, and 4% were originated in 2012 and prior years. The weighted average Fair Isaac Corporation ("FICO") score of borrowers backing these loans was 768 (at origination) and the weighted average loan-to-value ("LTV") ratio of these loans was 66% (at origination). At December 31, 2019, these loans were comprised of 89% fixed-rate loans with a weighted average coupon of 4.14%, and the remainder were hybrid or ARM loans with a weighted average coupon of 4.16%.

At Consolidated Legacy Sequoia Entities

At December 31, 2019, we consolidated 2,198 held-for-investment loans at consolidated Legacy Sequoia entities, with an aggregate unpaid principal balance of $425 million and a fair value of $408 million, as compared to 2,641 loans at December 31, 2018, with an aggregate unpaid principal balance of $545 million and a fair value of $520 million. At origination, the weighted average FICO score of borrowers backing these loans was 727, the weighted average LTV ratio of these loans was 65%, and the loans were nearly all first lien and prime-quality.

Note 6. Residential Loans - (continued)

At December 31, 2019 and December 31, 2018, the unpaid principal balance of loans at consolidated Sequoia entities delinquent greater than 90 days was $10 million and $14 million, respectively, of which the unpaid principal balance of loans in foreclosure was $4 million and $5 million, respectively. During the years ended December 31, 2019 and 2018, we recorded net market valuation gains of $5 million and $37 million, respectively, on these loans through Investment fair value changes, net on our consolidated statements of income. Pursuant to the collateralized financing entity guidelines, the market valuation changes of these loans are based on the estimated fair value of the associated ABS issued. The net impact to our income statement associated with our retained economic investment in the Legacy Sequoia securitization entities is presented in *Note 5.*

At Consolidated Sequoia Choice Entities

At December 31, 2019, we consolidated 3,156 held-for-investment loans at consolidated Sequoia Choice entities, with an aggregate unpaid balance of $2.24 billion and a fair value of $2.29 billion, as compared to 2,800 loans at December 31, 2018, with an aggregate unpaid principal balance of $2.04 billion and a fair value of $2.08 billion. At origination, the weighted average FICO score of borrowers backing these loans was 744, the weighted average LTV ratio of these loans was 75%, and the loans were all first lien and prime-quality. At December 31, 2019, nine of these loans with an aggregate unpaid principal balance of $7 million were greater than 90 days delinquent and three of these loans with an aggregate unpaid principal balance of $2 million were in foreclosure. At December 31, 2018, three of these loans with an aggregate unpaid principal balance of $2 million were greater than 90 days delinquent and none of these loans were in foreclosure.

During the years ended December 31, 2019 and 2018, we transferred loans with a fair value of $1.08 billion and $1.78 billion, respectively, from held-for-sale to held-for-investment associated with Choice securitizations. During the years ended December 31, 2019 and 2018, we recorded net market valuation losses of $15 million and $13 million, respectively, on these loans through Investment fair value changes, net on our consolidated statements of income. Pursuant to the collateralized financing entity guidelines, the market valuation changes of these loans are based on the estimated fair value of the ABS issued associated with Choice securitizations. The net impact to our income statement associated with our retained economic investment in the Sequoia Choice securitization entities is presented in *Note 5.*

At Consolidated Freddie Mac SLST Entities

Beginning in the fourth quarter of 2018, we invested in subordinate securities issued by certain Freddie Mac SLST securitization trusts and were required to consolidate the underlying seasoned re-performing and non-performing residential loans owned at these entities for financial reporting purposes in accordance with GAAP. At securitization, each of these mortgage loans was a fully amortizing, fixed- or step-rate, first-lien loan that had been modified. At December 31, 2019, we consolidated 14,502 held-for-investment loans at the consolidated Freddie Mac SLST entities, with an aggregate unpaid principal balance of $2.43 billion and a fair value of $2.37 billion, as compared to 7,900 loans at December 31, 2018, with an aggregate unpaid principal balance of $1.31 billion and a fair value of $1.22 billion. At securitization, the weighted average FICO score of borrowers backing these loans was 600 and the weighted average LTV ratio of these loans was 73%. At December 31, 2019, 587 of these loans with an aggregate unpaid principal balance of $135 million were greater than 90 days delinquent and 208 of these loans with an aggregate unpaid principal balance of $33 million were in foreclosure. At December 31, 2018, 306 of these loans with aggregate unpaid principal balance of $51 million were greater than 90 days delinquent and none of these loans were in foreclosure.

Note 6. Residential Loans - (continued)

During the years ended December 31, 2019 and 2018, we recorded net market valuation gains of $64 million and $21 million, respectively, on these loans through Investment fair value changes, net on our consolidated statements of income. Pursuant to the collateralized financing entity guidelines, the market valuation changes of these loans are based on the estimated fair value of the ABS issued associated with the Freddie Mac SLST securitizations. The net impact to our income statement associated with our economic investment in the Freddie Mac SLST securitization entities is presented in *Note 5.*

Residential Loan Characteristics

The following table presents the geographic concentration of residential loans recorded on our consolidated balance sheets at December 31, 2019 and December 31, 2018.

Table 6.2 – Geographic Concentration of Residential Loans

	December 31, 2019				
Geographic Concentration (by Principal)	**Held-for-Sale**	**Held-for-Investment at Legacy Sequoia**	**Held-for-Investment at Sequoia Choice**	**Held-for-Investment at Freddie Mac SLST**	**Held-for-Investment at FVO**
California	36 %	18 %	35 %	14 %	45 %
Washington	7 %	1 %	7 %	2 %	5 %
Texas	6 %	6 %	9 %	3 %	8 %
Colorado	6 %	3 %	4 %	— %	4 %
Florida	4 %	14 %	5 %	10 %	5 %
New Jersey	2 %	4 %	2 %	7 %	2 %
New York	1 %	10 %	4 %	10 %	4 %
Other states (none greater than 5%)	38 %	44 %	34 %	54 %	27 %
Total	100 %	100 %	100 %	100 %	100 %

	December 31, 2018				
Geographic Concentration (by Principal)	**Held-for-Sale**	**Held-for-Investment at Legacy Sequoia**	**Held-for-Investment at Sequoia Choice**	**Held-for-Investment at Freddie Mac SLST**	**Held-for-Investment at FVO**
California	40 %	19 %	39 %	12 %	47 %
Washington	10 %	1 %	7 %	2 %	5 %
Texas	6 %	6 %	8 %	3 %	8 %
Florida	4 %	13 %	4 %	10 %	5 %
New Jersey	2 %	4 %	1 %	7 %	1 %
New York	3 %	10 %	5 %	10 %	3 %
Other states (none greater than 5%)	35 %	47 %	36 %	56 %	31 %
Total	100 %	100 %	100 %	100 %	100 %

Note 6. Residential Loans - (continued)

The following table displays the loan product type and accompanying loan characteristics of residential loans recorded on our consolidated balance sheets at December 31, 2019 and December 31, 2018.

Table 6.3 – Product Types and Characteristics of Residential Loans

December 31, 2019

(In Thousands)

Loan Balance	Number of Loans	Interest Rate(1)	Maturity Date	Total Principal	30-89 Days DQ	90+ Days DQ
Held-for-Investment at Redwood:						
Hybrid ARM loans						
$ — to $250	12	3.50% to 4.50%	2043-09 - 2046-01	$ 2,423	$ —	$ —
$ 251 to $500	51	3.25% to 5.63%	2041-01 - 2048-08	20,781	—	—
$ 501 to $750	97	2.88% to 5.13%	2041-09 - 2048-08	61,708	1,364	—
$ 751 to $1,000	90	2.88% to 6.00%	2043-12 - 2048-08	77,550	1,784	971
over $1,000	49	3.00% to 5.50%	2040-10 - 2048-09	64,937	1,428	—
	299			227,399	4,576	971
Fixed loans						
$ — to $250	38	2.90% to 4.80%	2026-02 - 2047-12	6,549	223	—
$ 251 to $500	676	2.75% to 6.00%	2026-01 - 2049-04	287,984	—	—
$ 501 to $750	1,091	2.80% to 6.75%	2026-04 - 2049-05	669,159	2,325	614
$ 751 to $1,000	519	2.75% to 6.63%	2026-01 - 2049-04	447,499	1,895	—
over $1,000	317	3.00% to 5.88%	2031-04 - 2049-05	414,188	3,202	—
	2,641			1,825,379	7,645	614
Total HFI at Redwood:	2,940			$ 2,052,778	$ 12,221	$ 1,585
Held-for-Investment at Legacy Sequoia:						
ARM loans:						
$ — to $250	1,685	1.38% to 6.00%	2020-01 - 2035-11	$ 169,230	$ 5,135	$ 3,109
$ 251 to $500	345	1.25% to 5.63%	2022-01 - 2036-05	120,261	6,149	3,835
$ 501 to $750	87	1.63% to 4.38%	2027-04 - 2035-02	53,811	3,628	1,211
$ 751 to $1,000	45	1.63% to 4.38%	2027-11 - 2036-03	37,756	827	1,648
over $1,000	24	1.63% to 4.00%	2027-12 - 2035-04	38,341	—	—
	2,186			419,399	15,739	9,803
Hybrid ARM loans:						
$ — to $250	2	4.25% to 4.50%	2033-09 - 2033-10	465	—	—
$ 251 to $500	7	3.63% to 5.13%	2033-07 - 2034-06	2,494	—	—
$ 501 to $750	2	4.50% to 4.50%	2033-08 - 2033-08	1,181	—	—
over $1,000	1	4.50% to 4.50%	2033-09 - 2033-09	1,291	—	—
	12			5,431	—	—
Total HFI at Legacy Sequoia:	2,198			$ 424,830	$ 15,739	$ 9,803
Held-for-Investment at Sequoia Choice:						
Fixed loans:						
$ — to $250	56	2.75% to 5.50%	2038-02 - 2049-07	$ 10,743	$ —	$ —
$ 251 to $500	420	3.13% to 6.13%	2037-12 - 2049-09	184,455	2,282	—
$ 501 to $750	1,528	3.13% to 6.75%	2037-02 - 2049-09	940,914	13,020	2,366
$ 751 to $1,000	835	3.25% to 6.50%	2035-04 - 2049-09	719,609	7,856	3,297
over $1,000	317	3.50% to 5.88%	2038-01 - 2049-09	384,959	1,108	1,093
Total HFI at Sequoia Choice:	3,156			$ 2,240,680	$ 24,266	$ 6,756

Note 6. Residential Loans - (continued)

Table 6.3 – Product Types and Characteristics of Residential Loans (continued)

December 31, 2019
(In Thousands)

Loan Balance	Number of Loans	Interest Rate(1)	Maturity Date	Total Principal	30-89 Days DQ	90+ Days DQ
Held-for-Investment at Freddie Mac SLST:						
Fixed loans:						
$ — to $250	11,639	2.00% to 11.00%	2019-11 - 2059-10	$ 1,501,538	$ 477,592	$ 79,632
$ 251 to $500	2,805	2.00% to 7.75%	2033-08 - 2058-11	894,125	297,732	52,920
$ 501 to $750	57	2.00% to 6.75%	2043-08 - 2058-07	31,350	8,787	2,623
over $1,000	1	4.00% to 4.00%	2056-03 - 2056-03	1,021	1,021	—
Total HFI at Freddie Mac SLST:	14,502			$ 2,428,034	$ 785,132	$ 135,175
Held-for-Sale:						
Hybrid ARM loans						
$ — to $250	7	5.20% to 7.00%	2047-08 2048-12	$ 1,254	$ —	$ —
$ 251 to $500	1	4.25% to 4.25%	2049-08 - 2049-08	432	—	—
$ 501 to $750	52	3.00% to 5.50%	2047-04 - 2049-12	33,611	—	—
$ 751 to $1,000	33	3.25% to 4.88%	2047-04 - 2049-11	28,573	—	—
over $1,000	22	3.25% to 5.25%	2048-06 - 2049-11	28,013	—	—
	115			91,883	—	—
Fixed loans						
$ — to $250	2	3.88% to 7.13%	2034-08 - 2049-07	481	—	—
$ 251 to $500	13	3.63% to 6.50%	2048-01 - 2050-01	6,234	—	—
$ 501 to $750	301	3.20% to 5.88%	2034-05 - 2050-01	186,251	—	747
$ 751 to $1,000	161	3.50% to 6.50%	2034-07 - 2050-01	139,786	—	—
over $1,000	77	3.20% to 5.00%	2034-08 - 2050-01	100,293	1,650	—
	554			433,045	1,650	747
Total Held-for-Sale	669			$ 524,928	$ 1,650	$ 747

Note 6. Residential Loans - (continued)

Table 6.3 – Product Types and Characteristics of Residential Loans (continued)

December 31, 2018
(In Thousands)

Loan Balance	Number of Loans	Interest Rate[1]	Maturity Date	Total Principal	30-89 Days DQ	90+ Days DQ
Held-for-Investment at Redwood:						
Hybrid ARM loans						
$ — to $250	12	2.88% to 4.88%	2043-09 - 2046-01	$ 2,190	$ 59	$ —
$ 251 to $500	59	2.63% to 5.75%	2043-08 - 2048-08	23,986	—	—
$ 501 to $750	116	2.88% to 5.75%	2043-03 - 2048-08	73,360	692	—
$ 751 to $1,000	129	2.88% to 6.38%	2043-09 - 2048-09	111,879	—	—
over $1,000	69	3.00% to 5.50%	2040-10 - 2048-10	92,151	1,112	—
	385			303,566	1,863	—
Fixed loans						
$ — to $250	36	3.30% to 5.08%	2028-11 - 2047-12	6,737	—	—
$ 251 to $500	679	2.75% to 5.75%	2027-09 - 2048-11	292,730	—	—
$ 501 to $750	1,213	2.75% to 6.75%	2027-10 - 2048-11	746,503	1,320	1,224
$ 751 to $1,000	599	2.75% to 6.13%	2027-07 - 2048-11	517,075	903	—
over $1,000	384	2.80% to 5.88%	2031-04 - 2048-11	518,719	2,000	—
	2,911			2,081,764	4,223	1,224
Total HFI at Redwood:	3,296			$ 2,385,330	$ 6,086	$ 1,224
Held-for-Investment at Legacy Sequoia:						
ARM loans:						
$ — to $250	1,988	1.25% to 5.50%	2019-02 - 2035-11	$ 206,490	$ 7,179	$ 3,952
$ 251 to $500	424	1.25% to 5.63%	2023-05 - 2036-05	148,154	5,989	4,368
$ 501 to $750	110	1.63% to 4.50%	2022-01 - 2035-02	67,471	1,309	1,880
$ 751 to $1,000	61	1.63% to 4.38%	2027-11 - 2036-03	51,918	791	2,561
over $1,000	37	1.63% to 4.38%	2027-12 - 2036-05	61,710	1,023	1,194
	2,620			535,743	16,291	13,955
Hybrid ARM loans:						
$ — to $250	4	4.63% to 5.00%	2033-08 - 2034-06	769	—	—
$ 251 to $500	10	2.63% to 4.88%	2033-07 - 2034-06	3,675	—	—
$ 501 to $750	6	4.38% to 5.00%	2033-08 - 2034-11	3,667	—	—
over $1,000	1	4.88% to 4.88%	2033-09 - 2033-09	1,355	—	—
	21			9,466	—	—
Total HFI at Legacy Sequoia:	2,641			$ 545,209	$ 16,291	$ 13,955
Held-for-Investment at Sequoia Choice:						
Fixed loans:						
$ — to $250	29	2.75% to 5.63%	2038-03 - 2048-09	$ 5,484	$ —	$ —
$ 251 to $500	336	3.13% to 6.13%	2037-12 - 2048-09	149,917	1,419	925
$ 501 to $750	1,363	3.13% to 6.38%	2037-02 - 2048-09	841,692	3,633	—
$ 751 to $1,000	761	3.25% to 6.50%	2035-04 - 2048-09	659,845	3,549	980
over $1,000	311	3.13% to 5.88%	2038-01 - 2048-09	384,072	2,188	—
Total HFI at Sequoia Choice:	2,800			$ 2,041,010	$ 10,789	$ 1,905

Note 6. Residential Loans - (continued)

Table 6.3 – Product Types and Characteristics of Residential Loans (continued)

December 31, 2018
(In Thousands)

Loan Balance				Number of Loans	Interest Rate[1]			Maturity Date	Total Principal	30-89 Days DQ	90+ Days DQ
Held-for-Investment at Freddie Mac SLST:											
Fixed loans:											
$	—	to	$250	6,404	2.00%	to	10.50%	2018-12 - 2058-10	$ 830,118	$ 130,608	$ 30,686
$	251	to	$500	1,469	2.00%	to	7.38%	2033-08 - 2058-11	466,222	66,706	19,319
$	501	to	$750	27	2.00%	to	5.88%	2050-02 - 2057-12	14,634	1,631	523
				7,900					1,310,974	198,945	50,528
Held-for-Sale:											
Hybrid ARM loans											
$	251	to	$500	8	3.88%	to	5.38%	2048-05 - 2048-12	$ 3,795	$ —	$ —
$	501	to	$750	50	3.63%	to	7.38%	2048-01 - 2049-01	31,759	—	—
$	751	to	$1,000	27	3.88%	to	5.25%	2048-02 - 2049-01	23,478	—	—
		over	$1,000	23	3.50%	to	5.50%	2047-04 - 2048-12	28,112	—	—
				108					87,144	—	—
Fixed loans											
$	—	to	$250	6	4.38%	to	5.75%	2048-08 - 2048-11	1,180	—	—
$	251	to	$500	188	3.13%	to	6.38%	2029-04 - 2049-01	88,204	—	—
$	501	to	$750	788	3.75%	to	7.00%	2033-11 - 2049-01	475,935	559	747
$	751	to	$1,000	295	3.25%	to	6.63%	2033-12 - 2049-01	255,429	—	—
		over	$1,000	99	3.75%	to	6.13%	2032-10 - 2049-01	126,392	—	—
				1,376					947,140	559	747
Total Held-for-Sale				1,484					$ 1,034,284	$ 559	$ 747

(1) Rate is net of servicing fee for consolidated loans for which we do not own the MSR.

Note 7. Business Purpose Residential Loans

We originate business purpose residential loans, including single-family rental loans and residential bridge loans. This origination activity commenced in connection with our acquisition of 5 Arches in March 2019.

Business Purpose Residential Loan Originations

During the period from March 1, 2019 to December 31, 2019, we funded $1.02 billion of business purpose residential loans, of which $56 million of residential bridge loans and $20 million of single-family rental loans were sold to third parties. The remaining business purpose residential loans were transferred to our investment portfolio (residential bridge loans and certain single-family rental loans), or retained in our mortgage banking business (single-family rental loans) for future securitizations. Prior to the transfer of residential bridge loans to our investment portfolio, we recorded a net market valuation gain of $5 million on these loans through Mortgage banking activities, net on our consolidated statements of income for the period from March 1, 2019 to December 31, 2019, respectively. Market valuation adjustments on our single-family rental loans are also recorded in Mortgage banking activities, net on our consolidated statements of income prior to their sale or transfer to our investment portfolio. Additionally, during the period from March 1, 2019 to December 31, 2019, we recorded loan origination fee income associated with business purpose loans of $16 million through Mortgage banking activities, net on our consolidated statements of income.

The following table summarizes the classifications and carrying values of the business purpose residential loans owned at Redwood at December 31, 2019 and December 31, 2018.

Table 7.1 – Classifications and Carrying Values of Business Purpose Residential Loans

December 31, 2019	**Single-Family Rental**		**Residential**	
(In Thousands)	**Redwood**	**CAFL**	**Bridge**	**Total**
Held-for-sale at fair value	$ 331,565	—	$ —	$ 331,565
Held-for-investment at fair value	237,620	2,192,552	745,006	3,175,178
Total Business Purpose Residential Loans	$ 569,185	$ 2,192,552	$ 745,006	$ 3,506,743

December 31, 2018	**Single-Family Rental**		**Residential**	
(In Thousands)	**Redwood**	**CAFL**	**Bridge**	**Total**
Held-for-sale at fair value	$ 28,460	$ —	$ —	$ 28,460
Held-for-investment at fair value	—	—	112,798	112,798
Total Business Purpose Residential Loans	$ 28,460	$ —	$ 112,798	$ 141,258

Business Purpose Residential Loans Held-for-Sale at Fair Value

Single-Family Rental Loans

At December 31, 2019, we owned 201 single-family rental loans with an aggregate unpaid principal balance of $322 million and a fair value of $332 million, as compared to 11 loans at December 31, 2018 with an aggregate unpaid principal balance of $28 million and a fair value of $28 million. At December 31, 2019, two of these loans with an aggregate unpaid principal balance and fair value of $2 million were greater than 90 days delinquent, of which one of these loans with an unpaid principal balance of $0.1 million was in foreclosure. At December 31, 2018, none of these loans were greater than 90 days delinquent or in foreclosure.

Note 7. Business Purpose Residential Loans - (continued)

During the period from March 1, 2019 to December 31, 2019, we originated $514 million of single-family rental loans. Additionally, we acquired $407 million of single-family rental loans as part of our acquisition of CoreVest in the fourth quarter of 2019. During the period from March 1, 2019 to December 31, 2019, $238 million of single-family rental loans were transferred to our investment portfolio and financed with FHLB borrowings, and the remaining loans were retained in our mortgage banking business. During this same period, we transferred $394 million of single-family rental loans from held-for-sale to held-for-investment associated with a CAFL securitization and sold $20 million to third parties. During the first two months of 2019, prior to our acquisition of 5 Arches on March 1, 2019, we purchased $19 million of single-family rental loans from 5 Arches. During the year ended December 31, 2019, we recorded a net market valuation gain of $13 million on single-family rental loans held-for-sale at fair value through Mortgage banking activities, net on our consolidated statements of income.

The outstanding single-family rental loans held-for-sale at December 31, 2019 were first-lien, fixed-rate loans with original maturities of five, seven, or ten years. At December 31, 2019, the weighted average coupon of our single-family rental loans was 4.96% and the weighted average remaining loan term was nine years. At origination, the weighted average LTV ratio of these loans was 69% and the weighted average debt service coverage ratio ("DSCR") was 1.43 times.

Business Purpose Residential Loans Held-for-Investment at Fair Value

Single-Family Rental Loans at Redwood

At December 31, 2019, we owned 107 single-family rental loans held-for-investment with an aggregate unpaid principal balance of $231 million and a fair value of $238 million. At December 31, 2019, none of these loans were greater than 90 days delinquent or in foreclosure. During the year ended December 31, 2019, we transferred loans with a fair value of $238 million from held-for-sale to held-for-investment. During the year ended December 31, 2019, we recorded a net market valuation gain of $0.3 million on single-family rental loans held-for-investment at fair value through Investment fair value changes, net on our consolidated statements of income.

The outstanding single-family rental loans held-for-investment at Redwood at December 31, 2019 were first-lien, fixed-rate loans with original maturities of five, seven, or ten years. At December 31, 2019, the weighted average coupon of our single-family rental loans was 4.89% and the weighted average remaining loan term was seven years. At origination, the weighted average LTV ratio of these loans was 68% and the weighted average DSCR was 1.36 times.

Single-Family Rental Loans at CAFL

In conjunction with our acquisition of CoreVest in the fourth quarter of 2019, we consolidated the single-family rental loans owned at certain CAFL securitization entities. At December 31, 2019, we consolidated 783 held-for-investment single-family rental loans at the consolidated CAFL entities, with an aggregate unpaid principal balance of $2.08 billion and a fair value of $2.19 billion. The outstanding single-family rental loans held-for-investment at CAFL at December 31, 2019 were first-lien, fixed-rate loans with original maturities of five, seven, or ten years. At December 31, 2019, the weighted average coupon of our single-family rental loans was 5.70% and the weighted average remaining loan term was seven years. At origination, the weighted average LTV ratio of these loans was 68% and the weighted average DSCR was 1.35 times. At December 31, 2019, 18 of these loans with an aggregate unpaid principal balance of $29 million were greater than 90 days delinquent and five of these loans with an aggregate unpaid principal balance of $9 million were in foreclosure.

During the year ended December 31, 2019, we recorded a net market valuation loss of $15 million on these loans through Investment fair value changes, net on our consolidated statements of income. Pursuant to the collateralized financing entity guidelines, the market valuation changes of these loans are based on the estimated fair value of the ABS issued associated with CAFL securitizations. The net impact to our income statement associated with our retained economic investment in the CAFL securitization entities is presented in *Note 5.* Additionally, as part of our acquisition of CoreVest during the year ended December 31, 2019, we acquired REO with a fair value of $2 million related to loans at CAFL entities, which is included in Other assets on our consolidated balance sheets.

Note 7. Business Purpose Residential Loans - (continued)

Residential Bridge Loans

At December 31, 2019, we owned 2,653 residential bridge loans held-for-investment with an aggregate unpaid principal balance of $741 million and a fair value of $745 million as compared to 157 loans at December 31, 2018 with an aggregate unpaid principal balance of $112 million and a fair value of $113 million.

As part of our credit risk management practices, our residential bridge loans are subject to individual risk assessment using an internal borrower and collateral quality evaluation framework. At December 31, 2019, 31 loans with an aggregate fair value of $12 million and an unpaid principal balance of $14 million were in foreclosure, of which 15 of these loans with an aggregate fair value of $7 million and an unpaid principal balance of $9 million were greater than 90 days delinquent. At December 31, 2018, seven loans with an aggregate fair value of $12 million were greater than 90 days delinquent and four of these loans with an aggregate fair value of $11 million were in foreclosure. During the year ended December 31, 2019, we transferred three loans with a fair value of $8 million to REO, which is included in Other assets on our consolidated balance sheets.

During the period from March 1, 2019 to December 31, 2019, $448 million of newly originated residential bridge loans were transferred to our investment portfolio. Additionally, we acquired $375 million of residential bridge loans as part of our acquisition of CoreVest during the fourth quarter of 2019. During the first two months of 2019, prior to our acquisition of 5 Arches on March 1, 2019, we purchased $10 million of residential bridge loans from 5 Arches. During the year ended December 31, 2019, we recorded a net market valuation loss of $2 million on residential bridge loans held-for-investment at fair value through Investment fair value changes, net on our consolidated statements of income.

The outstanding residential bridge loans held-for-investment at December 31, 2019 were first lien, fixed-rate, interest-only loans with a weighted average coupon of 8.11% and original maturities of six to 24 months. At origination, the weighted average FICO score of borrowers backing these loans was 732 and the weighted average LTV ratio of these loans was 70%.

At December 31, 2019, we had a $173 million commitment to fund residential bridge loans. See *Note 16* for additional information on this commitment.

Note 7. Business Purpose Residential Loans - (continued)

Business Purpose Residential Loan Characteristics

The following table presents the geographic concentration of business purpose residential loans recorded on our consolidated balance sheets atDecember 31, 2019.

Table 7.2 – Geographic Concentration of Business Purpose Residential Loans

	December 31, 2019			
Geographic Concentration (by Principal)	**Single-Family Rental Held-for-Sale**	**Single-Family Rental Held-for-Investment at Redwood**	**Single-Family Rental Held-for-Investment at CAFL**	**Residential Bridge**
Florida	5 %	— %	8 %	9 %
Texas	19 %	12 %	15 %	3 %
New Jersey	12 %	5 %	11 %	8 %
New York	5 %	1 %	1 %	6 %
California	2 %	1 %	7 %	21 %
Utah	— %	— %	— %	5 %
Georgia	8 %	— %	5 %	7 %
Alabama	5 %	— %	4 %	4 %
Arkansas	6 %	— %	2 %	— %
Maryland	6 %	— %	2 %	— %
Illinois	1 %	— %	5 %	3 %
Other states (none greater than 5%)	31 %	81 %	40 %	34 %
Total	100 %	100 %	100 %	100 %

	December 31, 2018			
Geographic Concentration (by Principal)	**Single-Family Rental Held-for-Sale**	**Single-Family Rental Held-for-Investment at Redwood**	**Single-Family Rental Held-for-Investment at CAFL**	**Residential Bridge**
Florida	69 %	— %	— %	7 %
Texas	14 %	— %	— %	— %
California	— %	— %	— %	79 %
Utah	— %	— %	— %	5 %
Other states (none greater than 5%)	17 %	— %	— %	9 %
Total	100 %	— %	— %	100 %

Note 7. Business Purpose Residential Loans - (continued)

The following table displays the loan product type and accompanying loan characteristics of business purpose residential loans recorded on our consolidated balance sheets at December 31, 2019.

Table 7.3 – Product Types and Characteristics of Business Purpose Residential Loans

December 31, 2019
(In Thousands)

Loan Balance	Number of Loans	Interest Rate	Maturity Date	Total Principal	30-89 Days DQ	90+ Days DQ
Single-Family Rental Held-for-Investment at Redwood:						
Fixed loans:						
$ 251 to $500	20	4.88% to 7.47%	2024-02 - 2030-01	$ 7,925	$ —	$ —
$ 501 to $750	26	4.45% to 7.25%	2023-09 - 2030-01	15,620	—	—
$ 751 to $1,000	16	4.91% to 6.58%	2023-11 - 2029-09	13,616	—	—
over $1,000	45	3.93% to 6.94%	2023-10 - 2030-01	194,050	—	—
Total SFR HFI at Redwood:	107			$ 231,211	$ —	$ —
Single-Family Rental Held-for-Investment at CAFL:						
Fixed loans:						
$ — to $250	2	5.46% to 5.80%	2019-11 - 2021-09	$ 398	$ —	$ —
$ 251 to $500	56	4.92% to 7.05%	2020-03 - 2029-10	$ 25,643	$ 1,306	$ —
$ 501 to $750	148	4.75% to 7.31%	2020-03 - 2029-10	91,414	1,259	1,990
$ 751 to $1,000	98	4.62% to 7.23%	2020-03 - 2029-10	85,472	1,639	879
over $1,000	479	4.31% to 7.57%	2019-12 - 2029-11	1,875,287	18,567	26,170
Total SFR HFI at CAFL:	783			$ 2,078,214	$ 22,771	$ 29,039
Single-Family Rental Held-for-Sale:						
Fixed loans:						
$ — to $250	85	5.50% to 7.63%	2027-03 - 2050-01	$ 10,506	$ —	$ 130
$ 251 to $500	9	4.94% to 6.00%	2024-11 - 2050-01	3,708	—	—
$ 501 to $750	21	4.55% to 5.96%	2024-01 - 2030-01	13,335	—	—
$ 751 to $1,000	13	5.00% to 5.93%	2024-01 - 2030-01	11,676	—	—
over $1,000	73	4.35% to 6.28%	2024-01 - 2030-01	282,411	—	1,688
Total Single-Family Rental HFS:	201			$ 321,636	$ —	$ 1,818
Residential Bridge:						
Fixed loans:						
$ — to $250	2,207	6.53% to 12.00%	2019-07 - 2022-01	$ 197,449	$ 1,447	$ 369
$ 251 to $500	198	6.99% to 13.00%	2019-10 - 2022-01	71,361	2,811	675
$ 501 to $750	71	6.99% to 9.99%	2019-11 - 2021-10	42,862	2,072	508
$ 751 to $1,000	40	7.28% to 10.00%	2018-10 - 2022-01	34,646	1,771	2,443
over $1,000	137	5.79% to 10.25%	2019-11 - 2022-01	394,914	31,452	4,994
Total Residential Bridge:	2,653			$ 741,232	$ 39,553	$ 8,989

Note 7. Business Purpose Residential Loans - (continued)

December 31, 2018
(In Thousands)

Loan Balance	Number of Loans	Interest Rate	Maturity Date	Total Principal	30-89 Days DQ	90+ Days DQ
Single-Family Rental Held-for-Sale:						
Fixed loans:						
$ 251 to $500	2	6.79% to 7.47%	2028-08 - 2028-12	$ 787	$ —	$ —
$ 501 to $750	2	6.12% to 7.25%	2023-09 - 2028-11	1,252	—	—
$ 751 to $1,000	3	5.91% to 6.58%	2023-11 - 2028-12	2,488	—	—
over $1,000	4	5.62% to 6.94%	2023-10 - 2025-12	23,039	—	—
Total Single-Family Rental HFS:	11			$ 27,566	$ —	$ —
Residential Bridge:						
Fixed loans:						
$ — to $250	50	8.00% to 12.00%	2018-07 - 2020-05	$ 7,941	$ 262	$ 695
$ 251 to $500	38	8.00% to 10.00%	2018-09 - 2019-12	13,297	636	469
$ 501 to $750	21	7.50% to 10.00%	2019-01 - 2019-12	12,410	1,769	—
$ 751 to $1,000	19	7.50% to 10.00%	2019-04 - 2019-12	16,937	840	—
over $1,000	29	8.00% to 10.00%	2018-09 - 2019-12	61,775	1,484	10,970
Total Residential Bridge:	157			$ 112,360	$ 4,991	$ 12,134

Note 8. Multifamily Loans

Since 2018, we have invested in multifamily subordinate securities issued by three Freddie Mac K-Series securitization trusts and were required to consolidate the underlying multifamily loans owned at these entities for financial reporting purposes in accordance with GAAP. At December 31, 2019, we consolidated 279 held-for-investment multifamily loans, with an aggregate unpaid principal balance of $4.20 billion and a fair value of $4.41 billion, as compared to 162 loans at December 31, 2018 with an aggregate unpaid principal balance of $2.13 billion and a fair value of $2.14 billion. The outstanding multifamily loans held-for-investment at the Freddie Mac K-Series entities at December 31, 2019 were first-lien, fixed-rate loans that were originated between 2015 and 2017 and had original loan terms of seven to ten years and an original weighted average LTV ratio of 69%. At December 31, 2019, the weighted average coupon of these multifamily loans was 4.13% and the weighted average remaining loan term was six years. At December 31, 2019 and December 31, 2018, none of these loans were greater than 90 days delinquent or in foreclosure.

During the years ended December 31, 2019 and 2018, we recorded net market valuation gains of $130 million and $47 million, respectively, on these loans through Investment fair value changes, net on our consolidated statements of income. Pursuant to the collateralized financing entity guidelines, the market valuation changes of these loans are based on the estimated fair value of the ABS issued associated with the securitizations. The net impact to our income statement associated with our economic investment in the securities of the Freddie Mac K-Series securitization entities is presented in *Note 5*.

Note 8. Multifamily Loans - (continued)

Multifamily Loan Characteristics

The following table presents the geographic concentration of multifamily loans recorded on our consolidated balance sheets atDecember 31, 2019.

Table 8.1 – Geographic Concentration of Multifamily Loans

Geographic Concentration (by Principal)	December 31, 2019	December 31, 2018
Texas	13 %	9 %
California	11 %	11 %
Florida	10 %	— %
Arizona	6 %	8 %
Georgia	6 %	6 %
Washington	5 %	— %
Colorado	5 %	— %
Other states (none greater than 5%)	44 %	66 %
Total	100 %	100 %

The following table displays the loan product type and accompanying loan characteristics of multifamily loans recorded on our consolidated balance sheets at December 31, 2019.

Table 8.2 – Product Types and Characteristics of Multifamily Loans

December 31, 2019
(In Thousands)

Loan Balance	Number of Loans	Interest Rate	Maturity Date	Total Principal	30-89 Days DQ	90+ Days DQ
Fixed loans:						
$ 1,000 to $10,000	114	3.29% to 4.73%	2023-02 - 2029-10	$ 674,666	$ —	$ —
$ 10,001 to $20,000	102	3.54% to 4.94%	2023-09 - 2029-08	1,489,118	—	—
$ 20,001 to $30,000	32	3.54% to 4.69%	2024-01 - 2026-12	750,712	—	—
$ 30,001 to $40,000	19	3.52% to 4.79%	2025-05 - 2029-10	654,729	—	—
over $40,000	12	3.55% to 4.65%	2024-10 - 2026-09	625,775	—	—
Total:	279			$ 4,195,000	$ —	$ —

December 31, 2018
(In Thousands)

Loan Balance	Number of Loans	Interest Rate	Maturity Date	Total Principal	30-89 Days DQ	90+ Days DQ
Fixed loans:						
$ 1,000 to $10,000	70	3.29% to 4.73%	2023-02 - 2027-01	$ 394,373	$ —	$ —
$ 10,001 to $20,000	66	3.54% to 4.61%	2023-09 - 2027-01	960,992	—	—
$ 20,001 to $30,000	16	3.65% to 4.72%	2024-01 - 2026-12	373,036	—	—
$ 30,001 to $40,000	7	3.62% to 4.71%	2025-11 - 2026-06	244,074	—	—
over $40,000	3	3.74% to 4.18%	2024-10 - 2026-06	154,223	—	—
Total:	162			$ 2,126,698	$ —	$ —

Note 9. Real Estate Securities

We invest in real estate securities that we acquire from third parties or create and retain from our Sequoia securitizations.The following table presents the fair values of our real estate securities by type at December 31, 2019 and December 31, 2018.

Table 9.1 – Fair Values of Real Estate Securities by Type

(In Thousands)	December 31, 2019		December 31, 2018	
Trading	$	860,540	$	1,118,612
Available-for-sale		239,334		333,882
Total Real Estate Securities	$	1,099,874	$	1,452,494

Our real estate securities include mortgage-backed securities, which are presented in accordance with their general position within a securitization structure based on their rights to cash flows. Senior securities are those interests in a securitization that generally have the first right to cash flows and are last in line to absorb losses. Mezzanine securities are interests that are generally subordinate to senior securities in their rights to receive cash flows, and have subordinate securities below them that are first to absorb losses. Many of our mezzanine classified securities were initially rated AA through BBB- and issued in 2012 or later. Subordinate securities are all interests below mezzanine. Excluding our re-performing loan securities, nearly all of our residential securities are supported by collateral that was designated as prime at the time of issuance.

Trading Securities

The following table presents the fair value of trading securities by position and collateral type atDecember 31, 2019 and December 31, 2018.

Table 9.2 – Trading Securities by Position

(In Thousands)	December 31, 2019		December 31, 2018	
Senior	$	150,067	$	158,670
Mezzanine		538,489		610,819
Subordinate		171,984		349,123
Total Trading Securities	$	860,540	$	1,118,612

We elected the fair value option for certain securities and classify them as trading securities. Our trading securities include both residential and multifamily mortgage-backed securities, and our residential securities also include securities backed by re-performing loans ("RPL"). At December 31, 2019 and 2018, our senior trading securities included $64 million and $82 million of interest-only securities, respectively, for which there is no principal balance, and the unpaid principal balance of our remaining senior trading securities was $84 million and $78 million, respectively. Our interest-only securities included $36 million and $43 million of A-IO-S securities at December 31, 2019 and 2018, respectively, which are securities we retained from certain of our Sequoia securitizations that represent certificated servicing strips. AtDecember 31, 2019 and 2018, our senior trading securities included $55 million and $48 million of RPL securities, respectively.

At December 31, 2019 and 2018, our mezzanine trading securities had an unpaid principal balance of$537 million and $646 million, respectively. At December 31, 2019 and 2018, the fair value of our mezzanine securities was $538 million and $611 million, respectively, and included $39 million and $68 million of Sequoia securities, respectively, $395 million and $429 million of multifamily securities, respectively, and $104 million and $114 million of other third party residential securities, respectively, including $30 million and $11 million of RPL securities, respectively.

Note 9. Real Estate Securities - (continued)

At December 31, 2019 and 2018, our subordinate trading securities had an unpaid principal balance of $302 million and $476 million, respectively. At December 31, 2019 and 2018, the fair value of our subordinate securities was $172 million and $349 million, respectively, and included $90 million and $277 million of Agency residential mortgage CRT securities, respectively, and $82 million and $72 million of other third party residential securities, respectively, including $76 million and $63 million of RPL securities, respectively.

During the years ended December 31, 2019 and 2018, we acquired $367 million and $688 million (principal balance), respectively, of securities for which we elected the fair value option and classified as trading, and sold $593 million and $415 million, respectively, of such securities. During the years ended December 31, 2019 and 2018, we recorded a net market valuation gain of $56 million and a net market valuation loss of $8 million, respectively, on trading securities, included in Investment fair value changes, net on our consolidated statements of income.

AFS Securities

The following table presents the fair value of our available-for-sale securities by position and collateral type at December 31, 2019 and December 31, 2018.

Table 9.3 – Available-for-Sale Securities by Position

(In Thousands)	December 31, 2019	December 31, 2018
Senior	$ 25,792	$ 87,615
Mezzanine	13,687	36,407
Subordinate	199,855	209,860
Total AFS Securities	$ 239,334	$ 333,882

At December 31, 2019, our available-for-sale securities were comprised of $230 million of residential mortgage-backed securities and $9 million of multifamily mortgage-backed securities. At December 31, 2018, our available-for-sale securities were comprised entirely of residential mortgage-backed securities. During the years ended December 31, 2019 and 2018, we purchased $27 million and $8 million of AFS securities, respectively, and sold $110 million and $144 million of AFS securities, respectively, which resulted in net realized gains of $18 million and $27 million, respectively.

We often purchase AFS securities at a discount to their outstanding principal balances. To the extent we purchase an AFS security that has a likelihood of incurring a loss, we do not amortize into income the portion of the purchase discount that we do not expect to collect due to the inherent credit risk of the security. We may also expense a portion of our investment in the security to the extent we believe that principal losses will exceed the purchase discount. We designate any amount of unpaid principal balance that we do not expect to receive, and thus do not expect to earn or recover, as a credit reserve on the security. Any remaining net unamortized discounts or premiums on the security are amortized into income over time using the effective yield method.

At December 31, 2019, there were no AFS securities with contractual maturities less than five years, $8 million with contractual maturities greater than five years but less than 10 years, and the remainder of our AFS securities had contractual maturities greater than 10 years.

Note 9. Real Estate Securities - (continued)

The following table presents the components of carrying value (which equals fair value) of AFS securities at December 31, 2019 and December 31, 2018.

Table 9.4 – Carrying Value of AFS Securities

December 31, 2019 **(In Thousands)**	**Senior**	**Mezzanine**	**Subordinate**	**Total**
Principal balance	$ 26,331	$ 13,512	$ 264,234	$ 304,077
Credit reserve	(533)	—	(32,407)	(32,940)
Unamortized discount, net	(10,427)	(527)	(113,301)	(124,255)
Amortized cost	15,371	12,985	118,526	146,882
Gross unrealized gains	10,450	702	81,329	92,481
Gross unrealized losses	(29)	—	—	(29)
Carrying Value	$ 25,792	$ 13,687	$ 199,855	$ 239,334

December 31, 2018 **(In Thousands)**	**Senior**	**Mezzanine**	**Subordinate**	**Total**
Principal balance	$ 91,736	$ 36,852	$ 302,524	$ 431,112
Credit reserve	(7,790)	—	(33,580)	(41,370)
Unamortized discount, net	(18,460)	(3,697)	(129,043)	(151,200)
Amortized cost	65,486	33,155	139,901	238,542
Gross unrealized gains	22,178	3,252	70,458	95,888
Gross unrealized losses	(49)	—	(499)	(548)
Carrying Value	$ 87,615	$ 36,407	$ 209,860	$ 333,882

The following table presents the changes for the years ended December 31, 2019 and 2018, in unamortized discount and designated credit reserves on residential AFS securities.

Table 9.5 – Changes in Unamortized Discount and Designated Credit Reserves on AFS Securities

	Year Ended December 31, 2019		**Year Ended December 31, 2018**	
(In Thousands)	**Credit Reserve**	**Unamortized Discount, Net**	**Credit Reserve**	**Unamortized Discount, Net**
Beginning balance	$ 41,370	$ 151,200	$ 46,549	$ 183,753
Amortization of net discount	—	(7,921)	—	(14,098)
Realized credit losses	(2,606)	—	(2,165)	—
Acquisitions	3,712	1,910	6,315	2,716
Sales, calls, other	(9,453)	(21,017)	(1,850)	(28,739)
Impairments	—	—	89	—
Transfers to (release of) credit reserves, net	(83)	83	(7,568)	7,568
Ending Balance	$ 32,940	$ 124,255	$ 41,370	$ 151,200

Note 9. Real Estate Securities - (continued)

AFS Securities with Unrealized Losses

The following table presents the components comprising the total carrying value of residential AFS securities that were in a gross unrealized loss position at December 31, 2019 and December 31, 2018.

Table 9.6 – Components of Fair Value of AFS Securities by Holding Periods

	Less Than 12 Consecutive Months			12 Consecutive Months or Longer		
(In Thousands)	Amortized Cost	Unrealized Losses	Fair Value	Amortized Cost	Unrealized Losses	Fair Value
December 31, 2019	$ —	$ —	$ —	$ 5,830	$ (29)	$ 5,801
December 31, 2018	12,923	(499)	12,424	7,464	(49)	7,415

At December 31, 2019, after giving effect to purchases, sales, and extinguishment due to credit losses, our consolidated balance sheet included107 AFS securities, of which one was in an unrealized loss position andone was in a continuous unrealized loss position for 12 consecutive months or longer. AtDecember 31, 2018, our consolidated balance sheet included 128 AFS securities, of which seven were in an unrealized loss position andthree were in a continuous unrealized loss position for 12 consecutive months or longer.

Evaluating AFS Securities for Other-than-Temporary Impairments

Gross unrealized losses on our AFS securities were less than$0.1 million at December 31, 2019. We evaluate all securities in an unrealized loss position to determine if the impairment is temporary or other-than-temporary (resulting in an OTTI). At December 31, 2019, we did not intend to sell any of our AFS securities that were in an unrealized loss position, and it is more likely than not that we will not be required to sell these securities before recovery of their amortized cost basis, which may be at their maturity. We review our AFS securities that are in an unrealized loss position to identify those securities with losses that are other-than-temporary based on an assessment of changes in expected cash flows for such securities, which considers recent security performance and expected future performance of the underlying collateral.

For the year ended December 31, 2019, there were no other-than-temporary impairments related to our AFS securities. AFS securities for which OTTI is recognized have experienced, or are expected to experience, credit-related adverse cash flow changes. In determining our estimate of cash flows for AFS securities we may consider factors such as structural credit enhancement, past and expected future performance of underlying mortgage loans, including timing of expected future cash flows, which are informed by prepayment rates, default rates, loss severities, delinquency rates, percentage of non-performing loans, FICO scores at loan origination, year of origination, loan-to-value ratios, and geographic concentrations, as well as general market assessments. Changes in our evaluation of these factors impacted the cash flows expected to be collected at the OTTI assessment date and were used to determine if there were credit-related adverse cash flows and if so, the amount of credit related losses. Significant judgment is used in both our analysis of the expected cash flows for our AFS securities and any determination of the credit loss component of OTTI.

The table below summarizes the significant valuation assumptions we used for our AFS securities in unrealized loss positions atDecember 31, 2019.

Table 9.7 – Significant Valuation Assumptions

December 31, 2019	Range for Securities
Prepayment rates	15% - 15%
Projected losses	1% - 1%

Note 9. Real Estate Securities - (continued)

The following table details the activity related to the credit loss component of OTTI (i.e., OTTI recognized through earnings) for AFS securities held at December 31, 2019, 2018, and 2017 for which a portion of an OTTI was recognized in other comprehensive income.

Table 9.8 – Activity of the Credit Component of Other-than-Temporary Impairments

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Balance at beginning of period	$ 18,652	$ 21,037	$ 28,261
Additions			
Initial credit impairments	—	76	178
Subsequent credit impairments	—	—	47
Reductions			
Securities sold, or expected to sell	(77)	(1,218)	(4,898)
Securities with no outstanding principal at period end	(4,417)	(1,243)	(2,551)
Balance at End of Period	$ 14,158	$ 18,652	$ 21,037

Gains and losses from the sale of AFS securities are recorded as Realized gains, net, in our consolidated statements of income. The following table presents the gross realized gains and losses on sales and calls of AFS securities for the years ended December 31, 2019, 2018, and 2017.

Table 9.9 – Gross Realized Gains and Losses on AFS Securities

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Gross realized gains - sales	$ 17,582	$ 27,127	$ 13,927
Gross realized gains - calls	6,239	43	677
Gross realized losses - sales	—	(129)	—
Gross realized losses - calls	—	—	(497)
Total Realized Gains on Sales and Calls of AFS Securities, net	$ 23,821	$ 27,041	$ 14,107

Note 10. Other Investments

Other investments at December 31, 2019 and December 31, 2018 are summarized in the following table.

Table 10.1 – Components of Other Investments

(In Thousands)	December 31, 2019	December 31, 2018
Servicer advance investments	$ 169,204	$ 300,468
Shared home appreciation options	45,085	—
Mortgage servicing rights	42,224	60,281
Investment in multifamily loan fund	39,802	—
Excess MSRs	31,814	27,312
Participation in loan warehouse facility	—	39,703
Investment in 5 Arches	—	10,754
Other	30,001	—
Total Other Investments	$ 358,130	$ 438,518

Servicer advance investments

In 2018, we and a third-party co-investor, through two partnerships ("SA Buyers") consolidated by us, purchased the outstanding servicer advances and excess MSRs related to a portfolio of legacy residential mortgage-backed securitizations serviced by the co-investor (See *Note 4* for additional information regarding the transaction). At December 31, 2019, we had funded $71 million of total capital to the SA Buyers (see *Note 16* for additional detail).

Our servicer advance investments (owned by the consolidated SA Buyers) are comprised of outstanding servicer advance receivables, the requirement to purchase all future servicer advances made with respect to a specified pool of residential mortgage loans, and a portion of the mortgage servicing fees from the underlying loan pool. A portion of the remaining mortgage servicing fees from the underlying loan pool are paid directly to the third-party servicer for the performance of servicing duties and a portion is paid to excess MSRs that we own as a separate investment. We hold our servicer advance investments at our taxable REIT subsidiaries.

Servicer advances are non-interest bearing and are a customary feature of residential mortgage securitization transactions. Servicer advances are generally reimbursable cash payments made by a servicer when the borrower fails to make scheduled payments due on a residential mortgage loan or to support the value of the collateral property. Servicer advances typically fall into three categories:

- Principal and Interest Advances: cash payments made by the servicer to cover scheduled principal and interest payments on a residential mortgage loan that have not been paid on a timely basis by the borrower.
- Escrow Advances (Taxes and Insurance Advances): Cash payments made by the servicer to third parties on behalf of the borrower for real estate taxes and insurance premiums on the property that have not been paid on a timely basis by the borrower.
- Corporate Advances: Cash payments made by the servicer to third parties for the reimbursable costs and expenses incurred in connection with the foreclosure, preservation and sale of the mortgaged property, including attorneys' and other professional fees.

Servicer advances are generally permitted to be repaid from amounts received with respect to the related residential mortgage loan, including payments from the borrower or amounts received from the liquidation of the property securing the loan. Residential mortgage servicing agreements generally require a servicer to make advances in respect of serviced residential mortgage loans unless the servicer determines in good faith that the advance would not be ultimately recoverable from the proceeds of the related residential mortgage loan or the mortgaged property.

Note 10. Other Investments - (continued)

At December 31, 2019, our servicer advance investments had a carrying value of $169 million and were associated with a portfolio of residential mortgage loans with an unpaid principal balance of $7.94 billion. The outstanding servicer advance receivables associated with this investment were $152 million at December 31, 2019, which were financed with short-term non-recourse securitization debt (see *Note 13* for additional detail on this debt). The servicer advance receivables were comprised of the following types of advances at December 31, 2019 and December 31, 2018:

Table 10.2 – Components of Servicer Advance Receivables

(In Thousands)	December 31, 2019	December 31, 2018
Principal and interest advances	$ 15,081	$ 144,336
Escrow advances (taxes and insurance advances)	96,732	94,828
Corporate advances	39,769	47,614
Total Servicer Advance Receivables	$ 151,582	$ 286,778

We account for our servicer advance investments at fair value and during the years ended December 31, 2019 and 2018, we recorded $11 million and $1 million of interest income associated with these investments, respectively, and recorded a net market valuation gain of $3 million and a net market valuation loss of $1 million, respectively, through Investment fair value changes, net in our consolidated statements of income.

Mortgage Servicing Rights

We invest in mortgage servicing rights associated with residential mortgage loans and contract with licensed sub-servicers to perform all servicing functions for these loans. The majority of our investments in MSRs were made through the retention of servicing rights associated with the residential jumbo mortgage loans that we acquired and subsequently transferred to third parties. We hold our MSR investments at our taxable REIT subsidiaries.

At December 31, 2019 and December 31, 2018, our MSRs had a fair value of $42 million and $60 million, respectively, and were associated with loans with an aggregate principal balance of $4.35 billion and $4.93 billion, respectively.

The following table presents activity for MSRs for the years ended December 31, 2019, 2018, and 2017.

Table 10.3 – Activity for MSRs

	Years Ended December 31,		
(In Thousands)	2019	2018	2017
Balance at beginning of period	$ 60,281	$ 63,598	$ 118,526
Additions	868	328	8,026
Sales	—	(1,077)	(52,788)
Changes in fair value due to:			
Changes in assumptions (1)	(10,659)	4,434	(1,088)
Other changes (2)	(8,266)	(7,002)	(9,078)
Balance at End of Period	$ 42,224	$ 60,281	$ 63,598

(1) Primarily reflects changes in prepayment assumptions due to changes in market interest rates.

(2) Represents changes due to the realization of expected cash flows.

Note 10. Other Investments - (continued)

The following table presents the components of our MSR income for the years ended December 31, 2019, 2018, and 2017.

Table 10.4 – Components of MSR Income, net

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Servicing income	$ 15,038	$ 15,372	$ 21,120
Cost of sub-servicer	(1,465)	(1,444)	(2,828)
Net servicing fee income	13,573	13,928	18,292
Market valuation changes of MSRs	(18,856)	(2,508)	(10,166)
Market valuation changes of associated derivatives (1)	8,596	(4,734)	(568)
MSR reversal of provision for repurchases	208	390	302
MSR Income, Net	$ 3,521	$ 7,076	$ 7,860

(1) MSR income, net is included in Other income on our consolidated statements of income.

Excess MSRs

In association with our servicer advance investments described above, in the fourth quarter of 2018, we (through our consolidated SA Buyers) also invested in excess MSRs associated with the same portfolio of legacy residential mortgage-backed securitizations. Additionally, beginning in 2018, we invested in excess MSRs associated with specified pools of multifamily loans. We account for our excess MSRs at fair value and during the years ended December 31, 2019 and 2018, we recognized $8 million and $1 million of interest income, respectively, through Other interest income, and recorded a net market valuation loss of $3 million and a net market valuation gain of $2 million, respectively, through Investment fair value changes, net on our consolidated statements of income.

Investment in Multifamily Loan Fund

In January 2019, we invested in a limited partnership created to acquire floating rate, light-renovation multifamily loans from Freddie Mac. We committed to fund an aggregate of $78 million to the partnership, and have funded approximately $41 million at December 31, 2019. Freddie Mac is providing a debt facility to finance loans purchased by the partnership. After the partnership's acquisitions have reached a specific threshold, the partnership and Freddie Mac may agree to include the related loans in a Freddie Mac-sponsored securitization and the limited partners may acquire the subordinate securities issued in any such securitization.

We account for our ownership interest in this partnership using the equity method of accounting as we are able to exert significant influence over but do not control the activities of the investee. At December 31, 2019, the carrying amount of our investment in the partnership was $40 million. We have elected to record our share of earnings or losses from this investment on a one-quarter lag. During the year ended December 31, 2019, we recorded $1 million of income associated with this investment in Other income on our consolidated statements of income.

Shared Home Appreciation Options

In the third quarter of 2019, we entered into a flow purchase agreement to acquire shared home appreciation options. Under this arrangement, our counterparty purchases an option to buy a fractional interest in a homeowner's ownership interest in residential property, and subsequently the counterparty sells the option contract to us. Pursuant to the terms of the option contract, we share in both home price appreciation and depreciation. At December 31, 2019, we had acquired $43 million of shared home appreciation options under this flow purchase agreement and had an outstanding commitment to fund up to an additional $7 million under this agreement. We account for these investments under the fair value option and during the year ended December 31, 2019, we recorded a net market valuation gain of $1 million related to these assets through Investment fair value changes, net on our consolidated statements of income.

Note 10. Other Investments - (continued)

Participation in Loan Warehouse Facility

In the second quarter of 2018, we invested in a subordinated participation in a revolving mortgage loan warehouse credit facility of one of our loan sellers. We accounted for this subordinated participation interest as a loan receivable at amortized cost, and all associated interest income was recorded as a component of Other interest income in our consolidated statements of income. During the first quarter of 2019, our agreement associated with this investment was terminated and the balance outstanding under this agreement was repaid.

Investment in 5 Arches

In May 2018, we acquired a 20% minority interest in 5 Arches for $10 million, which included a one-year option to purchase all remaining equity in the company for a combination of cash and stock totaling $40 million. In March 2019, we closed on our option to acquire the remaining80% interest in 5 Arches. See *Note 2* for discussion of this acquisition.

During 2018 and through February 28, 2019, we accounted for our minority ownership interest in 5 Arches using the equity method of accounting as we were able to exert significant influence over but did not control the activities of the investee. During the period from January 1, 2019 to February 28, 2019 and for the year ended December 31, 2018, we recorded $0.3 million and $0.6 million of gross income, respectively, and, including amortization of certain intangible assets, recorded$0.1 million and $0.4 million of net earnings, respectively, in Other income on our consolidated statements of income.

Note 11. Derivative Financial Instruments

The following table presents the fair value and notional amount of our derivative financial instruments atDecember 31, 2019 and December 31, 2018.

Table 11.1 – Fair Value and Notional Amount of Derivative Financial Instruments

	December 31, 2019		December 31, 2018	
(In Thousands)	Fair Value	Notional Amount	Fair Value	Notional Amount
Assets - Risk Management Derivatives				
Interest rate swaps	$ 17,095	$ 1,399,000	$ 28,211	$ 2,106,500
TBAs	5,755	2,445,000	4,665	520,000
Interest rate futures	777	213,700	—	—
Swaptions	1,925	1,065,000	—	—
Assets - Other Derivatives				
Loan purchase and interest rate lock commitments	10,149	1,537,162	2,913	331,161
Total Assets	$ 35,701	$ 6,659,862	$ 35,789	$ 2,957,661
Liabilities - Cash Flow Hedges				
Interest rate swaps	$ (51,530)	$ 139,500	$ (34,492)	$ 139,500
Liabilities - Risk Management Derivatives				
Interest rate swaps	(97,235)	2,314,300	(36,416)	1,742,000
TBAs	(13,359)	4,160,000	(13,215)	935,000
Interest rate futures	(10)	12,300	—	—
Liabilities - Other Derivatives				
Loan purchase commitments	(1,290)	303,394	(732)	137,224
Total Liabilities	$ (163,424)	$ 6,929,494	$ (84,855)	$ 2,953,724
Total Derivative Financial Instruments, Net	$ (127,723)	$ 13,589,356	$ (49,066)	$ 5,911,385

Note 11. Derivative Financial Instruments - (continued)

Risk Management Derivatives

To manage, to varying degrees, risks associated with certain assets and liabilities on our consolidated balance sheets, we may enter into derivative contracts. At December 31, 2019, we were party to swaps and swaptions with an aggregate notional amount of $4.78 billion, TBA agreements sold with an aggregate notional amount of $6.61 billion, and interest rate futures contracts with an aggregate notional amount of $226 million. At December 31, 2018, we were party to swaps with an aggregate notional amount of $3.85 billion and TBA agreements sold with an aggregate notional amount of $1.46 billion.

For the years ended December 31, 2019, 2018, and 2017, risk management derivatives had a net market valuation loss of $134 million, a net market valuation gain of $40 million, and a net market valuation loss of $31 million, respectively. These market valuation gains and losses are recorded in Mortgage banking activities, net, Investment fair value changes, net and Other income on our consolidated statements of income.

Loan Purchase, Interest Rate Lock, and Forward Sale Commitments

LPCs, IRLCs, and FSCs that qualify as derivatives are recorded at their estimated fair values. For the years ended December 31, 2019, 2018, and 2017, LPCs, IRLCs, and FSCs had a net market valuation gain of $62 million, a net market valuation loss of $1 million, and a net market valuation gain of $38 million, respectively, that were recorded in Mortgage banking activities, net on our consolidated statements of income.

Derivatives Designated as Cash Flow Hedges

To manage the variability in interest expense related to portions of our long-term debt and certain adjustable-rate securitization entity liabilities that are included in our consolidated balance sheets for financial reporting purposes, we designated certain interest rate swaps as cash flow hedges with an aggregate notional balance of $140 million.

For the years ended December 31, 2019, 2018, and 2017, changes in the values of designated cash flow hedges were negative $17 million, positive $9 million, and positive $1 million, respectively, and were recorded in Accumulated other comprehensive income, a component of equity. For interest rate agreements currently or previously designated as cash flow hedges, our total unrealized loss reported in Accumulated other comprehensive income was $51 million and $34 million at December 31, 2019 and December 31, 2018, respectively.

The following table illustrates the impact on interest expense of our interest rate agreements accounted for as cash flow hedges for the years ended December 31, 2019, 2018, and 2017.

Table 11.2 – Impact on Interest Expense of Interest Rate Agreements Accounted for as Cash Flow Hedges

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Net interest expense on cash flows hedges	$ (2,847)	$ (3,228)	$ (4,602)
Realized net losses reclassified from other comprehensive income	—	—	(45)
Total Interest Expense	$ (2,847)	$ (3,228)	$ (4,647)

Note 11. Derivative Financial Instruments - (continued)

Derivative Counterparty Credit Risk

We incur credit risk to the extent that counterparties to our derivative financial instruments do not perform their obligations under specified contractual agreements. If a derivative counterparty does not perform, we may not receive the proceeds to which we may be entitled under these agreements. Each of our derivative counterparties that is not a clearinghouse must maintain compliance with International Swaps and Derivatives Association ("ISDA") agreements or other similar agreements (or receive a waiver of non-compliance after a specific assessment) in order to conduct derivative transactions with us. Additionally, we review non-clearinghouse derivative counterparty credit standings, and in the case of a deterioration of creditworthiness, appropriate remedial action is taken. To further mitigate counterparty risk, we exit derivatives contracts with counterparties that (i) do not maintain compliance with (or obtain a waiver from) the terms of their ISDA or other agreements with us; or (ii) do not meet internally established guidelines regarding creditworthiness. Our ISDA and similar agreements currently require full bilateral collateralization of unrealized loss exposures with our derivative counterparties. Through a margin posting process, our positions are revalued with counterparties each business day and cash margin is generally transferred to either us or our derivative counterparties as collateral based upon the directional changes in fair value of the positions. We also attempt to transact with several different counterparties in order to reduce our specific counterparty exposure. With respect to certain of our derivatives, clearing and settlement is through one or more clearinghouses, which may be substituted as a counterparty. Clearing and settlement of derivative transactions through a clearinghouse is also intended to reduce specific counterparty exposure. We consider counterparty risk as part of our fair value assessments of all derivative financial instruments at each quarter-end. At December 31, 2019, we assessed this risk as remote and did not record a specific valuation adjustment.

At December 31, 2019, we had outstanding derivative agreements with nine counterparties (other than clearinghouses) and were in compliance with ISDA agreements governing our open derivative positions.

Note 12. Other Assets and Liabilities

Other assets at December 31, 2019 and December 31, 2018 are summarized in the following table.

Table 12.1 – Components of Other Assets

(In Thousands)	**December 31, 2019**	**December 31, 2018**
Margin receivable	$ 209,776	$ 100,773
FHLBC stock	43,393	43,393
Pledged collateral	32,945	42,433
Investment receivable	23,330	6,959
Right-of-use asset	11,866	—
REO	9,462	3,943
Fixed assets and leasehold improvements (1)	4,901	5,106
Other	12,590	15,218
Total Other Assets	$ 348,263	$ 217,825

(1) Fixed assets and leasehold improvements had a basis of $11 million and accumulated depreciation of $7 million at December 31, 2019.

Note 12. Other Assets and Liabilities - (continued)

Accrued expenses and other liabilities at December 31, 2019 and December 31, 2018 are summarized in the following table.

Table 12.2 – Components of Accrued Expenses and Other Liabilities

(In Thousands)	December 31, 2019	December 31, 2018
Accrued compensation	$ 33,888	$ 19,769
Contingent consideration	28,484	—
Guarantee obligations	14,009	16,711
Lease liability	13,443	—
Payable to minority partner	13,189	14,331
Residential bridge loan holdbacks	10,682	—
Accrued taxes payable	5,268	423
Deferred tax liabilities	5,152	9,022
Residential loan and MSR repurchase reserve	4,268	4,189
Legal reserve	2,000	2,000
Margin payable	1,700	835
Other	14,155	11,439
Total Accrued Expenses and Other Liabilities	$ 146,238	$ 78,719

Margin Receivable and Payable

Margin receivable and payable resulted from margin calls between us and our counterparties under derivatives, master repurchase agreements, and warehouse facilities, whereby we or the counterparty posted collateral.

FHLBC Stock

In accordance with our FHLB-member subsidiary's borrowing agreement with the FHLBC, our subsidiary is required to purchase and hold stock in the FHLBC. See *Note 3* and *Note 15* for additional information on this borrowing agreement.

Pledged Collateral and Guarantee Obligations

The pledged collateral and guarantee obligations presented in the tables above are related to our risk-sharing arrangements with Fannie Mae and Freddie Mac, as well as collateral pledged for certain interest rate agreements. In accordance with these arrangements, we are required to pledge collateral to secure our guarantee obligations and to meet margin requirements for our interest rate agreements. See *Note 3* and *Note 16* for additional information on our risk-sharing arrangements.

Contingent Consideration

The contingent consideration presented in the table above is related to our acquisition of 5 Arches in 2019. See *Note 16* for additional information on our contingent consideration liabilities.

Lease Liability and Right-of-Use Asset

The lease liability and right-of-use asset presented in the tables above resulted from our adoption of ASU 2016-02, "Leases," in the first quarter of 2019. The lease liability is equal to the present value of our remaining lease payments discounted at our incremental borrowing rate and the right-of-use asset is equal to the lease liability adjusted for our deferred rent liability. These balances are reduced as lease payments are made. See *Note 16* for additional information on leases.

Note 12. Other Assets and Liabilities - (continued)

Residential Bridge Loan Holdbacks

Residential bridge loan holdbacks represent loan amounts payable to residential bridge loan borrowers subject to the completion of various phases of property rehabilitation.

Investment Receivable

At December 31, 2019, investment receivable primarily consisted of unsettled trade receivables related to real estate securities sales. In accordance with our policy to record purchases and sales of securities on the trade date, if the trade and settlement of a purchase or sale crosses over a quarterly reporting period, we will record an investment receivable for sales and an unsettled trades liability for purchases.

REO

The carrying value of REO at December 31, 2019, was $9 million, which included $0.5 million of REO from our Legacy Sequoia entities, $7 million from our residential bridge loan portfolio, $0.4 million from our consolidated Freddie Mac SLST entities, and $2 million from CAFL entities. At December 31, 2019, there were four REO assets at our Legacy Sequoia entities, four residential bridge loan REO assets, three REO assets at our Freddie Mac SLST entities, and two REO assets at our CAFL entities recorded on our consolidated balance sheets. During the year ended December 31, 2019, transfers into REO included $0.3 million from Legacy Sequoia entities, a $8 million residential bridge loan, and $0.5 million from Freddie Mac SLST entities. In connection with our acquisition of CoreVest during the fourth quarter of 2019, we acquired $3 million of REO associated with consolidated CAFL entities. During the year ended December 31, 2019, there were Legacy Sequoia REO liquidations of $5 million, resulting in $1 million of unrealized gains which were recorded in Investment fair value changes, net, on our consolidated statements of income. At December 31, 2018, our REO included 13 properties, all of which were owned at consolidated Legacy Sequoia entities.

Legal and Repurchase Reserves

See *Note 16* for additional information on the legal and residential repurchase reserves.

Payable to Minority Partner

In 2018, Redwood and a third-party co-investor, through two partnership entities consolidated by Redwood, purchased servicer advances and excess MSRs related to a portfolio of residential mortgage loans serviced by the co-investor (see *Note 4* and *Note 10* for additional information on the partnership entities and associated investments). We account for the co-investor’s interests in the entities as liabilities and at December 31, 2019, the carrying value of their interests was $13 million, representing their current economic interest in the entities. Earnings from the partnership entities are allocated to the co-investors on a proportional basis and during the years ended December 31, 2019 and 2018, we allocated $1 million of gains and less than $0.1 million of losses to the co-investors, respectively, which were recorded in Other expenses on our consolidated statements of income.

Note 13. Short-Term Debt

We enter into repurchase agreements, bank warehouse agreements, and other forms of collateralized (and generally uncommitted) short-term borrowings with several banks and major investment banking firms. At December 31, 2019, we had outstanding agreements with several counterparties and we were in compliance with all of the related covenants.

Note 13. Short-Term Debt - (continued)

The table below summarizes our short-term debt, including the facilities that are available to us, the outstanding balances, the weighted average interest rate, and the maturity information at December 31, 2019 and December 31, 2018.

Table 13.1 – Short-Term Debt

	December 31, 2019					
(Dollars in Thousands)	**Number of Facilities**	**Outstanding Balance**	**Limit**	**Weighted Average Interest Rate**	**Maturity**	**Weighted Average Days Until Maturity**
Facilities						
Residential loan warehouse (1)	4	$ 185,894	$ 1,425,000	3.23%	1/2020-10/2020	69
Business purpose residential loan warehouse (2)	8	814,118	1,475,000	4.11%	12/2020-5/2022	489
Real estate securities repo (1)	10	1,176,579	—	2.94%	1/2020-3/2020	23
Total Short-Term Debt Facilities	22	2,176,591				
Servicer advance financing	1	152,554	400,000	3.56%	11/2020	335
Total Short-Term Debt		$ 2,329,145				

	December 31, 2018					
(Dollars in Thousands)	**Number of Facilities**	**Outstanding Balance**	**Limit**	**Weighted Average Interest Rate**	**Maturity**	**Weighted Average Days Until Maturity**
Facilities						
Residential loan warehouse (1)	4	$ 860,650	$ 1,425,000	4.10%	2/2019-12/2019	178
Business purpose residential loan warehouse (2)	4	88,380	480,000	4.99%	11/2019-6/2021	594
Real estate securities repo (1)	9	988,890	—	3.47%	1/2019-3/2019	26
Total Short-Term Debt Facilities	17	1,937,920				
Servicer advance financing	1	262,740	350,000	4.32%	11/2019	333
Convertible notes, net	N/A	199,619		5.63%	11/2019	319
Total Short-Term Debt		$ 2,400,279				

(1) Borrowings under our facilities are generally charged interest based on a specified margin over the one-month LIBOR interest rate. At December 31, 2019, all of these borrowings were under uncommitted facilities and were due within 364 days (or less) of the borrowing date.

(2) Due to the revolving nature of the borrowings under these facilities, we have classified these facilities as short-term debt at December 31, 2019. Borrowings under these facilities will be repaid as the underlying loans mature or are sold to third parties or transferred to securitizations.

Note 13. Short-Term Debt - (continued)

The following table below presents the value of loans and securities pledged as collateral under our short-term debt facilities at December 31, 2019 and December 31, 2018.

Table 13.2 – Collateral for Short-Term Debt

(In Thousands)	December 31, 2019	December 31, 2018
Collateral Type		
Held-for-sale residential loans	$ 201,949	$ 935,132
Business purpose residential loans	988,179	125,404
Real estate securities		
On balance sheet	618,881	844,465
Sequoia Choice securitizations (1)	111,341	130,139
Freddie Mac SLST securitizations (1)	381,640	228,920
Freddie Mac K-Series securitizations (1)	252,284	17,521
CAFL securitizations (1)	127,840	—
Total real estate securities owned	1,491,986	1,221,045
Total Collateral for Short-Term Debt	$ 2,682,114	$ 2,281,581

(1) Represents securities we have retained from consolidated securitization entities. For GAAP purposes, we consolidate the loans and non-recourse ABS debt issued from these securitizations.

For the years ended December 31, 2019 and 2018, the average balances of our short-term debt facilities were $1.97 billion and $1.51 billion, respectively. At December 31, 2019 and December 31, 2018, accrued interest payable on our short-term debt facilities was $6 million and $4 million, respectively.

Servicer advance financing consists of non-recourse short-term securitization debt used to finance servicer advance investments. We consolidate the securitization entity that issued the debt, but the entity is independent of Redwood and the assets and liabilities are not owned by and are not legal obligations of Redwood. At December 31, 2019, the fair value of servicer advances, cash and restricted cash collateralizing the securitization financing was $176 million. At December 31, 2019, the accrued interest payable balance on this financing was $0.2 million and the unamortized capitalized commitment costs were $1 million.

During the fourth quarter of 2018, $201 million principal amount of 5.625% exchangeable senior notes and $1 million of unamortized deferred issuance costs were reclassified from long-term debt to short-term debt as the maturity of the notes was less than one year as of November 2018. In November 2019, we repaid these $201 million convertible notes and all related accrued interest in full.

We also maintain a $10 million committed line of credit with a financial institution that is secured by certain mortgage-backed securities with a fair market value of $3 million at December 31, 2019. At both December 31, 2019 and December 31, 2018, we had no outstanding borrowings on this facility.

Note 13. Short-Term Debt - (continued)

Remaining Maturities of Short-Term Debt

The following table presents the remaining maturities of our secured short-term debt by the type of collateral securing the debt as well as our convertible notes at December 31, 2019.

Table 13.3 – Short-Term Debt by Collateral Type and Remaining Maturities

	December 31, 2019			
(In Thousands)	**Within 30 days**	**31 to 90 days**	**Over 90 days**	**Total**
Collateral Type				
Held-for-sale residential loans	$ 49,084	$ 110,446	$ 26,364	$ 185,894
Business purpose residential loans	—	—	814,118	814,118
Real estate securities	824,054	352,525	—	1,176,579
Total Secured Short-Term Debt	873,138	462,971	840,482	2,176,591
Servicer advance financing	—	—	152,554	152,554
Total Short-Term Debt	$ 873,138	$ 462,971	$ 993,036	$ 2,329,145

Note 14. Asset-Backed Securities Issued

Through our Sequoia securitization program, we sponsor securitization transactions in which securities backed by residential mortgage loans (ABS) are issued by Sequoia entities. We consolidated the Legacy Sequoia and Sequoia Choice securitization entities as well as certain third-party Freddie Mac K-Series and SLST securitization entities that we determined were VIEs and for which we determined we were the primary beneficiary. Additionally, beginning in the fourth quarter of 2019, we consolidated certain CAFL securitization entities that we determined were VIEs and for which we determined we were the primary beneficiary. Each consolidated securitization entity is independent of Redwood and of each other and the assets and liabilities of each entity are not owned by and are not legal obligations of Redwood. Our exposure to these entities is primarily through the financial interests we have retained, although we are exposed to certain financial risks associated with our role as a sponsor, servicing administrator, or depositor of these entities or as a result of our having sold assets directly or indirectly to these entities.

We account for the ABS issued under our consolidated entities at fair value, with periodic changes in fair value recorded in Investment fair value changes, net on our consolidated statements of income. Pursuant to the CFE guidelines, the market valuation changes on the loans in these securitizations are based on the estimated fair value of the associated ABS issued we present on our balance sheet as well as the securities retained or owned at the securitization entities. The net impact to our income statement associated with our economic investment in each of these securitization entities is presented in *Note 5.*

The ABS issued by these entities consist of various classes of securities that pay interest on a monthly basis. All ABS issued by the Sequoia Choice, Freddie Mac K-Series, and Freddie Mac SLST entities and substantially all the ABS issued by the CAFL entities pay fixed rates of interest. Substantially all ABS issued by the Legacy Sequoia entities pay variable rates of interest, which are indexed to one-, three-, or six-month LIBOR. ABS issued also includes some interest-only classes with coupons set at a fixed spread to a benchmark rate, or set at a spread to the interest rates earned on the assets less the interest rates paid on the liabilities of a securitization entity.

Note 14. Asset-Backed Securities Issued - (continued)

The carrying values of ABS issued by our consolidated securitization entities atDecember 31, 2019 and December 31, 2018, along with other selected information, are summarized in the following table.

Table 14.1 – Asset-Backed Securities Issued

	December 31, 2019					
(Dollars in Thousands)	**Legacy Sequoia**	**Sequoia Choice**	**Freddie Mac SLST**	**Freddie Mac K-Series**	**CAFL**	**Total**
Certificates with principal balance	$ 420,056	$ 1,979,719	$ 1,842,682	$ 3,844,789	$ 1,875,007	$ 9,962,253
Interest-only certificates	1,282	16,514	30,291	217,891	90,134	356,112
Market valuation adjustments	(18,873)	40,965	45,349	93,559	36,110	197,110
ABS Issued, Net	$ 402,465	$ 2,037,198	$ 1,918,322	$ 4,156,239	$ 2,001,251	$ 10,515,475
Range of weighted average interest rates, by series	1.94% to 3.26%	4.40% to 5.05%	3.50%	3.35% to 4.35%	3.25% to 5.36%	
Stated maturities	2024 - 2036	2047 - 2049	2028 - 2029	2025 - 2049	2022 - 2048	
Number of series	20	9	2	5	10	

	December 31, 2018					
(Dollars in Thousands)	**Legacy Sequoia**	**Sequoia Choice**	**Freddie Mac SLST**	**Freddie Mac K-Series**	**CAFL**	**Total**
Certificates with principal balance	$ 540,456	$ 1,838,758	$ 993,659	$ 1,936,691	$ —	$ 5,309,564
Interest-only certificates	1,537	25,662	—	131,600	—	158,799
Market valuation adjustments	(29,753)	20,590	89	(49,216)	—	(58,290)
ABS Issued, Net	$ 512,240	$ 1,885,010	$ 993,748	$ 2,019,075	$ —	$ 5,410,073
Range of weighted average interest rates, by series	1.36% to 3.60%	4.46% to 4.97%	3.51%	3.39% to 4.08%	—%	
Stated maturities	2024 - 2036	2047 - 2048	2028	2025 - 2049	—	
Number of series	20	6	1	3	—	

The actual maturity of each class of ABS issued is primarily determined by the rate of principal prepayments on the assets of the issuing entity. Each series is also subject to redemption prior to the stated maturity according to the terms of the respective governing documents of each ABS issuing entity. As a result, the actual maturity of ABS issued may occur earlier than its stated maturity. At December 31, 2019, the majority of the ABS issued and outstanding had contractual maturities beyondfive years. The following table summarizes the accrued interest payable on ABS issued at December 31, 2019 and December 31, 2018. Interest due on consolidated ABS issued is payable monthly.

Table 14.2 – Accrued Interest Payable on Asset-Backed Securities Issued

(In Thousands)	**December 31, 2019**	**December 31, 2018**
Legacy Sequoia	$ 395	$ 571
Sequoia Choice	7,732	7,180
Freddie Mac SLST	5,374	2,907
Freddie Mac K-Series	12,887	6,239
CAFL	7,298	—
Total Accrued Interest Payable on ABS Issued	$ 33,686	$ 16,897

Note 14. Asset-Backed Securities Issued - (continued)

The following table summarizes the carrying value components of the collateral for ABS issued and outstanding atDecember 31, 2019 and December 31, 2018.

Table 14.3 – Collateral for Asset-Backed Securities Issued

	December 31, 2019					
(In Thousands)	**Legacy Sequoia**	**Sequoia Choice**	**Freddie Mac SLST**	**Freddie Mac K-Series**	**CAFL**	**Total**
Residential loans	$ 407,890	$ 2,291,463	$ 2,367,215	$ —	$ —	$ 5,066,568
Business purpose residential loans	—	—	—	—	2,192,552	2,192,552
Multifamily loans	—	—	—	4,408,524	—	4,408,524
Restricted cash	143	27	—	—	—	170
Accrued interest receivable	655	9,824	7,313	13,539	9,572	40,903
REO	460	—	445	—	1,795	2,700
Total Collateral for ABS Issued	$ 409,148	$ 2,301,314	$ 2,374,973	$ 4,422,063	$ 2,203,919	$ 11,711,417

	December 31, 2018					
(In Thousands)	**Legacy Sequoia**	**Sequoia Choice**	**Freddie Mac SLST**	**Freddie Mac K-Series**	**CAFL**	**Total**
Residential loans	$ 519,958	$ 2,079,382	$ 1,222,669	$ —	$ —	$ 3,822,009
Multifamily loans	—	—	—	2,144,598	—	2,144,598
Restricted cash	146	1,022	—	—	—	1,168
Accrued interest receivable	822	8,988	3,926	6,595	—	20,331
REO	3,943	—	—	—	—	3,943
Total Collateral for ABS Issued	$ 524,869	$ 2,089,392	$ 1,226,595	$ 2,151,193	$ —	$ 5,992,049

Note 15. Long-Term Debt

FHLBC Borrowings

In July 2014, our FHLB-member subsidiary entered into a borrowing agreement with the Federal Home Loan Bank of Chicago. AtDecember 31, 2019, under this agreement, our subsidiary could incur borrowings up to $2.00 billion, also referred to as “advances,” from the FHLBC secured by eligible collateral, including residential mortgage loans. During the year ended December 31, 2019, our FHLB-member subsidiary made no additional borrowings under this agreement. Under a final rule published by the Federal Housing Finance Agency in January 2016, our FHLB-member subsidiary will remain an FHLB member through the five-year transition period for captive insurance companies. Our FHLB-member subsidiary's existing $2.00 billion of FHLB debt, which matures beyond this transition period, is permitted to remain outstanding until its stated maturity. As residential loans pledged as collateral for this debt pay down, we are permitted to pledge additional loans or other eligible assets to collateralize this debt; however, we do not expect to be able to increase our subsidiary's FHLB debt above the existing $2.00 billion maximum.

Note 15. Long-Term Debt - (continued)

At December 31, 2019, $2.00 billion of advances were outstanding under this agreement, which were classified as long-term debt, with a weighted average interest rate of 1.88% and a weighted average maturity of approximately six years. At December 31, 2018, $2.00 billion of advances were outstanding under this agreement, which were classified as long-term debt, with a weighted average interest rate of 2.52% and a weighted average maturity of seven years. Advances under this agreement incur interest charges based on a specified margin over the FHLBC's 13-week discount note rate, which resets every 13 weeks. At December 31, 2019, total advances under this agreement were secured by residential mortgage loans with a fair value of $2.10 billion, single-family rental loans with a fair value of $211 million, real estate securities with a fair value of $39 million, and $59 million of restricted cash. This agreement also requires our subsidiary to purchase and hold stock in the FHLBC in an amount equal to a specified percentage of outstanding advances. At December 31, 2019, our subsidiary held $43 million of FHLBC stock that is included in Other assets in our consolidated balance sheets.

The following table presents maturities of our FHLBC borrowings by year at December 31, 2019.

Table 15.1 – Maturities of FHLBC Borrowings by Year

(In Thousands)	December 31, 2019
2024	$ 470,171
2025	887,639
2026	642,189
Total FHLBC Borrowings	$ 1,999,999

Subordinate Securities Financing Facility

In the third quarter of 2019, a subsidiary of Redwood entered into a repurchase agreement providing non-mark-to-market recourse debt financing. The financing is fully and unconditionally guaranteed by Redwood, with an interest rate of approximately 4.21% through September 2022. The financing facility may be terminated, at our option, in September 2022, and has a final maturity in September 2024, provided that the interest rate on amounts outstanding under the facility increases between October 2022 and September 2024. At December 31, 2019, we had borrowings under this facility totaling $185 million, net of $1 million of deferred issuance costs, for a carrying value of $184 million. At December 31, 2019, the fair value of real estate securities pledged as collateral under this long-term debt facility was $250 million, which included $125 million of securities retained from our consolidated Sequoia Choice securitizations. This facility is included in Long-term debt, net on our consolidated balance sheets at December 31, 2019.

Convertible Notes

In September 2019, RWT Holdings, Inc., a wholly-owned subsidiary of Redwood Trust, Inc., issued $201 million principal amount of 5.75% exchangeable senior notes due 2025. These exchangeable notes require semi-annual interest payments at a fixed coupon rate of 5.75% until maturity or exchange, which will be no later than October 1, 2025. After deducting the underwriting discount and offering costs, we received $195 million of net proceeds. Including amortization of deferred debt issuance costs, the weighted average interest expense yield on these exchangeable notes is approximately 6.3% per annum. At December 31, 2019, these notes were exchangeable at the option of the holder at an exchange rate of 55.1967 common shares per $1,000 principal amount of exchangeable senior notes (equivalent to an exchange price of $18.12 per common share). Upon exchange of these notes by a holder, the holder will receive shares of our common stock. At December 31, 2019, the outstanding principal amount of these notes was $201 million. At December 31, 2019, the accrued interest payable balance on this debt was $3 million and the unamortized deferred issuance costs were $6 million.

Note 15. Long-Term Debt - (continued)

In June 2018, we issued $200 million principal amount of 5.625% convertible senior notes due 2024 at an issuance price of 99.5%. These convertible notes require semi-annual interest payments at a fixed coupon rate of 5.625% until maturity or conversion, which will be no later than July 15, 2024. After deducting the issuance discount, the underwriting discount and offering costs, we received $194 million of net proceeds. Including amortization of deferred debt issuance costs and the debt discount, the weighted average interest expense yield on these convertible notes is approximately 6.2% per annum. These notes are convertible at the option of the holder at a conversion rate of 54.7645 common shares per $1,000 principal amount of convertible senior notes (equivalent to a conversion price of $18.26 per common share). Upon conversion of these notes by a holder, the holder will receive shares of our common stock. At December 31, 2019, the outstanding principal amount of these notes was $200 million and the accrued interest payable on this debt was $5 million. At December 31, 2019, the unamortized deferred issuance costs and debt discount were $4 million and $1 million, respectively.

In August 2017, we issued $245 million principal amount of 4.75% convertible senior notes due 2023. These convertible notes require semi-annual interest payments at a fixed coupon rate of 4.75% until maturity or conversion, which will be no later than August 15, 2023. After deducting the underwriting discount and offering costs, we received $238 million of net proceeds. Including amortization of deferred debt issuance costs, the weighted average interest expense yield on these convertible notes is approximately 5.3% per annum. At December 31, 2019, these notes were convertible at the option of the holder at a conversion rate of 54.3346 common shares per $1,000 principal amount of convertible senior notes (equivalent to a conversion price of $18.40 per common share). Upon conversion of these notes by a holder, the holder will receive shares of our common stock. At December 31, 2019, the outstanding principal amount of these notes was $245 million. At December 31, 2019, the accrued interest payable balance on this debt was $4 million and the unamortized deferred issuance costs were $5 million.

In November 2014, RWT Holdings, Inc., a wholly-owned subsidiary of Redwood Trust, Inc., issued $205 million principal amount of 5.625% exchangeable senior notes due 2019. These exchangeable notes required semi-annual interest payments at a fixed coupon rate of 5.625%. After deducting the underwriting discount and offering costs, we received $198 million of net proceeds. Including amortization of deferred debt issuance costs, the weighted average interest expense yield on these exchangeable notes was approximately 6.3% per annum. These notes were exchangeable at the option of the holder at an exchange rate of 46.5404 common shares per $1,000 principal amount of exchangeable senior notes (equivalent to an exchange price of $21.49 per common share). Upon exchange of these notes by a holder, the holder would have received shares of our common stock. During 2016, we repurchased $4 million par value of these notes at a discount and recorded a gain on extinguishment of debt of $0.3 million in Realized gains, net on our consolidated statements of income. Additionally, during the fourth quarter of 2018, $201 million principal amount of these notes and $1 million of unamortized deferred issuance costs were reclassified from long-term debt to short-term debt as the maturity of the notes was less than one year as of November 2018. In November 2019, we repaid these $201 million exchangeable notes and all related accrued interest in full.

Trust Preferred Securities and Subordinated Notes

At December 31, 2019, we had trust preferred securities and subordinated notes outstanding of $100 million and $40 million, respectively. This debt requires quarterly interest payments at a floating rate equal to three-month LIBOR plus 2.25% until the notes are redeemed. The $100 million trust preferred securities will be redeemed no later than January 30, 2037, and the $40 million subordinated notes will be redeemed no later than July 30, 2037. Prior to 2014, we entered into interest rate swaps with aggregate notional values totaling $140 million to hedge the variability in this long-term debt interest expense. Including hedging costs and amortization of deferred debt issuance costs, the weighted average interest expense yield on our trust preferred securities and subordinated notes is approximately 6.9% per annum. At both December 31, 2019 and December 31, 2018, the accrued interest payable balance on our trust preferred securities and subordinated notes was $1 million.

Under the terms of this debt, we covenant, among other things, to use our best efforts to continue to qualify as a REIT. If an event of default were to occur in respect of this debt, we would generally be restricted under its terms (subject to certain exceptions) from making dividend distributions to stockholders, from repurchasing common stock or repurchasing or redeeming any other then-outstanding equity securities, and from making any other payments in respect of any equity interests in us or in respect of any then-outstanding debt that is pari passu or subordinate to this debt.

Note 16. Commitments and Contingencies

Lease Commitments

At December 31, 2019, we were obligated under eight non-cancelable operating leases with expiration dates through 2028 for $16 million of cumulative lease payments. Our operating lease expense was $3 million, $2 million, and $2 million for the years ended December 31, 2019, 2018 and 2017, respectively.

The following table presents our future lease commitments at December 31, 2019.

Table 16.1 – Future Lease Commitments by Year

(In Thousands)	December 31, 2019
2020	$ 3,395
2021	2,275
2022	1,706
2023	1,520
2024	1,558
2025 and thereafter	5,678
Total Lease Commitments	16,132
Less: Imputed interest	(2,689)
Lease Liability	$ 13,443

Leasehold improvements for our offices are amortized into expense over the lease term. There were $3 million of unamortized leasehold improvements at December 31, 2019. For the years ended December 31, 2019, 2018, and 2017, we recognized $0.4 million, $0.2 million, and $0.2 million of leasehold amortization expense, respectively.

During the first quarter of 2019, we adopted ASU 2016-02, "Leases," which required us to recognize a lease liability that was equal to the present value of our remaining lease payments of $16 million discounted at various incremental borrowing rates, and a right-of-use asset, which was equal to our lease liability adjusted for our deferred rent liability. We elected to apply the new guidance using the optional transition method, which permits lessees to measure the lease liability and right-of-use asset at January 1, 2019, without adjusting the comparative periods presented. We elected the package of practical expedients under the transition guidance within this standard, which allowed us to carry forward the classifications of each of our four existing leases as operating leases and to continue to expense lease payments on a straight-line basis. As one of our operating leases qualified for the short-term lease exception under this guidance, we continued to account for this lease under legacy GAAP and did not include this lease in our calculation of the lease liability and right-of-use asset.

We assumed five new leases during 2019 as a result of the acquisitions of 5 Arches and CoreVest. We determined that each of these leases qualified as operating leases under the new guidance and accounted for them as such. At December 31, 2019, our lease liability was $13 million, which was a component of Accrued expenses and other liabilities, and our right-of-use asset was $12 million, which was a component of Other assets.

We determined that none of our leases contained an implicit interest rate and used a discount rate equal to our incremental borrowing rate on a collateralized basis to determine the present value of our total lease payments. As such, we determined the applicable discount rate for each of our leases using a swap rate plus an applicable spread for borrowing arrangements secured by our real estate loans and securities for a length of time equal to the remaining lease term on the date of adoption. At December 31, 2019, the weighted-average remaining lease term and weighted-average discount rate for our leases was 7 years and 5.3%, respectively.

Note 16. Commitments and Contingencies - (continued)

Commitment to Fund Residential Bridge Loans

As of December 31, 2019, we had commitments to fund up to $173 million of additional advances on existing residential bridge loans. These commitments are generally subject to loan agreements with covenants regarding the financial performance of the customer and other terms regarding advances that must be met before we fund the commitment. We may also advance funds related to loans sold under a separate loan sale agreement that are generally repaid immediately by the loan purchaser and do not generally expose us to loss. The outstanding commitments related to these loans that we may temporarily fund totaled approximately $56 million at December 31, 2019.

Commitment to Fund Partnerships

In the fourth quarter of 2018, we invested in two partnerships created to acquire and manage certain mortgage servicing related assets (see *Note 10* for additional detail). In connection with this investment, we are required to fund future net servicer advances related to the underlying mortgage loans. The actual amount of net servicer advances we may fund in the future is subject to significant uncertainty and will be based on the credit and prepayment performance of the underlying loans.

In the first quarter of 2019, we invested in a partnership created to acquire floating rate, light-renovation multifamily loans from Freddie Mac (see *Note 10* for additional detail). At December 31, 2019, we had an outstanding commitment to fund an additional $37 million to the partnership. Additionally, in connection with this transaction, we have made a guarantee to Freddie Mac in the event of losses incurred on the loans that exceed the equity available in the partnership to absorb such losses. At December 31, 2019, the carrying value of this guarantee was $0.1 million. We believe the likelihood of performance under the guarantee is remote. Our maximum loss exposure from this guarantee arrangement is $135 million.

5 Arches Contingent Consideration

As part of the consideration for our acquisition of 5 Arches, we are committed to make earn-out payments up to $29 million, payable in a mix of cash and Redwood common stock, which will be calculated following each of the first two anniversaries of the option closing date based on loan origination volumes exceeding certain specified thresholds. These contingent earn-out payments are classified as a contingent consideration liability and carried at fair value. At December 31, 2019, our estimated fair value of this contingent liability was $28 million. For the year ended December 31, 2019, we recorded contingent consideration expense of $3 million related to our valuation of this liability through Other expenses on our consolidated statements of income.

Commitment to Fund Shared Home Appreciation Options

In the third quarter of 2019, we entered into a flow purchase agreement to acquire shared home appreciation options. The counterparty purchases an option to buy a fractional interest in a homeowner's ownership interest in residential property, and subsequently the counterparty sells the option contract to us. Pursuant to the terms of the option contract, we share in both home price appreciation and depreciation. At December 31, 2019, we had acquired $45 million of shared home appreciation options under this agreement, which are included in Other Investments on our consolidated balance sheets. At December 31, 2019, we had an outstanding commitment to fund up to an additional $7 million under this agreement.

Commitment to Participate in Loan Warehouse Facility

In the second quarter of 2018, we invested in a participation in the mortgage loan warehouse credit facility of one of our loan sellers. This investment included a commitment to participate in (and an obligation to fund) a designated amount of the loan seller's borrowings under this warehouse credit facility. Our commitment to participate in this facility was terminated in the first quarter of 2019. See *Note 10* for additional detail on our participation in a loan warehouse facility.

Note 16. Commitments and Contingencies - (continued)

Loss Contingencies — Risk-Sharing

During 2015 and 2016, we sold conforming loans to the Agencies with an original unpaid principal balance of $3.19 billion, subject to our risk-sharing arrangements with the Agencies. At December 31, 2019, the maximum potential amount of future payments we could be required to make under these arrangements was $44 million and this amount was fully collateralized by assets we transferred to pledged accounts and is presented as pledged collateral in Other assets on our consolidated balance sheets. We have no recourse to any third parties that would allow us to recover any amounts related to our obligations under the arrangements. At December 31, 2019, we had not incurred any losses under these arrangements. For the years ended December 31, 2019, 2018, and 2017, other income related to these arrangements was $4 million, $4 million, and $3 million, respectively, and was included in Other income on our consolidated statements of income. For the years ended December 31, 2019, 2018, and 2017, we recorded net market valuation losses related to these arrangements of $0.2 million, $0.4 million, and $1 million, respectively, through Investment fair value changes, net, on our consolidated statements of income.

All of the loans in the reference pools subject to these risk-sharing arrangements were originated in 2014 and 2015, and at December 31, 2019, the loans had an unpaid principal balance of $1.55 billion and a weighted average FICO score of 759 (at origination) and LTV ratio of 76% (at origination). At December 31, 2019, $7 million of the loans were 90 days or more delinquent, of which $2 million were in foreclosure. At December 31, 2019, the carrying value of our guarantee obligation was $14 million and included $5 million designated as a non-amortizing credit reserve, which we believe is sufficient to cover current expected losses under these obligations.

Our consolidated balance sheets include assets of special purpose entities ("SPEs") associated with these risk-sharing arrangements (i.e., the "pledged collateral" referred to above) that can only be used to settle obligations of these SPEs for which the creditors of these SPEs (the Agencies) do not have recourse to Redwood Trust, Inc. or its affiliates. At December 31, 2019 and December 31, 2018, assets of such SPEs totaled $48 million and $47 million, respectively, and liabilities of such SPEs totaled $14 million and $17 million, respectively.

Loss Contingencies — Residential Repurchase Reserve

We maintain a repurchase reserve for potential obligations arising from representation and warranty violations related to residential loans we have sold to securitization trusts or third parties and for conforming residential loans associated with MSRs that we have purchased from third parties. We do not originate residential loans and we believe the initial risk of loss due to loan repurchases (i.e., due to a breach of representations and warranties) would generally be a contingency to the companies from whom we acquired the loans. However, in some cases, for example, where loans were acquired from companies that have since become insolvent, repurchase claims may result in our being liable for a repurchase obligation.

At both December 31, 2019 and December 31, 2018, our repurchase reserve associated with our residential loans and MSRs was $4 million and was recorded in Accrued expenses and other liabilities on our consolidated balance sheets. We received 15 repurchase requests during the year ended December 31, 2019 and 11 during the year ended December 31, 2018. During the years ended December 31, 2019, 2018, and 2017, we repurchased zero loans, two loans, and one loan, respectively. During the years ended December 31, 2019, 2018, and 2017, we recorded $0.1 million, $0.7 million, and $0.3 million of reversals of repurchase provisions, respectively, that were recorded in Mortgage banking activities, net and Other income on our consolidated statements of income and had charge-offs of zero, zero, and $0.2 million, respectively.

Note 16. Commitments and Contingencies - (continued)

Loss Contingencies — Litigation

On or about December 23, 2009, the Federal Home Loan Bank of Seattle (the "FHLB-Seattle") filed a complaint in the Superior Court for the State of Washington (case number 09-2-46348-4 SEA) against Redwood Trust, Inc., our subsidiary, Sequoia Residential Funding, Inc. ("SRF"), Morgan Stanley & Co., and Morgan Stanley Capital I, Inc. (collectively, the "FHLB-Seattle Defendants"), which alleged that the FHLB-Seattle Defendants made false or misleading statements in offering materials for a mortgage pass-through certificate (the "Seattle Certificate") issued in the Sequoia Mortgage Trust 2005-4 securitization transaction (the "2005-4 RMBS") and purchased by the FHLB-Seattle. 8% The Seattle Certificate was issued with an original principal amount of approximately$133 million, and, at December 31, 2019, approximately $128 million of principal and $12 million of interest payments had been made in respect of the Seattle Certificate.The matter was subsequently resolved and the claims were dismissed by the FHLB Seattle as to all the FHLB Seattle Defendants. At the time the Seattle Certificate was issued, Redwood agreed to indemnify the underwriters of the 2005-4 RMBS, which underwriters were named as defendants in the action, for certain losses and expenses they might incur as a result of claims made against them relating to this RMBS, including, without limitation, certain legal expenses. Regardless of the resolution of this litigation, we could incur a loss as a result of these indemnities.

On or about July 15, 2010, The Charles Schwab Corporation ("Schwab") filed a complaint in the Superior Court for the State of California in San Francisco (case number CGC-10-501610) against SRF and 26 other defendants (collectively, the "Schwab Defendants"), which alleged that the Schwab Defendants made false or misleading statements in offering materials for various residential mortgage-backed securities sold or issued by the Schwab Defendants. Schwab alleged only a claim for negligent misrepresentation under California state law against SRF and sought unspecified damages and attorneys' fees and costs from SRF. Schwab claimed that SRF made false or misleading statements in offering materials for a mortgage pass-through certificate (the "Schwab Certificate") issued in the 2005-4 RMBS and purchased by Schwab. The Schwab Certificate was issued with an original principal amount of approximately $15 million, and, at December 31, 2019, approximately $14 million of principal and $1 million of interest payments had been made in respect of the Schwab Certificate. On November 14, 2014, Schwab voluntarily dismissed with prejudice its negligent misrepresentation claim, which resulted in the dismissal with prejudice of SRF from the action. Subsequently, the matter was resolved and Schwab dismissed its claims against the lead underwriter of the 2005-4 RMBS. At the time the Schwab Certificate was issued, Redwood agreed to indemnify the underwriters of the 2005-4 RMBS, which underwriters were also named as defendants in the action, for certain losses and expenses they might incur as a result of claims made against them relating to this RMBS, including, without limitation, certain legal expenses. Regardless of the resolution of this litigation, Redwood could incur a loss as a result of these indemnities.

Through certain of our wholly-owned subsidiaries, we have in the past engaged in, and expect to continue to engage in, activities relating to the acquisition and securitization of residential mortgage loans. In addition, certain of our wholly-owned subsidiaries have in the past engaged in activities relating to the acquisition and securitization of debt obligations and other assets through the issuance of collateralized debt obligations (commonly referred to as CDO transactions). Because of this involvement in the securitization and CDO businesses, we could become the subject of litigation relating to these businesses, including additional litigation of the type described above, and we could also become the subject of governmental investigations, enforcement actions, or lawsuits, and governmental authorities could allege that we violated applicable law or regulation in the conduct of our business. As an example, in July 2016 we became aware of a complaint filed by the State of California on April 1, 2016 against Morgan Stanley & Co. and certain of its affiliates alleging, among other things, that there were misleading statements contained in offering materials for 28 different mortgage pass-through certificates purchased by various California investors, including various California public pension systems, from Morgan Stanley and alleging that Morgan Stanley made false or fraudulent claims in connection with the sale of those certificates. Of the 28 mortgage pass-through certificates that were the subject of the complaint, two were Sequoia mortgage pass-through certificates issued in 2004 and two were Sequoia mortgage pass-through certificates issued in 2007. With respect to each of those certificates, our wholly-owned subsidiary, RWT Holdings, Inc., was the sponsor and our wholly-owned subsidiary, Sequoia Residential Funding, Inc., was the depositor. The plaintiffs subsequently withdrew from the litigation their claims based on eight of the 28 mortgage pass-through certificates, including one of the Sequoia mortgage pass-through certificates issued in 2004. We believe this matter was subsequently resolved and the plaintiffs withdrew their remaining claims. At the time these Sequoia mortgage pass-through certificates were issued, Sequoia Residential Funding, Inc. and Redwood Trust agreed to indemnify the underwriters of these certificates for certain losses and expenses they might incur as a result of claims made against them relating to these certificates, including, without limitation, certain legal expenses. Regardless of the resolution of this litigation, we could incur a loss as a result of these indemnities.

Note 16. Commitments and Contingencies - (continued)

In accordance with GAAP, we review the need for any loss contingency reserves and establish reserves when, in the opinion of management, it is probable that a matter would result in a liability and the amount of loss, if any, can be reasonably estimated. Additionally, we record receivables for insurance recoveries relating to litigation-related losses and expenses if and when such amounts are covered by insurance and recovery of such losses or expenses are due. At December 31, 2019, the aggregate amount of loss contingency reserves established in respect of the FHLB-Seattle and Schwab litigation matters described above was $2 million. We review our litigation matters each quarter to assess these loss contingency reserves and make adjustments in these reserves, upwards or downwards, as appropriate, in accordance with GAAP based on our review.

In the ordinary course of any litigation matter, including certain of the above-referenced matters, we have engaged and may continue to engage in formal or informal settlement communications with the plaintiffs or co-defendants. Settlement communications we have engaged in relating to certain of the above-referenced litigation matters are one of the factors that have resulted in our determination to establish the loss contingency reserves described above. We cannot be certain that any of these matters will be resolved through a settlement prior to trial and we cannot be certain that the resolution of these matters, whether through trial or settlement, will not have a material adverse effect on our financial condition or results of operations in any future period.

Future developments (including resolution of substantive pre-trial motions relating to these matters, receipt of additional information and documents relating to these matters (such as through pre-trial discovery), new or additional settlement communications with plaintiffs relating to these matters, or resolutions of similar claims against other defendants in these matters) could result in our concluding in the future to establish additional loss contingency reserves or to disclose an estimate of reasonably possible losses in excess of our established reserves with respect to these matters. Our actual losses with respect to the above-referenced litigation matters may be materially higher than the aggregate amount of loss contingency reserves we have established in respect of these litigation matters, including in the event that any of these matters proceeds to trial and the plaintiff prevails. Other factors that could result in our concluding to establish additional loss contingency reserves or estimate additional reasonably possible losses, or could result in our actual losses with respect to the above-referenced litigation matters being materially higher than the aggregate amount of loss contingency reserves we have established in respect of these litigation matters include that: there are significant factual and legal issues to be resolved; information obtained or rulings made during the lawsuits could affect the methodology for calculation of the available remedies; and we may have additional obligations pursuant to indemnity agreements, representations and warranties, and other contractual provisions with other parties relating to these litigation matters that could increase our potential losses.

Note 17. Equity

The following table provides a summary of changes to accumulated other comprehensive income by component for the years endedDecember 31, 2019 and 2018.

Table 17.1 – Changes in Accumulated Other Comprehensive Income by Component

	Years Ended December 31,			
	2019		2018	
(In Thousands)	Net Unrealized Gains on Available-for-Sale Securities	Net Unrealized Losses on Interest Rate Agreements Accounted for as Cash Flow Hedges	Net Unrealized Gains on Available-for-Sale Securities	Net Unrealized Losses on Interest Rate Agreements Accounted for as Cash Flow Hedges
Balance at beginning of period	$ 95,342	$ (34,045)	$ 128,201	$ (42,953)
Other comprehensive income (loss) before reclassifications	17,077	(16,894)	(7,298)	8,908
Amounts reclassified from other accumulated comprehensive income (1)	(19,967)	—	(25,561)	—
Net current-period other comprehensive income (loss)	(2,890)	(16,894)	(32,859)	8,908
Balance at End of Period	$ 92,452	$ (50,939)	$ 95,342	$ (34,045)

(1) Amount is presented net of tax provision of $2 million for the year ended December 31, 2018.

The following table provides a summary of reclassifications out of accumulated other comprehensive income for the years endedDecember 31, 2019 and 2018.

Table 17.2 – Reclassifications Out of Accumulated Other Comprehensive Income

		Amount Reclassified From Accumulated Other Comprehensive Income	
	Affected Line Item in the	Years Ended December 31,	
(In Thousands)	Income Statement	2019	2018
Net Realized (Gain) Loss on AFS Securities			
Other than temporary impairment (1)	Investment fair value changes, net	$ —	$ 89
Gain on sale of AFS securities	Realized gains, net	(19,967)	(27,178)
Gain on sale of AFS securities	Provision for income taxes	—	1,528
		$ (19,967)	$ (25,561)

(1) For the year ended December 31, 2019, there were no other-than-temporary impairments. For the year ended December 31, 2018, other-than-temporary impairments were $1 million, of which $0.1 million were recognized through our consolidated statements of income, and $1 million were recognized in Accumulated other comprehensive income, a component of our consolidated balance sheet.

Note 17. Equity - (continued)

Issuance of Common Stock

In 2018, we established a program to sell up to an aggregate of $150 million of common stock from time to time in at-the-market ("ATM") offerings. During the year ended December 31, 2019, we issued 2,259,758 common shares for net proceeds of approximately $36 million through ATM offerings. During the year ended December 31, 2018, we issued 1,550,819 common shares for net proceeds of approximately $25 million through ATM offerings. At December 31, 2019, approximately $88 million remained outstanding for future offerings under this program.

On January 29, 2019, we sold 11,500,000 shares of common stock in an underwritten public offering, resulting in net proceeds of approximately $177 million. On September 3, 2019, we sold 14,375,000 shares of common stock in an underwritten public offering, resulting in net proceeds of approximately $228 million. During the year ended December 31, 2018, we sold 7,187,500 shares of common stock in an underwritten public offering, resulting in net proceeds of approximately $117 million.

On October 15, 2019, we issued 588,260 shares of restricted common stock to members of CoreVest management at a grant date fair market value of $16.48 per share, as a component of total consideration paid for the acquisition of CoreVest. The grant date fair value of these restricted stock awards was $10 million, which will be recognized as compensation expense over the two-year vesting period in accordance with GAAP.

Direct Stock Purchase and Dividend Reinvestment Plan

During the year ended December 31, 2019, we issued 399,838 shares of common stock through our Direct Stock Purchase and Dividend Reinvestment Plan, resulting in net proceeds of approximately $6 million.

Earnings per Common Share

The following table provides the basic and diluted earnings per common share computations for the years ended December 31, 2019, 2018, and 2017.

Table 17.3 – Basic and Diluted Earnings per Common Share

	Years Ended December 31,		
(In Thousands, except Share Data)	**2019**	**2018**	**2017**
Basic Earnings per Common Share:			
Net income attributable to Redwood	$ 169,183	$ 119,600	$ 140,406
Less: Dividends and undistributed earnings allocated to participating securities	(4,797)	(3,754)	(3,632)
Net income allocated to common shareholders	$ 164,386	$ 115,846	$ 136,774
Basic weighted average common shares outstanding	101,120,744	78,724,912	76,792,957
Basic Earnings per Common Share	$ 1.63	$ 1.47	$ 1.78
Diluted Earnings per Common Share:			
Net income attributable to Redwood	$ 169,183	$ 119,600	$ 140,406
Less: Dividends and undistributed earnings allocated to participating securities	(5,273)	(4,283)	(3,836)
Add back: Interest expense on convertible notes for the period, net of tax	36,212	32,653	26,898
Net income allocated to common shareholders	$ 200,122	$ 147,970	$ 163,468
Weighted average common shares outstanding	101,147,225	78,724,912	76,792,957
Net effect of dilutive equity awards	251,100	189,120	185,383
Net effect of assumed convertible notes conversion to common shares	35,382,269	31,113,738	24,996,668
Diluted weighted average common shares outstanding	136,780,594	110,027,770	101,975,008
Diluted Earnings per Common Share	$ 1.46	$ 1.34	$ 1.60

Note 17. Equity - (continued)

We included participating securities, which are certain equity awards that have non-forfeitable dividend participation rights, in the calculations of basic and diluted earnings per common share as we determined that the two-class method was more dilutive than the alternative treasury stock method for these shares. Dividends and undistributed earnings allocated to participating securities under the basic and diluted earnings per share calculations require specific shares to be included that may differ in certain circumstances.

During the year ended December 31, 2019, certain of our convertible notes were determined to be dilutive and were included in the calculation of diluted EPS under the "if-converted" method. Under this method, the periodic interest expense (net of applicable taxes) for dilutive notes is added back to the numerator and the weighted average number of shares that the notes are entitled to (if converted, regardless of whether they are in or out of the money) are included in the denominator.

For the years ended December 31, 2019, 2018, and 2017, no common shares related to the assumed conversion of our convertible notes were antidilutive and excluded from the calculation of diluted earnings per share.

For the years ended December 31, 2019, 2018, and 2017, the number of outstanding equity awards that were antidilutive totaled10,051, 7,230, and 5,843, respectively.

Stock Repurchases

In February 2018, our Board of Directors approved an authorization for the repurchase of our common stock, increasing the total amount authorized for repurchases of common stock to $100 million, and also authorized the repurchase of outstanding debt securities, including convertible and exchangeable debt. This authorization increased the previous share repurchase authorization approved in February 2016 and has no expiration date. This repurchase authorization does not obligate us to acquire any specific number of shares or securities. Under this authorization, shares or securities may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended. At December 31, 2019, $100 million of the current authorization remained available for the repurchase of shares of our common stock.

Note 18. Equity Compensation Plans

At December 31, 2019 and December 31, 2018, 3,637,480 and 4,616,776 shares of common stock, respectively, were available for grant under our Incentive Plan.The unamortized compensation cost of awards issued under the Incentive Plan and purchases under the Employee Stock Purchase Plan totaled $32 million at December 31, 2019, as shown in the following table.

Table 18.1 – Activities of Equity Compensation Costs by Award Type

	Year Ended December 31, 2019					
(In Thousands)	**Restricted Stock Awards**	**Restricted Stock Units**	**Deferred Stock Units**	**Performance Stock Units**	**Employee Stock Purchase Plan**	**Total**
Unrecognized compensation cost at beginning of period	$ 3,498	$ 74	$ 14,489	$ 7,061	$ —	$ 25,122
Equity grants	—	4,233	11,230	5,275	173	20,911
Equity grant forfeitures	—	—	(303)	—	—	(303)
Equity compensation expense	(1,508)	(773)	(7,558)	(3,390)	(173)	(13,402)
Unrecognized Compensation Cost at End of Period	$ 1,990	$ 3,534	$ 17,858	$ 8,946	$ —	$ 32,328

At December 31, 2019, the weighted average amortization period remaining for all of our equity awards wastwo years.

Note 18. Equity Compensation Plans - (continued)

Restricted Stock Awards ("RSAs")

The following table summarizes the activities related to RSAs for the years ended December 31, 2019, 2018, and 2017.

Table 18.2 – Restricted Stock Awards Activities

	Years Ended December 31,					
	2019		2018		2017	
	Shares	Weighted Average Grant Date Fair Market Value	Shares	Weighted Average Grant Date Fair Market Value	Shares	Weighted Average Grant Date Fair Market Value
Outstanding at beginning of period	334,606	$ 14.92	257,507	$ 15.23	204,515	$ 14.27
Granted	—	—	168,537	14.71	134,364	16.52
Vested	(118,136)	15.05	(83,968)	15.46	(61,928)	14.97
Forfeited	—	—	(7,470)	15.05	(19,444)	14.78
Outstanding at End of Period	216,470	$ 14.85	334,606	$ 14.92	257,507	$ 15.23

The expenses recorded for RSAs were $2 million, $2 million, and $1 million for the years ended December 31, 2019, 2018 and 2017, respectively. As of December 31, 2019, there was $2 million of unrecognized compensation cost related to unvested RSAs. This cost will be recognized over a weighted average period of less than two years. Restrictions on shares of RSAs outstanding lapse through 2022.

Restricted Stock Units ("RSUs")

The following table summarizes the activities related to RSUs for the years ended December 31, 2019, 2018, and 2017.

Table 18.3 – Restricted Stock Units Activities

	Years Ended December 31,					
	2019		2018		2017	
	Shares	Weighted Average Grant Date Fair Market Value	Shares	Weighted Average Grant Date Fair Market Value	Shares	Weighted Average Grant Date Fair Market Value
Outstanding at beginning of period	4,876	$ 15.38	—	$ —	—	$ —
Granted	270,297	15.66	4,876	15.38	—	—
Vested	—	—	—	—	—	—
Forfeited	—	—	—	—	—	—
Outstanding at End of Period	275,173	$ 15.65	4,876	$ 15.38	—	$ —

The expenses recorded for RSUs were $1 million and less than $0.1 million for the years ended December 31, 2019 and 2018, respectively. As of December 31, 2019, there was $4 million of unrecognized compensation cost related to unvested RSUs. This cost will be recognized over a weighted average period of less than two years. Restrictions on shares of RSUs outstanding lapse through 2023.

Note 18. Equity Compensation Plans - (continued)

Deferred Stock Units ("DSUs")

The following table summarizes the activities related to DSUs for the years ended December 31, 2019, 2018, and 2017.

Table 18.4 – Deferred Stock Units Activities

	Years Ended December 31,					
	2019		2018		2017	
	Units	Weighted Average Grant Date Fair Market Value	Units	Weighted Average Grant Date Fair Market Value	Units	Weighted Average Grant Date Fair Market Value
Outstanding at beginning of period	2,336,720	$ 15.58	1,878,491	$ 15.92	1,848,862	$ 16.46
Granted	733,096	16.06	670,254	15.53	565,921	16.01
Distributions	(419,113)	15.96	(212,025)	18.37	(504,417)	18.09
Forfeitures	(19,898)	15.96	—	—	(31,875)	14.80
Balance at End of Period	2,630,805	$ 15.66	2,336,720	$ 15.58	1,878,491	$ 15.92

We generally grant DSUs annually, as part of our compensation process. In addition, DSUs are granted from time to time in connection with hiring and promotions and in lieu of the payment in cash of a portion of annual bonus earned. At December 31, 2019 and 2018, the number of outstanding DSUs that were unvested was 1,344,743 and 1,155,098, respectively. The weighted average grant-date fair value of these unvested DSUs was $15.76 and $15.18 at December 31, 2019 and 2018, respectively. Unvested DSUs at December 31, 2019 will vest through 2023.

Expenses related to DSUs were $8 million, $8 million, and $6 million for the years ended December 31, 2019, 2018, and 2017, respectively. At December 31, 2019, there was $18 million of unrecognized compensation cost related to unvested DSUs. This cost will be recognized over a weighted average period of less than two years. At December 31, 2019 and 2018, the number of outstanding DSUs that had vested was 1,286,063 and 1,181,623, respectively.

Performance Stock Units ("PSUs")

At December 31, 2019 and December 31, 2018, the target number of PSUs that were unvested was 839,070 and 725,616, respectively. During 2019, 2018, and 2017, 307,938, 258,078, and 273,054 target number of PSUs were granted, respectively, with per unit grant date fair values of $17.13, $17.05, and $13.24, respectively. During the years ended December 31, 2019, 2018, and 2017, there were no PSUs forfeited due to employee departures.

With respect to 307,938 and 235,053 target number of PSUs granted in December 2019 and December 2018, respectively, the number of underlying shares of common stock that vest and that the recipient becomes entitled to receive at the time of vesting will generally range from 0% to 250% of the target number of PSUs granted, with the target number of PSUs granted being adjusted to reflect the value of any dividends declared on our common stock during the vesting period. Vesting of these PSUs will generally occur as of January 1, 2023 for the December 2019 awards and as of January 1, 2022 for the December 2018 awards. Vesting is based on a three-step process as described below.

- First, baseline vesting would range from 0% - 200% of the target number of PSUs granted based on the level of book value total stockholder return ("bvTSR") attained over the three-year vesting period, with 100% of the target number of PSUs vesting if three-year bvTSR is 25%. Book Value TSR is defined as the percentage by which our book value "per share price" has increased or decreased as of the last day of the three-year vesting period relative to the first day of such vesting period, adjusted to reflect the reinvestment of all dividends declared and/or paid on our common stock, compared to the bvTSR goal for the performance period.

Note 18. Equity Compensation Plans - (continued)

- Second, the vesting level would then be adjusted to increase or decrease by up to an additional 50 percentage points based on Redwood's relative total stockholder return ("rTSR") against a comparator group of companies measured over the three-year vesting period, with median rTSR performance correlating to no adjustment from the baseline level of vesting.

- Third, if the vesting level after steps one and two is greater than 100% of the target number of PSUs, but absolute total shareholder return ("TSR") is negative over the three-year performance period, vesting would be capped at 100% of target number of PSUs. TSR is defined as the percentage by which our common stock "per share price" has increased or decreased as of the last day of the three-year vesting period relative to the first day of such vesting period, adjusted to reflect the reinvestment of all dividends declared and/or paid on our common stock ("Three-Year TSR").

The grant date fair value of the December 2019 PSUs of $17.13 was determined through Monte-Carlo simulations using the following assumptions: the common stock closing price at the grant date for Redwood and each member of the comparator group, the average closing price of the common stock price for the 60 trading days prior to the grant date for Redwood and each member of the comparator group, and the range of performance-based vesting based on Absolute TSR over three years from the grant date. For the 2019 PSU grant, an implied volatility assumption of 15% (based on historical volatility), a risk-free rate of 1.68% (the three-year Treasury rate on the grant date), and a 0% dividend yield (the mathematical equivalent to reinvesting the dividends over the three-year performance period as is consistent with the terms of the PSUs) were used.

The grant date fair value of the December 2018 PSUs of $17.23 was determined through Monte-Carlo simulations using the following assumptions: the common stock closing price at the grant date for Redwood and each member of the comparator group, the average closing price of the common stock price for the 60 trading days prior to the grant date for Redwood and each member of the comparator group, and the range of performance-based vesting based on Absolute TSR over three years from the grant date. For the 2018 PSU grant, an implied volatility assumption of 22% (based on historical volatility), a risk-free rate of 2.78% (the three-year Treasury rate on the grant date), and a 0% dividend yield (the mathematical equivalent to reinvesting the dividends over the three-year performance period as is consistent with the terms of the PSUs) were used.

In May 2018, 23,025 target number of PSUs with a per unit grant date fair value of $15.20 were granted to two executives in connection with their promotions. The grant date fair values of these PSUs were determined through Monte-Carlo simulations using the following assumptions: our common stock closing price at the grant date, the average closing price of our common stock price for the 60 trading days prior to the grant date and the range of performance-based vesting based on Three-Year TSR and the performance-based vesting formula described below with respect to PSUs granted in December 2017. For this PSU grant, an implied volatility assumption of 27% (based on historical volatility), a risk-free rate of 2.71% (the three-year Treasury rate on the grant date), and a 0% dividend yield (the mathematical equivalent to reinvesting the dividends over the three-year performance period as is consistent with the terms of the PSUs) were used.

With respect to the PSUs granted in May 2018 and December 2017, vesting will generally occur at the end of three years from their grant date, with the level of vesting at that time contingent on the Three-Year TSR. The number of underlying shares of our common stock that will vest in future years will vary between 0% (if Three-Year TSR is zero or negative) and 200% (if Three-Year TSR is greater than or equal to 125%) of the target number of PSUs originally granted, adjusted upward (if vesting is greater than 0%) to reflect the value of dividends paid during the three-year vesting period.

The grant date fair values of 2017 PSUs were determined through Monte-Carlo simulations using the following assumptions: our common stock closing price at the grant date, the average closing price of our common stock price for the 60 trading days prior to the grant date and the range of performance-based vesting based on TSR over three years from the grant date. For the 2017 PSU grant, an implied volatility assumption of 27% (based on historical volatility), a risk-free rate of 1.90% (the three-year Treasury rate on the grant date), and a 0% dividend yield (the mathematical equivalent to reinvesting the dividends over the three-year performance period as is consistent with the terms of the PSUs) were used.

Note 18. Equity Compensation Plans - (continued)

With respect to the PSUs granted in 2016, the three-year performance period ended during the fourth quarter of 2019, resulting in the vesting of222,769 shares of our common stock. With respect to the PSUs granted in 2015, the three-year performance period ended during the fourth quarter of 2018, resulting in the vesting of 387,937 shares of our common stock. With respect to the PSUs granted in 2014, the three-year performance period ended during the fourth quarter of 2017, resulting in the vesting of zero shares of our underlying common stock.

Expenses related to PSUs were$3 million for each of the years endedDecember 31, 2019, 2018, and 2017. As of December 31, 2019, there was $9 million of unrecognized compensation cost related to unvested PSUs.

Employee Stock Purchase Plan ("ESPP")

The ESPP allows a maximum of 600,000 shares of common stock to be purchased in aggregate for all employees. As ofDecember 31, 2019, 430,772 shares had been purchased, respectively, and there remained a negligible amount of uninvested employee contributions in the ESPP at December 31, 2019.

The following table summarizes the activities related to the ESPP for the years endedDecember 31, 2019, 2018, and 2017.

Table 18.5 – Employee Stock Purchase Plan Activities

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Balance at beginning of period	$ 6	$ 4	$ 3
Employee purchases	524	375	305
Cost of common stock issued	(526)	(373)	(304)
Balance at End of Period	$ 4	$ 6	$ 4

Executive Deferred Compensation Plan

The following table summarizes the cash account activities related to the EDCP for the years endedDecember 31, 2019, 2018, and 2017.

Table 18.6 – EDCP Cash Accounts Activities

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Balance at beginning of period	$ 2,484	$ 2,171	$ 2,088
New deferrals	789	759	750
Accrued interest	68	82	58
Withdrawals	(887)	(528)	(725)
Balance at End of Period	$ 2,454	$ 2,484	$ 2,171

In 2018, our Board of Directors approved an amendment to the EDCP to increase by200,000 shares the shares available to allow non-employee directors to defer certain cash payments and dividends into DSUs.

Note 19. Mortgage Banking Activities

The following table presents the components of Mortgage banking activities, net, recorded in our consolidated statements of income for the years ended December 31, 2019, 2018, and 2017.

Table 19.1 – Mortgage Banking Activities

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Residential Mortgage Banking Activities, Net			
Changes in fair value of:			
Residential loans, at fair value (1)	$ 63,527	$ 21,808	$ 69,373
Risk management derivatives (2)	(17,519)	35,248	(17,529)
Other income (3)	1,735	2,567	2,064
Total residential mortgage banking activities, net	47,743	59,623	53,908
Business Purpose Mortgage Banking Activities, Net			
Changes in fair value of:			
Single-family rental loans, at fair value (1)	17,004	453	—
Risk management derivatives (2)	1,796	(510)	—
Residential bridge loans, at fair value	4,518	—	—
Other income (4)	16,205	—	—
Total business purpose mortgage banking activities, net	39,523	(57)	—
Mortgage Banking Activities, Net	$ 87,266	$ 59,566	$ 53,908

(1) For residential loans, includes changes in fair value for associated loan purchase and forward sale commitments. For single-family rental loans, includes changes in fair value for associated interest rate lock commitments.

(2) Represents market valuation changes of derivatives that were used to manage risks associated with our accumulation of loans.

(3) Amounts in this line item include other fee income from loan acquisitions and the provision for repurchases expense, presented net.

(4) Amounts in this line item include other fee income from loan originations.

Note 20. Investment Fair Value Changes

The following table presents the components of Investment fair value changes, net, recorded in our consolidated statements of income for the years ended December 31, 2019, 2018 and 2017.

Table 20.1 – Investment Fair Value Changes

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Investment Fair Value Changes, Net			
Changes in fair value of:			
Residential loans held-for-investment, at Redwood	$ 58,891	$ (29,573)	$ (5,765)
Single-family rental loans held-for-investment	272	—	—
Residential bridge loans held-for-investment	(2,139)	(29)	—
Trading securities	56,046	(8,055)	39,526
Servicer advance investments	3,001	(701)	—
Excess MSRs	(3,260)	1,823	—
Shared home appreciation options	842	—	—
REO	(1,045)	—	—
Net investments in Legacy Sequoia entities (1)	(1,545)	(1,016)	(8,027)
Net investments in Sequoia Choice entities (1)	6,947	443	(323)
Net investment in Freddie Mac SLST entities (1)	27,206	1,271	—
Net investments in Freddie Mac K-Series entities (1)	21,430	931	—
Net investments in CAFL entities (1)	(3,636)	—	—
Risk-sharing and other investments	(341)	(434)	(1,484)
Risk management derivatives, net	(127,169)	9,740	(12,842)
Valuation adjustments on commercial loans held-for-sale	—	—	300
Impairments on AFS securities	—	(89)	(1,011)
Investment Fair Value Changes, Net	$ 35,500	$ (25,689)	$ 10,374

(1) Includes changes in fair value of the loans held-for-investment, REO and the ABS issued at the entities, which netted together represent the change in value of our retained investments at the consolidated VIEs.

Note 21. Other Income

The following table presents the components of Other income recorded in our consolidated statements of income for theyears ended December 31, 2019, 2018 and 2017.

Table 21.1 – Other Income

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
MSR income, net	$ 3,521	$ 7,076	$ 7,860
Risk share income	3,522	3,613	3,194
FHLBC capital stock dividend	2,169	1,763	1,382
Equity investment income	1,405	618	—
5 Arches loan administration fee income	4,400	—	—
Gain on re-measurement of investment in 5 Arches	2,441	—	—
Other	1,799	—	—
Other Income	$ 19,257	$ 13,070	$ 12,436

Note 22. General and Administrative Expenses and Other Expenses

Components of our general and administrative, and other expenses for the years ended December 31, 2019, 2018 and 2017 are presented in the following table.

Table 22.1 – Components of General and Administrative Expenses and Other Expenses

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
General and Administrative Expenses			
Fixed compensation expense	$ 39,747	$ 24,445	$ 22,111
Variable compensation expense (1)	25,069	14,589	20,574
Equity compensation expense	13,402	12,388	10,141
Acquisition-related equity compensation expense (2)	1,010	—	—
Systems and consulting	10,746	7,451	7,073
Loan acquisition costs (3)	7,031	7,697	5,022
Office costs	6,310	4,705	4,248
Accounting and legal	5,450	5,529	2,842
Corporate costs	2,351	1,955	1,856
Other	7,556	4,023	3,289
Total General and Administrative Expenses	118,672	82,782	77,156
Other Expenses			
Amortization of purchase-related intangible assets (4)	8,699	177	—
Contingent consideration expense (4)	3,217	—	—
Other	1,106	19	—
Total Other Expenses	13,022	196	—
Total General and Administrative Expenses and Other Expenses	$ 131,694	$ 82,978	$ 77,156

(1) Variable compensation expense in 2017 includes $2 million of costs associated with the hiring of a new executive officer.

(2) Acquisition-related equity compensation expense relates to 588,260 shares of restricted stock that were issued to members of CoreVest management as a component of the consideration paid to them for our purchase of their interests in CoreVest. The grant date fair value of these restricted stock awards was $10 million, which will be recognized as compensation expense over the two-year vesting period on a straight-line basis in accordance with GAAP.

(3) Loan acquisition costs primarily includes underwriting and due diligence costs related to the acquisition of residential loans held-for-sale at fair value.

(4) Contingent consideration expense relates to the acquisition of 5 Arches during 2019. Refer to *Note 2* for additional detail.

Note 23. Taxes

Components of our net deferred tax assets atDecember 31, 2019 and December 31, 2018 are presented in the following table.

Table 23.1 – Deferred Tax Assets (Liabilities)

(In Thousands)	December 31, 2019	December 31, 2018
Deferred Tax Assets		
Net operating loss carryforward – state	$ 98,554	$ 103,858
Net operating loss carryforward – federal	82	—
Real estate assets	676	2,400
Interest rate agreements	—	2,320
Allowances and accruals	1,930	1,830
Goodwill and intangible assets	2,739	—
Other	1,749	1,586
Total Deferred Tax Assets	105,730	111,994
Deferred Tax Liabilities		
Mortgage Servicing Rights	(13,783)	(20,068)
Interest rate agreements	(42)	—
Total Deferred Tax Liabilities	(13,825)	(20,068)
Valuation allowance	(97,057)	(100,948)
Total Deferred Tax Asset (Liability), net of Valuation Allowance	$ (5,152)	$ (9,022)

The deferred tax assets and liabilities reported above, with the exception of the state net operating loss ("NOL") and capital loss carryforwards, relate solely to our TRS. For state purposes, the REIT files a unitary combined return with its TRS. Because the REIT may have state taxable income apportioned to it from the activity of its TRS, we report the entire combined unitary state NOL and capital loss carryforwards as deferred tax assets, including the carryforwards allocated to the REIT.

Realization of our deferred tax assets ("DTAs") atDecember 31, 2019, is dependent on many factors, including generating sufficient taxable income prior to the expiration of NOL carryforwards and generating sufficient capital gains in future periods prior to the expiration of capital loss carryforwards. We determine the extent to which realization of the deferred assets is not assured and establish a valuation allowance accordingly.

As a result of GAAP income generated at our TRS in2019 and 2018, we are reporting net federal ordinary and capital deferred tax liabilities ("DTLs") at December 31, 2019 and December 31, 2018 and consequently no valuation allowance was recorded against any federal DTA in either of these periods. Consistent with prior periods, at December 31, 2019, we continued to maintain a valuation allowance against our net state DTAs as we remain uncertain about our ability to generate sufficient income in future periods needed to utilize net state DTAs beyond the reversal of our state DTLs.

Our estimate of net deferred tax assets could change in future periods to the extent that actual or revised estimates of future taxable income during the carryforward periods change from current expectations. We assessed our tax positions for all open tax years (i.e., Federal, 2016 to 2019, and State, 2015 to 2019) and, at December 31, 2019 and December 31, 2018, concluded that we had no uncertain tax positions that resulted in material unrecognized tax benefits.

Note 23. Taxes (continued)

At December 31, 2019, our federal NOL carryforward at the REIT was$28 million, which will expire in2029. In order to utilize NOLs at the REIT, taxable income must exceed dividend distributions. At December 31, 2019, our taxable REIT subsidiaries had $0.4 million of federal NOLs, which will carry forward indefinitely. Redwood and its taxable subsidiaries accumulated an estimated state NOL of $1.15 billion at December 31, 2019. These NOLs expire beginning in2029. If certain substantial changes in the Company's ownership occur, there could be an annual limitation on the amount of the carryforwards that can be utilized.

The following table summarizes the provision for income taxes for the years endedDecember 31, 2019, 2018, and 2017.

Table 23.2 – Provision for Income Taxes

	Years Ended December 31,		
(In Thousands)	**2019**	**2018**	**2017**
Current Provision for Income Taxes			
Federal	$ 12,036	$ 11,387	$ 512
State	897	820	361
Total Current Provision for Income Taxes	12,933	12,207	873
Deferred (Benefit) Provision for Income Taxes			
Federal	(3,976)	(1,419)	10,991
State	(1,517)	300	(112)
Total Deferred (Benefit) Provision for Income Taxes	(5,493)	(1,119)	10,879
Total Provision for Income Taxes	$ 7,440	$ 11,088	$ 11,752

The following is a reconciliation of the statutory federal and state tax rates to our effective tax rate atDecember 31, 2019, 2018, and 2017.

Table 23.3 – Reconciliation of Statutory Tax Rate to Effective Tax Rate

	December 31, 2019	**December 31, 2018**	**December 31, 2017**
Federal statutory rate	21.0 %	21.0 %	34.0 %
State statutory rate, net of Federal tax effect	8.6 %	8.6 %	7.2 %
Differences in taxable (loss) income from GAAP income	(2.1)%	(1.7)%	(3.9)%
Change in valuation allowance	(2.2)%	1.9 %	(1.0)%
Dividends paid deduction	(21.1)%	(21.3)%	(23.4)%
Federal statutory rate change	— %	— %	(5.2)%
Effective Tax Rate	4.2 %	8.5 %	7.7 %

We believe that we have met all requirements for qualification as a REIT for federal income tax purposes. Many requirements for qualification as a REIT are complex and require analysis of particular facts and circumstances. Often there is only limited judicial or administrative interpretive guidance and as such there can be no assurance that the Internal Revenue Service or courts would agree with our various tax positions. If we did not meet the requirements for statutory relief, we could be subject to a 100% prohibited transaction tax for certain transactions, be required to distribute additional dividends, or be subject to federal corporate income tax on our taxable income. We could also potentially lose our REIT status. Any of these outcomes could have a material adverse impact on our consolidated financial statements.

Note 24. Segment Information

Redwood operates in four segments: Residential Lending, Business Purpose Lending, Multifamily Investments, and Third-Party Residential Investments. Beginning in the fourth quarter of 2019, we reorganized our segments to align with changes in how we view our business for making operating decisions and assessing performance, and conformed the presentation of prior periods. The accounting policies of the reportable segments are the same as those described in *Note 3 — Summary of Significant Accounting Policies*. For a full description of our segments, see Item 1—*Business* in this Annual Report on Form 10-K.

Segment contribution represents the measure of profit that management uses to assess the performance of our business segments and make resource allocation and operating decisions. Certain corporate expenses not directly assigned or allocated to one of our four segments, as well as activity from certain consolidated Sequoia entities, are included in the Corporate/Other column as reconciling items to our consolidated financial statements. These unallocated corporate expenses primarily include indirect general and administrative expenses and other expense.

The following tables present financial information by segment for the years ended December 31, 2019, 2018, and 2017.

Table 24.1 – Business Segment Financial Information

	Year Ended December 31, 2019					
(In Thousands)	**Residential Lending**	**Business Purpose Lending**	**Multifamily Investments**	**Third-Party Residential Investments**	**Corporate/ Other**	**Total**
Interest income	$ 268,559	$ 54,372	$ 161,692	$ 120,009	$ 17,649	$ 622,281
Interest expense	(192,359)	(35,663)	(151,980)	(85,388)	(14,418)	(479,808)
Net interest income	76,200	18,709	9,712	34,621	3,231	142,473
Non-interest income						
Mortgage banking activities, net	47,743	39,523	—	—	—	87,266
Investment fair value changes, net	(27,920)	(6,722)	27,097	44,662	(1,617)	35,500
Other income	9,210	5,852	1,484	—	2,711	19,257
Realized gains, net	8,292	—	134	15,395	—	23,821
Total non-interest income, net	37,325	38,653	28,715	60,057	1,094	165,844
General and administrative expenses	(30,671)	(30,655)	(1,498)	(2,843)	(53,005)	(118,672)
Other expenses	—	(8,521)	—	(1,106)	(3,395)	(13,022)
Provision for income taxes	(4,074)	(947)	(11)	(2,408)	—	(7,440)
Segment Contribution	$ 78,780	$ 17,239	$ 36,918	$ 88,321	$ (52,075)	
Net Income						$ 169,183
Non-cash amortization income (expense), net	$ 3,669	$ (9,173)	$ (1)	$ 6,957	$ (4,813)	$ (3,361)

Note 24. Segment Information (continued)

	Year Ended December 31, 2018					
(In Thousands)	**Residential Lending**	**Business Purpose Lending**	**Multifamily Investments**	**Third-Party Residential Investments**	**Corporate/ Other**	**Total**
Interest income	$ 245,124	$ 4,588	$ 40,050	$ 68,919	$ 20,036	$ 378,717
Interest expense	(158,498)	(2,252)	(34,324)	(27,446)	(16,519)	(239,039)
Net interest income	86,626	2,336	5,726	41,473	3,517	139,678
Non-interest income						
Mortgage banking activities, net	59,623	(57)	—	—	—	59,566
Investment fair value changes, net	(21,686)	(29)	3,979	(6,957)	(996)	(25,689)
Other income	12,452	—	—	—	618	13,070
Realized gains, net	7,709	—	—	19,332	—	27,041
Total non-interest income (loss), net	58,098	(86)	3,979	12,375	(378)	73,988
General and administrative expenses	(32,139)	(2,597)	(869)	(2,855)	(44,322)	(82,782)
Other expenses	—	—	—	(18)	(178)	(196)
Provision for income taxes	(8,033)	—	(16)	(3,039)	—	(11,088)
Segment Contribution	$ 104,552	$ (347)	$ 8,820	$ 47,936	$ (41,361)	
Net Income						$ 119,600
Non-cash amortization income (expense), net	$ 4,486	$ (290)	$ (1)	$ 12,295	$ (4,111)	$ 12,379

	Year Ended December 31, 2017					
(In Thousands)	**Residential Lending**	**Business Purpose Lending**	**Multifamily Investments**	**Third-Party Residential Investments**	**Corporate/ Other**	**Total**
Interest income	$ 158,819	$ —	$ 9,170	$ 60,661	$ 19,407	$ 248,057
Interest expense	(66,364)	—	(6,107)	(21,512)	(14,833)	(108,816)
Net interest income	92,455	—	3,063	39,149	4,574	139,241
Non-interest income						
Mortgage banking activities, net	53,908	—	—	—	—	53,908
Investment fair value changes, net	(25,466)	—	16,196	27,684	(8,040)	10,374
Other income	12,436	—	—	—	—	12,436
Realized gains, net	3,907	—	—	10,200	(752)	13,355
Total non-interest income (loss), net	44,785	—	16,196	37,884	(8,792)	90,073
General and administrative expenses	(28,622)	—	(425)	(2,028)	(46,081)	(77,156)
Provision for income taxes	(6,641)	—	(238)	(4,873)	—	(11,752)
Segment Contribution	$ 101,977	$ —	$ 18,596	$ 70,132	$ (50,299)	
Net Income						$ 140,406
Non-cash amortization income (expense), net	$ 4,946	$ —	$ (1)	$ 15,927	$ (3,410)	$ 17,462

Note 24. Segment Information (continued)

The following table presents the components of Corporate/Other for the years endedDecember 31, 2019, 2018, and 2017.

Table 24.2 – Components of Corporate/Other

	Years Ended December 31,								
	2019			2018			2017		
(In Thousands)	Legacy Consolidated VIEs (1)	Other	Total	Legacy Consolidated VIEs (1)	Other	Total	Legacy Consolidated VIEs (1)	Other	Total
Interest income	$ 17,649	$ —	$ 17,649	$ 20,036	$ —	$ 20,036	$ 19,407	$ —	$ 19,407
Interest expense	(14,418)	—	(14,418)	(16,519)	—	(16,519)	(14,789)	(44)	(14,833)
Net interest income (loss)	3,231	—	3,231	3,517	—	3,517	4,618	(44)	4,574
Non-interest income									
Investment fair value changes, net	(1,545)	(72)	(1,617)	(1,016)	20	(996)	(8,027)	(13)	(8,040)
Other income	—	2,711	2,711	—	618	618	—	—	—
Realized gains, net	—	—	—	—	—	—	—	(752)	(752)
Total non-interest (loss) income, net	(1,545)	2,639	1,094	(1,016)	638	(378)	(8,027)	(765)	(8,792)
General and administrative expenses	—	(53,005)	(53,005)	—	(44,322)	(44,322)	—	(46,081)	(46,081)
Other expenses	—	(3,395)	(3,395)	—	(178)	(178)	—	—	—
Total	$ 1,686	$ (53,761)	$ (52,075)	$ 2,501	$ (43,862)	$ (41,361)	$ (3,409)	$ (46,890)	$ (50,299)

(1) Legacy consolidated VIEs represent Legacy Sequoia entities that are consolidated for GAAP financial reporting purposes. See *Note 4* for further discussion on VIEs.

The following table presents supplemental information by segment atDecember 31, 2019 and December 31, 2018.

Table 24.3 – Supplemental Segment Information

(In Thousands)	Residential Lending	Business Purpose Lending	Multifamily Investments	Third-Party Residential Investments	Corporate/ Other	Total
December 31, 2019						
Residential loans	$ 4,939,745	$ —	$ —	$ 2,367,215	$ 407,890	$ 7,714,850
Business purpose residential loans	—	3,506,743	—	—	—	3,506,743
Multifamily loans	—	—	4,408,524	—	—	4,408,524
Real estate securities	229,074	—	404,128	466,672	—	1,099,874
Other investments	42,224	21,002	61,018	233,886	—	358,130
Goodwill and intangible assets	—	161,464	—	—	—	161,464
Total assets	5,410,540	3,786,641	4,889,330	3,139,616	769,313	17,995,440
December 31, 2018						
Residential loans	$ 5,512,116	$ —	$ —	$ 1,222,668	$ 519,958	$ 7,254,742
Business purpose residential loans	—	141,258	—	—	—	141,258
Multifamily loans	—	—	2,144,598	—	—	2,144,598
Real estate securities	364,308	—	429,079	659,107	—	1,452,494
Other investments	99,984	10,754	15,092	312,688	—	438,518
Total assets	6,186,889	160,950	2,600,150	2,232,276	757,141	11,937,406

Note 25. Quarterly Financial Data - Unaudited

	Three Months Ended							
(In Thousands, except Share Data)		**December 31,**		**September 30,**		**June 30,**		**March 31,**
2019								
Operating results:								
Interest income	$	192,581	$	150,117	$	148,542	$	131,041
Interest expense		(147,708)		(116,604)		(116,220)		(99,276)
Net interest income		44,873		33,513		32,322		31,765
Non-interest income		58,052		30,029		29,984		47,779
General and administrative, and other expenses		(49,444)		(29,346)		(28,707)		(24,197)
Net income		49,143		34,310		31,266		54,464
Per share data:								
Net income – basic	$	0.42	$	0.33	$	0.31	$	0.57
Net income – diluted		0.38		0.31		0.30		0.49
Regular dividends declared per common share		0.30		0.30		0.30		0.30
2018								
Operating results:								
Interest income	$	119,725	$	99,397	$	82,976	$	76,619
Interest expense		(84,961)		(64,351)		(48,213)		(41,514)
Net interest income		34,764		35,046		34,763		35,105
Non-interest income		(17,538)		32,327		19,527		39,672
General, administrative, and other expenses		(19,378)		(21,561)		(19,009)		(23,030)
Net (loss) income		(913)		40,921		32,747		46,845
Per share data:								
Net (loss) income – basic	$	(0.02)	$	0.49	$	0.42	$	0.60
Net (loss) income – diluted		(0.02)		0.42		0.38		0.50
Regular dividends declared per common share		0.30		0.30		0.30		0.28

REDWOOD TRUST, INC. AND SUBSIDIARIES

SCHEDULE IV - MORTGAGE LOANS ON REAL ESTATE
December 31, 2019

(In Thousands)

Description	Number of Loans	Interest Rate	Maturity Date	Carrying Amount	Principal Amount Subject to Delinquent Principal or Interest
Residential Loans Held-for-Investment					
At Redwood (1):					
Hybrid ARM loans	299	2.875% to 6.00%	2041-01 - 2048-09	$ 232,581	$ 971
Fixed loans	2,641	2.75% to 6.75%	2026-01 - 2049-05	1,879,316	614
At Legacy Sequoia (2):					
ARM loans	2,186	1.25% to 6.00%	2020-01 - 2036-05	402,837	9,803
Hybrid ARM loans	12	3.63% to 5.13%	2033-07 - 2034-06	5,053	—
At Sequoia Choice (2):					
Fixed loans	3,156	2.75% to 6.75%	2035-04 - 2049-09	2,291,463	6,756
At Freddie Mac SLST (3):					
Fixed loans	14,502	2.00% to 11.00%	2019-11 - 2059-10	2,367,215	135,175
Total Residential Loans Held-for-Investment				$ 7,178,465	$ 153,319
Residential Loans Held-for-Sale (4):					
ARM loans	2	3.38% to 3.50%	2032-11 - 2032-11	$ 105	$ —
Hybrid ARM loans	115	3.00% to 7.00%	2047-04 - 2049-12	93,755	—
Fixed loans	554	3.20% to 7.13%	2034-05 - 2050-01	442,525	747
Total Residential Loans Held-for-Sale				$ 536,385	$ 747
Single-Family Rental Loans Held-for-Sale (4):					
Fixed loans	201	4.35% to 7.63%	2024-01 - 2050-01	$ 331,565	$ 1,818
Total Single-Family Rental Loans Held-for-Sale				$ 331,565	$ 1,818
Single-Family Rental Loans Held-for-Investment:					
At Redwood (1):					
Fixed loans	107	3.93% to 7.47%	2023-09 - 2030-01	$ 237,620	$ —
At CAFL (2):					
Fixed loans	783	4.31% to 7.57%	2019-11 - 2029-11	2,192,552	29,039
Total Single-Family Rental Loans Held-for-Investment				$ 2,430,172	$ 29,039
Residential Bridge Loans Held-for-Investment (1):					
Fixed loans	2,653	5.79% to 13.00%	2018-10 - 2022-01	$ 745,006	$ 8,989
Total Residential Bridge Loans Held-for-Investment				$ 745,006	$ 8,989
Multifamily Loans Held-for-Investment (3):					
At Freddie Mac K-Series:					
Fixed loans	279	3.29% to 4.94%	2023-02 - 2029-10	$ 4,408,524	$ —
Total Multifamily Loans Held-for-Investment				$ 4,408,524	$ —

(1) For our held-for-investment residential, single-family rental, and residential bridge loans at Redwood, the aggregate tax basis for Federal income tax purposes at December 31, 2019 was $2.07 billion, $238 million, and $746 million, respectively.

(2) For our held-for-investment loans at consolidated Legacy Sequoia, Sequoia Choice, and CAFL entities, the aggregate tax basis for Federal income tax purposes at December 31, 2019 was zero, as the transfers of these loans into securitizations were treated as sales for tax purposes.

(3) Our held-for-investment loans at Freddie Mac SLST and Freddie Mac K-Series entities were consolidated for GAAP purposes. For tax purposes, we acquired real estate securities issued by these entities and therefore, the tax basis in these loans was zero at December 31, 2019.

(4) The aggregate tax basis for Federal income tax purposes of our mortgage loans held at Redwood approximates the carrying values, as disclosed in the schedule.

REDWOOD TRUST, INC. AND SUBSIDIARIES

NOTE TO SCHEDULE IV - RECONCILIATION OF MORTGAGE LOANS ON REAL ESTATE
December 31, 2019

The following table summarizes the changes in the carrying amount of mortgage loans on real estate during the years ended December 31, 2019, 2018, and 2017.

	Years Ended December 31,		
(In Thousands)	2019	2018	2017
Balance at beginning of period	$ 9,540,598	$ 5,115,210	$ 3,890,751
Additions during period:			
Originations/acquisitions	12,911,261	10,607,896	5,741,427
Deductions during period:			
Sales	(5,218,797)	(5,426,304)	(3,982,683)
Principal repayments	(1,851,278)	(843,984)	(576,620)
Transfers to REO	(7,552)	(4,104)	(4,219)
Changes in fair value, net	255,885	91,884	46,554
Balance at end of period	$ 15,630,117	$ 9,540,598	$ 5,115,210

EXHIBIT 4.1

DESCRIPTION OF REDWOOD TRUST, INC. COMMON STOCK

The following description of Redwood Trust, Inc.'s common stock is a summary and does not purport to be complete. This summary is subject to and qualified in its entirety by reference to applicable Maryland law and to the provisions of our Articles of Amendment and Restatement, including any amendments and articles supplementary (our "charter"), and our Amended and Restated Bylaws, as amended (our "bylaws"), each of which are incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this Exhibit 4.1 is a part. We encourage you to read our charter, bylaws and the applicable provisions of Maryland Law for additional information.

Common Stock

General

Our charter authorizes 270,000,000 shares of common stock, $0.01 par value per share.

Voting Rights

Subject to our charter restrictions on transfer of our stock, each outstanding share of common stock entitles the holder to one vote on all matters submitted to a vote of stockholders, including the election of directors. Except as provided with respect to any other class or series of stock, the holders of our common stock will possess the exclusive voting power. There is no cumulative voting in the election of directors, which means that the holders of a majority of the outstanding shares of common stock can elect all of the directors then standing for election, and the holders of the remaining shares will not be able to elect any directors.

Dividends

Holders of our common stock are entitled to receive dividends if, as, and when authorized by our board of directors and declared by us out of assets legally available for the payment of dividends.

Liquidation

Holders of our common stock are entitled to share ratably in our assets legally available for distribution to our stockholders in the event of our liquidation, dissolution, or winding up, after payment of or adequate provision for all of our known debts and liabilities. These rights are subject to the preferential rights of any other class or series of our stock and to the provisions of our charter regarding restrictions on transfer of our stock.

Rights and Preferences

Holders of our common stock have no preference, conversion, exchange, sinking fund, redemption, or, if listed on a national securities exchange, appraisal rights and have no preemptive rights to subscribe for any of our securities. Subject to our charter restrictions on transfer of our stock, all shares of common stock will have equal dividend, liquidation, and other rights.

Fully Paid and Nonassesable

All outstanding shares of our common stock are fully paid and nonassessable.

Power to Reclassify Shares of Our Stock; Issuance of Additional Shares

Our charter authorizes our board of directors to classify and reclassify from time to time any unissued shares of our stock into other classes or series of stock, including preferred stock, and to cause the issuance of such shares. Prior to issuance of shares of each class or series, the board of directors is required by Maryland law and by our charter to set, subject to our charter restrictions on transfer of our stock, the terms, preferences, conversion or other rights, voting powers, restrictions, limitations as to dividends or other distributions, qualifications and terms and conditions of redemption for each class or series. We believe that the power to issue additional shares of common stock or preferred stock and to classify or reclassify unissued shares of common or preferred stock and thereafter to issue the classified or reclassified shares provides us with increased flexibility in structuring possible future financings and acquisitions and in meeting other needs which might arise. These actions can be taken without stockholder approval, unless stockholder approval is required by applicable law or the rules of any stock exchange or automated quotation system on which our securities may be listed or traded. Although we have no present intention of doing so, we could issue a class or series of stock that could delay, defer, or prevent a transaction or a change in control of Redwood Trust that might involve a premium price for holders of common stock or otherwise be in their best interest. We have no shares of preferred stock presently outstanding.

Restrictions on Ownership and Transfer and Repurchase of Shares

In order that we may meet the requirements for qualification as a real estate investment trust ("REIT") for U.S. federal income tax purposes at all times, among other purposes, our charter prohibits any person from acquiring or holding beneficial ownership of shares of our common stock or preferred stock, or collectively, capital stock, in excess of 9.8%, in number of shares or value, of the outstanding shares of the related class of capital stock. For this purpose, the term "beneficial ownership" means beneficial ownership, as determined under Rule 13d-3 under the U.S. Securities Exchange Act of 1934, as amended ("Exchange Act"), of capital stock by a person, either directly or constructively, including through application of the constructive ownership provisions of Section 544 of the Internal Revenue Code of 1986, as amended (the "Code") and related provisions.

Under the constructive ownership rules of Section 544 of the Code, a holder of a warrant generally will be treated as owning the number of shares of capital stock into which such warrant may be converted. In addition, the constructive ownership rules generally attribute ownership of securities owned by a corporation, partnership, estate, or trust proportionately to its stockholders, partners, or beneficiaries, respectively. The rules may also attribute ownership of securities owned by family members to other members of the same family and may treat an option to purchase securities as actual ownership of the underlying securities by the optionholder. The rules further provide when securities constructively owned by a person will be considered to be actually owned for the further application of such attribution provisions. To determine whether a person holds or would hold capital stock in excess of the 9.8% ownership limit, a person will be treated as owning not only shares of capital stock actually owned, but also any shares of capital stock attributed to that person under the attribution rules described above. Accordingly, a person who directly owns less than 9.8% of the shares outstanding may nevertheless be in violation of the 9.8% ownership limit.

Any acquisition or transfer of shares of capital stock or warrants that would cause us to be disqualified as a REIT or that would create a direct or constructive ownership of shares of capital stock in excess of the 9.8% ownership limit, or result in the shares of capital stock being beneficially owned, within the meaning of Section 856(a) of the Code, by fewer than 100 persons, determined without any reference to any rules of attribution, or result in our being closely held within the meaning of Section 856(h) of the Code, will be null and void, and the intended transferee will acquire no rights to those shares or warrants. These restrictions on transferability and ownership will not apply if our board of directors determines that it is no longer in our best interests to continue to qualify as a REIT.

If any purported transfer of shares of capital stock or warrants results in a purported transferee owning, directly or constructively, shares in excess of the 9.8% ownership limit due to the unenforceability of the transfer restrictions described above, the amount of shares causing the purported transferee to violate the 9.8% ownership limit will constitute excess securities. Excess securities will be transferred by operation of law to Redwood Trust as trustee for the exclusive benefit of the person or persons to whom the excess securities are ultimately transferred, until such time as the purported transferee retransfers the excess securities. While the excess securities are held in trust, a holder of such securities will not be entitled to vote or to share in any dividends or other distributions with respect to such securities and will not be entitled to exercise or convert such securities into shares of capital stock. Excess securities may be transferred by the purported transferee to any person (if such transfer would not result in excess securities) at a price not to exceed the price paid by the purported transferee (or, if no consideration was paid by the purported transferee, the Market Price (as defined in our charter) of the excess securities on the date of the purported transfer), at which point the excess securities will automatically be exchanged for the stock or warrants, as the case may be, to which the excess securities are attributable. If a purported transferee receives a higher price for designating an ultimate transferee, such purported transferee shall pay, or cause the ultimate transferee to pay, such excess to us. In addition, such excess securities held in trust are subject to purchase by us at a purchase price equal to the lesser of (a) the price per share or per warrant, as the case may be, in the transaction that created such excess securities (or, in the case of a devise or gift, the Market Price at the time of such devise or gift), reduced by the amount of any distributions received in violation of the charter that have not been repaid to us, and (b) the Market Price on the date we elect to purchase the excess securities, reduced by the amount of any distributions received in violation of the charter that have not been repaid to us.

Upon a purported transfer of excess securities, the purported transferee shall cease to be entitled to distributions, voting rights, and other benefits with respect to the shares of capital stock or warrants except the right to payment of the purchase price for the shares of capital stock or warrants on the retransfer of securities as provided above. Any dividend or distribution paid to a purported transferee on excess securities prior to our discovery that shares of capital stock have been transferred in violation of our charter shall be repaid to us upon demand. If these transfer restrictions are determined to be void, invalid, or unenforceable by a court of competent jurisdiction, then the purported transferee of any excess securities may be deemed, at our option, to have acted as an agent on our behalf in acquiring the excess securities and to hold the excess securities on our behalf.

All certificates representing shares of capital stock and warrants will bear a legend referring to the restrictions described above.

Any person who acquires shares or warrants in violation of our charter, or any person who is a purported transferee such that excess securities result, must immediately give written notice or, in the event of a proposed or attempted transfer that would be void as set forth above, give at least 15 days prior written notice to us of such event and shall provide us such other information as we may request in order to determine the effect, if any, of the transfer on our status as a REIT. In addition, as required under the REIT provisions of the Code, every record owner of more than 5.0%, during any period in which the number of record stockholders is 2,000, or 1.0%, during any period in which the number of record stockholders is greater than 200 but less than 2,000, or 1/2%, during any period in which the number of record stockholders is 200 or less, of the number or value of our outstanding shares will receive a questionnaire from us by January 30 requesting information as to how the shares are held. In addition, our charter requires that such stockholders must provide written notice to us by 30 days after January 1 stating the name and address of the record stockholder, the number of shares beneficially owned and a description of how the shares are held. In practice, we have generally permitted our stockholders to comply with the foregoing charter requirement by responding to our annual REIT questionnaire. Further, each stockholder upon demand is required to disclose to us in writing such information with respect to the direct and constructive ownership of shares and warrants as our board of directors deems reasonably necessary to comply with the REIT provisions of the Code, to comply with the requirements of any taxing authority or governmental agency or to determine any such compliance.

Our board of directors may increase or decrease the 9.8% ownership limit. In addition, to the extent consistent with the REIT provisions of the Code, our board of directors may, pursuant to our charter, waive the 9.8% ownership limit for a purchaser of our stock. As a condition to such waiver the intended transferee must give written notice to the board of directors of the proposed transfer no later than the fifteenth day prior to any transfer which, if consummated, would result in the intended transferee owning shares in excess of the ownership limit. Our board of directors may also take such other action as it deems necessary or advisable to protect our status as a REIT. Pursuant to our charter, our board of directors has, from time to time, waived the ownership limit for certain of our stockholders.

The provisions described above may inhibit market activity and the resulting opportunity for the holders of our capital stock and warrants to receive a premium for their shares or warrants that might otherwise exist in the absence of such provisions. Such provisions also may make us an unsuitable investment vehicle for any person seeking to obtain ownership of more than 9.8% of the outstanding shares of our capital stock.

Transfer Agent, Registrar, and Dividend Disbursing Agent

The transfer agent and registrar for our common stock is currently Computershare Trust Company, N.A. and its affiliate, Computershare Inc., acts as dividend disbursing agent.

Listing

Our common stock is listed on the New York Stock Exchange under the symbol "RWT."

Certain Provisions of the Maryland Law and of Our Charter and Bylaws

Maryland Business Combination Act

Under the Maryland Business Combination Act, "business combinations" between a Maryland corporation and an interested stockholder or an affiliate of an interested stockholder, as such terms are defined in the Act, are prohibited for five years after the most recent date on which the interested stockholder becomes an interested stockholder. These business combinations include a merger, consolidation, share exchange, or, in circumstances specified in the statute, an asset transfer or issuance or reclassification of equity securities. The statute permits various exemptions from its provisions, including business combinations that are exempted by provision in the charter of the corporation. Our charter provides that we elect not to be governed by the provisions of the Maryland Business Combination Act.

Maryland Control Share Acquisition Act

The Maryland Control Share Acquisition Act causes persons who acquire beneficial ownership of stock at levels of 10%, 33%, and more than 50% (control share acquisitions) to lose the voting rights of such stock unless voting rights are restored by the stockholders at a meeting by vote of two-thirds of all the votes entitled to be cast on the matter (excluding stock held by the acquiring stockholder or the corporation's officers or employee directors). The Maryland Control Share Acquisition Act affords a cash-out election for stockholders other than the acquiring stockholder, at an appraised value (but not less than the highest price per share paid by the acquiring person in the control share acquisition), payable by the corporation, if voting rights for more than 50% of the outstanding stock are approved for the acquiring person. Under certain circumstances, the corporation may redeem shares acquired in a control share acquisition if voting rights for such shares have not been approved. The statute does not apply (a) to shares acquired in a merger, consolidation, or share exchange if the corporation is a party to the transaction or (b) to acquisitions approved or exempted by the charter or bylaws of the corporation. Our bylaws contain a provision exempting from the Maryland Control Share Acquisition Act acquisitions of our common stock by any person pursuant to a waiver from the ownership limit in our charter granted to such person by our board of directors.

The Maryland Control Share Acquisition Act could have the effect of discouraging offers to acquire us and of increasing the difficulty of consummating any such offers.

Board of Directors, Vacancies, and Removal of Directors

All directors are elected annually to serve until the next annual meeting of stockholders and until their respective successors are duly elected and qualify.

Pursuant to our election to be subject to certain provisions of the Maryland General Corporation Law, any vacancy on our board of directors may be filled only by the affirmative vote of a majority of the remaining directors in office, even if the remaining directors do not constitute a quorum, and any director elected to fill a vacancy shall serve for the remainder of the full term of the directorship in which such vacancy occurred and until a successor is elected and qualifies. A director may be removed with or without cause by the affirmative vote of a majority of all the votes entitled to be cast generally for the election of directors.

Charter Amendments and Extraordinary Corporate Actions

Under Maryland law, a Maryland corporation generally cannot dissolve, amend its charter, merge, sell all or substantially all of its assets, engage in a share exchange, convert or engage in similar transactions outside the ordinary course of business, unless approved by the affirmative vote of stockholders entitled to cast at least two-thirds of the votes entitled to be cast on the matter. However, a Maryland corporation may provide in its charter for approval of these matters by a lesser percentage, but not less than a majority of all of the votes entitled to be cast on the matter. Our charter provides for approval of these matters by the affirmative vote of the holders of a majority of the total number of shares entitled to vote on the matter.

Advance Notice of Director Nominations and New Business

Our bylaws provide that with respect to an annual meeting of stockholders, nominations of individuals for election to the board of directors and the proposal of business to be considered by stockholders may be made only (i) pursuant to our notice of the meeting, (ii) by the board of directors or (iii) by a stockholder who is entitled to vote at the meeting and who has complied with the advance notice procedures of our bylaws. With respect to special meetings of stockholders, only the business specified in our notice of the meeting may be brought before the meeting.

Exclusive Forum

Our bylaws provide that unless we consent in writing to the selection of an alternative forum, the Circuit Court for Baltimore City, Maryland, or if that court does not have jurisdiction, the United States District Court for the District of Maryland, Baltimore Division, will be the sole and exclusive forum for (a) any Internal Corporate Claim (as defined in the Maryland General Corporation Law), (b) any derivative action or proceeding brought on our behalf, (c) any action asserting a claim of breach of any duty owed by any director or officer or other employee of ours to us or our stockholders, (d) any action asserting a claim against us or any director or officer or other employee of ours arising pursuant to any provision of the Maryland General Corporation Law or our charter or our bylaws, or (e) any other action asserting a claim against us or any director or officer or other employee of ours that is governed by the internal affairs doctrine.

Subtitle 8

Title 3, Subtitle 8 of the MGCL permits a Maryland corporation with a class of equity securities registered under the Exchange Act and at least three independent directors to elect to be subject, by provision in its charter or bylaws or a resolution of its board of directors and notwithstanding any contrary provision in the charter or bylaws, to any of:

- a classified board of directors;

- a two-thirds vote requirement for removing a director;
- a requirement that the number of directors be fixed only by vote of the directors;
- a requirement that a vacancy on the board of directors be filled only by the remaining directors and for the remainder of the full term of the class of directors in which the vacancy occurred; or
- a majority requirement for the calling of a special meeting of stockholders.

Pursuant to Subtitle 8, we have elected to provide that vacancies on the board of directors may be filled only by the remaining directors and for the remainder of the full term of the directorship in which the vacancy occurred. Through provisions in our charter and bylaws unrelated to Subtitle 8, we already (a) vest in the board of directors the exclusive power to fix the number of directorships and (b) require, unless called by our chairman of the board, our president, the board of directors or a majority of independent directors, the request of holders of a majority of outstanding shares entitled to vote at the meeting to call a special meeting of stockholders.

Meetings of Stockholders

Under our current bylaws and pursuant to Maryland law, annual meetings of stockholders will be held each year at a date and at the time in the month of May determined by our board of directors. Special meetings of stockholders may be called by our board of directors, the chairman of the board of directors, our president or a majority of independent directors. Additionally, subject to the provisions of our bylaws, special meetings of the stockholders to act on any matter must be called by our secretary upon the written request of stockholders entitled to cast not less than a majority of all the votes entitled to be cast at such meeting who have requested the special meeting in accordance with the procedures set forth in, and provided the information and certifications required by, our bylaws. Only matters set forth in the notice of the special meeting may be considered and acted upon at such a meeting. Our secretary will inform the requesting stockholders of the reasonably estimated cost of preparing and delivering the notice of meeting (including our proxy materials), and the requesting stockholder or stockholders must pay such estimated cost before our secretary may prepare and deliver the notice of the special meeting.

THIRD Amendment to LEASE AGREEMENT

This Third Amendment to Lease Agreement (this "**Amendment**") is by and between **ARTIS HRA Inverness Point, LP**, a Delaware limited partnership ("**Landlord**"), and **Redwood Trust, Inc.**, a Maryland corporation ("**Tenant**"), and is dated as of January 22, 2020 (the "**Effective Date**").

Recitals

A. MG-Point, LLC, a Colorado limited liability company, predecessor-in-interest to Landlord, and Tenant are the parties to that certain Lease Agreement dated as of January 11, 2013, as amended by that certain First Amendment to Lease dated as of June 27, 2013, and as further amended by that certain Second Amendment to Lease dated as of June 23, 2014 (the "**Original Lease**," as amended hereby the "**Lease**").

B. Pursuant to the Lease, Tenant leases from Landlord the space known as Suite 425 in the building commonly known as "The Point at Inverness," located at 8310 South Valley Highway, Englewood, CO 80112 (that space, as more particularly defined in the Lease, the "**Original Premises**"). The Original Premises comprise 21,517 square feet of rentable area.

C. Landlord and Tenant wish to amend the Lease to extend the Term for a period of ten (10) years, expand and relocate the Original Premises, and to provide for certain related matters, as set forth in this Amendment.

Agreement

Therefore, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. **Incorporation of Recitals; Defined Terms**. The foregoing Recitals are incorporated herein as though fully set forth herein. Terms that are not defined in this Amendment but are defined in the Original Lease have the meanings given in the Original Lease. As used in this Amendment, the following terms have the meanings given below:

(a) "**Extension Commencement Date**" means the earlier of (a) the first day on which Tenant Substantially Completes (as hereinafter defined) the Initial Improvements (as hereinafter defined) and occupies the New Premises for the regular conduct of business; and (b) February 1, 2021 (the "**Scheduled Commencement Date**") provided that the Scheduled Commencement Date shall be subject to extension in accordance with Section 6(i) below.

(b) "**Extension Term**" means that period beginning on the Extension Commencement Date and ending on January 31, 2031.

(c) "**New Premises**" means the approximately 25,160 rentable square feet of space currently located in Suites 425 and 450, which shall be known as Suite 425 upon Substantial Completion of the Work, as depicted on Exhibit A.

(d) "**Substantial Completion**" means that the Work shall be completed substantially except for minor so-called punch list items or details of construction, decoration and mechanical adjustments that do not, individually or in the aggregate, interfere (beyond a *de minimis* extent) with Tenant's use or occupancy of the New Premises. "Substantially Complete" shall have a correlative meaning.

(e) “**Surrender Premises**” means the Original Premises, comprising approximately 21,517 rentable square feet of space.

(f) “**Surrender Premises Date**” shall mean no later than thirty (30) days following Substantial Completion of the Work (the date of actual surrender of the Surrender Premises being referred to herein as the “**Surrender Date**”).

2. **Amendment of Lease**. The Lease is hereby amended as follows:

(a) **New Premises**. On the Extension Commencement Date, the Premises (as defined in the Original Lease) shall relocate to the New Premises. From and after the Extension Commencement Date, the Lease is amended such that all references in the Lease to the Premises shall be deemed to refer to the New Premises only. Tenant and Landlord agree that the Building has been re-measured and the rentable square footage of the Building is hereby amended to be 190,334 rentable square feet. Landlord represents and warrants that the rentable square footage of the Building and the rentable square footage of the New Premises are measured in accordance with the Building Owners and Managers Association International Method of Measurement - ANSI/BOMA Z65.1 [2010].

(b) **Surrender Premises**. On or prior to the Surrender Premises Date, Tenant shall, at its sole cost and expense, relocate its fixtures, equipment, and personal property from the Surrender Premises to that portion of the New Premises as is available to Tenant on the Surrender Premises Date. Tenant shall vacate and deliver to Landlord exclusive possession of the Surrender Premises in good order and condition, as required in the Original Lease and herein, not later than the Surrender Premises Date; provided, however, that, notwithstanding anything to the contrary contained in the Original Lease, Tenant shall not be required to remove any Alterations (excluding cabling, which Tenant shall remove on or prior to the Surrender Date) and related equipment (excluding cabling) within the Surrender Premises or to otherwise restore the Surrender Premises to its prior condition.

(i) All of the terms, covenants, agreements, and conditions of the Lease shall remain in full force and effect with respect to the Surrender Premises through the Surrender Date. Tenant shall continue to pay all monetary obligations, including, without limitation, Base Rent, Tenant’s Pro Rata Share of Operating Expenses, and any other rent and charges as they may become due and payable under the Lease applicable to the Surrender Premise through and including the Surrender Date. As of 11:59 p.m. on the Surrender Date, the surrender of the Surrender Premises shall be deemed effective and the monetary obligations with respect to the Surrender Premises shall be prorated, billed, and payable in the manner provided in the Lease, in the same manner as would apply if the term of the Lease expired on the Surrender Date with respect to the Surrender Premises.

(ii) From and after the Surrender Date, the Lease shall continue in full force and effect for the remainder of the Term, as extended by this Amendment, upon and subject to the terms and provisions of the Lease, including, without limitation, the following modifications of the Lease: The Surrender Premises shall cease to be a part of the Lease and Tenant shall have no right to possession or use of the Surrender Premises or any options or other rights with respect to the Surrender Premises without written consent from Landlord.

(iii) Notwithstanding any provision of this Amendment to the contrary, neither this Amendment nor the acceptance by Landlord of the Surrender Premises shall in any way either (1) be deemed to or release Tenant from any obligation or liability with respect to the Surrender Premises (including, without limitation, any obligation or liability under provisions of the Lease to indemnify, defend and hold harmless Landlord or other parties, or with respect to any breach or breaches of the Lease) which obligation or liability (A) first arises or relates to a date on or prior to the date on which Tenant delivers to Landlord possession of the Surrender Premises in the condition required set forth herein or (B) arises out of or is incurred in connection with events or other matters which took place on or prior to such date; or (2) affect any obligation under the Lease which by its terms is to survive the expiration or sooner termination of the Lease.

(c) **Extension of Term**. The Term of the Lease is hereby extended by the Extension Term and the Expiration Date provided in Section 1.3 of the Original Lease is amended to be January 31, 2031.

(d) **Operating Expenses**. Effective beginning on the Extension Commencement Date, Tenant shall be responsible for its Pro Rata Share of Operating Expenses for the New Premises, which shall be 13.22%. Notwithstanding anything to the contrary contained herein, if the Extension Commencement Date occurs prior to February 1, 2021, Tenant shall (i) continue to pay its Pro Rata Share of Operating Expenses as set forth in the Original Lease on the Original Premises and (ii) an additional pro rata share of Operating Expenses based on any portion of the New Premises which Tenant is occupying as of the Extension Commencement Date, through January 31, 2021. Operating Expenses for 2019 are estimated to be $11.61 per rentable square foot.

(e) **Base Rent**. Effective beginning on the Extension Commencement Date, the following schedule of Base Rent replaces the schedule provided in Section 1.4 of the Original Lease:

Period	**Annual Base Rent Rate (annual, per rsf)**	**Monthly Installment of Base Rent**
Extension Commencement Date - 04/30/2022*	$20.00	$41,933.33
05/01/2022 - 04/30/2023	$20.50	$42,981.67
05/01/2023 - 04/30/2024	$21.00	$44,030.00
05/01/2024 - 04/30/2025	$21.50	$45,078.33
05/01/2025 - 04/30/2026	$22.00	$46,126.67
05/01/2026 - 04/30/2027	$22.50	$47,175.00
05/01/2027 - 04/30/2028	$23.00	$48,223.33
05/01/2028 - 04/30/2029	$23.50	$49,271.67
05/01/2029 - 04/30/2030	$24.00	$50,320.00
05/01/2030 - 01/31/2031	$24.50	$51,368.33

*Base Rent and additional Rent for the New Premises will be abated from February 1, 2021, through April 30, 2021 ("**Abatement Period**") (subject to adjustment as provided for below in the event that the Extension Commencement Date occurs after February 1, 2021), in the total amount of $125,800.00 plus any additional Rent charges (the "**Abatement Amount**"), except that if an Event of Default (beyond any applicable notice and cure period(s)) occurs before the Extension Commencement Date, there will be no Abatement Period or abatement of the Abatement Amount and (b) if an Event of Default (beyond any applicable notice and cure period(s)) occurs after the Extension Commencement Date, Landlord may terminate any Abatement Period and Tenant shall repay the unamortized amount of the Abatement Amount (amortized on a straight-line basis over the Extension Term) received by Tenant prior to the Event of Default.

Notwithstanding anything to the contrary contained herein, if the Extension Commencement Date occurs prior to February 1, 2021, Tenant shall (i) continue to pay Base Rent as set forth in the Original Lease on the Original Premises, and (ii) pay a rate of $18.00 per rentable square foot on 3,643 rentable square feet of deemed space (effectively $5,464.50 per month), through January 31, 2021.

Notwithstanding anything to the contrary contained herein, if the Extension Commencement Date occurs after February 1, 2021, (i) Tenant shall continue to pay Base Rent as set forth in the Original Lease on the Original Premises until the Extension Commencement Date occurs, (ii) the Abatement Period shall commence on the Extension Commencement Date and shall expire on the day immediately prior to the three (3) month anniversary of the Extension Commencement Date so that Tenant is receives the total Abatement Amount, and (iii) the Parking Abatement Period (as hereinafter defined) shall commence on the Extension

Commencement Date and shall expire on the day immediately prior to the one (1) year anniversary of the Extension Commencement Date so that the parking charges are abated for a one (1) year period.

Following the Effective Date, Tenant shall pay Rent to the following address (or such other address as may be provided by Landlord from time to time):

Payment address (as it should appear on your payment envelopes)	Artis HRA Inverness Point - Lockbox 328216 P.O. Box 913282 Denver, CO 80291-3282
Payment address *only* for overnight deliveries by courier	**Lockbox Services** 913282-328216 Artis HRA Inverness Point MAC C7301- L25 1740 Broadway St - LL2 Denver, CO 80274

3. **Option to Renew**.

(a) Provided that (i) Tenant is not in default under the Lease beyond any applicable notice and cure periods and (ii) the Original Tenant (as defined below) continues to be in possession of the New Premises, both requirements being met as of the date of exercise of the Renewal Option and as of the Renewal Term Commencement Date (both as defined below), then Landlord and Tenant agree that during the Extension Term, Tenant shall have one (1) option to renew the Lease (the "**Renewal Option**") for the entire Premises for a period of five (5) years (the "**Renewal Term**"), commencing on the first day following the expiration of the Extension Term (the "**Renewal Term Commencement Date**"). The Renewal Option is exercisable only by Tenant giving written notice thereof ("**Renewal Notice**") to Landlord of its exercise of the Renewal Option at least nine (9) months, but not more than twelve (12) months, prior to the expiration of the Extension Term. If Tenant gives timely notice exercising the Renewal Option, the Term shall (subject to cancellation by Landlord for an Event of Default by Tenant as provided in the first sentence of this Section or Tenant's withdrawal of Tenant's notice exercising the Renewal Option as permitted by Section 3(b) below) automatically be extended by the Renewal Term. If Tenant does not timely give notice of its exercise of the Renewal Option, the Renewal Option shall expire and Tenant shall have no further right to extend or renew the Term. During the Renewal Term, this Lease and Tenant's use and occupancy of the New Premises shall be on the terms provided in this Lease, except as follows:

(i) The annual amount of Base Rent shall be the fair market annual Base Rent for space similar to the New Premises in comparable office buildings in southeast suburban Denver, determined as provided by Section 3(b) and Section 3(c) below.

(ii) Tenant shall have no further Renewal Options or extensions options after the exercise of the Renewal Option.

(iii) The Premises shall be the Premises as of the last day before the Renewal Term commences, and Landlord shall have no obligation to make or pay for any improvements in the Premises on account of Tenant's exercise of the Renewal Option.

(iv) Notwithstanding the fact that, upon Tenant's exercise of the herein option to renew, the renewal of the Term shall be self-executing, as aforesaid, the parties shall, within 15 days after Tenant's exercise thereof, enter into an amendment of the Lease confirming the Renewal Term and Base Rent.

(b) Within fifteen (15) days of receiving Tenant's notice of exercise of the Renewal Option, Landlord shall notify Tenant of the fair market Base Rent for the Renewal Term ("**Landlord's Rent Notice**") as determined by Landlord in good faith and upon comparable lease transactions. Landlord's determination of the fair market Base Rent shall be reasonable and shall be based on the Market Rent (as defined below). Tenant shall have fifteen (15) days after receipt of Landlord's Rent Notice to (i) withdraw Tenant's notice exercising the Renewal Option, and if Tenant gives such a notice the Renewal Option shall terminate, there shall be no Renewal Term, and Tenant shall have no further right to extend or renew the Term, or (ii) notify Landlord that Tenant disputes Landlord's determination of the Market Rent as set forth in Landlord's Rent Notice ("**Dispute Notice**"). If Tenant does not timely withdraw its notice exercising the Renewal Option or if Tenant does not timely provide the Dispute Notice, Tenant shall have no further right to cancel or withdraw its exercise of the Renewal Option and the Base Rent for the Renewal Term shall be the amount or amounts set forth in Landlord's Rent Notice.

(c) "**Market Rent**" means the annual amount per square foot that a willing tenant would pay and a willing landlord would accept in arm's length bona fide negotiations, for a renewal lease of premises of like quality on the same terms and conditions in a building of like quality and location for the specified period of time. Such determination shall take into account all relevant factors, including, without limitation, the following matters: the credit standing of Tenant; the length of the term; expense stops; construction allowances and other tenant concessions that would be available to tenants comparable to Tenant (such as moving expense allowance, free rent periods and free parking, if any, but specifically excluding the value of improvements installed in the Premises at Tenant's cost), and whether adjustments are then being made in determining the rental rates for renewals because of concessions being offered by Landlord to Tenant (or the lack thereof for the Renewal Term). If Tenant provides Landlord with a timely Dispute Notice, Landlord and Tenant shall promptly negotiate in good faith to determine a mutually acceptable Market Rent and shall exchange written proposals and comparables supporting such proposals. If the parties mutually agree upon a new rate for Market Rent, such agreed rate shall be the rental rate for Base Rent applicable during the Renewal Term. If the parties have not agreed within 60 days after the giving of Tenant's Dispute Notice, then within ten (10) days following the end of such 60-day period each party shall designate by written notice to the other party one qualified commercial real estate broker of good reputation, having at least five (5) years' experience in the real estate market in the southeast Denver office submarket ("**Appraiser(s)**"). The two Appraisers so designated shall together determine whether Landlord's determination of the Market Rent or Tenant's determination of the Market Rent is closest to the Market Rent for the space in question. Landlord and Tenant shall each require the Appraisers to make such determination and report it in writing to Landlord and Tenant within twenty (20) days after such selection, and each party shall use its best efforts to secure such determination within such time period. If the two selected Appraisers agree as to which rate is closest, the rate agreed to shall be deemed the effective rental rate. If the two selected Appraisers fail to agree pursuant to this procedure, they shall together immediately select a third Appraiser who shall then (within ten (10) days of the Appraisers' selection) determine which rate is closest to the Market Rent as determined by the third Appraiser. The third Appraiser shall notify Landlord and Tenant of its determination and the rental rate selected shall be the effective rental rate. Each party will pay the fee of the Appraiser selected by it and one-half of the fee of the third Appraiser.

(d) The Renewal Option shall be personal to REDWOOD TRUST, INC., a Maryland corporation (together with any Permitted Transferee who has assumed the Lease (as defined in Section 14.2

of the Lease), collectively, "**Original Tenant**"), and may only be exercised by Original Tenant (and not any assignee, sublessee or other transferee of Original Tenant's interest in the Lease). All references to "Tenant" in this Section 3 shall mean Original Tenant only. In the event of any assignment of the Lease or sublease of all or any portion of the New Premises to any party other than Original Tenant, the Renewal Option shall be extinguished.

(e) Any renewal or extension option(s) provided in the Original Lease are hereby deleted and replaced with this Section 3.

4. **Signage**.

(a) Directory and Suite Signage. Landlord shall provide Tenant, at Landlord's expense, with directory and suite signage consistent with the signage for the Original Premises.

(b) Initial Monument Sign. Tenant shall have the right to continue to maintain, repair and replace its sign panel on the existing monument sign for the Building (the "**Initial Monument Sign**").

(c) New Monument Sign. Tenant may, at Tenant's sole cost and expense, install one panel on the new monument sign in the location depicted on Exhibit B (the "**New Monument Sign**"), subject to all applicable laws, governmental approvals, and Landlord's approval of the size, design, and layout of such signage which approval shall not be unreasonably withheld, conditioned or delayed. Notwithstanding the foregoing, any costs associated with bringing the New Monument Sign up to current Inverness Planning and Architectural Control Committee ("**IPACC**") standards shall be split 50/50 between Landlord and Tenant. During the Extension Term, Tenant shall have exclusive use of the New Monument Sign and Landlord shall not permit any other party to install any signage on the New Monument Sign.

(d) Exterior Signage.

(i) If Landlord intends to or offers signage on the exterior of the Building or if Landlord is approached by another tenant who has approached IPACC for a variance in building signage requirements applicable to the Building (the "**Signage Opportunity**"), Landlord shall first give Tenant written notice specifying the terms and conditions applicable to the Signage Opportunity (the "**Signage Notice**"). Within twenty (20) business days of Tenant's receipt of the Signage Notice, Tenant shall give Landlord written notice of Tenant's acceptance or rejection of the Signage Opportunity. If Tenant foregoes the Signage Opportunity or does not give Tenant's response within such twenty (20) business day period, Landlord shall have the right to permit another tenant to install signage on the exterior of the Building on the terms set forth in the Landlord's Signage Notice within one hundred twenty (120) day after Tenant elects (or is deemed to have elected) not to exercise its right to the Signage Opportunity; provided, however, that Tenant's right to the Signage Opportunity shall be restored in the event (i) Landlord changes in any material respect the terms of the Signage Notice for the Signage Opportunity, or (ii) Landlord does not enter into an agreement with the other tenant to install signage on the exterior of the Building on the terms set forth in the Landlord's Signage Notice within one hundred twenty (120) days after Tenant elects (or is deemed to have elected) not to exercise its right to the Signage Opportunity, in which case Landlord shall reoffer the Signage Opportunity to Tenant pursuant to the terms of this Section 5, or (iii) there is any material change to the IPACC standards which permits Tenant signage to be installed on the exterior of the Building without a variance or permits more than one exterior sign to be installed on the Building. If Tenant timely accepts the Signage Opportunity, Tenant shall be responsible, at Tenant's sole cost and expense, for approaching IPACC if a variance of IPACC rules would be required for Tenant to install its signage and ultimately for installing such exterior Building signage, subject to all applicable laws, governmental approvals, and Landlord's approval of the size, location, design, and layout of such signage. Landlord shall reasonably cooperate with Tenant, including, executing applications and other reasonable documentation, in connection with Tenant's efforts to obtain any required permits, approvals and variances to permit Tenant's exterior signage on the Building.

(ii) If Tenant installs its signage on the exterior of the Building, then Landlord shall not grant to any tenant or other person or entity the right to place signage on or in, or to otherwise identify itself on or in, the exterior of the Building in a manner that is more prominent than Tenant.

5. **Parking**. Effective upon the Extension Commencement Date, Tenant shall be allocated a total of 130 parking spaces, with twelve (12) of such parking spaces being Covered Parking Spaces and the balance shall be one hundred eighteen (118) Surface Parking Spaces (the "**Parking Allotment**"). Covered Parking Spaces shall be charged a monthly fee at Landlord's standard parking rates, which, as of the Extension Commencement Date, are $125.00 for each reserved Covered Parking Space per space per month and $100.00 per space per month for each unreserved Covered Parking Space, and Tenant's parking rights shall continue to be subject to the other terms, conditions, and adjustments provided in the Original Lease. Additionally, subject to availability as determined in Landlord's sole discretion, Tenant shall have the option to lease up to an additional three (3) Covered Parking Spaces on a month-to-month basis, which spaces shall be a part of the Parking Allotment. Parking charges will be abated from February 1, 2021, through January 31, 2022 (the "**Parking Abatement Period**") (subject to adjustment as provided for in Section 2(e) above in the event that the Extension Commencement Date occurs after February 1, 2021), except that, if an Event of Default (beyond any applicable notice and cure period(s)) occurs or is continuing during the Parking Abatement Period, then no parking charges shall be abated during the pendency of such default; provided, that if Tenant cures such default prior to the termination of this Lease, then upon the cure of such default, the parking charges due hereunder shall again be abated in an amount equal to the previously unapplied portion of the Parking Abatement Amount that Tenant would have received but for such default.

6. **Tenant Improvements**.

(a) **Premises**. On the Delivery Date (as hereinafter defined), Landlord is providing the New Premises to Tenant in its present condition, "as is" subject to the terms and conditions of this Amendment.

(b) **Early Access.** From and after the Effective Date, Landlord shall provide Tenant with access to the New Premises as may be required by Tenant to prepare plans and to perform any inspections; provided, however that Tenant acknowledges that entry to the Intermap Give Back Space (as hereinafter defined) shall be subject to the terms and conditions of the existing lease between Intermap Technologies and Landlord (the "**Intermap Lease**").

(c) **Drawings**. Tenant shall provide Landlord with construction drawings (the "**Drawings**") for the improvements to be installed in the New Premises by Tenant (the "**Initial Improvements**" or the "**Work**") prepared by Tenant's architect. The Drawings shall be subject to Landlord's approval (not to be unreasonably withheld or delayed, as hereinafter described). Landlord shall give its approval or disapproval (giving reasonable detailed reasons in case of disapproval) of the Drawings within ten (10) business days after their delivery to Landlord. If Landlord fails to notify Tenant that it approves or disapproves the Drawings within ten (10) business days after receipt by Landlord of such Drawings, then Landlord shall be deemed to have approved the Drawings. Landlord shall cooperate with Tenant by discussing or reviewing the Drawings at Tenant's request prior to completion of the full, final detailed Drawings in order to expedite the preparation of and the subsequent approval process concerning the Drawings.

(d) No portion of the Work shall be undertaken or commenced by Tenant in the New Premises until all necessary building permits have been applied for and obtained by Tenant. Tenant acknowledges that: (a) the applicable governmental agencies are not required to issue approvals, permits or a certificate of occupancy within any specified period of time; (b) the applicable governmental agencies may impose additional requirements as a condition of issuing approvals, permits or a certificate of occupancy which could cause delays; and (c) that the Landlord is not responsible for the length of the period of time taken by applicable governmental agencies, or any delays caused by additional requirements of the applicable governmental agencies, in obtaining such approvals, permits or certificate of occupancy.

(e) **Landlord's Allowance**. The Initial Improvements (as well as installation of Tenant's own trade fixtures, equipment and furniture) are to be constructed at Tenant's expense. Landlord has agreed to provide Tenant with an improvement allowance of up to $1,761,200.00 (the "**Landlord's Allowance**"), to be applied toward the cost of the Initial Improvements. Up to $125,800.00 of the Landlord's Allowance may be used by Tenant for moving, cabling costs, and furniture costs related to the New Premises. Tenant may submit requests for disbursements of the Landlord's Allowance not more than monthly. To draw on the

Landlord's Allowance, Tenant must submit to Landlord a written notice requesting disbursement, together with (i) invoices for all costs included in the request for disbursement, (ii) proof that such costs have been paid, including appropriate lien waivers in a form acceptable to Landlord, and (iii) such other documentation as Landlord may reasonably request. Landlord shall make disbursements for the requested portion of the Landlord's Allowance within sixty (60) days following Landlord's receipt of a proper request for disbursement and Landlord may make such disbursements to Tenant or pay directly to Tenant's contractors, as agreed to by Landlord and Tenant. Tenant will be responsible for paying the excess of the cost of the Initial Improvements over the Landlord's Allowance. In the event the actual cost of the Initial Improvements is less than the Landlord's Allowance, Tenant shall not be entitled to any additional Initial Improvements or a rebate or credit against Rent, and the unused portion of the Landlord's Allowance shall remain the property of Landlord except for up to up to $125,800.00. If the Initial Improvements to be constructed with the Landlord's Allowance have not commenced as of twelve (12) months from the Extension Commencement Date, Landlord's obligation to provide sums to construct the Initial Improvements shall terminate, and the Landlord's Allowance shall expire. No disbursement of any part of the Landlord's Allowance by Landlord will constitute acceptance of any condition of the Initial Improvements, an approval of any action taken or omission of Tenant or its contractors, subcontractors and material suppliers, or waive any other rights or claims that Landlord might have at law or in equity. In the event that Landlord does not make disbursement of the Landlord's Allowance within sixty (60) days following Landlord's receipt of a proper request for disbursement, Tenant shall provide a second, written notice to Landlord requesting payment within ten (10) business days following Landlord's receipt of such notice. If Landlord fails to make payment following such ten (10) business day period, Tenant may offset the requested disbursement amount against Rent.

(i) **Communications Cabling and Equipment**. Tenant alone shall be responsible for and pay all the costs of installing any cabling and other communications equipment which Tenant needs for its occupancy of the New Premises, except that Tenant may apply up to $125,800.00 of the Landlord's Allowance towards moving, cabling costs, and furniture costs for the New Premises. Landlord and Tenant shall cooperate with one another to schedule Tenant's work in installing such cabling and other equipment so that such installation does not interfere with Landlord's work on the Initial Improvements.

(f) **Contractors**. All construction will be done through the Tenant's contractors. All contractors to be used by Tenant shall be approved by Landlord in advance which such approval shall not be unreasonably withheld, conditioned or delayed. Landlord shall give its approval or disapproval (giving reasonable detailed reasons in case of disapproval) of the proposed contractors within three (3) business days after Tenant's request to Landlord. If Landlord fails to notify Tenant that it approves or disapproves the proposed contractors within three (3) business days after receipt by Landlord of Tenant's request, then Landlord shall be deemed to have approved the proposed contractors. Tenant shall require all contractors performing work in the New Premises to carry and maintain, at no expense to Landlord, any or all of the following insurance policies as determined by Landlord written by insurance companies acceptable to Landlord: (a) commercial general liability insurance, which shall name Tenant and Landlord as an additional insureds, in such amounts and with such endorsements that Landlord requires; (b) worker's compensation insurance in such amounts as required by law and covering all persons engaged in the work; (c) insurance against such other perils or legal risks and in such amounts as Landlord may require. Upon Landlord's request, Tenant shall provide Landlord with duplicate original counterparts of any of the insurance policies required by this paragraph.

(g) **Permits**. Tenant's contractor will file applications and other necessary documentation for the issuance of all required governmental permits for the construction of the Initial Improvements (collectively, the "**Permits**") not later than May 1, 2020, and will also obtain final inspection approval, if applicable, or any other final governmental approval of the Initial Improvements that may be required by applicable codes and regulations for the New Premises, upon Substantial Completion of the Initial Improvements. Tenant will use commercially reasonable effort to obtain the Permits not later than the Delivery Date.

(h) **Construction Supervision**. All contractors rendering any service to Tenant must contact Landlord or Landlord's contractor in advance and obtain permission to provide materials or work to the New Premises, and are subject to Landlord's supervision, approval and control of performance, including installation of Tenant's trade fixtures, equipment and furniture in accordance with the terms of this Lease. This provision applies to all work performed in or around the Building, including without limitation installation of telecommunications equipment and installations of any nature affecting doors, walls, lighting, electrical connections, the HVAC system, ductwork, woodwork, trim, windows, ceilings, equipment or other physical portions of the Building.

(i) Tenant may perform the Work at such time as Tenant deems appropriate, both during Ordinary Business Hours and at other times except that any Excessive Noise Work (as defined below) may only be performed during hours other than Ordinary Business Hours if such Excessive Noise Work during Ordinary Business Hours would unreasonably interfere or disturb other tenants or occupants use or occupancy of their respective premises in the Building. "**Excessive Noise Work**" shall mean any Work creating excessive noise or vibration, including the portions of any Work involving: (i) demolition; (ii) cutting, trenching, chopping, drilling or perforating of floor slabs; or (iii) shooting fasteners into slab, floor or over-head. Any Excessive Noise Work shall be restricted to hours approved by Landlord and all such movement shall be under supervision of Landlord by prearrangement before performance. Tenant assumes all risk of damage of said articles being moved through the Building and any injury to persons or public engaged or not engaged in such moving. Any handtrucks, carryalls or similar appliances used for delivery or receipt of merchandise or equipment shall be equipped with rubber tires, sideguards and other safeguards as Landlord shall reasonably require.

(ii) Tenant and its contractors must not make nor permit to be made any unseemly or disturbing noises that unreasonably interfere with occupants of the Building, the New Premises or those having business with other tenants whether by the noise from equipment and installations, use of any musical instrument or loud talk.

(iii) If Tenant or Tenant's contractors are performing any of the Initial Improvements, Tenant will indemnify Landlord from and against any materialman and mechanics' liens in accordance with Section 13 of the Original Lease and shall otherwise comply with the provisions of Section 13 of the Original Lease with respect to any construction liens.

(iv) Tenant and its contractors must observe all rules and regulations of Landlord which are attached hereto as Exhibit D.

(v) Tenant shall use only new, first-class materials in the Work, except where explicitly shown in the Space Plan. All of the Work shall be done in a good and workmanlike manner. Tenant shall obtain contractors' warranties of at least six (6) months duration from the completion of the Work against defects in workmanship and materials on all work performed and equipment installed in the New Premises as part of the Work.

(vi) Upon not less than twenty-four (24) hours' written notice (or by email to (i) Tenant's Project Manager (jon.micheel@cbre.com), (ii) Tenant's general contractor (email address to be provided), and (iii) Tenant (notices@redwoodtrust.com)) to Tenant and Tenant's failure to cure such matter within such 24-hour period, Landlord shall have the right to order Tenant or any of Tenant's contractors who violate the requirements imposed on Tenant or Tenant's contractors in performing work to cease work and remove its equipment and employees from the Building (a "**Cease Order**") to the extent Landlord determines in good faith that such violation is likely to have a material adverse effect on the Building systems, structure or operations, the safety of the Building's occupants, or to otherwise create any other type of hazardous condition, which Cease Order shall remain effective until such time as the violation which is the subject thereof has been cured. No such action by Landlord shall delay the commencement of the Lease or the obligation to pay Rent or any other obligations herein set forth.

(vii) Tenant shall permit access to the New Premises, and the Work shall be subject to inspection, by Landlord and Landlord's architects, engineers, contractors and other representatives, at all reasonable times during the period in which the Work is being constructed and installed and following completion of the Work, provided Landlord uses commercially reasonable efforts to minimize interference with Tenant's business operations in the New Premises and the Work then being performed.

(i) **Intermap Give Back Space; Delivery of New Premises; Tenant Finish Period**.

(i) A portion of the New Premises is currently leased to Intermap Technologies as shown on Exhibit A (the "**Intermap Give Back Space**"). Landlord represents and warrants that the Intermap Lease expires on June 30, 2020 (the "**Intermap Lease Expiration Date**"). Landlord shall use good faith, diligent efforts to negotiate an early termination agreement with Intermap Technologies terminating the Intermap Lease. In the event that Landlord executes such early termination agreement with Intermap Technologies, Landlord shall send written notice to Tenant specifying the date on which the Intermap Lease will terminate and the date on which the Landlord will deliver exclusive possession of the New Premises to Tenant (the "**Delivery Notice**") which anticipated delivery date shall be the later of (i) 60 days following receipt of the Delivery Notice by Tenant, and (ii) April 1, 2020 (the later of such dates shall be referred to as the "**Anticipated Delivery Date**"). In the event that Landlord does not deliver the Delivery Notice to Tenant by May 1, 2020, the Anticipated Delivery Date shall be July 1, 2020.

(ii) The actual date on which Landlord shall deliver exclusive possession of the New Premises (including the Intermap Give Back Space) to Tenant vacant, free of all occupancies and in "broom clean" condition and otherwise in the condition required by this Lease shall be referred to as the "**Delivery Date**". Notwithstanding anything to the contrary contained herein, if the Delivery Date does not occur on or before July 1, 2020 (but no earlier than the Anticipated Delivery Date), then (i) the Scheduled Commencement Date shall be extended by one (1) day for each day after July 1, 2020 until the Delivery Date occurs, and (ii) Base Rent and Additional Rent shall abate for one (1) day for each day after July 1, 2020 until the Delivery Date occurs which abatement shall be applied after the Abatement Period. Such postponement of the Scheduled Commencement Date (and therefore the postponement of the commencement of the Extension Term) and rent abatement will be Tenant's sole and exclusive remedy for Landlord's failure to deliver the New Premises by July 1, 2020, and Tenant expressly waives any other rights, claims or remedies on account of such failure.

(iii) The period for Tenant to perform the Work (the "**Tenant Finish Period**") will begin on the Delivery Date and Tenant will use its commercially reasonable efforts to commence the Work on the Delivery Date and to complete the Work by the Scheduled Commencement Date. Tenant agrees that it shall commence the Work within thirty (30) days after the later of the following to occur: (i) Tenant receives the Permits provided that Tenant must file its permit application in accordance with Section 6(g) above and (ii) the Delivery Date. In the event Tenant, for any reason, fails to complete the Work on or before the Scheduled Commencement Date, Tenant shall be responsible for Rent and all other obligations set forth in the Lease from the Scheduled Commencement Date regardless of the degree of completion of the Work on such date, and no such delay in completion of the Work shall relieve Tenant of any of its obligations under the Lease except as hereinafter provided, subject to any Landlord Delay (as hereinafter defined). The Scheduled Commencement Date shall be extended by the number of days of delay of the completion of the Work to the extent caused by a "Landlord Delay". As used herein, the term "**Landlord Delay**" shall mean actual delays to the extent resulting from the acts or omissions of Landlord including, but not limited to (i) failure of Landlord to timely approve or disapprove any construction drawings, plans and applications which require Landlord's approval or signature; (ii) unreasonable and material interference by Landlord, its agents, employees or contractors with the Substantial Completion of the Work; or (iii) failure to cure a Landlord Violation (as hereinafter defined).

(iv) Notwithstanding anything to the contrary provided herein, prior to the Delivery Date, Tenant may elect to commence the Work in the New Premises (excluding the Intermap Give Back Space) at any time after Tenant has secured the Permits. In the event that Tenant elects to commence the Work in the New Premises (excluding the Intermap Give Back Space) prior to the Delivery Date, Tenant shall provide written notice of such election to Landlord and Landlord shall provide Tenant with access to the New Premises (excluding the Intermap Give Back Space) to allow Tenant to perform the Work in the New Premises (excluding the Intermap Give Back Space).

(j) **Charges and Fees**. Tenant shall pay Landlord a construction management fee in an amount equal to $10,000.00 to defray Landlord's administrative and overhead expenses incurred to review the Space Plan and coordinate with Tenant's onsite project manager the staging and progress of the Work. Except as provided herein, there shall be no other construction management fee or supervisory fee imposed by Landlord in connection with the Work.

(k) **Miscellaneous**. Approval by Landlord's architects or engineers does not constitute approval by Landlord. Any approval by Landlord or Landlord's architects or engineers of any of Tenant's drawing, plans or specifications which are prepared in connection with construction of improvements in the New Premises shall not in any way constitute a representation or warranty of Landlord as to the adequacy of sufficiency of the drawings, plans or specifications. Failure by Tenant to pay any amount when due under this Section 6 or the failure by Tenant to perform any of its other obligations under this Section 6 shall be an Event of Default under the Lease (subject to the same notice and cure provisions as provided in the Lease), entitling Landlord to all of its remedies under the Lease following any uncured Event of Default. As used in this Section 6, "including" means "including without limitation."

(l) Notwithstanding anything to the contrary set forth elsewhere in this Lease, if any noted violation of any applicable law, ordinance or governmental regulation (including, without limitation, the Americans With Disabilities Act of 1990 (42 U.S.C. §12101 et seq.) and regulations and guidelines promulgated thereunder) which is not caused by Tenant's acts or omissions (or the acts or omissions of Tenant's agents, contractors, and/or employees) (herein called a "**Landlord's Violation**") shall actually delay (or prevent) Tenant from obtaining any governmental permits, consents, approvals or other documentation required by Tenant for the performance of any Work or to occupy the New Premises, then, upon the giving of notice by Tenant to Landlord of such prevention or delay and of the applicable Landlord's Violations, Landlord shall promptly commence and thereafter diligently prosecute to completion the cure and removal of record of such Landlord's Violations. In the event that Tenant is prevented or delayed from obtaining any permits, consents, approvals or other documentation required by Tenant for the performance of any Work or to occupy the New Premises as a result of a Landlord's Violation, then Base Rent and additional Rent shall abate for one (1) day for each day of such delay until Landlord cures such Landlord's Violation.

7. **Condition of the New Premises**. On the Delivery Date, Landlord agrees to deliver the New Premises to Tenant vacant, free of all occupancies (except as provided below with respect to the Intermap Give Back Space) and in "broom clean" condition and otherwise in the condition required by this Lease. Tenant acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the New Premises, or with respect to the suitability of any part of the same for the conduct of Tenant's business. Tenant shall be conclusively deemed to have accepted the New Premises "as is" in the condition existing on the Extension Commencement Date subject to latent defect and Landlord's obligation to deliver the New Premises in the condition required hereunder. Landlord shall not have any obligation to install any improvements or alterations in, to, or on the New Premises, except as may be required to cure any Landlord's Violations.

8. **Intentionally omitted.**

9. **Landlord's Offer of Space**.

(a) Subject to all the provisions of Section 9 below, if during the Extension Term Landlord intends to offer space on the fourth (4th) floor of the Building (the "**Fourth Floor Space**") to third parties to lease, Landlord shall first give Tenant written notice specifying the space that Landlord intends to offer for lease (the "**Offer Space**") and the material terms on which Landlord intends to offer such space for lease ("**Landlord's Offer Notice**"). Within seven (7) business days of Tenant's receipt of Landlord's Offer Notice, Tenant shall give Landlord written notice whether Tenant accepts the terms set forth in Landlord's Offer Notice ("**Tenant's Response**"). If (i) Tenant does not give Tenant's Response within such seven (7) business day period, (ii) Tenant's Response does not accept the Offer Space on all the terms set forth in Landlord's

Offer Notice, or (iii) Landlord determines that Tenant's response is ambiguous and Tenant fails to clarify any ambiguity by the end of the second (2nd) business day after Landlord gives notice to Tenant requesting such clarification, then Tenant shall have no further rights with respect to such Offer Space and Landlord shall have no further obligation at any time to offer to lease any Fourth Floor Space to Tenant. If Tenant timely gives Tenant's Response and Tenant's Response accepts the terms set forth in Landlord's Offer Notice, Tenant and Landlord shall promptly execute an amendment to this Lease that provides for the addition of the Offer Space to the Premises on the terms set forth in the Offer Notice and Landlord shall have no further obligation to offer to lease any other Fourth Floor Space to Tenant.

(b) Tenant's right to receive Landlord's Offer Notice under this Section 9 is a one-time right only. If Landlord once gives Tenant Landlord's Offer Notice with respect to any Offer Space, Landlord shall have no further or subsequent obligation to give Landlord's Offer Notice as to the same Offer Space.

(c) Landlord shall have no obligation to offer any space to Tenant or to enter into an amendment to this Lease to expand the area of the Premises if an Event of Default has occurred and is then uncured.

(d) Landlord shall have no obligation to offer to Tenant Fourth Floor Space that is being offered to the market for lease as of the execution of this Lease unless such space is first leased to another tenant and then subsequently becomes available for lease to third parties.

(e) Landlord shall have no obligation to offer to Tenant space in the Building (i) other than the Fourth Floor Space, or (ii) which is smaller than what Landlord is then willing to offer to third parties for lease.

(f) Tenant's rights under this Section 9 shall be subject to any and all rights of other tenants under instruments executed before this Amendment.

(a) Tenant's rights under this Section 9 shall not apply during any Renewal Term.

(b) Tenant's rights under this Section 9 may not be exercised by any Transferee and shall immediately terminate in the event of any assignment of the Lease or sublease of more than fifty percent (50%) of the rentable area of the Premises by Tenant.

10. **Brokers**. Tenant and Landlord each represents that it did not deal with any broker or finder in connection with this Amendment other than John Marold of CBRE, Inc. ("**Landlord's Broker**"), and Frederic de Loizaga of CBRE, Inc. ("**Tenant's Broker**"). Landlord shall indemnify Tenant against any liability or expense (including reasonable attorneys' fees and costs of defense) for any brokerage commission or finder's fee claimed by anyone based on any express or implied commitment made by Landlord or its agents or representatives in connection with this Amendment, including any commission owed to Landlord's Broker and Tenant's Broker pursuant to a separate agreement, but excluding any claim for compensation by Tenant's Broker in excess of the commission, if any, that Landlord has agreed to pay Tenant's Broker. Tenant shall indemnify Landlord against any liability or expense (including reasonable attorneys' fees and costs) for any brokerage commission or finder's fee claimed by anyone other than Landlord's Broker based on any express or implied commitment made by Tenant or its agents or representatives, including any commission or fee claimed by Tenant's Broker in excess of the commission, if any, that Landlord has agreed to pay Tenant's Broker. The parties' liability under this Section 10 shall survive any expiration or termination of the Lease.

11. **Effect**. Except as amended by this Amendment, all of the terms, covenants, conditions, provisions, and agreements of the Lease remain in full force and effect. The provisions of this Amendment supersede and control over any conflicting provisions in the Lease.

12. **Estoppel**. Tenant hereby acknowledges and confirms that, as of the date hereof and to Tenant's knowledge, Landlord has performed all obligations on the part of the Landlord under the Lease and that Tenant has no claims against Landlord or claims of offset against any rent or other sums payable by Tenant under the Lease.

13. **Interpretation**. As used in this Amendment, the word "including" is not exclusive and means "including, without limitation" unless used with specific terms of exclusion. The word "party" means one of Landlord or Tenant, and "parties" means both, unless the context specifically indicates that reference to a third party is intended. References to sections or exhibits mean the sections of this Amendment and exhibits attached to this Amendment, unless the reference specifies another document.

14. **Notices**. Landlord's Notice Address, as set forth in Section 1.10 of the Original Lease, is hereby amended to be as follows:

ARTIS HRA Inverness Point, LP

c/o MDC Realty Advisors

1700 Broadway, Suite 710

Denver, Colorado 80290

Attn: Bruce Backstrom, Senior Vice President Operations & Leasing

With a copy to:

Artis REIT

16220 North Scottsdale Road, Suite 280

Scottsdale, AZ 85254

Attn: Philip Martens, CPA

With a copy to:

Reinhart Boerner Van Deuren s.c.

16220 North Scottsdale Road, Suite 290

Scottsdale, AZ 85254

Attn: William Invie Shroyer

15. **Miscellaneous**. The parties have read this Amendment and have received the advice of legal counsel with respect to this Amendment or have had the opportunity to receive legal advice, and they have freely and voluntarily entered into this Amendment. This Amendment embodies the entire agreement between the parties as to its subject matter and supersedes any prior agreements with respect thereto. There are no agreements or understandings between the parties with respect to the subject matter of this Amendment not set forth in this Amendment or the Lease. This Amendment cannot be modified except by a writing signed by both parties.

16. **Signing and Delivery**. This Amendment will be effective only when both Landlord and Tenant have signed and delivered it. This Amendment may be signed in counterparts and, when counterparts

of this Amendment have been signed and delivered by both of the parties as provided in this Section 14, this Amendment will be fully binding and effective, just as if both of the parties had signed and delivered a single counterpart of this Amendment. This Amendment is not an offer to lease and cannot be accepted by performance or otherwise rendered effective in any manner other than in accordance with this Section 16. Landlord's submission of an unsigned copy this Amendment to Tenant for evaluation, negotiation, or signature by Tenant will not constitute signature of this Amendment by Landlord or otherwise bind Landlord, regardless of whether the cover letter or email transmitting that copy of this Amendment is signed or contains words of approval.

[The remainder of this page is intentionally blank; signatures follow.]

Signed by the parties on the dates stated below:

Landlord:

ARTIS HRA Inverness Point, LP,

a Delaware limited partnership

By: ARTIS HRA Inverness Point GP, LLC,
a Delaware limited liability company, General Partner

By: /s/ BRUCE BACKSTROM
Bruce Backstrom, Authorized Signatory

Date: 1/22/20

Tenant:

Redwood Trust, Inc., a Maryland corporation

By: /s/ GARNET KANOUSE
Print Name: Garnet Kanouse
Its: Managing Director

Date: 1/22/20

EXHIBIT 10.77

February 28, 2020

BY HAND DELIVERY

Collin Cochrane
c/o Redwood Trust, Inc.
One Belvedere Place, Suite 300
Mill Valley, CA 94941

Dear Mr. Cochrane:

This letter agreement is to memorialize discussions we have had relating to your compensation terms with Redwood Trust, Inc. (together with its subsidiaries, the "Company").

1. Cash Award. If you remain continuously employed by the Company from the date hereof through March 1, 2022 (the "Specified Period"), you will be entitled to receive a cash award (the "Cash Award") of $500,000 (Five-Hundred Thousand Dollars), payable at the end of the pay period immediately following the end of the Specified Period.

A. In the event that your employment with the Company is terminated by the Company without "Cause" (as defined below) prior to the end of the Specified Period, subject to your compliance with the terms set forth in paragraph 4 below, you will be entitled to receive the Cash Award within 30 days following your termination date, notwithstanding that you were not continuously employed during the Specific Period.

2. Annual Bonuses During Specified Period. While you acknowledge that the amount of your annual year-end bonus is, and will continue to be, at the discretion of the Company, the Company agrees that:

A. The target amount of your 2020 annual year-end bonus will remain at its current level of 125% of your 2020 base salary.

B. In the event that your employment with the Company is terminated by the Company without "Cause" (as defined below) prior to the end of the Specified Period, subject to your compliance with the terms set forth in paragraph 4 below, you will be entitled to receive an annual year-end bonus for any full calendar year during which you were employed during the Specified Period (or, if you were employed for only a portion of a calendar year during the Specified Period, a pro-rated annual year-end bonus for such portion of a calendar year), with the amount of any such bonus being at the discretion of the Company, and, in any event, payable within 30 days following your termination date.

3. Amendment to Currently Outstanding Equity Awards. Annex A to this letter agreement lists your currently outstanding but unvested equity awards as of February 28, 2020 (collectively, "Outstanding Equity Awards"), which include both deferred stock units (" Outstanding DSUs") and performance stock units ("Outstanding PSUs"). This letter agreement hereby amends each of the award agreements between you and the Company pursuant to which the Outstanding Equity Awards were granted as follows:

A. Currently Outstanding PSUs. With respect to award agreements for Outstanding PSUs, notwithstanding provisions therein providing for the full or partial forfeiture of such PSUs upon a termination of employment without cause, in the event that your employment with the Company is terminated by the Company without "Cause" (as defined below) prior to the scheduled final vesting date for such PSUs, subject to your compliance with the terms set forth in paragraph 4 below, the target shares granted therein, to the extent not already vested or forfeited at the time of such termination, shall not be pro-rated based on time served during the performance period and such PSUs shall continue to be eligible to vest and become payable based on the performance goals and other performance-based vesting terms set forth therein.

B. Currently Outstanding DSUs. With respect to award agreements for Outstanding DSUs, notwithstanding provisions therein providing for the full or partial forfeiture of DSUs upon a termination of employment without cause, in the event that your employment with the Company is terminated by the Company without "Cause" (as defined below) prior to the scheduled final vesting date for such DSUs, subject to your compliance with the terms set forth in paragraph 4 below, the award shares granted therein, to the extent not already vested or forfeited at the time of such termination shall immediately vest and not be forfeited.

4. Conditions to Termination-Related Provisions. The payments and vesting terms described in paragraphs 1.A, 2.B, 3.A, and 3.B above, are subject to, and contingent on, you satisfying each of the following conditions immediately prior to any and each instance of the Company paying or delivering any amount or consideration to you in accordance therewith:

(i) you honor any post-employment obligations to the Company, including, but not limited to, the return of any Company property; and

(ii) you execute and deliver to the Company, within 21 days following your employment termination date, a Separation and Release Agreement consistent with the standard form used by the Company (which would contain, among other terms, a general release of claims by you of the Company and its affiliates) and you not revoking the Separation and Release Agreement after any waiting or revocation period required under applicable law.

5. Defined Terms - "Cause". Solely for purposes of this letter agreement, "Cause" for termination of employment shall mean any one of the following events (as determined in good faith by the Company):

(i) your commission of, indictment for, or plea of nolo contendere to, a felony or any other crime involving moral turpitude,

(ii) with respect to the Company or its business and operations, (A) any act or omission by you involving, or attempting, embezzlement, misappropriation, or fraud or (B) any act or omission by you involving dishonesty, misrepresentation or similar behavior, which, in the case of this clause (B) is reasonably likely to have an adverse effect on, or has injured or harmed or is reasonably likely to injure or harm, the Company or its business and operations in a manner that is significant,

(iii) (A) your breach of any Company policy (including any code of conduct or harassment policies) which is reasonably likely to have an adverse effect on, or has injured or harmed or is reasonably likely to injure or harm, the Company or any of its affiliates in a manner that is significant or (B) any significant breach by you of an agreement with the Company or any of its affiliates,

(iv) your breach of any fiduciary duty or fiduciary obligation to the Company or any of its affiliates which is reasonably likely to have an adverse effect on, or has injured or harmed or is reasonably likely to injure or harm, the Company or any of its affiliates,

(v) any act of negligence, recklessness, or willful misconduct that has had or is reasonably likely to have an adverse effect on, or has injured or harmed or is reasonably likely to injure or harm, the Company or any of its affiliates or any of its or their business affairs, reputation, counterparties, employees, agents or vendors in a manner that is significant,

(vi) your failure to substantially perform your job or duties to the Company or any of its affiliates as reasonably determined by the Company, which failure shall continue for thirty (30) days after written notice thereof by the Company to you, or

(vii) your unauthorized use or disclosure of trade secrets or confidential or proprietary information of the Company or pertaining to the Company's business.

* * *

If you become eligible to receive any payments and/or taxable income in accordance with the terms of this letter agreement, the Company will make withholdings and deductions from taxable amounts delivered to you in accordance with applicable law and your then applicable withholding designations that the Company has customarily applied.

Any controversy or claim arising out of or relating to this letter agreement, including any claim of a breach of this letter agreement (a "Dispute"), shall be resolved in the manner set forth in dispute resolution/arbitration provisions of the existing Employment and Confidentiality Agreement between you and the Company dated March 20, 2013.

This letter agreement sets forth the entire agreement between the parties hereto and fully supersedes any and all prior agreements or understandings, written or oral, between the parties hereto pertaining to the subject matter hereof.

You have the right to consult with the attorney of your choice before signing this letter agreement or any Separation and Release Agreement, and are hereby advised to consult with an attorney in regard to these matters.

[*Signature page follows…*]

Please acknowledge your agreement to the foregoing by signing below in the space provided for your signature and by returning such signed original to me.

Sincerely,

Redwood Trust, Inc.

By: /s/ Andrew P. Stone
Name: Andrew P. Stone
Title: Executive Vice President

Agreed and Acknowledged:

/s/ Collin L. Cochrane
Collin L. Cochrane

Date: February 28, 2020

EXHIBIT 21

LIST OF SUBSIDIARIES
OF REDWOOD TRUST, INC.

Subsidiaries*	**Jurisdiction of Incorporation or Organization**
Redwood Residential Acquisition Corporation	Delaware
Redwood Subsidiary Holdings, LLC	Delaware
RWT Holdings, Inc.	Delaware
RWT Securities, LLC	Delaware
Sequoia Residential Funding, Inc.**	Delaware
RWT Financial, LLC	Delaware
CoreVest American Finance Lender LLC	Delaware

* In accordance with Item 601(b)(21)(ii) of Regulation S-K the names of certain subsidiaries have been omitted.

** Sequoia Residential Funding, Inc. is the depositor with respect to more than 30 Sequoia securitization trusts that are not listed in this exhibit, but we are required to consolidate the assets and liabilities of certain of these trusts under GAAP for financial reporting purposes.

EXHIBIT 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our reports dated March 2, 2020, with respect to the consolidated financial statements and internal control over financial reporting, included in the Annual Report of Redwood Trust, Inc. on Form 10-K for the year ended December 31, 2019. We consent to the incorporation by reference of said reports in the Registration Statements of Redwood Trust, Inc. on Form S-3 (File No. 333-231338, effective May 9, 2019) and on Forms S-8 (File Nos. 333-89302, effective May 29, 2002; 333-89300, effective May 29, 2002; 333-90592, effective June 17, 2002; 333-116395, effective June 10, 2004; 333-136497, effective August 10, 2006; 333-155154, effective November 6, 2008; 333-162893, effective November 5, 2009; 333-176102, effective August 5, 2011; 333-183114, effective August 7, 2012; 333-183116, effective August 7, 2012; 333-190529, effective August 9, 2013; 333-190530, effective August 9, 2013; 333-196247, effective May 23, 2014, 333-197990, effective August 8, 2014; 333-226721, effective August 9, 2018; 333-229985, effective March 1, 2019; and 333-233158, effective August 9, 2019).

/s/ GRANT THORNTON LLP

Newport Beach, California
March 2, 2020

EXHIBIT 31.1

CHIEF EXECUTIVE OFFICER CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Christopher J. Abate, certify that:

1. I have reviewed this Annual Report on Form 10-K of Redwood Trust, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over the financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:
    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 2, 2020

/s/ CHRISTOPHER J. ABATE

Christopher J. Abate
Chief Executive Officer

EXHIBIT 31.2

CHIEF FINANCIAL OFFICER CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Collin L. Cochrane, certify that:

1. I have reviewed this Annual Report on Form 10-K of Redwood Trust, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over the financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:
    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 2, 2020

/s/ COLLIN L. COCHRANE

Collin L. Cochrane
Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION

Pursuant to 18 U.S.C. §1350, the undersigned officer of Redwood Trust, Inc. (the "Registrant") hereby certifies that the Registrant's Annual Report on Form 10-K for the year ended December 31, 2019 (the "Annual Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: March 2, 2020	/s/ CHRISTOPHER J. ABATE
	Christopher J. Abate
	Chief Executive Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. §1350 and is not being filed as part of the Annual Report or as a separate disclosure document.

EXHIBIT 32.2

CERTIFICATION

Pursuant to 18 U.S.C. §1350, the undersigned officer of Redwood Trust, Inc. (the "Registrant") hereby certifies that the Registrant's Annual Report on Form 10-K for the year ended December 31, 2019 (the "Annual Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: March 2, 2020	/s/ COLLIN L. COCHRANE
	Collin L. Cochrane
	Chief Financial Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. §1350 and is not being filed as part of the Annual Report or as a separate disclosure document.