

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

FORM 10-Q

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934**
For the Quarterly Period Ended: **September 30, 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

(State or Other Jurisdiction of
Incorporation or Organization)

68-0329422

(I.R.S. Employer
Identification No.)

One Belvedere Place, Suite 300

Mill Valley, California
(Address of Principal Executive Offices)

94941

(Zip Code)

(415) 389-7373

(Registrant's Telephone Number, Including Area Code)

Not Applicable

(Former Name, Former Address and Former Fiscal Year, if Changed Since Last Report)

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, smaller reporting company, or an emerging growth company. See the 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

Non-accelerated filer

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Common Stock, \$0.01 par value per share 112,689,511 shares outstanding as of November 5, 2019

REDWOOD TRUST, INC.
2019 FORM 10-Q REPORT
TABLE OF CONTENTS

		Page
PART I —	FINANCIAL INFORMATION	
Item 1.	Financial Statements	2
	Consolidated Balance Sheets at September 30, 2019 (Unaudited) and December 31, 2018	2
	Consolidated Statements of Income for the Three and Nine Months Ended September 30, 2019 and 2018 (Unaudited)	3
	Consolidated Statements of Comprehensive Income for the Three and Nine Months Ended September 30, 2019 and 2018 (Unaudited)	4
	Consolidated Statements of Changes in Stockholders' Equity for the Three and Nine Months Ended September 30, 2019 and 2018 (Unaudited)	5
	Consolidated Statements of Cash Flows for the Nine Months Ended September 30, 2019 and 2018 (Unaudited)	7
	Notes to Consolidated Financial Statements (Unaudited)	9
	Note 1. Organization	9
	Note 2. Basis of Presentation	9
	Note 3. Summary of Significant Accounting Policies	13
	Note 4. Principles of Consolidation	17
	Note 5. Fair Value of Financial Instruments	23
	Note 6. Residential Loans	36
	Note 7. Business Purpose Residential Loans	39
	Note 8. Multifamily Loans	41
	Note 9. Real Estate Securities	41
	Note 10. Other Investments	46
	Note 11. Derivative Financial Instruments	49
	Note 12. Other Assets and Liabilities	51
	Note 13. Short-Term Debt	53
	Note 14. Asset-Backed Securities Issued	55
	Note 15. Long-Term Debt	57
	Note 16. Commitments and Contingencies	59
	Note 17. Equity	64
	Note 18. Equity Compensation Plans	67
	Note 19. Mortgage Banking Activities	69
	Note 20. Investment Fair Value Changes, Net	70
	Note 21. Other Income, Net	71
	Note 22. Operating Expenses	71
	Note 23. Taxes	72
	Note 24. Segment Information	72
	Note 25. Subsequent Events	76
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	77
Item 3.	Quantitative and Qualitative Disclosures About Market Risk	119
Item 4.	Controls and Procedures	120
PART II —	OTHER INFORMATION	
Item 1.	Legal Proceedings	121
Item 1A.	Risk Factors	122
Item 2.	Unregistered Sales of Equity Securities and Use of Proceeds	123
Item 3.	Defaults Upon Senior Securities	124
Item 4.	Mine Safety Disclosures (Not Applicable)	124
Item 5.	Other Information	124
Item 6.	Exhibits	125
Signatures		127

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

REDWOOD TRUST, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(In Thousands, except Share Data) (Unaudited)	September 30, 2019	December 31, 2018
ASSETS ⁽¹⁾		
Residential loans, held-for-sale, at fair value	\$ 925,887	\$ 1,048,801
Residential loans, held-for-investment, at fair value	7,755,916	6,205,941
Business purpose residential loans, at fair value	336,035	141,258
Multifamily loans, held-for-investment, at fair value	3,791,622	2,144,598
Real estate securities, at fair value	1,285,426	1,452,494
Other investments	347,707	438,518
Cash and cash equivalents	394,628	175,764
Restricted cash	111,518	29,313
Goodwill and intangible assets	49,121	—
Accrued interest receivable	57,464	47,105
Derivative assets	43,649	35,789
Other assets	377,310	217,825
Total Assets	\$ 15,476,283	\$ 11,937,406
LIABILITIES AND EQUITY ⁽¹⁾		
Liabilities		
Short-term debt, net ⁽²⁾	\$ 1,980,817	\$ 2,400,279
Accrued interest payable	46,881	42,528
Derivative liabilities	234,011	84,855
Accrued expenses and other liabilities	129,742	78,719
Asset-backed securities issued, at fair value	8,346,051	5,410,073
Long-term debt, net	2,953,722	2,572,158
Total liabilities	13,691,224	10,588,612
Commitments and Contingencies (see <i>Note 16</i>)		
Equity		
Common stock, par value \$0.01 per share, 270,000,000 and 180,000,000 shares authorized; 112,101,731 and 84,884,344 issued and outstanding	1,121	849
Additional paid-in capital	2,244,834	1,811,422
Accumulated other comprehensive income	38,124	61,297
Cumulative earnings	1,529,981	1,409,941
Cumulative distributions to stockholders	(2,029,001)	(1,934,715)
Total equity	1,785,059	1,348,794
Total Liabilities and Equity	\$ 15,476,283	\$ 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 September 30, 2019 and December 31, 2018, assets of consolidated VIEs totaled \$9,596,537 and \$6,331,191, respectively. At September 30, 2019 and December 31, 2018, liabilities of consolidated VIEs totaled \$8,582,595 and \$5,709,807, respectively. See *Note 4* for further discussion.

(2) Includes \$201 million of convertible notes, 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 November 15, 2018. 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

(In Thousands, except Share Data) (Unaudited)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Interest Income				
Residential loans	\$ 77,070	\$ 63,265	\$ 230,308	\$ 169,010
Business purpose residential loans	5,446	1,445	12,231	1,445
Multifamily loans	36,829	5,578	94,134	5,578
Real estate securities	23,047	27,063	72,514	79,054
Other interest income	7,725	2,046	20,513	3,905
Total interest income	150,117	99,397	429,700	258,992
Interest Expense				
Short-term debt	(24,239)	(14,146)	(70,732)	(40,756)
Asset-backed securities issued	(71,065)	(27,421)	(196,473)	(55,171)
Long-term debt	(21,300)	(22,784)	(64,895)	(58,151)
Total interest expense	(116,604)	(64,351)	(332,100)	(154,078)
Net Interest Income	33,513	35,046	97,600	104,914
Non-interest Income				
Mortgage banking activities, net	9,515	11,224	40,984	48,396
Investment fair value changes, net	11,444	10,332	34,741	12,830
Other income, net	1,825	3,453	7,819	8,893
Realized gains, net	4,714	7,275	18,227	21,352
Total non-interest income, net	27,498	32,284	101,771	91,471
Operating expenses	(26,815)	(21,490)	(76,229)	(63,529)
Net Income before Provision for Income Taxes	34,196	45,840	123,142	132,856
Benefit from (provision for) income taxes	114	(4,919)	(3,102)	(12,343)
Net Income	\$ 34,310	\$ 40,921	\$ 120,040	\$ 120,513
Basic earnings per common share	\$ 0.33	\$ 0.49	\$ 1.20	\$ 1.51
Diluted earnings per common share	\$ 0.31	\$ 0.42	\$ 1.09	\$ 1.30
Basic weighted average shares outstanding	101,872,126	80,796,856	97,214,064	77,211,188
Diluted weighted average shares outstanding	136,522,709	114,682,688	131,202,689	107,792,029

The accompanying notes are an integral part of these consolidated financial statements.

REDWOOD TRUST, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In Thousands) (Unaudited)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Net Income	\$ 34,310	\$ 40,921	\$ 120,040	\$ 120,513
Other comprehensive loss:				
Net unrealized gain (loss) on available-for-sale securities	4,484	(2,408)	19,764	(9,749)
Reclassification of unrealized gain on available-for-sale securities to net income	(3,492)	(5,686)	(15,807)	(19,821)
Net unrealized (loss) gain on interest rate agreements	(11,791)	4,801	(27,130)	16,649
Total other comprehensive loss	(10,799)	(3,293)	(23,173)	(12,921)
Total Comprehensive Income	\$ 23,511	\$ 37,628	\$ 96,867	\$ 107,592

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 Three Months Ended September 30, 2019

(In Thousands, except Share Data)	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Cumulative Earnings	Cumulative Distributions to Stockholders	Total
	Shares	Amount					
(Unaudited)							
June 30, 2019	97,715,021	\$ 977	\$ 2,013,044	\$ 48,923	\$ 1,495,671	\$ (1,994,583)	\$ 1,564,032
Net income	—	—	—	—	34,310	—	34,310
Other comprehensive loss	—	—	—	(10,799)	—	—	(10,799)
Issuance of common stock	14,375,000	144	228,339	—	—	—	228,483
Employee stock purchase and incentive plans	11,710	—	154	—	—	—	154
Non-cash equity award compensation	—	—	3,297	—	—	—	3,297
Common dividends declared (\$0.30 per share)	—	—	—	—	—	(34,418)	(34,418)
September 30, 2019	<u>112,101,731</u>	<u>\$ 1,121</u>	<u>\$ 2,244,834</u>	<u>\$ 38,124</u>	<u>\$ 1,529,981</u>	<u>\$ (2,029,001)</u>	<u>\$ 1,785,059</u>

For the Nine Months Ended September 30, 2019

(In Thousands, except Share Data)	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Cumulative Earnings	Cumulative Distributions to Stockholders	Total
	Shares	Amount					
(Unaudited)							
December 31, 2018	84,884,344	\$ 849	\$ 1,811,422	\$ 61,297	\$ 1,409,941	\$ (1,934,715)	\$ 1,348,794
Net income	—	—	—	—	120,040	—	120,040
Other comprehensive loss	—	—	—	(23,173)	—	—	(23,173)
Issuance of common stock	26,666,191	267	418,324	—	—	—	418,591
Direct stock purchase and dividend reinvestment plan	399,838	4	6,303	—	—	—	6,307
Employee stock purchase and incentive plans	151,358	1	(1,767)	—	—	—	(1,766)
Non-cash equity award compensation	—	—	10,552	—	—	—	10,552
Common dividends declared (\$0.90 per share)	—	—	—	—	—	(94,286)	(94,286)
September 30, 2019	<u>112,101,731</u>	<u>\$ 1,121</u>	<u>\$ 2,244,834</u>	<u>\$ 38,124</u>	<u>\$ 1,529,981</u>	<u>\$ (2,029,001)</u>	<u>\$ 1,785,059</u>

For the Three Months Ended September 30, 2018

(In Thousands, except Share Data)	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Cumulative Earnings	Cumulative Distributions to Stockholders	Total
	Shares	Amount					
(Unaudited)							
June 30, 2018	75,742,719	\$ 757	\$ 1,665,749	\$ 75,620	\$ 1,369,933	\$ (1,883,104)	\$ 1,228,955
Net income	—	—	—	—	40,921	—	40,921
Other comprehensive loss	—	—	—	(3,293)	—	—	(3,293)
Issuance of common stock	7,187,500	72	116,964	—	—	—	117,036
Employee stock purchase and incentive plans	62	—	94	—	—	—	94
Non-cash equity award compensation	—	—	3,150	—	—	—	3,150
Common dividends declared (\$0.30 per share)	—	—	—	—	—	(25,536)	(25,536)
September 30, 2018	<u>82,930,281</u>	<u>\$ 829</u>	<u>\$ 1,785,957</u>	<u>\$ 72,327</u>	<u>\$ 1,410,854</u>	<u>\$ (1,908,640)</u>	<u>\$ 1,361,327</u>

REDWOOD TRUST, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (CONTINUED)

For the Nine Months Ended September 30, 2018

(In Thousands, except Share Data)	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Cumulative Earnings	Cumulative Distributions to Stockholders	Total
(Unaudited)	Shares	Amount					
December 31, 2017	76,599,972	\$ 766	\$ 1,673,845	\$ 85,248	\$ 1,290,341	\$ (1,837,913)	\$ 1,212,287
Net income	—	—	—	—	120,513	—	120,513
Other comprehensive loss	—	—	—	(12,921)	—	—	(12,921)
Issuance of common stock	7,187,500	72	116,964	—	—	—	117,036
Employee stock purchase and incentive plans	183,638	1	(101)	—	—	—	(100)
Non-cash equity award compensation	—	—	10,783	—	—	—	10,783
Share repurchases	(1,040,829)	(10)	(15,534)	—	—	—	(15,544)
Common dividends declared (\$0.88 per share)	—	—	—	—	—	(70,727)	(70,727)
September 30, 2018	<u>82,930,281</u>	<u>\$ 829</u>	<u>\$ 1,785,957</u>	<u>\$ 72,327</u>	<u>\$ 1,410,854</u>	<u>\$ (1,908,640)</u>	<u>\$ 1,361,327</u>

The accompanying notes are an integral part of these consolidated financial statements.

REDWOOD TRUST, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In Thousands) (Unaudited)	Nine Months Ended September 30,	
	2019	2018
Cash Flows From Operating Activities:		
Net income	\$ 120,040	\$ 120,513
Adjustments to reconcile net income to net cash used in operating activities:		
Amortization of premiums, discounts, and securities issuance costs, net	(3,486)	(11,091)
Depreciation and amortization of non-financial assets	5,673	922
Originations of held-for-sale loans	(124,392)	—
Purchases of held-for-sale loans	(4,002,509)	(5,596,326)
Proceeds from sales of held-for-sale loans	2,971,811	4,097,211
Principal payments on held-for-sale loans	77,100	51,853
Net settlements of derivatives	(32,902)	36,721
Non-cash equity award compensation expense	10,552	10,783
Market valuation adjustments	(62,720)	(53,666)
Realized gains, net	(18,227)	(21,352)
Net change in:		
Accrued interest receivable and other assets	(141,197)	(32,722)
Accrued interest payable and accrued expenses and other liabilities	(1,049)	34,137
Net cash used in operating activities	(1,201,306)	(1,363,017)
Cash Flows From Investing Activities:		
Originations of loans held-for-investment	(171,915)	—
Purchases of loans held-for-investment	(49,489)	(111,231)
Proceeds from sales of loans held-for-investment	9,422	—
Principal payments on loans held-for-investment	1,091,652	550,973
Purchases of real estate securities	(309,839)	(482,150)
Purchases of residential securities held in consolidated securitization trust	(193,212)	—
Purchases of multifamily securities held in consolidated securitization trusts	(68,601)	(54,957)
Proceeds from sales of real estate securities	487,469	432,199
Principal payments on real estate securities	62,711	61,278
Purchases of servicer advance investments	(69,610)	—
Principal repayments from servicer advance investments	150,512	—
Acquisition of 5 Arches, net of cash acquired	(3,714)	—
Net investment in participation in loan warehouse facility	38,209	(37,814)
Net investment in multifamily loan fund	(33,090)	—
Other investing activities, net	(24,989)	(3,731)
Net cash provided by investing activities	915,516	354,567
Cash Flows From Financing Activities:		
Proceeds from borrowings on short-term debt	4,009,083	4,760,083
Repayments on short-term debt	(4,435,823)	(5,274,664)
Proceeds from issuance of asset-backed securities	1,020,136	1,658,848
Repayments on asset-backed securities issued	(720,651)	(305,528)
Proceeds from issuance of long-term debt	387,053	199,000
Deferred long-term debt issuance costs paid	(7,023)	(4,977)
Net proceeds from issuance of common stock	426,970	117,311
Net payments on repurchase of common stock	—	(16,315)
Dividends paid	(94,286)	(70,727)
Other financing activities, net	1,400	(619)
Net cash provided by financing activities	586,859	1,062,412
Net increase in cash, cash equivalents and restricted cash	301,069	53,962
Cash, cash equivalents and restricted cash at beginning of period ⁽¹⁾	205,077	146,807
Cash, cash equivalents and restricted cash at end of period ⁽¹⁾	\$ 506,146	\$ 200,769

REDWOOD TRUST, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

(In Thousands) (Unaudited)	Nine Months Ended September 30,	
	2019	2018
Supplemental Cash Flow Information:		
Cash paid during the period for:		
Interest	\$ 319,036	\$ 139,003
Taxes	6,977	6,372
Supplemental Noncash Information:		
Real estate securities retained from loan securitizations	\$ 7,759	\$ 46,872
Retention of mortgage servicing rights from loan securitizations and sales	868	—
Consolidation of residential loans held in securitization trusts	1,190,995	—
Consolidation of residential ABS	997,783	—
Consolidation of multifamily loans held in securitization trusts	1,481,554	946,650
Consolidation of multifamily ABS	1,408,002	880,602
Transfers from loans held-for-sale to loans held-for-investment	1,361,015	1,981,170
Transfers from loans held-for-investment to loans held-for-sale	22,808	15,717
Transfers from residential loans to real estate owned	5,280	2,139
Right-of-use asset obtained in exchange for operating lease liability	13,016	—

(1) Cash, cash equivalents, and restricted cash at September 30, 2019 includes cash and cash equivalents of \$395 million and restricted cash of \$112 million, and at December 31, 2018 includes cash and cash equivalents of \$176 million and restricted cash of \$29 million.

The accompanying notes are an integral part of these consolidated financial statements.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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 two segments: Investment Portfolio and Mortgage Banking.

Our primary sources of income are net interest income from our investment portfolio 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 of residential loans and their subsequent sale or securitization, as well as through the origination of business purpose residential loans.

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 operating subsidiaries" or "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. References herein to "Redwood," the "company," "we," "us," and "our" include Redwood Trust, Inc. and its consolidated subsidiaries, unless the context otherwise requires.

Note 2. Basis of Presentation

The consolidated financial statements presented herein are at September 30, 2019 and December 31, 2018, and for the three and nine months ended September 30, 2019 and 2018. These interim unaudited consolidated financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission ("SEC"). Certain information and note disclosures normally included in our annual financial statements 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") — have been condensed or omitted in these interim financial statements according to these SEC rules and regulations. Management believes that the disclosures included in these interim financial statements should be read in conjunction with the consolidated financial statements and notes thereto included in the company's Annual Report on Form 10-K for the year ended December 31, 2018. In the opinion of management, all normal and recurring adjustments to present fairly the financial condition of the company at September 30, 2019 and results of operations for all periods presented have been made. The results of operations for the three and nine months ended September 30, 2019 should not be construed as indicative of the results to be expected for the full year.

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 beginning in the third quarter of 2017 ("Sequoia Choice"). In addition, we consolidated the assets and liabilities of certain Freddie Mac K-Series securitizations we invested in beginning in the third quarter of 2018, and the assets and liabilities of certain Freddie Mac SLST securitizations we invested in beginning in the fourth quarter of 2018. 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 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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, and the underlying loans at the consolidated Freddie Mac K-Series are shown under Multifamily 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 the fourth quarter of 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, LLC ("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.

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

On March 1, 2019, we completed the acquisition of the remaining 80% interest in 5 Arches, an originator of business purpose residential loans. 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. At closing, we paid approximately \$13 million of cash, and the remainder of the consideration, which could total up to an additional \$27 million, will be paid in a mix of cash and Redwood common stock and is contingent on the achievement of certain specified loan origination thresholds over the next two years.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 2. Basis of Presentation - (continued)

We accounted for the acquisition of 5 Arches under the acquisition method of accounting pursuant to ASC 805. We performed the preliminary 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. Through September 30, 2019, there have been no significant changes to our preliminary purchase price allocation, which is summarized in the following table.

Table 2.1 – 5 Arches Purchase Price Allocation

(In Thousands)	March 1, 2019	
Purchase price:		
Cash	\$	12,575
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
Allocated to:		
Tangible net assets acquired ⁽¹⁾	\$	985
Goodwill		28,747
Intangible assets		24,800
Deferred tax liability		(4,202)
Total net assets acquired	\$	50,330

(1) 5 Arches net assets acquired consisted of assets of \$19 million and liabilities of \$18 million as of March 1, 2019.

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, net on our consolidated statements of income during the three months ended March 31, 2019.

As part of this acquisition, we identified and recorded finite-lived intangible assets totaling \$25 million. The amortization period for each of these assets and the activity for the period from March 1, 2019 to September 30, 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 September 30, 2019	Weighted Average Amortization Period (in years)
Finite-lived intangible assets:					
Broker network	\$ —	\$ 18,100	\$ (2,112)	\$ 15,988	5
Non-compete agreements	—	2,900	(564)	2,336	3
Loan administration fees on existing loan assets	—	2,600	(1,517)	1,083	1
Tradenname	—	1,200	(233)	967	3
Total	\$ —	\$ 24,800	\$ (4,426)	\$ 20,374	4

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 2. Basis of Presentation - (continued)

All of our intangible assets are amortized on a straight-line basis. Estimated amortization expense for the remainder of 2019 and the following years is summarized in the table below.

Table 2.3 – Intangible Asset Amortization Expense by Year

(In Thousands)	September 30, 2019	
2019 (3 months)	\$	1,897
2020		5,420
2021		4,987
2022		3,848
2023 and thereafter		4,222
Total Future Intangible Asset Amortization	\$	20,374

We recorded goodwill of \$29 million as a result of the total consideration exceeding the fair value of the net assets acquired. 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 workforce continuing to provide services to the business. We expect \$3 million of our goodwill balance to be deductible for tax purposes. The following table presents the goodwill activity for the nine months ended September 30, 2019.

Table 2.4 – Goodwill – Activity

(In Thousands)	Nine Months Ended September 30, 2019	
Beginning balance	\$	—
Goodwill recognized from 5 Arches acquisition		28,728
Measurement period adjustment		19
Impairment		—
Ending Balance	\$	28,747

The liability resulting from the contingent consideration arrangement was recorded at its acquisition-date fair value of \$25 million as part of total consideration for the acquisition of 5 Arches. At September 30, 2019, our estimated fair value of this contingent liability was \$25 million and was recorded as a component of Accrued expenses and other liabilities on our consolidated balance sheets. 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 and 5 Arches combined, as if the acquisition occurred as of January 1, 2018. These pro forma amounts have been adjusted to include the amortization of intangible assets 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 September 30, 2019, 5 Arches had mortgage banking income of \$12 million and a net loss of \$3 million. Included in the net loss for this period was intangible asset amortization expense of \$4 million.

Table 2.5 – Unaudited Pro Forma Financial Information

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Supplementary pro forma information:				
Net interest income	\$ 33,513	\$ 35,231	\$ 98,101	\$ 105,660
Non-interest income	27,498	22,280	98,780	84,684
Net income	34,310	32,636	115,809	111,072

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 3. Summary of Significant Accounting Policies

Significant Accounting Policies

Included in *Note 3* to the Consolidated Financial Statements of our Annual Report on Form 10-K for the year ended December 31, 2018 is a summary of our significant accounting policies. Provided below is a summary of additional accounting policies that are significant to the company's consolidated financial position and results of operations for the three and nine months ended September 30, 2019.

Business Combinations

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. Adjustments to the values of the assets acquired and liabilities assumed that could be made during the measurement period, which could be up to one year after the acquisition date, are recorded in the period in which the adjustment is identified, with a corresponding offset to goodwill. Any adjustments made after the measurement period are recorded in the consolidated statements of income. Acquisition-related costs are expensed as incurred.

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.

Loan Originations

Our wholly-owned subsidiary, 5 Arches, originates business purpose residential loans, including single-family rental and residential bridge loans. Single-family rental loans are mortgage loans secured by 1-4 unit residential real estate with a mortgage loan borrower that owns the real estate as an investment property and rents the property to residential tenants. 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. Generally, single-family rental loans are classified as held-for-sale at fair value, as we have originated these loans with the intent to sell to third parties or transfer to securitization entities. Certain single-family rental loans may be subsequently reclassified to held-for-investment when the loans are transferred to our Federal Home Loan Bank of Chicago ("FHLBC") member subsidiary and pledged as collateral for borrowings made from the FHLBC. Residential bridge loans are classified as held-for-investment at fair value, if we intend to hold these loans to maturity, or held-for-sale at fair value, if we intend to sell the loans to a third party.

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 income, net 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 3. Summary of Significant Accounting Policies - (continued)

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.

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 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.

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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 3. Summary of Significant Accounting Policies - (continued)

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 September 30, 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 September 30, 2019, our right-of-use asset was \$11 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 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 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 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 3. Summary of Significant Accounting Policies - (continued)

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. Additionally, 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. 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.

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 September 30, 2019 and December 31, 2018.

Table 3.1 – Offsetting of Financial Assets, Liabilities, and Collateral

September 30, 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	Gross Amounts Not Offset in Consolidated Balance Sheet ⁽¹⁾		Net Amount
				Financial Instruments	Cash Collateral (Received) Pledged	
Assets ⁽²⁾						
Interest rate agreements	\$ 33,642	\$ —	\$ 33,642	\$ (25,802)	\$ (4,379)	\$ 3,461
TBAs	5,250	—	5,250	(3,448)	(1,040)	762
Total Assets	\$ 38,892	\$ —	\$ 38,892	\$ (29,250)	\$ (5,419)	\$ 4,223
Liabilities ⁽²⁾						
Interest rate agreements	\$ (228,150)	\$ —	\$ (228,150)	\$ 25,802	\$ 202,348	\$ —
TBAs	(4,192)	—	(4,192)	3,448	483	(261)
Loan warehouse debt	(233,224)	—	(233,224)	233,224	—	—
Security repurchase agreements	(1,157,646)	—	(1,157,646)	1,157,646	—	—
Total Liabilities	\$ (1,623,212)	\$ —	\$ (1,623,212)	\$ 1,420,120	\$ 202,831	\$ (261)

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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⁾		Net Amount
				Financial Instruments	Cash Collateral (Received) Pledged	
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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 4. Principles of Consolidation - (continued)

Analysis of Consolidated VIEs

At September 30, 2019, we consolidated our Legacy Sequoia and Sequoia Choice securitization entities that we determined were VIEs and for which we determined we were the primary beneficiary. Additionally, beginning in the second half of 2018, we consolidated certain Freddie Mac K-Series and SLST 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 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 September 30, 2019, the estimated fair value of our investments in the consolidated Legacy Sequoia, Sequoia Choice, Freddie Mac SLST and Freddie Mac K-Series entities was \$10 million, \$259 million, \$456 million, and \$215 million, respectively.

Beginning in the fourth quarter of 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 September 30, 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 the fourth quarter of 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 servicer 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 September 30, 2019, the estimated fair value of our investment in the Servicing Investment entities was \$75 million.

The following table presents a summary of the assets and liabilities of these VIEs.

Table 4.1 – Assets and Liabilities of Consolidated VIEs

September 30, 2019 (Dollars in Thousands)	Legacy Sequoia	Sequoia Choice	Freddie Mac SLST	Freddie Mac K-Series	Servicing Investment	Total Consolidated VIEs
Residential loans, held-for-investment	\$ 429,159	\$ 2,618,316	\$ 2,441,223	\$ —	\$ —	\$ 5,488,698
Multifamily loans, held-for-investment	—	—	—	3,791,622	—	3,791,622
Other investments	—	—	—	—	238,316	238,316
Cash and cash equivalents	—	—	—	—	21,240	21,240
Restricted cash	143	15	—	—	21,450	21,608
Accrued interest receivable	716	10,806	7,215	11,300	4,472	34,509
REO	460	—	84	—	—	544
Total Assets	\$ 430,478	\$ 2,629,137	\$ 2,448,522	\$ 3,802,922	\$ 285,478	\$ 9,596,537
Short-term debt	\$ —	\$ —	\$ —	\$ —	\$ 191,203	\$ 191,203
Accrued interest payable	456	8,949	5,498	10,805	247	25,955
Accrued expenses and other liabilities	—	15	—	—	19,371	19,386
Asset-backed securities issued	419,890	2,361,111	1,987,473	3,577,577	—	8,346,051
Total Liabilities	\$ 420,346	\$ 2,370,075	\$ 1,992,971	\$ 3,588,382	\$ 210,821	\$ 8,582,595
Number of VIEs	20	9	2	4	3	38

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 4. Principles of Consolidation - (continued)

December 31, 2018							Total
(Dollars in Thousands)	Legacy Sequoia	Sequoia Choice	Freddie Mac SLST	Freddie Mac K-Series	Servicing Investment	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
REO	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 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 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 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. Additionally, we consolidate the assets and liabilities of Servicing Investment entities from our investment in servicer advance investments and excess MSR. 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 to 46 Sequoia securitization entities sponsored by us that are still outstanding as of September 30, 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 mortgage servicing rights ("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.

During the first quarter of 2019, the master servicer for one 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 September 30, 2019.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 4. Principles of Consolidation - (continued)

The following table presents information related to securitization transactions that occurred during the three and nine months ended September 30, 2019 and 2018.

Table 4.2 – Securitization Activity Related to Unconsolidated VIEs Sponsored by Redwood

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Principal balance of loans transferred	\$ 366,999	\$ 327,511	\$ 1,116,092	\$ 2,735,644
Trading securities retained, at fair value	1,228	2,583	4,736	48,831
AFS securities retained, at fair value	1,069	776	3,023	6,728

The following table summarizes the cash flows during the three and nine months ended September 30, 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

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Proceeds from new transfers	\$ 376,126	\$ 329,231	\$ 1,138,778	\$ 2,723,012
MSR fees received	2,919	3,405	9,084	10,216
Funding of compensating interest, net	(76)	(46)	(213)	(102)
Cash flows received on retained securities	6,603	7,267	20,892	21,720

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 4. Principles of Consolidation - (continued)

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 the three and nine months ended September 30, 2019 and 2018.

Table 4.4 – Assumptions Related to Assets Retained from Unconsolidated VIEs Sponsored by Redwood

At Date of Securitization	Three Months Ended September 30, 2019		Three Months Ended September 30, 2018	
	Senior IO Securities	Subordinate Securities	Senior IO Securities	Subordinate Securities
Prepayment rates	37%	15%	9%	9%
Discount rates	14%	7%	14%	7%
Credit loss assumptions	0.20%	0.20%	0.20%	0.20%

At Date of Securitization	Nine Months Ended September 30, 2019		Nine Months Ended September 30, 2018	
	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%

The following table presents additional information at September 30, 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)	September 30, 2019	December 31, 2018
On-balance sheet assets, at fair value:		
Interest-only, senior and subordinate securities, classified as trading	\$ 106,691	\$ 129,111
Subordinate securities, classified as AFS	141,568	162,314
Mortgage servicing rights	37,904	58,572
Maximum loss exposure ⁽¹⁾	\$ 286,163	\$ 349,997
Assets transferred:		
Principal balance of loans outstanding	\$ 10,360,700	\$ 10,580,216
Principal balance of loans 30+ days delinquent	28,782	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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 4. Principles of Consolidation - (continued)

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 September 30, 2019 and December 31, 2018.

Table 4.6 – Key Assumptions and Sensitivity Analysis for Assets Retained from Unconsolidated VIEs Sponsored by Redwood

September 30, 2019 (Dollars in Thousands)	MSRs	Senior Securities ⁽¹⁾	Subordinate Securities
Fair value at September 30, 2019	\$ 37,904	\$ 41,827	\$ 206,433
Expected life (in years) ⁽²⁾	6	5	13
Prepayment speed assumption (annual CPR) ⁽²⁾	14%	16%	16%
Decrease in fair value from:			
10% adverse change	\$ 1,893	\$ 1,977	\$ 454
25% adverse change	4,486	5,189	1,802
Discount rate assumption ⁽²⁾	11%	13%	5%
Decrease in fair value from:			
100 basis point increase	\$ 1,259	\$ 848	\$ 19,313
200 basis point increase	2,436	1,977	35,950
Credit loss assumption ⁽²⁾	N/A	0.21%	0.21%
Decrease in fair value from:			
10% higher losses	N/A	\$ —	\$ 1,666
25% higher losses	N/A	—	4,153
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 \$42 million and \$61 million of interest-only securities at September 30, 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 4. Principles of Consolidation - (continued)

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 September 30, 2019 and December 31, 2018, grouped by asset type.

Table 4.7 – Third-Party Sponsored VIE Summary

(In Thousands)	September 30, 2019	December 31, 2018
Mortgage-Backed Securities		
Senior	\$ 141,264	\$ 185,107
Mezzanine	589,189	547,249
Subordinate	306,713	428,713
Total Mortgage-Backed Securities	1,037,166	1,161,069
Excess MSR	17,212	15,092
Total Investments in Third-Party Sponsored VIEs	\$ 1,054,378	\$ 1,176,161

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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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 as of September 30, 2019 and December 31, 2018.

Table 5.1 – Carrying Values and Fair Values of Assets and Liabilities

(In Thousands)	September 30, 2019		December 31, 2018	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets				
Residential loans, held-for-sale				
At fair value	\$ 925,780	\$ 925,780	\$ 1,048,690	\$ 1,048,690
At lower of cost or fair value	107	126	111	131
Residential loans, held-for-investment	7,755,916	7,755,916	6,205,941	6,205,941
Business purpose residential loans	336,035	336,035	141,258	141,258
Multifamily loans	3,791,622	3,791,622	2,144,598	2,144,598
Trading securities	1,013,785	1,013,785	1,118,612	1,118,612
Available-for-sale securities	271,641	271,641	333,882	333,882
Servicer advance investments ⁽¹⁾	222,591	222,591	300,468	300,468
MSRs ⁽¹⁾	39,837	39,837	60,281	60,281
Participation in loan warehouse facility ⁽¹⁾	—	—	39,703	39,703
Excess MSRs ⁽¹⁾	32,937	32,937	27,312	27,312
Shared home appreciation options ⁽¹⁾	11,372	11,372	—	—
Cash and cash equivalents	394,628	394,628	175,764	175,764
Restricted cash	111,518	111,518	29,313	29,313
Accrued interest receivable	57,464	57,464	47,105	47,105
Derivative assets	43,649	43,649	35,789	35,789
REO ⁽²⁾	5,069	5,124	3,943	4,396
Margin receivable ⁽²⁾	226,727	226,727	100,773	100,773
FHLBC stock ⁽²⁾	43,393	43,393	43,393	43,393
Guarantee asset ⁽²⁾	1,784	1,784	2,618	2,618
Pledged collateral ⁽²⁾	57,832	57,832	42,433	42,433
Liabilities				
Short-term debt facilities	\$ 1,589,062	\$ 1,589,062	\$ 1,937,920	\$ 1,937,920
Short-term debt - servicer advance financing	191,203	191,203	262,740	262,740
Accrued interest payable	46,881	46,881	42,528	42,528
Margin payable ⁽³⁾	6,658	6,658	835	835
Guarantee obligation ⁽³⁾	15,016	14,661	16,711	16,774
Contingent consideration ⁽³⁾	25,167	25,167	—	—
Derivative liabilities	234,011	234,011	84,855	84,855
ABS issued at fair value	8,346,051	8,346,051	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	184,664	185,803	—	—
Convertible notes, net	830,995	853,471	633,196	618,271
Trust preferred securities and subordinated notes, net	138,616	92,070	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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 5. Fair Value of Financial Instruments - (continued)

During the three and nine months ended September 30, 2019, we elected the fair value option for \$16 million and \$50 million of residential senior securities, respectively, \$40 million and \$247 million of subordinate securities, respectively, \$2.67 billion and \$5.20 billion of residential loans (principal balance), respectively, \$124 million and \$301 million of business purpose residential loans (principal balance), respectively, zero and \$1.43 billion of multifamily loans (principal balance), respectively, \$1 million and \$70 million of servicer advance investments, respectively, and \$1 million and \$8 million of excess MSR, respectively. Additionally, during the three months ended September 30, 2019, we elected the fair value option for \$11 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 as September 30, 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

September 30, 2019 (In Thousands)	Carrying Value	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Assets				
Residential loans	\$ 8,681,696	\$ —	\$ —	\$ 8,681,696
Business purpose residential loans	336,035	—	—	336,035
Multifamily loans	3,791,622	—	—	3,791,622
Trading securities	1,013,785	—	—	1,013,785
Available-for-sale securities	271,641	—	—	271,641
Servicer advance investments	222,591	—	—	222,591
MSRs	39,837	—	—	39,837
Excess MSRs	32,937	—	—	32,937
Shared home appreciation options	11,372	—	—	11,372
Derivative assets	43,649	5,250	33,642	4,757
Pledged collateral	57,832	57,832	—	—
FHLBC stock	43,393	—	43,393	—
Guarantee asset	1,784	—	—	1,784
Liabilities				
Contingent consideration	\$ 25,167	\$ —	\$ —	\$ 25,167
Derivative liabilities	234,011	4,192	228,150	1,669
ABS issued	8,346,051	—	—	8,346,051

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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 nine months ended September 30, 2019.

Table 5.3 – Changes in Level 3 Assets and Liabilities Measured at Fair Value on a Recurring Basis

(In Thousands)	Assets								
	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	5,257,800	29,093	1,481,554	296,484	21,115	69,610	868	7,762	11,343
Originations	—	296,955	—	—	—	—	—	—	—
Sales	(2,941,592)	(46,855)	—	(418,168)	(82,384)	—	—	—	—
Principal paydowns	(1,068,878)	(84,410)	(12,904)	(33,730)	(28,981)	(150,512)	—	—	—
Gains (losses) in net income, net	179,964	4,990	178,374	55,538	24,052	3,025	(21,312)	(2,137)	29
Unrealized losses in OCI, net	—	—	—	—	3,957	—	—	—	—
Other settlements, net ⁽¹⁾	(229)	(4,996)	—	(4,951)	—	—	—	—	—
Ending Balance - September 30, 2019	\$ 8,681,696	\$ 336,035	\$ 3,791,622	\$ 1,013,785	\$ 271,641	\$ 222,591	\$ 39,837	\$ 32,937	\$ 11,372

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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)

(In Thousands)	Assets		Liabilities	
	Guarantee Asset	Derivatives (2)	Contingent Consideration	ABS Issued
Beginning balance - December 31, 2018	\$ 2,618	\$ 2,181	\$ —	\$ 5,410,073
Acquisitions	—	—	24,621	3,423,561
Principal paydowns	—	—	—	(718,293)
Gains (losses) in net income, net	(834)	42,415	546	230,710
Other settlements, net (1)	—	(41,508)	—	—
Ending Balance - September 30, 2019	\$ 1,784	\$ 3,088	\$ 25,167	\$ 8,346,051

(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 commitments at the time loans are acquired to the basis of residential loans. Other settlements, net for trading securities relates to the consolidation of a Freddie Mac K-Series entity during the second quarter of 2019.

(2) For the purpose of this presentation, derivative assets and liabilities, which consist of loan purchase and forward sale commitments, are presented on a net basis.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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 September 30, 2019 and 2018. Gains or losses incurred on assets or liabilities sold, matured, called, or fully written down during the three and nine months ended September 30, 2019 and 2018 are not included in this presentation.

Table 5.4 – Portion of Net Gains (Losses) Attributable to Level 3 Assets and Liabilities Still Held at September 30, 2019 and 2018 Included in Net Income

(In Thousands)	Included in Net Income			
	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Assets				
Residential loans at Redwood	\$ 17,771	\$ (18,100)	\$ 82,408	\$ (70,316)
Residential loans at consolidated Sequoia entities	(11,132)	(8,978)	10,111	11,936
Residential loans at consolidated Freddie Mac SLST entities	39,783	—	94,788	—
Business purpose residential loans	584	(20)	4,069	(20)
Multifamily loans at consolidated Freddie Mac K-Series entities	47,353	(4,199)	178,374	(4,199)
Trading securities	11,206	3,821	33,196	(1,956)
Available-for-sale securities	—	(33)	—	(90)
Servicer advance investments	1,585	—	3,025	—
MSRs	(5,892)	337	(16,971)	4,861
Excess MSRs	(1,634)	—	(2,137)	—
Shared home appreciation options	29	—	29	—
Loan purchase commitments	4,678	2,168	4,757	2,157
Other assets - Guarantee asset	(216)	(51)	(834)	15
Liabilities				
Loan purchase commitments	\$ (1,668)	\$ (2,314)	\$ (1,669)	\$ (2,388)
Contingent consideration	(235)	—	(546)	—
ABS issued	(49,399)	12,536	(230,709)	(8,478)

The following table presents information on assets recorded at fair value on a non-recurring basis at September 30, 2019. 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 September 30, 2019.

Table 5.5 – Assets and Liabilities Measured at Fair Value on a Non-Recurring Basis at September 30, 2019

September 30, 2019 (In Thousands)	Carrying Value	Fair Value Measurements Using			Gain (Loss) for	
		Level 1	Level 2	Level 3	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Assets						
REO	\$ 4,525	\$ —	\$ —	\$ 4,525	\$ (332)	\$ (470)

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 5. Fair Value of Financial Instruments - (continued)

The following table presents the net market valuation gains and losses recorded in each line item of our consolidated statements of income for the three and nine months ended September 30, 2019 and 2018.

Table 5.6 – Market Valuation Gains and Losses, Net

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Mortgage Banking Activities, Net				
Residential loans held-for-sale, at fair value	\$ (6,623)	\$ 5,626	\$ 289	\$ 16,522
Residential loan purchase and forward sale commitments	12,943	1,610	41,142	(8,116)
Single-family rental loans held-for-sale, at fair value	1,283	(99)	4,200	(99)
Single-family rental loan purchase commitments	564	(22)	1,273	(22)
Residential bridge loans	1,010	—	2,108	—
Risk management derivatives, net	(2,972)	3,796	(15,387)	38,378
Total mortgage banking activities, net⁽¹⁾	\$ 6,205	\$ 10,911	\$ 33,625	\$ 46,663
Investment Fair Value Changes, Net				
Residential loans held-for-investment, at Redwood	\$ 7,667	\$ (17,063)	\$ 71,323	\$ (71,058)
Single-family rental loans held-for-investment	22	—	22	—
Residential bridge loans held-for-investment	(742)	53	(1,363)	53
Trading securities	15,275	6,314	55,577	2,429
Servicer advance investments	1,585	—	3,025	—
Excess MSRs	(1,635)	—	(2,137)	—
Shared home appreciation options	29	—	29	—
REO	(331)	—	(470)	—
Net investments in Legacy Sequoia entities ⁽²⁾	(407)	(248)	(904)	(976)
Net investments in Sequoia Choice entities ⁽²⁾	2,722	(943)	8,866	43
Net investments in Freddie Mac SLST entities ⁽²⁾	17,300	—	31,702	—
Net investments in Freddie Mac K-Series entities ⁽²⁾	7,445	511	13,810	511
Risk-sharing investments	(53)	(126)	(191)	(474)
Risk management derivatives, net	(37,433)	21,867	(144,548)	82,391
Impairments on AFS securities	—	(33)	—	(89)
Total investment fair value changes, net	\$ 11,444	\$ 10,332	\$ 34,741	\$ 12,830
Other Income (Expense), Net				
MSRs	\$ (7,489)	\$ (823)	\$ (21,243)	\$ 1,324
Risk management derivatives, net	4,389	(890)	13,157	(7,151)
Gain on re-measurement of 5 Arches investment	—	—	2,440	—
Total other expense, net⁽³⁾	\$ (3,100)	\$ (1,713)	\$ (5,646)	\$ (5,827)
Total Market Valuation Gains, Net	\$ 14,549	\$ 19,530	\$ 62,720	\$ 53,666

(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 (expense), net presented above does not include net MSR fee income or provisions for repurchases for MSRs, as these amounts do not represent market valuation adjustments.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 5. Fair Value of Financial Instruments - (continued)

At September 30, 2019, our valuation policy and processes had not changed from those described in our Annual Report on Form 10-K for the year ended December 31, 2018. 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

September 30, 2019		Input Values			
(Dollars in Thousands, except Input Values)	Fair Value	Unobservable Input	Range		Weighted Average
Assets					
Residential loans, at fair value:					
Jumbo fixed-rate loans	\$ 2,452,300	Prepayment rate (annual CPR)	20	-	20 %
		Whole loan spread to TBA price	\$ 0.56	-	\$ 1.56
		Whole loan spread to swap rate	94	-	375 bps
Jumbo hybrid loans	321,793	Prepayment rate (annual CPR)	15	-	15 %
		Whole loan spread to swap rate	90	-	345 bps
Jumbo loans committed to sell	418,905	Whole loan committed sales price	\$ 101.88	-	\$ 102.91
Loans held by Legacy Sequoia (1)	429,159	Liability price			N/A
Loans held by Sequoia Choice (1)	2,618,316	Liability price			N/A
Loans held by Freddie Mac SLST (1)	2,441,223	Liability price			N/A
Business purpose residential loans:					
Single-family rental loans	129,145	Senior credit spread	110	-	110 bps
		Subordinate credit spread	143	-	1,250 bps
		Senior credit support	35	-	36 %
		IO discount rate	5	-	8 %
		Prepayment rate (annual CPR)	1	-	10 %
Residential bridge loans	206,890	Discount rate	6	-	10 %
Multifamily loans held by Freddie Mac K-Series (1)	3,791,622	Liability price			N/A
Trading and AFS securities	1,285,426	Discount rate	2	-	15 %
		Prepayment rate (annual CPR)	—	-	60 %
		Default rate	—	-	20 %
		Loss severity	—	-	40 %
Servicer advance investments	222,591	Discount rate	5	-	5 %
		Prepayment rate (annual CPR)	8	-	15 %
		Expected remaining life (2)	2	-	2 years
		Mortgage servicing income	8	-	14 bps
MSRs	39,837	Discount rate	11	-	13 %
		Prepayment rate (annual CPR)	6	-	53 %
		Per loan annual cost to service	\$ 82	-	\$ 82
Excess MSRs	32,937	Discount rate	11	-	16 %
		Prepayment rate (annual CPR)	9	-	14 %
		Excess mortgage servicing income	8	-	17 bps
Shared home appreciation options	11,372	Discount rate	11	-	11 %
		Prepayment rate (annual CPR)	10	-	30 %
		Home price appreciation	3	-	3 %
Guarantee asset	1,784	Discount rate	11	-	11 %
		Prepayment rate (annual CPR)	16	-	16 %

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 5. Fair Value of Financial Instruments - (continued)

Table 5.7 – Fair Value Methodology for Level 3 Financial Instruments (continued)

September 30, 2019 (Dollars in Thousands, except Input Values)		Fair Value	Unobservable Input	Input Values		Weighted Average
				Range		
Assets (continued)						
REO	\$	4,525	Loss severity	16	-	16 %
Residential loan purchase commitments, net		3,042	MSR multiple	0.6	-	4.6 x
			Pull-through rate	9	-	100 %
			Whole loan spread to TBA price	\$ 0.56	-	\$ 1.56
			Whole loan spread to swap rate - fixed rate	115	-	375 bps
			Prepayment rate (annual CPR)	15	-	20 %
			Whole loan spread to swap rate - hybrid	90	-	330 bps
Liabilities						
ABS issued (1):						
At consolidated Sequoia entities		2,781,001	Discount rate	3	-	15 %
			Prepayment rate (annual CPR)	8	-	40 %
			Default rate	—	-	7 %
			Loss severity	20	-	29 %
At consolidated Freddie Mac SLST entities		1,987,473	Discount rate	2	-	13 %
			Prepayment rate (annual CPR)	6	-	6 %
			Default rate	22	-	22 %
			Loss severity	30	-	30 %
At consolidated Freddie Mac K-Series entities		3,577,577	Discount rate	2	-	9 %
			Prepayment rate (annual CPR)	—	-	— %
			Default rate	1	-	1 %
			Loss severity	20	-	20 %
Contingent consideration		25,167	Discount rate	23	-	23 %
			Probability of outcomes (3)	—	-	100 %

- (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 September 30, 2019, the fair value of securities we owned at the consolidated Sequoia, Freddie Mac SLST and Freddie Mac K-Series entities was \$266 million, \$454 million, and \$214 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.

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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 5. Fair Value of Financial Instruments - (continued)

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. Pricing inputs obtained from market whole loan transaction activity include indicative spreads to indexed to be announced ("TBA") prices and indexed swap rates for fixed-rate loans and indexed swap rates for hybrid loans (Level 3). Pricing inputs obtained from market securitization activity include indicative spreads to indexed TBA prices for senior residential mortgage-backed securities ("RMBS") and indexed swap rates for subordinate RMBS, and credit support levels (Level 3). Other unobservable inputs also include assumed future prepayment rates. Observable inputs include benchmark interest rates, swap rates, and TBA prices. These assets would generally decrease in value based upon an increase in the credit spread, prepayment speed, or credit support assumptions.

Residential and multifamily loans at consolidated entities

We have elected to account for our consolidated securitization entities as CFEs 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 allow 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.

Prices for our single-family rental loans are determined using market comparable information. Significant inputs obtained from market activity include indicative spreads to indexed swap rates for senior and subordinate mortgage-backed securities ("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 or prepayment speed 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.

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 September 30, 2019, we received dealer price indications on 83% of our securities, representing 95% 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 5. Fair Value of Financial Instruments - (continued)

Derivative assets and liabilities

Our derivative instruments include swaps, swaptions, TBAs, loan purchase commitments ("LPCs"), and forward sale commitments ("FSCs"). 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 financial 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 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 are estimated based on the probability that the mortgage loan will be purchased (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.

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 5% 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 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 5. Fair Value of Financial Instruments - (continued)

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 inputs such as forecasted home price appreciation, prepayment rates, and discount rate. 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 (Level 3).

FHLBC stock

Our Federal Home Loan Bank ("FHLB") member subsidiary is required to purchase 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).

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).

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 5. Fair Value of Financial Instruments - (continued)

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 and Sequoia Choice securitization entities, as well as securities issued by certain third-party Freddie Mac SLST and K-series securitization entities which 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 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 rates, prepayment rate, default rate, loss severity and credit support. A decrease in credit losses or discount rate, or an increase in prepayment rates, would generally cause the fair value of the ABS issued to decrease (i.e., become a larger liability).

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).

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 5. Fair Value of Financial Instruments - (continued)

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 entities at September 30, 2019 and December 31, 2018.

Table 6.1 – Classifications and Carrying Values of Residential Loans

September 30, 2019 (In Thousands)	Redwood	Legacy Sequoia	Sequoia Choice	Freddie Mac SLST	Total
Held-for-sale					
At fair value	\$ 925,780	\$ —	\$ —	\$ —	\$ 925,780
At lower of cost or fair value	107	—	—	—	107
Total held-for-sale	925,887	—	—	—	925,887
Held-for-investment at fair value	2,267,218	429,159	2,618,316	2,441,223	7,755,916
Total Residential Loans	\$ 3,193,105	\$ 429,159	\$ 2,618,316	\$ 2,441,223	\$ 8,681,803
December 31, 2018 (In Thousands)					
Held-for-sale					
At fair value	\$ 1,048,690	\$ —	\$ —	\$ —	\$ 1,048,690
At lower of cost or fair value	111	—	—	—	111
Total held-for-sale	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

At September 30, 2019, we owned mortgage servicing rights associated with \$2.51 billion (principal balance) of consolidated residential loans purchased from third-party originators. The value of these MSR 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 September 30, 2019, we owned 1,206 loans held-for-sale at fair value with an aggregate unpaid principal balance of \$904 million and a fair value of \$926 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 both September 30, 2019 and 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 three and nine months ended September 30, 2019, we purchased \$1.45 billion and \$3.94 billion (principal balance) of loans, respectively, for which we elected the fair value option, and we sold \$1.53 billion and \$3.92 billion (principal balance) of loans, respectively, for which we recorded a net market valuation loss of \$7 million and a net market valuation gain of \$0.3 million, respectively, through Mortgage banking activities, net on our consolidated statements of income. At September 30, 2019, loans held-for-sale with a market value of \$253 million were pledged as collateral under short-term borrowing agreements.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 6. Residential Loans - (continued)

During the three and nine months ended September 30, 2018, we purchased \$1.79 billion and \$5.52 billion (principal balance) of loans, respectively, for which we elected the fair value option, and we sold \$1.90 billion and \$5.83 billion (principal balance) of loans, respectively, for which we recorded net market valuation gains of \$6 million and \$16 million, respectively, through Mortgage banking activities, net on our consolidated statements of income.

At Lower of Cost or Fair Value

At both September 30, 2019 and December 31, 2018, we held two residential loans at the lower of cost or fair value with \$0.1 million in outstanding principal balance and carrying values of \$0.1 million. At both September 30, 2019 and December 31, 2018, none of these loans were greater than 90 days delinquent or in foreclosure.

Residential Loans Held-for-Investment at Fair Value

At Redwood

At September 30, 2019, we owned 3,118 held-for-investment loans at Redwood with an aggregate unpaid principal balance of \$2.20 billion and a fair value of \$2.27 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 September 30, 2019, one of these loans with an aggregate fair value of \$0.5 million and an unpaid principal balance of \$0.6 million was greater than 90 days delinquent and 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 three and nine months ended September 30, 2019, we purchased zero and \$39 million (principal balance) of loans, respectively, for which we elected the fair value option, and did not sell any loans. During the three and nine months ended September 30, 2019, we transferred loans with a fair value of zero and \$69 million, respectively, from held-for-sale to held-for-investment. During the three and nine months ended September 30, 2019, we transferred loans with a fair value of zero and \$23 million, respectively, from held-for-investment to held-for-sale. During the three and nine months ended September 30, 2019, we recorded net market valuation gains of \$8 million and \$71 million, respectively, on residential loans held-for-investment at fair value through Investment fair value changes, net on our consolidated statements of income. At September 30, 2019, loans with a fair value of \$2.27 billion were pledged as collateral under a borrowing agreement with the FHLBC.

During the three and nine months ended September 30, 2018, we transferred loans with a fair value of \$116 million and \$204 million, respectively, from held-for-sale to held-for-investment. During both the three and nine months ended September 30, 2018, we transferred loans with a fair value of \$16 million from held-for-investment to held-for-sale. During the three and nine months ended September 30, 2018, we recorded net market valuation losses of \$17 million and \$71 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 September 30, 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 September 30, 2019, these loans were comprised of 88% fixed-rate loans with a weighted average coupon of 4.15%, and the remainder were hybrid or ARM loans with a weighted average coupon of 4.19%.

At Consolidated Legacy Sequoia Entities

At September 30, 2019, we consolidated 2,277 held-for-investment loans at consolidated Legacy Sequoia entities, with an aggregate unpaid principal balance of \$446 million and a fair value of \$429 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 66%, and the loans were nearly all first lien and prime-quality.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 6. Residential Loans - (continued)

At September 30, 2019 and December 31, 2018, the aggregate unpaid principal balance of loans at consolidated Legacy Sequoia entities delinquent greater than 90 days was \$13 million and \$14 million, respectively, of which the aggregate unpaid principal balance of loans in foreclosure was \$3 million and \$5 million, respectively. During the three and nine months ended September 30, 2019, we recorded a net market valuation loss of \$0.1 million and a net market valuation gain of \$5 million, respectively, on these loans through Investment fair value changes, net on our consolidated statements of income. During the three and nine months ended September 30, 2018, we recorded net market valuation gains of \$4 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 September 30, 2019, we consolidated 3,543 held-for-investment loans at the consolidated Sequoia Choice entities, with an aggregate unpaid principal balance of \$2.55 billion and a fair value of \$2.62 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 745, the weighted average LTV ratio of these loans was 75%, and the loans were all first lien and prime-quality. At September 30, 2019, six of these loans with an aggregate unpaid principal balance of \$4 million were greater than 90 days delinquent and one of these loans with an unpaid principal balance of \$1 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.

During the three and nine months ended September 30, 2019, we transferred loans with a fair value of \$727 million and \$1.08 billion, respectively, from held-for-sale to held-for-investment associated with Choice securitizations. During the three and nine months ended September 30, 2019, we recorded a net market valuation loss of \$11 million and a net market valuation gain of \$5 million, respectively, on these loans through Investment fair value changes, net on our consolidated statements of income. During the three and nine months ended September 30, 2018, we recorded net market valuation losses of \$13 million and \$25 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 September 30, 2019, we consolidated 14,706 held-for-investment loans at the consolidated Freddie Mac SLST entities, with an aggregate unpaid principal balance of \$2.47 billion and a fair value of \$2.44 billion, 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 599 and the weighted average LTV ratio of these loans was 68%. At September 30, 2019, 288 of these loans with an aggregate unpaid principal balance of \$75 million were greater than 90 days delinquent, and 150 of these loans with an aggregate unpaid principal balance of \$24 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.

During the three and nine months ended September 30, 2019, we recorded net market valuation gains of \$40 million and \$95 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*.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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 three months ended September 30, 2019, we funded \$127 million of business purpose residential loans, of which \$3 million of residential bridge loans were sold to a third party. During the period from March 1, 2019 to September 30, 2019, we funded \$297 million of business purpose residential loans, of which \$47 million of residential bridge loans were sold to a third party. The remaining business purpose residential loans were transferred to our investment portfolio (residential bridge loans), or retained in our mortgage banking business (single-family rental loans). Prior to the transfer of residential bridge loans to our investment portfolio, we recorded net market valuation gains of \$1 million and \$2 million on these loans through Mortgage banking activities, net on our consolidated statements of income for the three months ended September 30, 2019 and for the period from March 1, 2019 to September 30, 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. Additionally, during the three months ended September 30, 2019 and during the period from March 1, 2019 to September 30, 2019, we recorded loan origination fee income associated with business purpose loans of \$3 million and \$6 million, respectively, 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 September 30, 2019 and December 31, 2018.

Table 7.1 – Classifications and Carrying Values of Business Purpose Residential Loans

September 30, 2019 (In Thousands)	Single-Family Rental	Residential Bridge	Total
Held-for-sale at fair value	\$ 110,434	\$ —	\$ 110,434
Held-for-investment at fair value	18,711	206,890	225,601
Total Business Purpose Residential Loans	\$ 129,145	\$ 206,890	\$ 336,035

December 31, 2018 (In Thousands)	Single-Family Rental	Residential 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

Single-Family Rental Loans Held-for-Sale at Fair Value

At September 30, 2019, we owned 77 single-family rental loans held-for-sale with an aggregate unpaid principal balance of \$106 million and a fair value of \$110 million, 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 both September 30, 2019 and December 31, 2018, none of these loans were greater than 90 days delinquent or in foreclosure.

During the three months ended September 30, 2019 and for the period from March 1, 2019 to September 30, 2019, we originated \$36 million and \$78 million of single-family rental loans, respectively. During both the three months ended September 30, 2019 and for the period from March 1, 2019 to September 30, 2019, \$19 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. We did not sell any loans during either of these periods. 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 three and nine months ended September 30, 2019, we recorded net market valuation gains of \$1 million and \$3 million, respectively, on single-family rental loans held-for-sale at fair value through Mortgage banking activities, net on our consolidated statements of income. At September 30, 2019, loans held-for-sale with a market value of \$78 million were pledged as collateral under short-term borrowing agreements.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

The outstanding single-family rental loans held-for-sale at September 30, 2019 were first lien, fixed-rate loans with original maturities of five, seven, or ten years. At September 30, 2019, the weighted average coupon of our single-family rental loans was 5.35% and the weighted average remaining loan term was six years. At origination, the weighted average LTV ratio of these loans was 68% and the weighted average debt service coverage ratio ("DSCR") was 1.36 times.

Single-Family Rental Loans Held-for-Investment at Fair Value

At September 30, 2019, we owned one single-family rental loan held-for-investment with an aggregate unpaid principal balance of \$17 million and a fair value of \$19 million. At September 30, 2019, this loan was not greater than 90 days delinquent or in foreclosure. During the three months ended September 30, 2019, we transferred one loan with a fair value of \$19 million from held-for-sale to held-for-investment. During both the three and nine months ended September 30, 2019, we recorded net market valuation gains of less than \$0.1 million on single-family rental loans held-for-investment at fair value through Investment fair value changes, net on our consolidated statements of income.

Residential Bridge Loans Held-for-Investment at Fair Value

At September 30, 2019, we owned 392 residential bridge loans held-for-investment with an aggregate unpaid principal balance of \$205 million and a fair value of \$207 million, 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 September 30, 2019, nine loans with an aggregate fair value and unpaid principal balance of \$6 million were greater than 90 days delinquent, and eight of these loans with an aggregate fair value and unpaid principal balance of \$5 million were in foreclosure. 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 nine months ended September 30, 2019, we transferred one loan with a fair value of \$5 million to REO, which is included in Other assets on our consolidated balance sheets.

During the three months ended September 30, 2019 and for the period from March 1, 2019 to September 30, 2019, \$88 million and \$174 million of newly originated residential bridge loans, respectively, were transferred to our investment portfolio. 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 both the three and nine months ended September 30, 2019, we recorded net market valuation losses of \$1 million on residential bridge loans held-for-investment at fair value through Investment fair value changes, net on our consolidated statements of income. At September 30, 2019, loans with a market value of \$176 million were pledged as collateral under short-term borrowing agreements.

The outstanding residential bridge loans held-for-investment at September 30, 2019 were first lien, fixed-rate, interest-only loans with a weighted average coupon of 8.90% and original maturities of six to 24 months. At origination, the weighted average FICO score of borrowers backing these loans was 693 and the weighted average LTV ratio of these loans was 70%.

At September 30, 2019, we had a \$67 million commitment to fund residential bridge loans. See *Note 16* for additional information on this commitment.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 8. Multifamily Loans

Beginning in the second half of 2018, we invested in multifamily subordinate securities issued by certain 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 September 30, 2019, we consolidated 250 held-for-investment multifamily loans, with an aggregate unpaid principal balance of \$3.54 billion and a fair value of \$3.79 billion, 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 September 30, 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 September 30, 2019, the weighted average coupon of these multifamily loans was 4.19% and the weighted average remaining loan term was six years. At both September 30, 2019 and December 31, 2018, none of these loans were greater than 90 days delinquent or in foreclosure.

During the three and nine months ended September 30, 2019, we recorded net market valuation gains of \$47 million and \$178 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 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 September 30, 2019 and December 31, 2018.

Table 9.1 – Fair Values of Real Estate Securities by Type

(In Thousands)	September 30, 2019	December 31, 2018
Trading	\$ 1,013,785	\$ 1,118,612
Available-for-sale	271,641	333,882
Total Real Estate Securities	\$ 1,285,426	\$ 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. Most of our mezzanine classified securities were initially rated AA through BBB- and issued in 2012 or later. Subordinate securities are all interests below mezzanine. 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 at September 30, 2019 and December 31, 2018.

Table 9.2 – Trading Securities by Position

(In Thousands)	September 30, 2019	December 31, 2018
Senior	\$ 149,634	\$ 158,670
Mezzanine	644,571	610,819
Subordinate	219,580	349,123
Total Trading Securities	\$ 1,013,785	\$ 1,118,612

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 9. Real Estate Securities - (continued)

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. At September 30, 2019, trading securities with a carrying value of \$677 million as well as \$113 million, \$385 million, and \$209 million of securities we owned that were issued by consolidated Sequoia Choice, Freddie Mac SLST, and Freddie Mac K-Series securitizations, respectively, were pledged as collateral under short-term borrowing agreements. See *Note 13* for additional information on short-term debt. At September 30, 2019, trading securities with a carrying value of \$4 million, as well as \$126 million of securities we owned that were issued by consolidated Sequoia Choice securitizations, were pledged as collateral under our subordinate securities financing facility. In addition, at September 30, 2019, trading securities with a fair value of \$41 million were pledged as collateral under a borrowing agreement with the FHLBC. See *Note 15* for additional information on long-term debt.

At September 30, 2019 and December 31, 2018, our senior trading securities included \$58 million and \$82 million of interest-only securities, respectively, for which there is no principal balance, and the remaining unpaid principal balance of our senior trading securities was \$88 million and \$78 million, respectively. Our interest-only securities included \$29 million and \$43 million of A-IO-S securities at September 30, 2019 and December 31, 2018, respectively, which are securities we retained from certain of our Sequoia securitizations that represent certificated servicing strips.

At September 30, 2019 and December 31, 2018, our mezzanine and subordinate trading securities had an unpaid principal balance of \$1.01 billion and \$1.12 billion, respectively. At September 30, 2019 and December 31, 2018, the fair value of our mezzanine and subordinate securities was \$864 million and \$960 million, respectively, and included \$128 million and \$277 million, respectively, of Agency residential mortgage credit risk transfer (or "CRT") securities, \$65 million and \$68 million, respectively, of Sequoia securities, \$207 million and \$186 million, respectively, of other third-party residential securities, and \$464 million and \$429 million, respectively, of third-party commercial/multifamily securities.

During the three and nine months ended September 30, 2019, we acquired \$66 million and \$335 million (principal balance), respectively, of securities for which we elected the fair value option and classified as trading, and sold \$236 million and \$397 million, respectively, of such securities. During the three and nine months ended September 30, 2018, we acquired \$189 million and \$567 million (principal balance), respectively, of securities for which we elected the fair value option and classified as trading, and sold \$79 million and \$323 million, respectively, of such securities.

During the three and nine months ended September 30, 2019, we recorded net market valuation gains of \$15 million and \$56 million, respectively, on trading securities, included in Investment fair value changes, net on our consolidated statements of income. During the three and nine months ended September 30, 2018, we recorded net market valuation gains of \$6 million and \$2 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 September 30, 2019 and December 31, 2018.

Table 9.3 – Available-for-Sale Securities by Position

(In Thousands)	September 30, 2019	December 31, 2018
Senior	\$ 33,457	\$ 87,615
Mezzanine	13,967	36,407
Subordinate	224,217	209,860
Total AFS Securities	\$ 271,641	\$ 333,882

At September 30, 2019 and December 31, 2018, all of our available-for-sale securities were primarily comprised of residential mortgage-backed securities. At September 30, 2019, AFS securities with a carrying value of \$59 million were pledged as collateral under short-term borrowing agreements. See *Note 13* for additional information on short-term debt. At September 30, 2019, AFS securities with a carrying value of \$123 million were pledged as collateral under our subordinate securities financing facility. See *Note 15* for additional information on long-term debt.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 9. Real Estate Securities - (continued)

During the three and nine months ended September 30, 2019, we purchased \$12 million and \$21 million of AFS securities, respectively, and sold \$15 million and \$82 million of AFS securities, respectively, which resulted in net realized gains of \$4 million and \$13 million, respectively. During the three and nine months ended September 30, 2018, we purchased \$1 million and \$7 million of AFS securities, respectively, and sold \$26 million and \$118 million of AFS securities, respectively, which resulted in net realized gains of \$7 million and \$21 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 September 30, 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.

The following table presents the components of carrying value (which equals fair value) of AFS securities at September 30, 2019 and December 31, 2018.

Table 9.4 – Carrying Value of AFS Securities

September 30, 2019				
(In Thousands)	Senior	Mezzanine	Subordinate	Total
Principal balance	\$ 34,272	\$ 13,729	\$ 291,207	\$ 339,208
Credit reserve	(588)	—	(33,623)	(34,211)
Unamortized discount, net	(12,346)	(552)	(119,756)	(132,654)
Amortized cost	21,338	13,177	137,828	172,343
Gross unrealized gains	12,131	790	86,389	99,310
Gross unrealized losses	(12)	—	—	(12)
Carrying Value	\$ 33,457	\$ 13,967	\$ 224,217	\$ 271,641
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

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 9. Real Estate Securities - (continued)

The following table presents the changes for the three and nine months ended September 30, 2019, in unamortized discount and designated credit reserves on AFS securities.

Table 9.5 – Changes in Unamortized Discount and Designated Credit Reserves on AFS Securities

(In Thousands)	Three Months Ended September 30, 2019		Nine Months Ended September 30, 2019	
	Credit Reserve	Unamortized Discount, Net	Credit Reserve	Unamortized Discount, Net
Beginning balance	\$ 34,849	\$ 137,282	\$ 41,370	\$ 151,200
Amortization of net discount	—	(1,834)	—	(5,823)
Realized credit losses	(694)	—	(1,874)	—
Acquisitions	734	399	2,198	1,103
Sales, calls, other	(800)	(3,071)	(7,197)	(14,112)
(Release of) transfers to credit reserves, net	122	(122)	(286)	286
Ending Balance	\$ 34,211	\$ 132,654	\$ 34,211	\$ 132,654

AFS Securities with Unrealized Losses

The following table presents the components comprising the total carrying value of AFS securities that were in a gross unrealized loss position at September 30, 2019 and December 31, 2018.

Table 9.6 – Components of Fair Value of AFS Securities by Holding Periods

(In Thousands)	Less Than 12 Consecutive Months			12 Consecutive Months or Longer		
	Amortized Cost	Unrealized Losses	Fair Value	Amortized Cost	Unrealized Losses	Fair Value
September 30, 2019	\$ —	\$ —	\$ —	\$ 6,254	\$ (12)	\$ 6,242
December 31, 2018	12,923	(499)	12,424	7,464	(49)	7,415

At September 30, 2019, after giving effect to purchases, sales, and extinguishment due to credit losses, our consolidated balance sheet included 113 AFS securities, of which one was in an unrealized loss position and one was in a continuous unrealized loss position for 12 consecutive months or longer. At December 31, 2018, our consolidated balance sheet included 128 AFS securities, of which seven were in an unrealized loss position and three 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 September 30, 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 September 30, 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 9. Real Estate Securities - (continued)

For both the three and nine months ended September 30, 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 as September 30, 2019.

Table 9.7 – Significant Valuation Assumptions

September 30, 2019	Range for Securities		
Prepayment rates	15%	-	15%
Projected losses	1%	-	1%

The following table details the activity related to the credit loss component of OTTI (i.e., OTTI recognized through earnings) for AFS securities held as September 30, 2019 and 2018, 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

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Balance at beginning of period	\$ 18,580	\$ 20,967	\$ 18,652	\$ 21,037
Additions				
Initial credit impairments	—	33	—	76
Reductions				
Securities sold, or expected to sell	(6)	(927)	(20)	(1,026)
Securities with no outstanding principal at period end	—	(1,229)	(58)	(1,243)
Balance at End of Period	\$ 18,574	\$ 18,844	\$ 18,574	\$ 18,844

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 three and nine months ended September 30, 2019 and 2018.

Table 9.9 – Gross Realized Gains and Losses on AFS Securities

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Gross realized gains - sales	\$ 3,656	\$ 7,275	\$ 13,143	\$ 21,312
Gross realized gains - calls	1,058	—	5,084	43
Gross realized losses - sales	—	—	—	(3)
Total Realized Gains on Sales and Calls of AFS Securities, net	\$ 4,714	\$ 7,275	\$ 18,227	\$ 21,352

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 10. Other Investments

Other investments at September 30, 2019 and December 31, 2018 are summarized in the following table.

Table 10.1 – Components of Other Investments

(In Thousands)	September 30, 2019	December 31, 2018
Servicer advance investments	\$ 222,591	\$ 300,468
Mortgage servicing rights	39,837	60,281
Excess MSRs	32,937	27,312
Investment in multifamily loan fund	32,158	—
Shared home appreciation options	11,372	—
Other	8,812	—
Participation in loan warehouse facility	—	39,703
Investment in 5 Arches	—	10,754
Total Other Investments	\$ 347,707	\$ 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 September 30, 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 subsidiary.

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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

At September 30, 2019, our servicer advance investments had a carrying value of \$223 million and were associated with a portfolio of residential mortgage loans with an unpaid principal balance of \$8.38 billion. The outstanding servicer advance receivables associated with this investment were \$205 million at September 30, 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 September 30, 2019 and December 31, 2018:

Table 10.2 – Components of Servicer Advance Receivables

(In Thousands)	September 30, 2019	December 31, 2018
Principal and interest advances	\$ 54,670	\$ 144,336
Escrow advances (taxes and insurance advances)	99,227	94,828
Corporate advances	51,049	47,614
Total Servicer Advance Receivables	\$ 204,946	\$ 286,778

We account for our servicer advance investments at fair value and during the three and nine months ended September 30, 2019, we recorded \$3 million and \$9 million of interest income associated with these investments, respectively, and recorded net market valuation gains of \$2 million and \$3 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 MSR 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 subsidiary.

At September 30, 2019 and December 31, 2018, our MSRs had a fair value of \$40 million and \$60 million, respectively, and were associated with loans with an aggregate principal balance of \$4.61 billion and \$4.93 billion, respectively.

The following table presents activity for MSRs for the three and nine months ended September 30, 2019 and 2018.

Table 10.3 – Activity for MSRs

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Balance at beginning of period	\$ 47,396	\$ 64,674	\$ 60,281	\$ 63,598
Additions	—	—	868	—
Sales	—	—	—	(1,077)
Changes in fair value due to:				
Changes in assumptions ⁽¹⁾	(5,150)	1,099	(15,291)	6,388
Other changes ⁽²⁾	(2,409)	(1,988)	(6,021)	(5,124)
Balance at End of Period	\$ 39,837	\$ 63,785	\$ 39,837	\$ 63,785

(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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

The following table presents the components of our MSR income for the three and nine months ended September 30, 2019 and 2018.

Table 10.4 – Components of MSR Income, net

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Servicing income	\$ 3,850	\$ 4,004	\$ 11,310	\$ 11,601
Cost of sub-servicer	(319)	(324)	(1,090)	(1,254)
Net servicing fee income	3,531	3,680	10,220	10,347
Market valuation changes of MSRs	(7,489)	(823)	(21,243)	1,324
Market valuation changes of associated derivatives	4,389	(890)	13,157	(7,151)
MSR reversal of provision for repurchases	—	—	208	277
MSR Income, Net ⁽¹⁾	\$ 431	\$ 1,967	\$ 2,342	\$ 4,797

(1) MSR income, net is included in Other income, net 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 three and nine months ended September 30, 2019, we recognized \$2 million and \$6 million of interest income, respectively, through Other interest income, and recorded net market valuation losses of \$2 million and \$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 \$33 million at September 30, 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 September 30, 2019, the carrying amount of our investment in the partnership was \$32 million. We have elected to record our share of earnings or losses from this investment on a one-quarter lag. During the three and nine months ended September 30, 2019, we recorded \$1 million and \$0.5 million of income, respectively, associated with this investment in Other income, net 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. The counterparty purchases an option to buy a fractional interest in a homeowner's ownership interest in his or her real property, and subsequently the counterparty sells the option contract to us. Pursuant to the terms of the option contract, we are able to share in both home price appreciation and depreciation. At September 30, 2019, we had acquired \$11 million of shared home appreciation options under this flow purchase agreement and had an outstanding commitment to fund up to an additional \$39 million under this agreement.

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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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 remaining 80% 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, we recorded \$0.3 million of gross income associated with this investment and, including amortization of certain intangible assets, recorded \$0.1 million of net earnings in Other income, net 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 at September 30, 2019 and December 31, 2018.

Table 11.1 – Fair Value and Notional Amount of Derivative Financial Instruments

(In Thousands)	September 30, 2019		December 31, 2018	
	Fair Value	Notional Amount	Fair Value	Notional Amount
Assets - Risk Management Derivatives				
Interest rate swaps	\$ 28,987	\$ 1,190,500	\$ 28,211	\$ 2,106,500
TBAs	5,250	1,960,000	4,665	520,000
Swaptions	4,655	625,000	—	—
Assets - Other Derivatives				
Loan purchase commitments	4,757	875,707	2,913	331,161
Total Assets	\$ 43,649	\$ 4,651,207	\$ 35,789	\$ 2,957,661
Liabilities - Cash Flow Hedges				
Interest rate swaps	\$ (61,685)	\$ 139,500	\$ (34,492)	\$ 139,500
Liabilities - Risk Management Derivatives				
Interest rate swaps	(166,465)	3,896,300	(36,416)	1,742,000
TBAs	(4,192)	1,655,000	(13,215)	935,000
Liabilities - Other Derivatives				
Loan purchase commitments	(1,669)	457,272	(732)	137,224
Total Liabilities	\$ (234,011)	\$ 6,148,072	\$ (84,855)	\$ 2,953,724
Total Derivative Financial Instruments, Net	\$ (190,362)	\$ 10,799,279	\$ (49,066)	\$ 5,911,385

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 September 30, 2019, we were party to swaps and swaptions with an aggregate notional amount of \$5.71 billion and TBA agreements sold with an aggregate notional amount of \$3.62 billion. 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.

During the three and nine months ended September 30, 2019, risk management derivatives had net market valuation losses of \$36 million and \$147 million, respectively. During the three and nine months ended September 30, 2018, risk management derivatives had net market valuation gains of \$25 million and \$114 million, respectively. These market valuation gains and losses are recorded in Mortgage banking activities, net, Investment fair value changes, net, and Other income, net on our consolidated statements of income.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 11. Derivative Financial Instruments - (continued)

Loan Purchase and Forward Sale Commitments

LPCs and FSCs that qualify as derivatives are recorded at their estimated fair values. For the three and nine months ended September 30, 2019, LPCs and FSCs had net market valuation gains of \$14 million and \$42 million, respectively, that were recorded in Mortgage banking activities, net on our consolidated statements of income. For the three and nine months ended September 30, 2018, LPCs and FSCs had a net market valuation gain of \$2 million and a net market valuation loss of \$8 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 three and nine months ended September 30, 2019, changes in the values of designated cash flow hedges were negative \$12 million and negative \$27 million, respectively, and were recorded in Accumulated other comprehensive income, a component of equity. For the three and nine months ended September 30, 2018, changes in the values of designated cash flow hedges were positive \$5 million and positive \$17 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 \$61 million and \$34 million at September 30, 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 three and nine months ended September 30, 2019 and 2018.

Table 11.2 – Impact on Interest Expense of Interest Rate Agreements Accounted for as Cash Flow Hedges

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Net interest expense on cash flows hedges	\$ (727)	\$ (734)	\$ (2,004)	\$ (2,536)
Total Interest Expense	\$ (727)	\$ (734)	\$ (2,004)	\$ (2,536)

Derivative Counterparty Credit Risk

As discussed in our Annual Report on Form 10-K for the year ended December 31, 2018, we consider counterparty risk as part of our fair value assessments of all derivative financial instruments at each quarter-end. At September 30, 2019, we assessed this risk as remote and did not record a specific valuation adjustment.

At September 30, 2019, we had outstanding derivative agreements with six counterparties (other than clearinghouses) and were in compliance with ISDA agreements governing our open derivative positions.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 12. Other Assets and Liabilities

Other assets at September 30, 2019 and December 31, 2018 are summarized in the following table.

Table 12.1 – Components of Other Assets

(In Thousands)	September 30, 2019	December 31, 2018
Margin receivable	\$ 226,727	\$ 100,773
Pledged collateral	57,832	42,433
FHLBC stock	43,393	43,393
Investment receivable	14,375	6,959
Right-of-use asset	11,076	—
REO	5,069	3,943
Fixed assets and leasehold improvements ⁽¹⁾	4,794	5,106
Other	14,044	15,218
Total Other Assets	\$ 377,310	\$ 217,825

(1) Fixed assets and leasehold improvements had a basis of \$11 million and accumulated depreciation of \$6 million at September 30, 2019.

Accrued expenses and other liabilities at September 30, 2019 and December 31, 2018 are summarized in the following table.

Table 12.2 – Components of Accrued Expenses and Other Liabilities

(In Thousands)	September 30, 2019	December 31, 2018
Contingent consideration	\$ 25,167	\$ —
Payable to minority partner	18,664	14,331
Accrued compensation	17,219	19,769
Guarantee obligations	15,016	16,711
Lease liability	12,570	—
Deferred tax liabilities	11,986	9,022
Margin payable	6,658	835
Accrued operating expenses	6,036	3,122
Residential bridge loan holdbacks	4,465	—
Residential loan and MSR repurchase reserve	3,947	4,189
Legal reserve	2,000	2,000
Other	6,014	8,740
Total Accrued Expenses and Other Liabilities	\$ 129,742	\$ 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 12. Other Assets and Liabilities - (continued)

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 to a clearinghouse related to our 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 the first quarter of 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.

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 September 30, 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 September 30, 2019 was \$5 million, which included \$0.5 million of REO from our Legacy Sequoia entities, \$5 million from our residential bridge loan portfolio, and \$0.1 million from our consolidated Freddie Mac SLST entities. During the nine months ended September 30, 2019, transfers into REO included \$0.2 million from Legacy Sequoia entities, a \$5 million residential bridge loan, and \$0.1 million from Freddie Mac SLST entities. During the nine months ended September 30, 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 September 30, 2019, there were three REO properties at our Legacy Sequoia entities, one residential bridge loan REO property, and one REO property at our Freddie Mac SLST entities recorded on our consolidated balance sheets. At December 31, 2018, there were 13 REO properties recorded, 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 MSR 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 September 30, 2019, the carrying value of their interests was \$19 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 three and nine months ended September 30, 2019, we allocated \$0.4 million and \$0.9 million of gains to the co-investors, respectively, which were recorded in Other income, net on our consolidated statements of income.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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 September 30, 2019, we had outstanding agreements with several counterparties and we were in compliance with all of the related covenants. For additional information about these financial covenants and our short-term debt, see Part I, Item 2 – *Management's Discussion and Analysis of Financial Condition and Results of Operations* of this Quarterly Report on Form 10-Q and Part II, Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2018.

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 September 30, 2019 and December 31, 2018.

Table 13.1 – Short-Term Debt

(Dollars in Thousands)	September 30, 2019					
	Number of Facilities	Outstanding Balance	Limit	Weighted Average Interest Rate	Maturity	Weighted Average Days Until Maturity
Facilities						
Residential loan warehouse (1)	4	\$ 233,224	\$ 1,425,000	3.51%	10/2019-3/2020	96
Real estate securities repo (1)	9	1,157,646	—	3.11%	10/2019-1/2020	28
Single-family rental loan warehouse (2)	2	59,204	400,000	4.30%	6/2020-6/2021	358
Residential bridge loan warehouse (2)	4	138,988	330,000	4.54%	10/2019-5/2022	707
Business purpose loan working capital (2)	1	—	15,000	5.00%	12/2020	N/A
Total Short-Term Debt Facilities	20	1,589,062				
Servicer advance financing	1	191,203	350,000	3.89%	11/2019	46
Convertible notes, net	N/A	200,552	—	5.63%	11/2019	60
Total Short-Term Debt		\$ 1,980,817				

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 13. Short-Term Debt - (continued)

(Dollars in Thousands)	December 31, 2018					
	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
Real estate securities repo (1)	9	988,890	—	3.47%	1/2019-3/2019	26
Single-family rental loan warehouse (2)	2	22,053	400,000	4.77%	6/2020-6/2021	560
Residential bridge loan warehouse(2)	2	66,327	80,000	5.20%	11/2019-4/2021	629
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 September 30, 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 September 30, 2019. Borrowings under these facilities will be repaid as the underlying loans mature or are sold to third parties or transferred to securitizations.

At September 30, 2019 and December 31, 2018, the fair value of held-for-sale residential loans pledged as collateral under our short-term debt facilities was \$253 million and \$935 million, respectively. At September 30, 2019, the fair value of real estate securities pledged as collateral under our short-term debt facilities was \$736 million, and also included \$113 million of securities retained from our consolidated Sequoia Choice securitizations as well as \$385 million and \$209 million of securities we owned that were issued by consolidated Freddie Mac SLST and Freddie Mac K-series securitizations, respectively. At December 31, 2018, the fair value of real estate securities pledged as collateral under our short-term debt facilities was \$844 million, and also included \$130 million of securities retained from our consolidated Sequoia Choice securitizations as well as \$229 million and \$18 million of securities we owned that were issued by consolidated Freddie Mac SLST and Freddie Mac K-series securitizations, respectively. The fair value of single-family rental and residential bridge loans pledged as collateral under our warehouse facilities was \$78 million and \$176 million, respectively, at September 30, 2019 and \$28 million and \$98 million, respectively, at December 31, 2018.

For the three and nine months ended September 30, 2019, the average balances of our short-term debt facilities were \$1.97 billion and \$1.81 billion, respectively. At September 30, 2019 and December 31, 2018, accrued interest payable on our short-term debt facilities was \$3 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 September 30, 2019, the fair value of servicer advances, cash and restricted cash collateralizing the securitization financing was \$243 million. At September 30, 2019, the accrued interest payable balance on this financing was \$0.2 million and the unamortized capitalized commitment costs were \$0.4 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. At September 30, 2019, the accrued interest payable balance on this debt was \$4 million. See Note 15 for additional information on our convertible notes.

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 September 30, 2019. At both September 30, 2019 and December 31, 2018, we had no outstanding borrowings on this facility.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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 September 30, 2019.

Table 13.2 – Short-Term Debt by Collateral Type and Remaining Maturities

(In Thousands)	September 30, 2019			
	Within 30 days	31 to 90 days	Over 90 days	Total
Collateral Type				
Held-for-sale residential loans	\$ 31,031	\$ 108,316	\$ 93,877	\$ 233,224
Real estate securities	834,748	293,108	29,790	1,157,646
Single-family rental loans	—	—	59,204	59,204
Residential bridge loans	—	—	138,988	138,988
Total Secured Short-Term Debt	865,779	401,424	321,859	1,589,062
Servicer advance financing	—	191,203	—	191,203
Convertible notes, net	—	200,552	—	200,552
Total Short-Term Debt	\$ 865,779	\$ 793,179	\$ 321,859	\$ 1,980,817

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, and beginning in 2018, 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. Each consolidated 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. 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 our 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 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 and Freddie Mac K-Series, and Freddie Mac SLST entities pay fixed rates of interest and 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 14. Asset-Backed Securities Issued - (continued)

The carrying values of ABS issued by Sequoia securitization entities we sponsored at September 30, 2019 and December 31, 2018, along with other selected information, are summarized in the following table.

Table 14.1 – Asset-Backed Securities Issued

September 30, 2019 (Dollars in Thousands)	Legacy Sequoia	Sequoia Choice	Freddie Mac SLST	Freddie Mac K-Series	Total
Certificates with principal balance	\$ 437,793	\$ 2,285,479	\$ 1,885,106	\$ 3,239,009	\$ 7,847,387
Interest-only certificates	1,486	16,619	28,758	202,730	249,593
Market valuation adjustments	(19,389)	59,013	73,609	135,838	249,071
ABS Issued, Net	\$ 419,890	\$ 2,361,111	\$ 1,987,473	\$ 3,577,577	\$ 8,346,051
Range of weighted average interest rates, by series	2.22% to 3.49%	4.41% to 5.06%	3.50 %	3.39% to 4.20%	
Stated maturities	2024 - 2036	2047 - 2049	2028 - 2029	2025 - 2049	
Number of series	20	9	2	4	

December 31, 2018 (Dollars in Thousands)	Legacy Sequoia	Sequoia Choice	Freddie Mac SLST	Freddie Mac K-Series	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 September 30, 2019, all of the ABS issued and outstanding had contractual maturities beyond five years. The following table summarizes the accrued interest payable on ABS issued at September 30, 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)	September 30, 2019	December 31, 2018
Legacy Sequoia	\$ 456	\$ 571
Sequoia Choice	8,949	7,180
Freddie Mac SLST	5,498	2,907
Freddie Mac K-Series	10,805	6,239
Total Accrued Interest Payable on ABS Issued	\$ 25,708	\$ 16,897

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 14. Asset-Backed Securities Issued - (continued)

The following table summarizes the carrying value components of the collateral for ABS issued and outstanding at September 30, 2019 and December 31, 2018.

Table 14.3 – Collateral for Asset-Backed Securities Issued

September 30, 2019 (In Thousands)	Legacy Sequoia	Sequoia Choice	Freddie Mac SLST	Freddie Mac K-Series	Total
Residential loans	\$ 429,159	\$ 2,618,316	\$ 2,441,223	\$ —	\$ 5,488,698
Multifamily loans	—	—	—	3,791,622	3,791,622
Restricted cash	143	15	—	—	158
Accrued interest receivable	716	10,806	7,215	11,300	30,037
REO	460	—	84	—	544
Total Collateral for ABS Issued	\$ 430,478	\$ 2,629,137	\$ 2,448,522	\$ 3,802,922	\$ 9,311,059
December 31, 2018 (In Thousands)	Legacy Sequoia	Sequoia Choice	Freddie Mac SLST	Freddie Mac K-Series	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. At September 30, 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 three and nine months ended September 30, 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.

At September 30, 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 2.31% 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 September 30, 2019, total advances under this agreement were secured by residential mortgage loans with a fair value of \$2.27 billion, securities with a fair value of \$41 million, and \$77 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 September 30, 2019, our subsidiary held \$43 million of FHLBC stock that is included in Other assets in our consolidated balance sheets.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 15. Long-Term Debt - (continued)

The following table presents maturities of our FHLBC borrowings by year at September 30, 2019.

Table 15.1 – Maturities of FHLBC Borrowings by Year

(In Thousands)	September 30, 2019	
2024	\$	470,171
2025		887,639
2026		642,189
Total FHLBC Borrowings	\$	1,999,999

For additional information about our FHLBC borrowings, see Part I, Item 2 of Quarterly Report on Form 10-Q under the heading *Risks Relating to Debt Incurred under Short- and Long-Term Borrowing Facilities.*

Subordinate Securities Financing Facility

In September 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 September 30, 2019, we had borrowings under this facility totaling \$186 million, net of \$1 million of deferred issuance costs, for a carrying value of \$185 million. At September 30, 2019, the fair value of real estate securities pledged as collateral under this long-term debt facility was \$253 million, which included \$126 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 September 30, 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 September 30, 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 September 30, 2019, the outstanding principal amount of these notes was \$201 million. At September 30, 2019, the accrued interest payable balance on this debt was \$0.2 million and the unamortized deferred issuance costs were \$6 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%. 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 September 30, 2019, the outstanding principal amount of these notes was \$200 million and the accrued interest payable on this debt was \$2 million. At September 30, 2019, the unamortized deferred issuance costs and debt discount were \$4 million and \$1 million, respectively.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 15. Long-Term Debt - (continued)

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 September 30, 2019, these notes were convertible at the option of the holder at a conversion rate of 53.9060 common shares per \$1,000 principal amount of convertible senior notes (equivalent to a conversion price of \$18.55 per common share). Upon conversion of these notes by a holder, the holder will receive shares of our common stock. At September 30, 2019, the outstanding principal amount of these notes was \$245 million. At September 30, 2019, the accrued interest payable balance on this debt was \$1 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 require semi-annual interest payments at a fixed coupon rate of 5.625% until maturity or exchange, which will be no later than November 15, 2019. 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 is approximately 6.3% per annum. At September 30, 2019, these notes were exchangeable at the option of the holder at an exchange rate of 46.2370 common shares per \$1,000 principal amount of exchangeable senior notes (equivalent to an exchange price of \$21.63 per common share). Upon exchange of these notes by a holder, the holder will receive 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. At September 30, 2019, the outstanding principal amount of these notes was \$201 million. At September 30, 2019, the accrued interest payable balance on this debt was \$4 million and the unamortized deferred issuance costs were \$0.2 million.

Trust Preferred Securities and Subordinated Notes

At September 30, 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 September 30, 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 September 30, 2019, we were obligated under five non-cancelable operating leases with expiration dates through 2028 for \$15 million of cumulative lease payments. Our principal executive and administrative office is located in Mill Valley, California and we have several additional offices, as disclosed in *Part I, Item 2* of our Annual Report on Form 10-K for the year ended December 31, 2018. Additionally, with our acquisition of 5 Arches in the first quarter of 2019, we added an office located in Irvine, California. Our operating lease expense was \$2 million for both nine-month periods ended September 30, 2019 and 2018.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 16. Commitments and Contingencies - (continued)

The following table presents our future lease commitments and a reconciliation to our lease liability at September 30, 2019.

Table 16.1 – Future Lease Commitments by Year

(In Thousands)	September 30, 2019
2019 (3 months)	\$ 688
2020	2,721
2021	1,864
2022	1,468
2023 and thereafter	8,749
Total Lease Commitments	15,490
Less: Imputed interest	(2,920)
Lease Liability	\$ 12,570

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 \$15 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 qualifies for the short-term lease exception under this guidance, we will continue 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. At September 30, 2019, our lease liability was \$13 million, which was a component of Accrued expenses and other liabilities, and our right-of-use asset was \$11 million, which was a component of Other assets.

We determined that the four remaining leases did not contain 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 September 30, 2019, the weighted-average remaining lease term and weighted-average discount rate for our leases was 8 years and 5.3%, respectively.

Commitment to Fund Residential Bridge Loans

As of September 30, 2019, we had commitments to fund \$67 million of 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 (outstanding commitments related to these loans that we may temporarily fund totaled approximately \$65 million at September 30, 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 16. Commitments and Contingencies - (continued)

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 September 30, 2019, we had an outstanding commitment to fund an additional \$49 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 September 30, 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 \$27 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 September 30, 2019, our estimated fair value of this contingent liability was \$25 million. For the three and nine months ended September 30, 2019, we recorded contingent consideration expense of \$0.2 million and \$0.5 million, respectively, related to our valuation of this liability through Other income, net, 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 his or her real property, and subsequently the counterparty sells the option contract to us. Pursuant to the terms of the option contract, we are able to share in both home price appreciation and depreciation. At September 30, 2019, we had acquired \$11 million of shared home appreciation options under this agreement, which are included in Other Investments on our consolidated balance sheets. At September 30, 2019, we had an outstanding commitment to fund up to an additional \$39 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.

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 September 30, 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 September 30, 2019, we had not incurred any losses under these arrangements. For the three and nine months ended September 30, 2019, other income related to these arrangements was \$1 million and \$2 million, respectively, and net market valuation losses related to these investments were \$0.1 million and \$0.2 million, respectively. For the three and nine months ended September 30, 2018, other income related to these arrangements was \$1 million and \$3 million, respectively, and net market valuation losses related to these investments were \$0.1 million and \$0.5 million, respectively.

All of the loans in the reference pools subject to these risk-sharing arrangements were originated in 2014 and 2015, and at September 30, 2019, the loans had an unpaid principal balance of \$1.66 billion and a weighted average FICO score of 759 (at origination) and LTV ratio of 76% (at origination). At September 30, 2019, \$7 million of the loans were 90 days or more delinquent, of which \$2 million were in foreclosure. At September 30, 2019, the carrying value of our guarantee obligation was \$15 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 16. Commitments and Contingencies - (continued)

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 September 30, 2019 and December 31, 2018, assets of such SPEs totaled \$48 million and \$47 million, respectively, and liabilities of such SPEs totaled \$15 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 September 30, 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 10 repurchase requests during the nine months ended September 30, 2019, and did not repurchase any loans during this period. During both the nine months ended September 30, 2019 and 2018, we recorded reversals of repurchase provisions of \$0.2 million that were recorded in Mortgage banking activities, net and Other income, net on our consolidated statements of income.

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. The Seattle Certificate was issued with an original principal amount of approximately \$133 million, and, at September 30, 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 September 30, 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 16. Commitments and Contingencies - (continued)

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 September 30, 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.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 17. Equity

The following table provides a summary of changes to accumulated other comprehensive income by component for the three and nine months ended September 30, 2019 and 2018.

Table 17.1 – Changes in Accumulated Other Comprehensive Income by Component

(In Thousands)	Three Months Ended September 30, 2019		Three Months Ended September 30, 2018	
	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	\$ 98,307	\$ (49,384)	\$ 106,725	\$ (31,105)
Other comprehensive income (loss) before reclassifications (1)	4,484	(11,791)	(2,408)	4,801
Amounts reclassified from other accumulated comprehensive income	(3,492)	—	(5,686)	—
Net current-period other comprehensive income (loss)	992	(11,791)	(8,094)	4,801
Balance at End of Period	\$ 99,299	\$ (61,175)	\$ 98,631	\$ (26,304)
	Nine Months Ended September 30, 2019		Nine Months Ended September 30, 2018	
	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 (1)	19,764	(27,130)	(9,749)	16,649
Amounts reclassified from other accumulated comprehensive income	(15,807)	—	(19,821)	—
Net current-period other comprehensive income (loss)	3,957	(27,130)	(29,570)	16,649
Balance at End of Period	\$ 99,299	\$ (61,175)	\$ 98,631	\$ (26,304)

(1) Amounts presented for net unrealized gains on available-for-sale securities are net of tax benefit (provision) of zero and \$0.1 million for the three and nine months ended September 30, 2018, respectively.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 17. Equity - (continued)

The following table provides a summary of reclassifications out of accumulated other comprehensive income for the three and nine months ended September 30, 2019 and 2018.

Table 17.2 – Reclassifications Out of Accumulated Other Comprehensive Income

(In Thousands)	Affected Line Item in the Income Statement	Amount Reclassified From Accumulated Other Comprehensive Income	
		Three Months Ended September 30,	
		2019	2018
Net Realized (Gain) Loss on AFS Securities			
Other than temporary impairment ⁽¹⁾	Investment fair value changes, net	\$ —	\$ 33
Gain on sale of AFS securities	Realized gains, net	(3,492)	(7,247)
Gain on sale of AFS securities	Provision for income taxes	—	1,528
		\$ (3,492)	\$ (5,686)

(In Thousands)	Affected Line Item in the Income Statement	Amount Reclassified From Accumulated Other Comprehensive Income	
		Nine Months Ended September 30,	
		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	(15,807)	(21,438)
Gain on sale of AFS securities	Provision for income taxes	—	1,528
		\$ (15,807)	\$ (19,821)

(1) For both the three and nine months ended September 30, 2019, there were no other-than-temporary impairments. For the three months ended September 30, 2018, other-than-temporary impairments were \$0.4 million, of which less than \$0.1 million were recognized through our consolidated statements of income and \$0.3 million were recognized in Accumulated other comprehensive income, a component of our consolidated balance sheet. For the nine months ended September 30, 2018, other-than-temporary impairments were \$0.6 million, of which \$0.1 million were recognized through our consolidated statements of income and \$0.5 million were recognized in Accumulated other comprehensive income, a component of our consolidated balance sheet.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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 nine months ended September 30, 2019, we issued 791,191 common shares for net proceeds of approximately \$13 million through ATM offerings. At September 30, 2019, approximately \$112 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.

Direct Stock Purchase and Dividend Reinvestment Plan

During the nine months ended September 30, 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 three and nine months ended September 30, 2019 and 2018.

Table 17.3 – Basic and Diluted Earnings per Common Share

(In Thousands, except Share Data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Basic Earnings per Common Share:				
Net income attributable to Redwood	\$ 34,310	\$ 40,921	\$ 120,040	\$ 120,513
Less: Dividends and undistributed earnings allocated to participating securities	(856)	(1,231)	(3,260)	(3,766)
Net income allocated to common shareholders	\$ 33,454	\$ 39,690	\$ 116,780	\$ 116,747
Basic weighted average common shares outstanding	101,872,126	80,796,856	97,214,064	77,211,188
Basic Earnings per Common Share	\$ 0.33	\$ 0.49	\$ 1.20	\$ 1.51
Diluted Earnings per Common Share:				
Net income attributable to Redwood	\$ 34,310	\$ 40,921	\$ 120,040	\$ 120,513
Less: Dividends and undistributed earnings allocated to participating securities	(1,036)	(1,284)	(3,625)	(3,867)
Add back: Interest expense on convertible notes for the period, net of tax	8,887	8,666	26,271	23,642
Net income allocated to common shareholders	\$ 42,161	\$ 48,303	\$ 142,686	\$ 140,288
Weighted average common shares outstanding	101,872,126	80,796,856	97,214,064	77,211,188
Net effect of dilutive equity awards	362,743	443,191	261,155	251,935
Net effect of assumed convertible notes conversion to common shares	34,287,840	33,442,641	33,727,470	30,328,906
Diluted weighted average common shares outstanding	136,522,709	114,682,688	131,202,689	107,792,029
Diluted Earnings per Common Share	\$ 0.31	\$ 0.42	\$ 1.09	\$ 1.30

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

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 three and nine months ended September 30, 2019 and 2018, 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 three and nine months ended September 30, 2019, the number of outstanding equity awards that were antidilutive totaled 11,710 and 9,361, respectively. For the three and nine months ended September 30, 2018, the number of outstanding equity awards that were antidilutive totaled 7,761 and 7,230, 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 September 30, 2019, \$100 million of the current authorization remained available for the repurchase of shares of our common stock.

Note 18. Equity Compensation Plans

At September 30, 2019 and December 31, 2018, 4,187,924 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 \$23 million at September 30, 2019, as shown in the following table.

Table 18.1 – Activities of Equity Compensation Costs by Award Type

(In Thousands)	Nine Months Ended September 30, 2019					
	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	—	3,483	4,831	—	160	8,474
Equity grant forfeitures	—	—	—	—	—	—
Equity compensation expense	(1,137)	(499)	(5,871)	(2,505)	(120)	(10,132)
Unrecognized Compensation Cost at End of Period	\$ 2,361	\$ 3,058	\$ 13,449	\$ 4,556	\$ 40	\$ 23,464

At September 30, 2019, the weighted average amortization period remaining for all of our equity awards was two years.

Restricted Stock Awards ("RSAs")

At September 30, 2019 and December 31, 2018, there were 218,022 and 334,606 shares, respectively, of RSAs outstanding. Restrictions on these shares lapse through 2022. During the nine months ended September 30, 2019, there were no RSAs granted, restrictions on 116,584 RSAs lapsed and those shares were distributed, and no RSAs forfeited.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 18. Equity Compensation Plans - (continued)

Restricted Stock Units ("RSUs")

At September 30, 2019 and December 31, 2018, there were 229,943 and 4,876 shares, respectively, of RSUs outstanding. Restrictions on these shares lapse through 2023. During the nine months ended September 30, 2019, there were 225,067 RSUs granted, no RSUs distributed, and no RSUs forfeited.

Deferred Stock Units ("DSUs")

At September 30, 2019 and December 31, 2018, there were 2,414,056 and 2,336,720 DSUs, respectively, outstanding of which 1,345,005 and 1,181,622, respectively, had vested. During the nine months ended September 30, 2019, there were 337,787 DSUs granted, 260,451 DSUs distributed, and no DSUs forfeited. Unvested DSUs at September 30, 2019 vest through 2023.

Performance Stock Units ("PSUs")

At both September 30, 2019 and December 31, 2018, the target number of PSUs that were unvested was 725,616. Vesting for all PSUs will generally occur at the end of three years from their grant date based on various TSR performance calculations, as discussed in our Annual Report on Form 10-K for the year ended December 31, 2018.

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 of September 30, 2019 and December 31, 2018, 418,651 and 390,569 shares had been purchased, respectively, and there remained a negligible amount of uninvested employee contributions in the ESPP at September 30, 2019.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 19. Mortgage Banking Activities, Net

The following table presents the components of Mortgage banking activities, net, recorded in our consolidated statements of income for the three and nine months ended September 30, 2019 and 2018.

Table 19.1 – Mortgage Banking Activities

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Residential Mortgage Banking Activities, Net				
Changes in fair value of:				
Residential loans, at fair value ⁽¹⁾	\$ 6,320	\$ 7,236	\$ 41,431	\$ 8,406
Risk management derivatives ⁽²⁾	(1,710)	3,796	(11,608)	38,378
Other income, net ⁽³⁾	407	313	1,380	1,733
Total residential mortgage banking activities, net	5,017	11,345	31,203	48,517
Business Purpose Mortgage Banking Activities, Net:				
Changes in fair value of:				
Single-family rental loans, at fair value ⁽¹⁾	1,847	(121)	5,473	(121)
Risk management derivatives ⁽²⁾	(1,262)	—	(3,779)	—
Residential bridge loans, at fair value	1,010	—	2,108	—
Other income, net ⁽⁴⁾	2,903	—	5,979	—
Total business purpose mortgage banking activities, net	4,498	(121)	9,781	(121)
Mortgage Banking Activities, Net	\$ 9,515	\$ 11,224	\$ 40,984	\$ 48,396

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

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 20. Investment Fair Value Changes, Net

The following table presents the components of Investment fair value changes, net, recorded in our consolidated statements of income for the three and nine months ended September 30, 2019 and 2018.

Table 20.1 – Investment Fair Value Changes

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Investment Fair Value Changes, Net				
Changes in fair value of:				
Residential loans held-for-investment at Redwood	\$ 7,667	\$ (17,063)	\$ 71,323	\$ (71,058)
Single-family rental loans held-for-investment	22	—	22	—
Residential bridge loans held-for-investment	(742)	53	(1,363)	53
Trading securities	15,275	6,314	55,577	2,429
Servicer advance investments	1,585	—	3,025	—
Excess MSRs	(1,635)	—	(2,137)	—
Shared home appreciation options	29	—	29	—
REO	(331)	—	(470)	—
Net investments in Legacy Sequoia entities ⁽¹⁾	(407)	(248)	(904)	(976)
Net investments in Sequoia Choice entities ⁽¹⁾	2,722	(943)	8,866	43
Net investments in Freddie Mac SLST entities ⁽¹⁾	17,300	—	31,702	—
Net investments in Freddie Mac K-Series entities ⁽¹⁾	7,445	511	13,810	511
Risk-sharing investments	(53)	(126)	(191)	(474)
Risk management derivatives, net	(37,433)	21,867	(144,548)	82,391
Impairments on AFS securities	—	(33)	—	(89)
Investment Fair Value Changes, Net	\$ 11,444	\$ 10,332	\$ 34,741	\$ 12,830

(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 investments at the consolidated VIEs.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 21. Other Income, Net

The following table presents the components of Other income, net, recorded in our consolidated statements of income for the three and nine months ended September 30, 2019 and 2018.

Table 21.1 – Other Income, Net

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
MSR income, net	\$ 431	\$ 1,967	\$ 2,342	\$ 4,797
Risk share income	905	907	2,351	2,706
FHLBC capital stock dividend	541	460	1,623	1,271
Equity investment income	557	119	552	119
5 Arches loan administration fee income	1,344	—	3,298	—
Amortization of intangible assets	(1,897)	—	(4,429)	—
Gain on re-measurement of investment in 5 Arches	—	—	2,441	—
Other	(56)	—	(359)	—
Other Income, Net	\$ 1,825	\$ 3,453	\$ 7,819	\$ 8,893

Note 22. Operating Expenses

Components of our operating expenses for the three and nine months ended September 30, 2019 and 2018 are presented in the following table.

Table 22.1 – Components of Operating Expenses

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Fixed compensation expense	\$ 9,391	\$ 5,922	\$ 26,848	\$ 18,136
Variable compensation expense	4,090	4,923	12,513	13,655
Equity compensation expense	3,155	3,033	10,132	9,565
Total compensation expense	16,636	13,878	49,493	41,356
Systems and consulting	3,230	1,794	7,594	5,434
Loan acquisition costs ⁽¹⁾	1,392	1,887	4,385	5,860
Office costs	1,517	1,173	4,406	3,397
Accounting and legal	1,767	1,170	3,852	3,078
Corporate costs	482	462	1,701	1,462
Other operating expenses	1,791	1,126	4,798	2,942
Total Operating Expenses	\$ 26,815	\$ 21,490	\$ 76,229	\$ 63,529

(1) Loan acquisition costs primarily includes underwriting and due diligence costs related to the acquisition of residential loans held-for-sale at fair value.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 23. Taxes

For the nine months ended September 30, 2019 and 2018, we recognized a provision for income taxes of \$3 million and \$12 million, respectively. The following is a reconciliation of the statutory federal and state tax rates to our effective tax rate at September 30, 2019 and 2018.

Table 23.1 – Reconciliation of Statutory Tax Rate to Effective Tax Rate

	September 30, 2019	September 30, 2018
Federal statutory rate	21.0 %	21.0 %
State statutory rate, net of Federal tax effect	8.6 %	8.6 %
Differences in taxable (loss) income from GAAP income	(2.5)%	(1.8)%
Change in valuation allowance	(2.5)%	(3.2)%
Dividends paid deduction	(22.1)%	(15.3)%
Effective Tax Rate	2.5 %	9.3 %

We assessed our tax positions for all open tax years (i.e., Federal, 2016 to 2019, and State, 2014 to 2019) as of September 30, 2019 and December 31, 2018, and concluded that we had no uncertain tax positions that resulted in material unrecognized tax benefits.

Note 24. Segment Information

Redwood operates in two segments: Investment Portfolio and Mortgage Banking. Our segments are based on our organizational and management structure, which aligns with how our results are monitored and performance is assessed. For a full description of our segments, see *Part I, Item 1—Business* in our Annual Report on Form 10-K for the year ended December 31, 2018.

Our Mortgage Banking segment includes activity from both our residential and business purpose mortgage banking operations. Our business purpose mortgage banking operations includes activity from our wholly-owned subsidiary 5 Arches and our single-family rental loans that we are aggregating for subsequent sale or securitization. In connection with our acquisition of 5 Arches on March 1, 2019, the goodwill, intangible assets, and contingent consideration we recorded on our consolidated balance sheets were included in our Mortgage Banking segment. The gain on re-measurement of our initial minority investment and purchase option in 5 Arches during the three months ended March 31, 2019 was included in Corporate/Other.

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 two 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 interest expense associated with certain long-term debt, indirect operating expenses, and other expense.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 24. Segment Information - (continued)

The following tables present financial information by segment for the three and nine months ended September 30, 2019 and 2018.

Table 24.1 – Business Segment Financial Information

(In Thousands)	Three Months Ended September 30, 2019			
	Investment Portfolio	Mortgage Banking	Corporate/ Other	Total
Interest income	\$ 132,894	\$ 12,491	\$ 4,732	\$ 150,117
Interest expense	(94,519)	(6,657)	(15,428)	(116,604)
Net interest income (loss)	38,375	5,834	(10,696)	33,513
Non-interest income				
Mortgage banking activities, net	—	9,515	—	9,515
Investment fair value changes, net	11,896	—	(452)	11,444
Other income (expense), net	2,313	(252)	(236)	1,825
Realized gains, net	4,714	—	—	4,714
Total non-interest income, net	18,923	9,263	(688)	27,498
Direct operating expenses	(2,191)	(11,907)	(12,717)	(26,815)
(Provision for) benefit from income taxes	(89)	203	—	114
Segment Contribution	\$ 55,018	\$ 3,393	\$ (24,101)	
Net Income				\$ 34,310
Non-cash amortization income (expense), net	\$ 2,456	\$ (2,028)	\$ (1,148)	\$ (720)
	Three Months Ended September 30, 2018			
(In Thousands)	Investment Portfolio	Mortgage Banking	Corporate/ Other	Total
Interest income	\$ 79,556	\$ 14,427	\$ 5,414	\$ 99,397
Interest expense	(40,852)	(7,537)	(15,962)	(64,351)
Net interest income (loss)	38,704	6,890	(10,548)	35,046
Non-interest income				
Mortgage banking activities, net	—	11,224	—	11,224
Investment fair value changes, net	10,566	—	(234)	10,332
Other income, net	3,334	—	119	3,453
Realized gains, net	7,275	—	—	7,275
Total non-interest income, net	21,175	11,224	(115)	32,284
Direct operating expenses	(2,659)	(6,570)	(12,261)	(21,490)
Provision for income taxes	(2,840)	(2,079)	—	(4,919)
Segment Contribution	\$ 54,380	\$ 9,465	\$ (22,924)	
Net Income				\$ 40,921
Non-cash amortization income (expense), net	\$ 4,019	\$ (54)	\$ (1,176)	\$ 2,789

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 24. Segment Information - (continued)

(In Thousands)	Nine Months Ended September 30, 2019			
	Investment Portfolio	Mortgage Banking	Corporate/ Other	Total
Interest income	\$ 380,394	\$ 34,220	\$ 15,086	\$ 429,700
Interest expense	(266,318)	(18,816)	(46,966)	(332,100)
Net interest income (loss)	114,076	15,404	(31,880)	97,600
Non-interest income				
Mortgage banking activities, net	—	40,984	—	40,984
Investment fair value changes, net	35,749	—	(1,008)	34,741
Other income, net	6,408	(575)	1,986	7,819
Realized gains, net	18,227	—	—	18,227
Total non-interest income, net	60,384	40,409	978	101,771
Direct operating expenses	(7,110)	(31,582)	(37,537)	(76,229)
Provision for income taxes	(1,327)	(1,775)	—	(3,102)
Segment Contribution	\$ 166,023	\$ 22,456	\$ (68,439)	
Net Income				\$ 120,040
Non-cash amortization income (expense), net	\$ 7,446	\$ (4,765)	\$ (3,573)	\$ (892)

(In Thousands)	Nine Months Ended September 30, 2018			
	Investment Portfolio	Mortgage Banking	Corporate/ Other	Total
Interest income	\$ 202,882	\$ 40,408	\$ 15,702	\$ 258,992
Interest expense	(87,719)	(21,303)	(45,056)	(154,078)
Net interest income (loss)	115,163	19,105	(29,354)	104,914
Non-interest income				
Mortgage banking activities, net	—	48,396	—	48,396
Investment fair value changes, net	13,756	—	(926)	12,830
Other income, net	8,774	—	119	8,893
Realized gains, net	21,352	—	—	21,352
Total non-interest income, net	43,882	48,396	(807)	91,471
Direct operating expenses	(6,524)	(20,941)	(36,064)	(63,529)
Provision for income taxes	(4,858)	(7,485)	—	(12,343)
Segment Contribution	\$ 147,663	\$ 39,075	\$ (66,225)	
Net Income				\$ 120,513
Non-cash amortization income (expense), net	\$ 13,290	\$ (99)	\$ (3,021)	\$ 10,170

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 24. Segment Information - (continued)

The following table presents the components of Corporate/Other for the three and nine months ended September 30, 2019 and 2018.

Table 24.2 – Components of Corporate/Other

(In Thousands)	Three Months Ended September 30,					
	2019			2018		
	Legacy Consolidated VIEs⁽¹⁾	Other	Total	Legacy Consolidated VIEs⁽¹⁾	Other	Total
Interest income	\$ 4,295	\$ 437	\$ 4,732	\$ 5,174	\$ 240	\$ 5,414
Interest expense	(3,452)	(11,976)	(15,428)	(4,257)	(11,705)	(15,962)
Net interest income (loss)	843	(11,539)	(10,696)	917	(11,465)	(10,548)
Non-interest income						
Investment fair value changes, net	(407)	(45)	(452)	(248)	14	(234)
Other income	—	(236)	(236)	—	119	119
Total non-interest income, net	(407)	(281)	(688)	(248)	133	(115)
Direct operating expenses	—	(12,717)	(12,717)	—	(12,261)	(12,261)
Total	\$ 436	\$ (24,537)	\$ (24,101)	\$ 669	\$ (23,593)	\$ (22,924)

(In Thousands)	Nine Months Ended September 30,					
	2019			2018		
	Legacy Consolidated VIEs⁽¹⁾	Other	Total	Legacy Consolidated VIEs⁽¹⁾	Other	Total
Interest income	\$ 13,924	\$ 1,162	\$ 15,086	\$ 15,003	\$ 699	\$ 15,702
Interest expense	(11,548)	(35,418)	(46,966)	(12,324)	(32,732)	(45,056)
Net interest income (loss)	2,376	(34,256)	(31,880)	2,679	(32,033)	(29,354)
Non-interest income						
Investment fair value changes, net	(904)	(104)	(1,008)	(976)	50	(926)
Other income	—	1,986	1,986	—	119	119
Total non-interest income, net	(904)	1,882	978	(976)	169	(807)
Direct operating expenses	—	(37,537)	(37,537)	—	(36,064)	(36,064)
Total	\$ 1,472	\$ (69,911)	\$ (68,439)	\$ 1,703	\$ (67,928)	\$ (66,225)

(1) Legacy consolidated VIEs represent Legacy Sequoia entities that are consolidated for GAAP financial reporting purposes. See *Note 4* for further discussion on VIEs.

REDWOOD TRUST, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

Note 24. Segment Information - (continued)

The following table presents supplemental information by segment at September 30, 2019 and December 31, 2018.

Table 24.3 – Supplemental Segment Information

(In Thousands)	Investment Portfolio	Mortgage Banking	Corporate/ Other	Total
September 30, 2019				
Residential loans	\$ 7,326,757	\$ 925,887	\$ 429,159	\$ 8,681,803
Business purpose residential loans	225,601	110,434	—	336,035
Multifamily loans	3,791,622	—	—	3,791,622
Real estate securities	1,285,426	—	—	1,285,426
Other investments	346,136	1,571	—	347,707
Goodwill and intangible assets	—	49,121	—	49,121
Total assets	13,347,460	1,166,639	962,184	15,476,283
December 31, 2018				
Residential loans	\$ 5,685,983	\$ 1,048,801	\$ 519,958	\$ 7,254,742
Business purpose residential loans	112,798	28,460	—	141,258
Multifamily loans	2,144,598	—	—	2,144,598
Real estate securities	1,452,494	—	—	1,452,494
Other investments	427,764	—	10,754	438,518
Total assets	10,093,993	1,103,090	740,323	11,937,406

Note 25. Subsequent Events

On October 14, 2019, Redwood and RWT Holdings, Inc., our wholly-owned subsidiary, entered into an equity interests purchase agreement with CF CoreVest Parent I LLC, CF CoreVest Parent II LLC and CoreVest Management Partners LLC (collectively, the “Sellers”), and members of the CoreVest management team, pursuant to which we acquired a 100% equity interest in CoreVest American Finance Lender LLC and several of its affiliates (“CoreVest”), an originator of business purpose residential loans. The acquisition included CoreVest’s operating platform and approximately \$900 million of business purpose loans and securities, a significant portion of which we will hold for investment in our investment portfolio. The estimated aggregate purchase consideration for CoreVest is approximately \$492 million, subject to a customary post-closing reconciliation, including a net book value adjustment. Substantially all of the purchase consideration was payable in cash upon the close of the transaction. The transaction was closed on October 15, 2019.

Item 2. 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
- 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 I, Item 1 of this Quarterly Report on Form 10-Q and in Part II, Item 8, Financial Statements and Supplementary Data in our most recent Annual Report on Form 10-K, as well as the sections entitled “Risk Factors” in Part I, Item 1A of our most recent Annual Report on Form 10-K and Part II, Item 1A of this Quarterly Report on Form 10-Q, as well as other cautionary statements and risks described elsewhere in this report and our most recent Annual Report on Form 10-K. 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 below.

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 is set forth in this “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and our consolidated financial statements and notes thereto, which are included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

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 our 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 or director of Redwood. In addition, our website includes information concerning purchases and sales of our equity securities by our executive officers and directors, and may include 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 Quarterly Report on Form 10-Q.

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

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 two segments: Investment Portfolio and Mortgage Banking. Our segments are based on our organizational and management structure, which aligns with how our results are monitored and performance is assessed. For a full description of our segments, see Item 1—Business in our Annual Report on Form 10-K for the year ended December 31, 2018.

Our primary sources of income are net interest income from our investment portfolio 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 of loans and their subsequent sale or securitization.

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 operating subsidiaries” or “our taxable REIT subsidiaries” or “TRS.” Our mortgage banking activities and investments in MSR 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. Our executive offices are located at One Belvedere Place, Suite 300, Mill Valley, California 94941.

Cautionary Statement

This Quarterly Report on Form 10-Q 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 our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 and this Quarterly Report on Form 10-Q, in each case under the caption “Risk Factors.” Other risks, uncertainties, and factors that could cause actual results to differ materially from those projected 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 2019, including with respect to our investment portfolio and mortgage banking activities; (iii) statements related to our investment portfolio, including target returns on our RPL securities, our RPL investment strategy, and the view that a significant percentage of the underlying borrowers will cure their persistent delinquency history and continue paying steadily under the modified or recast terms of the loan; (iv) statements related to our residential and business purpose mortgage banking platforms, including our positioning in the market, the estimated size of the BPL market opportunity, and our commitment to growing our acquisition volume of expanded credit and non-QM loans; (v) statements relating to the potential for regulatory reform, including the expiration of the “QM Patch,” the ability of the private sector to effectively compete for a significant volume of non-QM loans currently purchased by the GSEs, and positioning Redwood to capitalize on resulting opportunities; (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 third quarter of 2019 and at September 30, 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 September 30, 2019 was approximately \$590 million, and that we believe this capital, along with additional capital from continued portfolio optimization, should be sufficient to meet our near-term capital needs); (ix) statements we make regarding future dividends, including with respect to our regular quarterly dividends in 2019; 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 and initiatives;
- our ability to scale our platform and systems, particularly with respect to our new initiatives;
- interest rate volatility, changes in credit spreads, and changes in liquidity in the market for real estate securities and loans;
- 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;
- 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);
- state and/or local regulations related to rent control or rent stabilization impacting single-family rental and multifamily properties;
- strategic business and capital deployment decisions we make;
- our recent acquisitions of business purpose lending origination platforms;
- 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;
- 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 Quarterly Report on Form 10-Q 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.

OVERVIEW

Business Update

Two years ago, we announced a comprehensive new business strategy to leverage our housing credit competencies across a broader portion of the residential housing finance sector. This entailed not only the expansion of our traditional jumbo residential mortgage business, but also a commitment to financing housing investors who purchase residential real estate for business income (i.e., rent or refurbishment). Over the course of the past 18 months, we've developed the skills and operations necessary to grow in this market, and have taken tangible steps towards building a specialty finance platform that serves the financing needs of all homebuyers - owner-occupants and investors alike.

Our expansion into business purpose lending ("BPL") began organically, but quickly evolved into a partnership with our 5 Arches platform in Irvine. We completed our acquisition of 5 Arches in March 2019, and this business has fit squarely within Redwood's strategic initiatives. The investment opportunities generated by 5 Arches have validated the thesis underpinning our new strategy; that is, a significant imbalance exists between the rate of new household formation in the United States and the rate of new homebuilding. Most recently, we had the opportunity to further solidify business purpose lending as a core strategy at Redwood, and in October 2019 we announced our acquisition of the CoreVest BPL platform.

CoreVest is a leading BPL originator and brings a talented team to Redwood that shares our values of working with integrity and fostering deep relationships with customers and business partners. Since their inception in 2014, CoreVest has funded over \$4 billion of loans while developing technology that offers a seamless borrower experience. The CoreVest platform has a highly scalable mortgage banking business and, at the time of acquisition, had recently completed its ninth securitization of single-family rental loans since 2015, more such transactions than any other issuer. This acquisition strengthens our position as a leading lender in the large and growing BPL market and added approximately \$900 million of business purpose mortgage loans and securities to our portfolio.

While our BPL expansion has been a key area of focus, we continue to focus on expanding our core jumbo residential business. We are committed to growing our acquisition volume of expanded credit and non-qualified residential mortgage (non-QM) loans by leveraging our approach to credit, speed to close, and reliable execution we deliver to loan sellers. We see an opportunity for growing this business in response to announcements made by federal regulatory agencies made over the course of this year regarding proposed changes to housing finance rules. Most recently, the CFPB announced in July 2019 that it intends to let the so called "QM Patch" expire. The QM Patch is an exemption from the CFPB's "Ability to Pay" regulations that has the effect of affording a competitive advantage to the public mortgage sector, resulting in an unlevel playing field for non-QM mortgage lending. We estimate the QM Patch expiration will allow the private sector to effectively compete for a significant volume of non-QM loans currently purchased by Fannie Mae and Freddie Mac, providing additional opportunities for growing our business.

The success of our mortgage banking businesses has been directly complemented by the work we have done within our investment portfolio. Our portfolio team continues to effectively deploy capital, leveraging unique and durable relationships forged over several years. A key differentiator for Redwood has always been our ability to source and structure investments our competitors cannot easily replicate, and we have over \$670 million of capital deployed year-to-date, through October, including our acquisition of the CoreVest investment portfolio. As we grow our mortgage banking platforms, our portfolio activities and efficiency of our corporate functions will be key to profitably scaling our business and increasing earnings per share.

As we reflect on the current state of our industry, we believe this is an exciting time for Redwood. Credit-oriented strategies are in demand as the yield curve flattens and investors seek alternative means to source real estate-related assets. However, the investment sourcing capabilities and operating know-how required to succeed in this environment remain in scarce supply. At Redwood, we have built a solutions-based business that possesses a unique ability to bridge the gap between the customized needs of non-agency borrowers - whether BPL, non-QM, or traditional jumbo - and the liquidity options available to them in the marketplace. We are already making necessary investments in technology and infrastructure to further automate our loan purchase process in anticipation of these opportunities. Our 25-year track record speaks to our ability to operate efficiently, while developing nascent, emerging products into scalable funding solutions that are transformative in nature. As we integrate our jumbo residential mortgage and BPL businesses over time, we continue to work towards our vision of becoming the preeminent specialty finance operator in the mortgage industry.

Financial and Operational Overview - Third Quarter Highlights

The following table presents key earnings metrics for the three and nine months ended September 30, 2019.

Table 1 – Key Earnings and Return Metrics

(In Thousands, except per Share Data)	Three Months Ended September 30, 2019		Nine Months Ended September 30, 2019	
Net income	\$	34,310	\$	120,040
Net income per diluted common share	\$	0.31	\$	1.09
Annualized GAAP return on equity		9%		10%
Book value per share	\$	15.92	\$	15.92
Economic return on book value ⁽¹⁾		1.3%		5.9%
REIT taxable income per share	\$	0.34	\$	0.89
Dividends per share	\$	0.30	\$	0.90

(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.

- During the third quarter of 2019, we accelerated our pace of portfolio optimization and raised equity capital in early September, which together generated \$476 million of available capital. These activities resulted in increased levels of realized gains, but dampened growth in net interest income, as our average undeployed capital increased. While lower benchmark interest rates generally persisted throughout the quarter, helping maintain residential loan purchase volume levels in our mortgage banking business, we experienced higher prepayments in our investment portfolio, which negatively impacted investment fair value changes. Additionally, mortgage banking margins were negatively impacted by lower benchmark interest rates, which impacted execution on securitizations we completed during the quarter. Execution improved for our most recent Sequoia securitization, completed in October. Despite the rate volatility, overall we continued to see strong demand for yield, resulting in positive overall investment fair value changes for the quarter.
- We issued \$228 million of common stock and \$201 million of 5.75% 6-year exchangeable debt in the third quarter.
- We deployed \$152 million of capital in the third quarter, including \$55 million into proprietary investments and \$98 million into third-party investments.
- Our 5 Arches platform originated \$162 million of business purpose mortgage loans in the third quarter, including \$125 million in funded loans and \$37 million in associated funding commitments.
- Residential jumbo loan purchase commitments were \$1.70 billion, and we purchased \$1.48 billion of residential jumbo loans during the third quarter of 2019.
- During the third quarter, we completed one Sequoia securitization of Select residential jumbo loans totaling \$376 million and two Sequoia securitizations of Choice residential jumbo loans totaling \$727 million. Additionally, we sold \$470 million of residential jumbo loans to third parties.
- Our book value per share declined \$0.09 per share to \$15.92 per share during the third quarter of 2019. While our earnings covered our dividend during the third quarter, this decrease was primarily driven by a \$0.11 per share decline in the value of derivatives hedging our long-term debt, which were impacted by the decline in benchmark rates during the third quarter.
- In October 2019, we completed the acquisition of CoreVest, an originator of business purpose residential loans. The acquisition included CoreVest's operating platform and approximately \$900 million of business purpose loans and securities, a significant portion of which we will hold for investment in our investment portfolio. Total transaction consideration was \$492 million of cash and Redwood common stock, net of in-place financing on certain of the financial assets.

Capital Allocation Summary

This section provides an overview of our capital position and how it was allocated at September 30, 2019. A detailed discussion of our liquidity and capital resources is provided in the *Liquidity and Capital Resources* section of this MD&A that follows.

We capitalize our business with a combination of equity and long-term unsecured corporate debt (which we collectively refer to as corporate "capital"). Our total capital was \$2.55 billion at September 30, 2019, and included \$1.79 billion of equity capital and \$0.77 billion of unsecured corporate debt, 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.

We also utilize various forms of collateralized short-term and long-term debt to finance certain investments and to warehouse some of our inventory of residential loans held-for-sale. We do not consider this collateralized debt as "capital" and, therefore, it is presented separately from allocated capital in the table below. The following table presents how our capital was allocated between business segments and investment types at September 30, 2019.

Table 2 – Capital Allocation Summary

At September 30, 2019

(Dollars in Thousands)	Fair Value	Collateralized Short-Term Debt	Collateralized Long-Term Debt	Allocated Capital	% of Total Capital
Investment portfolio					
Residential loans ⁽¹⁾	\$ 2,419,937	\$ —	\$ (1,944,640)	\$ 475,297	19 %
Business purpose residential loans	225,601	(139,476)	(14,265)	71,860	3 %
Securities portfolio					
Sequoia residential securities ⁽²⁾	505,464	(155,185)	(184,664)	165,615	6 %
Agency CRT securities	140,881	(8,082)	—	132,799	5 %
Multifamily securities ⁽³⁾	683,414	(516,552)	—	166,862	7 %
Re-performing residential loan securities ⁽⁴⁾	626,594	(315,030)	(41,094)	270,470	11 %
Third-party residential securities	254,158	(162,797)	—	91,361	4 %
Total securities portfolio	2,210,511	(1,157,646)	(225,758)	827,107	32 %
Other investments	200,872	—	—	200,872	8 %
Other assets/(other liabilities)				(73,548)	(3)%
Cash and liquidity capital				868,013	N/A
Total investment portfolio	\$ 5,056,921	\$ (1,297,122)	\$ (2,184,663)	2,369,602	93 %
Residential				130,000	5 %
Business purpose				54,516	2 %
Total mortgage banking				184,516	7 %
Total				\$ 2,554,118	100 %

(1) Includes \$43 million of FHLB stock, \$34 million of cash and cash equivalents, and \$77 million of restricted cash.

(2) Sequoia residential securities presented above includes \$257 million of securities retained from our consolidated Sequoia Choice securitizations. For GAAP purposes we consolidated \$2.62 billion of residential loans and \$2.36 billion of non-recourse ABS debt associated with these retained securities.

(3) Multifamily securities presented above includes \$214 million of subordinate investments in the Freddie Mac K-Series securitizations. For GAAP purposes we consolidated \$3.79 billion of multifamily loans and \$3.58 billion of non-recourse ABS debt associated with these securities.

(4) Re-performing residential loan securities presented above represent third-party securities collateralized by seasoned re-performing, and to a lesser extent, non-performing residential loans and includes \$454 million of subordinate and mezzanine investments in the Freddie Mac SLST securitizations. For GAAP purposes we consolidated \$2.44 billion of residential loans and \$1.99 billion of non-recourse ABS debt associated with these securities.

During the third quarter, capital raising combined with the completion of a new secured financing facility and portfolio optimization raised over \$476 million of capital. This combined activity included \$228 million of common equity raised in early September, a \$185 million long-term, non-mark-to-market, secured debt facility collateralized by retained Sequoia residential securities (that generated \$130 million of capital, after repayment of existing financing), and \$118 million from security sales.

In late September, we issued \$201 million of 5.75% 6-year exchangeable debt. This issuance will replace our exchangeable notes maturing in November 2019, and we therefore do not consider it incremental capital.

During the third quarter, we deployed capital into re-performing residential loan securities and business purpose residential loans, and reduced our capital allocations to Agency CRT securities, other third-party residential securities, and multifamily mezzanine securities.

As of September 30, 2019, our cash and liquidity capital included \$590 million of capital available for investment and an additional \$201 million of capital reserved for the repayment of our exchangeable notes maturing in November 2019.

In October 2019, we completed the acquisition of CoreVest for \$492 million, net of in-place financing on financial assets acquired, with a mix of cash on hand and shares of Redwood stock. This acquisition will increase our allocations of capital to business purpose residential loan investments and business purpose mortgage banking. In the near-term, we expect to further increase capital allocated to business purpose residential loans, multifamily securities, and re-performing loan securities.

At the end of October, adjusting for the acquisition of CoreVest and other activity, we estimate we had approximately \$100 million of capital available for investment.

RESULTS OF OPERATIONS

Within this *Results of Operations* section, we provide commentary that compares results year-over-year for 2019 and 2018. Most tables include a "change" column that shows the amount by which the results from 2019 are greater or less than the results from the respective period in 2018. Unless otherwise specified, references in this section to increases or decreases during the "three-month periods" refer to the change in results for the third quarter of 2019, compared to the third quarter of 2018, and increases or decreases in the "nine-month periods" refer to the change in results for the first nine months of 2019, compared to the first nine months of 2018.

The following table presents the components of our net income for the three and nine months ended September 30, 2019 and 2018.

Table 3 – Net Income

(In Thousands, except per Share Data)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2019	2018	Change	2019	2018	Change
Net Interest Income	\$ 33,513	\$ 35,046	\$ (1,533)	\$ 97,600	\$ 104,914	\$ (7,314)
Non-interest Income						
Mortgage banking activities, net	9,515	11,224	(1,709)	40,984	48,396	(7,412)
Investment fair value changes, net	11,444	10,332	1,112	34,741	12,830	21,911
Other income, net	1,825	3,453	(1,628)	7,819	8,893	(1,074)
Realized gains, net	4,714	7,275	(2,561)	18,227	21,352	(3,125)
Total non-interest income, net	27,498	32,284	(4,786)	101,771	91,471	10,300
Operating expenses	(26,815)	(21,490)	(5,325)	(76,229)	(63,529)	(12,700)
Net income before income taxes	34,196	45,840	(11,644)	123,142	132,856	(9,714)
Benefit from (provision for) income taxes	114	(4,919)	5,033	(3,102)	(12,343)	9,241
Net Income	\$ 34,310	\$ 40,921	\$ (6,611)	\$ 120,040	\$ 120,513	\$ (473)
Diluted earnings per common share	\$ 0.31	\$ 0.42	\$ (0.11)	\$ 1.09	\$ 1.30	\$ (0.21)

Net Interest Income

The decrease in net interest income during the three- and nine-month periods was primarily due to lower net interest income from our mortgage banking segment, driven by lower average balances of residential loans held-for-sale and higher interest rates on our variable rate financing. Additionally, during the third quarter of 2019, we accelerated our pace of portfolio optimization, increasing our average balance of undeployed capital, which also contributed to lower net interest income during the quarter. The decrease during the nine-month periods was also driven by higher convertible debt expense in 2019, relative to 2018, due to the timing of the issuance and maturity of different series of convertible and exchangeable notes in 2018 and 2019.

We utilize hedges to manage interest rate risk in our investment portfolio and the net interest paid or received from these instruments is a component of our Investment fair value changes line item, which is discussed below. For the three-month periods, net hedge interest expense associated with portfolio hedges increased and on a combined basis, net interest income plus net interest income (expense) on hedges decreased by \$2 million. For the nine-month periods, net hedge interest expense associated with portfolio hedges decreased and on a combined basis, net interest income plus net interest income (expense) on hedges increased by \$4 million. During the third quarter of 2019, we experienced increased hedging costs due to interest rate volatility.

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

Mortgage Banking Activities, Net

The decrease in income from mortgage banking activities during the three- and nine-month periods was predominantly due to lower margins in 2019, relative to 2018, as well as lower loan purchase volumes. A more detailed 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 portfolio investments accounted for under the fair value option and interest rate hedges associated with these investments. During the three and nine months ended September 30, 2019, the positive investment fair value changes were primarily driven by tightening credit spreads in several parts of our portfolio. Additional detail on our investment fair value changes is included in the Investment Portfolio portion of the “*Results of Operations by Segment*” section that follows.

Other Income, Net

The decrease in other income for the three- and nine-month periods was primarily due to amortization expense from intangible assets we recorded in connection with the acquisition of 5 Arches in the first quarter of 2019, as well as a decrease in income from our MSR investments. The decrease in other income for the nine-month periods was partially offset by a \$2 million gain associated with the re-measurement of our initial minority investment and purchase option in 5 Arches and loan administration fee income earned by 5 Arches.

Realized Gains, Net

During the three and nine months ended September 30, 2019, we realized gains of \$5 million and \$18 million, respectively, primarily from the sale of \$15 million and \$82 million of AFS securities, respectively, and the call of a seasoned Sequoia securitization in the first quarter. During the three and nine months ended September 30, 2018, we realized gains of \$7 million and \$21 million, respectively, primarily from the sale of \$26 million and \$118 million of AFS securities, respectively.

Operating Expenses

The increase in operating expenses for the three- and nine-month periods primarily resulted from additional expenses from the consolidated 5 Arches operations. Operating expenses for the three and nine months ended September 30, 2019 also included \$2 million of transaction costs related to the acquisition of CoreVest in October 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 and MSR investments, as well as certain other investment and hedging activities. For the three- and nine-month periods, the decrease in provision for income taxes was driven primarily by lower GAAP income earned at our TRS. Additionally, the nine-month period included a tax benefit resulting from the purchase of 5 Arches. For additional detail on income taxes, see the “*Taxable Income and Tax Provision*” section that follows.

Net Interest Income

The following table presents the components of net interest income for the three and nine months ended September 30, 2019 and 2018.

Table 4 – Net Interest Income

(Dollars in Thousands)	Three Months Ended September 30,					
	2019			2018		
	Interest Income/ (Expense)	Average Balance (1)	Yield	Interest Income/ (Expense)	Average Balance (1)	Yield
Interest Income						
Residential loans, held-for-sale	\$ 10,583	\$ 973,917	4.3 %	\$ 13,867	\$ 1,193,919	4.6 %
Residential loans - HFI at Redwood(2)	22,809	2,325,304	3.9 %	23,326	2,311,347	4.0 %
Residential loans - HFI at Legacy Sequoia(2)	4,293	436,963	3.9 %	5,172	565,008	3.7 %
Residential loans - HFI at Sequoia Choice(2)	27,555	2,320,989	4.7 %	20,900	1,753,014	4.8 %
Residential loans - HFI at Freddie Mac SLST(2)	11,830	1,278,036	3.7 %	—	—	— %
Business purpose residential loans	5,446	296,037	7.4 %	1,445	65,186	8.9 %
Multifamily loans - HFI at Freddie Mac K-Series	36,829	3,767,847	3.9 %	5,578	565,793	3.9 %
Trading securities	17,877	1,168,952	6.1 %	18,960	1,091,045	7.0 %
Available-for-sale securities	5,170	174,530	11.8 %	8,103	281,819	11.5 %
Other interest income	7,725	612,554	5.0 %	2,046	202,029	4.1 %
Total interest income	150,117	13,355,129	4.5 %	99,397	8,029,160	5.0 %
Interest Expense						
Short-term debt facilities	(18,209)	1,974,174	(3.7)%	(14,146)	1,567,364	(3.6)%
Short-term debt - servicer advance financing	(2,891)	212,988	(5.4)%	—	—	— %
Short-term debt - convertible notes, net	(3,139)	200,445	(6.3)%	—	—	— %
ABS issued - Legacy Sequoia(2)	(3,452)	428,101	(3.2)%	(4,257)	555,511	(3.1)%
ABS issued - Sequoia Choice(2)	(23,576)	2,085,622	(4.5)%	(18,019)	1,589,553	(4.5)%
ABS issued - Freddie Mac SLST(2)	(8,709)	1,023,046	(3.4)%	—	—	— %
ABS issued - Freddie Mac K-Series	(35,328)	3,559,970	(4.0)%	(5,145)	526,303	(3.9)%
Long-term debt - FHLBC	(12,311)	1,999,999	(2.5)%	(11,080)	1,999,999	(2.2)%
Long-term debt - other	(8,989)	602,434	(6.0)%	(11,704)	770,730	(6.1)%
Total interest expense	(116,604)	12,086,779	(3.9)%	(64,351)	7,009,460	(3.7)%
Net Interest Income	\$ 33,513			\$ 35,046		

Nine Months Ended September 30,

(Dollars in Thousands)	2019			2018		
	Interest Income/ (Expense)	Average Balance (1)	Yield	Interest Income/ (Expense)	Average Balance (1)	Yield
Interest Income						
Residential loans, held-for-sale	\$ 30,056	\$ 886,902	4.5 %	\$ 39,399	\$ 1,174,174	4.5 %
Residential loans - HFI at Redwood(2)	71,089	2,368,340	4.0 %	70,643	2,350,322	4.0 %
Residential loans - HFI at Legacy Sequoia(2)	13,916	466,580	4.0 %	14,998	593,382	3.4 %
Residential loans - HFI at Sequoia Choice(2)	80,026	2,227,573	4.8 %	43,970	1,234,897	4.7 %
Residential loans - HFI at Freddie Mac SLST(2)	35,221	1,238,334	3.8 %	—	—	— %
Business purpose residential loans	12,231	219,132	7.4 %	1,445	21,967	8.8 %
Multifamily loans - HFI at Freddie Mac K-Series	94,134	3,191,093	3.9 %	5,578	190,670	3.9 %
Trading securities	56,138	1,188,563	6.3 %	52,494	989,168	7.1 %
Available-for-sale securities	16,376	189,881	11.5 %	26,560	319,240	11.1 %
Other interest income	20,513	582,795	4.7 %	3,905	205,297	2.5 %
Total interest income	429,700	12,559,193	4.6 %	258,992	7,079,117	4.9 %
Interest Expense						
Short-term debt facilities	(51,424)	1,814,088	(3.8)%	(37,238)	1,472,436	(3.4)%
Short-term debt - servicer advance financing	(9,905)	239,218	(5.5)%	—	—	— %
Short-term debt - convertible notes, net	(9,403)	200,135	(6.3)%	(3,518)	95,375	(4.9)%
ABS issued - Legacy Sequoia(2)	(11,548)	458,173	(3.4)%	(12,324)	583,588	(2.8)%
ABS issued - Sequoia Choice(2)	(68,823)	2,018,406	(4.5)%	(37,702)	1,119,373	(4.5)%
ABS issued - Freddie Mac SLST(2)	(26,014)	997,460	(3.5)%	—	—	— %
ABS issued - Freddie Mac K-Series	(90,088)	3,012,017	(4.0)%	(5,145)	177,362	(3.9)%
Long-term debt - FHLBC	(38,728)	1,999,999	(2.6)%	(28,939)	1,999,999	(1.9)%
Long-term debt - other	(26,167)	582,753	(6.0)%	(29,212)	645,681	(6.0)%
Total interest expense	(332,100)	11,322,249	(3.9)%	(154,078)	6,093,814	(3.4)%
Net Interest Income	\$ 97,600			\$ 104,914		

- (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 presents net interest income by segment for the three and nine months ended September 30, 2019 and 2018.

Table 5 – Net Interest Income by Segment

(In Thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2019	2018	Change	2019	2018	Change
Net Interest Income by Segment						
Investment Portfolio	\$ 38,375	\$ 38,704	\$ (329)	\$ 114,076	\$ 115,163	\$ (1,087)
Mortgage Banking	5,834	6,890	(1,056)	15,404	19,105	(3,701)
Corporate/Other	(10,696)	(10,548)	(148)	(31,880)	(29,354)	(2,526)
Net Interest Income	\$ 33,513	\$ 35,046	\$ (1,533)	\$ 97,600	\$ 104,914	\$ (7,314)

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 interest expense related to long-term debt not directly allocated to our segments and net interest income from consolidated Legacy Sequoia entities. Details regarding consolidated Legacy Sequoia entities are included in the *“Results of Consolidated Legacy Sequoia Entities”* section that follows. Net interest income from Corporate/Other for the three-month periods remained consistent while the \$3 million increase in net expense from Corporate/Other for the nine-month periods was primarily due to higher convertible debt expense in 2019, relative to 2018, due to the issuance of \$200 million of convertible notes in June 2018 and the repayment of \$250 million of convertible notes in April 2018.

The following table presents the net interest rate spread between the yield on unsecuritized loans and securities and the debt yield of the short-term debt used in part to finance each investment type at September 30, 2019.

Table 6 – Interest Expense — Specific Borrowing Costs

September 30, 2019	Residential Loans Held-for-Sale	Single-Family Rental Loans	Residential Bridge Loans	Residential Securities
Asset yield	4.06 %	5.48 %	8.97 %	4.06 %
Short-term debt yield	3.51 %	4.30 %	4.54 %	3.11 %
Net Spread	0.55 %	1.18 %	4.43 %	0.95 %

For additional discussion on short-term debt, including information regarding margin requirements and financial covenants, see *‘Risks Relating to Debt Incurred under Short-Term and Long-Term Borrowing Facilities’* in the *Liquidity and Capital Resources* section of this MD&A.

Results of Operations by Segment

We report on our business using two distinct segments: Investment Portfolio and Mortgage Banking. 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* of our *Notes to Consolidated Financial Statements* in Part I, Item 1 of this Quarterly Report on Form 10-Q. The following table presents the segment contribution from our two segments, reconciled to our consolidated net income, for the three and nine months ended September 30, 2019 and 2018.

Table 7 – Segment Results Summary

(In Thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2019	2018	Change	2019	2018	Change
Segment Contribution from:						
Investment Portfolio	\$ 55,018	\$ 54,380	\$ 638	\$ 166,023	\$ 147,663	\$ 18,360
Mortgage Banking	3,393	9,465	(6,072)	22,456	39,075	(16,619)
Corporate/Other	(24,101)	(22,924)	(1,177)	(68,439)	(66,225)	(2,214)
Net Income	\$ 34,310	\$ 40,921	\$ (6,611)	\$ 120,040	\$ 120,513	\$ (473)

The following sections provide a detailed discussion of the results of operations at each of our two business segments for the three and nine months ended September 30, 2019 and 2018.

The increase in net expense from Corporate/Other for the three- and nine-month periods was primarily due to higher convertible debt expense in 2019, relative to 2018, as discussed in the previous section. Operating expenses for the three and nine months ended September 30, 2019 also included \$2 million of transaction costs related to the acquisition of CoreVest in October 2019. For the nine-month periods, the increase in net expense from Corporate/Other was partially offset by a \$2 million gain associated with the re-measurement of our initial minority investment and purchase option in 5 Arches.

Investment Portfolio Segment

Our Investment Portfolio segment is where we hold our housing-focused credit-sensitive investments in residential mortgage loans, mortgage-backed securities, and related assets. Our portfolio is primarily comprised of prime jumbo residential mortgage loans financed through the FHLBC, mortgage-backed securities collateralized by both residential and multifamily mortgages, and business purpose residential loans, which are mortgage loans to investors in residential properties.

The following table presents the components of segment contribution for the Investment Portfolio segment for the three and nine months ended September 30, 2019 and 2018.

Table 8 – Investment Portfolio Segment Contribution

(In Thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2019	2018	Change	2019	2018	Change
Interest income	\$ 132,894	\$ 79,556	\$ 53,338	\$ 380,394	\$ 202,882	\$ 177,512
Interest expense	(94,519)	(40,852)	(53,667)	(266,318)	(87,719)	(178,599)
Net interest income	38,375	38,704	(329)	114,076	115,163	(1,087)
Non-interest income						
Investment fair value changes, net	11,896	10,566	1,330	35,749	13,756	21,993
Other income, net	2,313	3,334	(1,021)	6,408	8,774	(2,366)
Realized gains, net	4,714	7,275	(2,561)	18,227	21,352	(3,125)
Total non-interest income, net	18,923	21,175	(2,252)	60,384	43,882	16,502
Direct operating expenses	(2,191)	(2,659)	468	(7,110)	(6,524)	(586)
Segment contribution before income taxes	55,107	57,220	(2,113)	167,350	152,521	14,829
Provision for income taxes	(89)	(2,840)	2,751	(1,327)	(4,858)	3,531
Total Segment Contribution	\$ 55,018	\$ 54,380	\$ 638	\$ 166,023	\$ 147,663	\$ 18,360

The following table presents our primary portfolios of investment assets in our Investment Portfolio segment at September 30, 2019 and December 31, 2018.

Table 9 – Investment Portfolio

(In Thousands)	September 30, 2019	December 31, 2018	Change
Residential loans held-for-investment at Redwood	\$ 2,267,218	\$ 2,383,932	\$ (116,714)
Residential bridge loans held-for-investment	206,890	112,798	94,092
Single-family rental loans held-for-investment	18,711	—	18,711
Residential securities	816,057	1,023,415	(207,358)
Multifamily securities	469,369	429,079	40,290
Securities retained from consolidated Sequoia Choice entities ⁽¹⁾	257,205	194,372	62,833
Securities issued by consolidated Freddie Mac SLST entities ⁽²⁾	453,750	228,921	224,829
Securities issued by consolidated Freddie Mac K-Series entities ⁽³⁾	214,045	125,523	88,522
Other investments	346,136	427,764	(81,628)
Other assets	371,918	270,356	101,562
Economic Assets at Investment Portfolio	\$ 5,421,299	\$ 5,196,160	\$ 225,139

- (1) Our investment in the consolidated Sequoia Choice entities at September 30, 2019 and December 31, 2018 represents \$2.62 billion and \$2.08 billion of loans, respectively, offset by \$2.36 billion and \$1.89 billion of ABS issued, respectively.
- (2) Our investment in the consolidated Freddie Mac SLST entities at September 30, 2019 and December 31, 2018 represents \$2.44 billion and \$1.22 billion of loans, respectively, offset by \$1.99 billion and \$0.99 billion of ABS issued, respectively.
- (3) Our investment in the consolidated Freddie Mac K-Series entities at September 30, 2019 and December 31, 2018 represents \$3.79 billion and \$2.14 billion of loans, respectively, offset by \$3.58 billion and \$2.02 billion of ABS issued, respectively.

Overview

During 2019, we have focused on optimizing our investment portfolio by selling assets that had appreciated in value with lower current yields, optimizing financing of assets in our portfolio, and redeploying capital into higher-yielding opportunities. During the first nine months of 2019, we deployed \$451 million of capital towards new residential and multifamily investments, including into residential re-performing loan securities, and we generated \$230 million of capital from asset sales and \$164 million of capital through new and incremental financing. As a result of capital optimization activities, we ended the third quarter with approximately \$590 million of capital available for investment. A higher balance of average undeployed capital during the third quarter dampened the growth in net interest income, while continued spread tightening during the quarter resulted in positive investment fair value changes.

In October 2019, we completed our acquisition of CoreVest, which included an operating platform and approximately \$900 million of business purpose loans and securities, a significant portion of which we will hold for investment in our investment portfolio. The deployment of capital into these assets, along with capital we expect to deploy into additional assets created by our expanded business purpose mortgage banking platform, should meaningfully increase the sustainable earnings potential of this segment. Credit fundamentals in our investment portfolio remain strong, benefiting from continued stability in the general economy and in housing.

Net Interest Income

Net interest income from our Investment Portfolio primarily includes interest income from our securities and residential loans held-for-investment, as well as the associated interest expense from short-term debt, FHLBC borrowings, and ABS issued. The following table presents the components of net interest income for our Investment Portfolio segment by investment type for the three and nine months ended September 30, 2019 and 2018.

Table 10 - Net Interest Income ("NII") from Investment Portfolio

(In Thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2019	2018	Change	2019	2018	Change
Net interest income from:						
Residential securities	\$ 12,200	\$ 19,114	\$ (6,914)	\$ 39,657	\$ 58,030	\$ (18,373)
Multifamily securities	732	1,775	(1,043)	3,706	5,526	(1,820)
HFI residential and single-family rental loans at Redwood	10,558	12,247	(1,689)	32,421	41,704	(9,283)
HFI residential loans at Sequoia Choice	3,979	2,881	1,098	11,203	6,268	4,935
HFI residential bridge loans	2,363	904	1,459	5,558	904	4,654
HFI residential loans at Freddie Mac SLST	3,121	—	3,121	9,207	—	9,207
HFI multifamily loans at Freddie Mac K-Series	1,501	433	1,068	4,046	433	3,613
Other interest income	3,921	1,350	2,571	8,278	2,298	5,980
NII from Investment Portfolio	\$ 38,375	\$ 38,704	\$ (329)	\$ 114,076	\$ 115,163	\$ (1,087)
Supplemental information:						
Hedge interest income (expense), net	\$ (999)	\$ 561	\$ (1,560)	\$ 3,139	\$ (2,297)	\$ 5,436

The decrease in net interest income from our Investment Portfolio segment for the three- and nine-month periods was primarily due to higher interest expense on our variable-rate borrowings resulting from rising benchmark interest rates over the first half of 2019. This decrease was partially offset by increased interest income from additional portfolio investments that we made during the past year.

The table above also presents supplemental information about interest income (expense) from hedges that we use to manage interest rate risk in our investment portfolio, which are a component of Investment fair value changes, net on our consolidated statements of income. On a combined basis, net interest income in our investment portfolio segment plus interest income (expense) from hedges used to manage interest rate risk in our investment portfolio decreased by \$2 million and increased by \$4 million in the three- and nine-month periods, respectively.

Investment fair value changes, net

Market valuation changes included in Investment fair value changes, net, result from changes in the fair value of investments and their associated hedges, generally due to changes in market interest rates, changes in credit spreads, and reductions in the basis of investments due to changes in principal balances. See *Note 20* of our *Notes to Consolidated Financial Statements* in Part I, Item 1 of this Quarterly Report on Form 10-Q for additional detail regarding the components of Investment fair value changes, net presented on our consolidated statements of income.

The following table presents the components of investment fair value changes for our Investment Portfolio segment, which is comprised of market valuation gains and losses by investment type, inclusive of fair value changes of associated risk management derivatives, for the three and nine months ended September 30, 2019 and 2018.

Table 11 - Investment Portfolio Fair Value Changes, Net by Investment Type

(In Thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2019	2018	Change	2019	2018	Change
Market valuation changes:						
Residential loans held-for-investment at Redwood	\$ (9,337)	\$ (2,305)	\$ (7,032)	\$ (19,381)	\$ (4,593)	\$ (14,788)
Single-family rental loans held-for-investment	22	—	22	22	—	22
Residential bridge loans held-for-investment	(742)	52	(794)	(1,363)	52	(1,415)
Net investments in Sequoia Choice entities ⁽¹⁾	2,722	(942)	3,664	8,866	44	8,822
Net investments in Freddie Mac SLST entities ⁽¹⁾	17,300	—	17,300	31,702	—	31,702
Net investments in Freddie Mac K-Series entities ⁽¹⁾	7,445	511	6,934	13,810	511	13,299
Residential trading securities	(4,763)	8,086	(12,849)	(8,930)	9,232	(18,162)
Multifamily trading securities	653	4,762	(4,109)	7,628	11,371	(3,743)
Servicer advance investments	1,585	—	1,585	3,025	—	3,025
Excess MSR	(1,635)	—	(1,635)	(2,137)	—	(2,137)
Shared home appreciation options	29	—	29	29	—	29
REO	(331)	—	(331)	(470)	—	(470)
Hedge interest income (expense), net	(999)	561	(1,560)	3,139	(2,298)	5,437
Other valuation changes	(53)	(159)	106	(191)	(563)	372
Investment Fair Value Changes, Net	\$ 11,896	\$ 10,566	\$ 1,330	\$ 35,749	\$ 13,756	\$ 21,993

(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.

During the three and nine months ended September 30, 2019, the positive investment fair value changes were primarily driven by tightening credit spreads in several parts of our portfolio. For our residential loans held-for-investment at Redwood and certain securities with premiums, including IO securities, our basis in these investments declined due to reductions in principal or notional underlying principal balances, which resulted in negative fair value changes.

Other Income, net

The following table presents the components of Other income, net for our investment portfolio for the three and nine months ended September 30, 2019 and 2018.

Table 12 – Other Income, Net from Investment Portfolio

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
MSR income, net	\$ 431	\$ 1,967	\$ 2,342	\$ 4,797
Risk share income	905	907	2,351	2,706
FHLBC capital stock dividend	541	460	1,623	1,271
Equity investment income	560	—	464	—
Other	(124)	—	(372)	—
Other Income, Net from Investment Portfolio	\$ 2,313	\$ 3,334	\$ 6,408	\$ 8,774

Realized Gains, net

During the three and nine months ended September 30, 2019, we realized gains of \$5 million and \$18 million, respectively, primarily from the sale of \$15 million and \$82 million of AFS securities, respectively, and the call of a seasoned Sequoia securitization during the first quarter. During the three and nine months ended September 30, 2018, we realized gains of \$7 million and \$21 million, respectively, primarily from the sale of \$26 million and \$118 million of AFS securities, respectively.

Direct Operating Expenses and Provision for Income Taxes

Operating expenses at our Investment Portfolio segment decreased for the three-month periods due to lower variable compensation commensurate with lower earnings quarter-over-quarter, as well as lower loan administration fees resulting from our acquisition of 5 Arches in 2019. The increase in operating expenses at our Investment Portfolio segment for the nine-month periods was primarily related to additional personnel added in 2018 to support our new business initiatives.

The provision for income taxes at our Investment Portfolio segment primarily results from GAAP income earned at our TRS from MSRs and certain securities. For the three- and nine-month periods, the decrease in the tax provision primarily resulted from decreased GAAP income at our TRS in this segment.

Residential Loans Held-for-Investment at Redwood Portfolio

The following table provides the activity of residential loans held-for-investment at Redwood during the three and nine months ended September 30, 2019.

Table 13 – Residential Loans Held-for-Investment at Redwood - Activity

(In Thousands)	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Fair value at beginning of period	\$ 2,386,883	\$ 2,383,932
Acquisitions	—	39,269
Sales	(6,641)	(9,421)
Transfers between portfolios ⁽¹⁾	8,431	68,825
Principal repayments	(129,122)	(286,710)
Changes in fair value, net	7,667	71,323
Fair Value at End of Period	\$ 2,267,218	\$ 2,267,218

(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 increase in fair value of our loans during the three- and nine-month periods was primarily due to a decline in benchmark interest rates. As our loans held-for-investment are generally fixed-rate and sensitive to changes in interest rates, we utilize various interest rate derivatives to hedge our interest rate risk for these investments. As a result of declining interest rates during the three and nine months ended September 30, 2019, interest rate derivatives associated with these investments decreased in value by \$17 million and \$86 million, respectively.

At September 30, 2019, \$2.27 billion of residential loans were held by our FHLB-member subsidiary and financed with \$1.94 billion of borrowings from the FHLBC. In connection with these borrowings, our FHLB-member subsidiary is required to hold \$43 million of FHLB stock.

At September 30, 2019, the weighted average maturity of these FHLB borrowings was approximately six years and they had a weighted average cost of 2.31% 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.

The following table presents the unpaid principal balances for residential real estate loans held-for-investment at fair value by product type at September 30, 2019.

Table 14 – Characteristics of Residential Real Estate Loans Held-for-Investment at Redwood

September 30, 2019		
(Dollars in Thousands)	Principal Balance	Weighted Average Coupon
Fixed - 30 year	\$ 1,888,486	4.16 %
Fixed - 15, 20, & 25 year	56,113	3.70 %
Hybrid	251,067	4.19 %
Total Outstanding Principal	\$ 2,195,666	

The outstanding residential loans held-for-investment at Redwood at September 30, 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 September 30, 2019, one of these loans with an aggregate fair value of \$0.5 million was greater than 90 days delinquent and one of these loans with an aggregate fair value of \$0.5 million was in foreclosure.

Residential Bridge Loans Held-for-Investment at Redwood Portfolio

The following table provides the activity of residential bridge loans held-for-investment at Redwood during the three and nine months ended September 30, 2019.

Table 15 – Residential Bridge Loans Held-for-Investment at Redwood - Activity

(In Thousands)	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Fair value at beginning of period	\$ 159,353	\$ 112,798
Originations	90,583	218,770
Acquisitions	—	10,295
Sales	(3,308)	(46,857)
Transfers to REO	—	(4,995)
Principal repayments	(40,006)	(83,866)
Changes in fair value, net	268	745
Fair Value at End of Period	\$ 206,890	\$ 206,890

Our \$207 million of residential bridge loans held-for-investment at September 30, 2019 were comprised of first-lien, fixed-rate, interest-only loans with a weighted average coupon of 8.90% and original maturities of six to 24 months. At origination, the weighted average FICO score of borrowers backing these loans was 693 and the weighted average LTV ratio of these loans was 70%. At September 30, 2019, of the 392 loans in this portfolio, nine loans with an aggregate fair value of \$6 million were greater than 90 days delinquent and eight of these loans with an aggregate fair value of \$5 million were in foreclosure.

At September 30, 2019, we had \$139 million of warehouse debt outstanding to fund our residential bridge loans held-for-investment. The weighted average cost of the borrowings outstanding under these facilities during the third quarter of 2019 was 5.07% per annum. Our residential bridge loan warehouse capacity totaled \$330 million across four separate counterparties.

Real Estate Securities Portfolio

The following table sets forth our real estate securities activity by collateral type in our Investment Portfolio segment for the three and nine months ended September 30, 2019.

Table 16 – Real Estate Securities Activity by Collateral Type

Three Months Ended September 30, 2019 (In Thousands)	Residential			Multifamily	Total
	Senior	Mezzanine	Subordinate	Mezzanine	
Beginning fair value	\$ 215,198	\$ 229,336	\$ 505,030	\$ 527,922	\$ 1,477,486
Transfers	—	—	—	—	—
Acquisitions					
Sequoia securities	1,228	—	1,070	—	2,298
Third-party securities	14,372	9,352	25,772	16,373	65,869
Sales					
Sequoia securities	—	(9,208)	—	—	(9,208)
Third-party securities	(29,881)	(44,042)	(100,401)	(75,803)	(250,127)
Gains on sales and calls, net	2,570	—	2,144	—	4,714
Effect of principal payments ⁽¹⁾	(8,579)	(1,203)	(2,164)	(10,340)	(22,286)
Change in fair value, net	(11,817)	4,934	12,346	11,217	16,680
Ending Fair Value ⁽²⁾	\$ 183,091	\$ 189,169	\$ 443,797	\$ 469,369	\$ 1,285,426
Nine Months Ended September 30, 2019 (In Thousands)					
Beginning fair value	\$ 246,285	\$ 218,147	\$ 558,983	\$ 429,079	\$ 1,452,494
Transfers	—	—	—	(4,951)	(4,951)
Acquisitions					
Sequoia securities	4,736	—	3,024	—	7,760
Third-party securities	45,063	70,169	70,209	124,398	309,839
Sales					
Sequoia securities	—	(31,325)	(4,727)	—	(36,052)
Third-party securities	(68,661)	(77,142)	(215,680)	(103,017)	(464,500)
Gains on sales and calls, net	8,319	3,059	6,849	—	18,227
Effect of principal payments ⁽¹⁾	(21,423)	(9,596)	(13,110)	(15,492)	(59,621)
Change in fair value, net	(31,228)	15,857	38,249	39,352	62,230
Ending Fair Value ⁽²⁾	\$ 183,091	\$ 189,169	\$ 443,797	\$ 469,369	\$ 1,285,426

(1) 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.

(2) At September 30, 2019, excludes \$257 million of securities retained from our consolidated Sequoia Choice securitizations as well as \$454 million and \$214 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, Freddie Mac SLST, and multifamily loans, see the subsections titled "Residential Loans Held-for-Investment at Sequoia Choice Portfolio," "Residential Loans Held-for-Investment at Freddie Mac SLST Portfolio," and "Multifamily Loans Held-for-Investment at Freddie Mac K-Series Portfolio" that follow.

During the three and nine months ended September 30, 2019, we sold \$259 million and \$501 million, respectively, of mostly lower-yielding securities as part of our ongoing portfolio optimization activities.

At September 30, 2019, our securities consisted of fixed-rate assets (83%), adjustable-rate assets (12%), 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 September 30, 2019.

Table 17 – Real Estate Securities Financed with Repurchase Debt

September 30, 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	\$ 83,954	\$ (76,653)	\$ 7,301	\$ 101	8%
Mezzanine ⁽⁴⁾	289,178	(249,412)	39,766	104	14%
Re-performing	416,111	(315,029)	101,082	91	24%
Total Residential Securities	789,243	(641,094)	148,149	97	19%
Multifamily Securities ⁽⁵⁾	653,432	(516,552)	136,880	88	21%
Total	\$ 1,442,675	\$ (1,157,646)	\$ 285,029		

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

(2) GAAP fair value per \$100 of principal.

(3) Allocated capital divided by GAAP fair value.

(4) Includes \$113 million and \$385 million of securities retained from our consolidated Sequoia Choice and Freddie Mac SLST securitizations, respectively, which we consolidate in accordance with GAAP.

(5) Includes \$209 million of securities we owned that were issued by Freddie Mac K-Series securitizations, which we consolidate in accordance with GAAP.

At September 30, 2019, we had short-term debt incurred through repurchase facilities of \$1.16 billion, which was secured by \$1.44 billion of real estate securities. The remaining \$768 million of our securities, including certain securities we own that were issued by consolidated Sequoia Choice and Freddie Mac K-Series securitization entities, were financed with capital. Our repo borrowings were made under facilities with nine different counterparties, and the weighted average cost of funds for these facilities during the third quarter of 2019 was approximately 3.37% per annum.

At September 30, 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 facilities.

The majority of the \$84 million of senior securities noted in the table above are supported by residential loans originated in 2018 and 2019. The \$289 million of mezzanine securities financed through repurchase facilities at September 30, 2019 primarily carry investment grade credit ratings and are supported by residential loans originated between 2013 and 2019. The majority of the loans underlying these securities have experienced minimal delinquencies to date. The \$653 million of multifamily securities financed through repurchase facilities at September 30, 2019 primarily carry investment grade credit ratings with 7%-8% of structural credit enhancement.

The following table presents our real estate securities at September 30, 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 18 – Real Estate Securities by Vintage and Type

September 30, 2019 (In Thousands)	Sequoia 2012- 2019	Third Party 2013-2019	Agency CRT 2016-2019	Third Party ≤2008	Total Residential Securities	Multifamily 2016-2019	Total Real Estate Securities
Senior ⁽¹⁾	\$ 41,826	\$ 107,803	\$ —	\$ 33,462	\$ 183,091	\$ —	\$ 183,091
Mezzanine ⁽²⁾	69,349	119,820	—	—	189,169	469,369	658,538
Subordinate ⁽¹⁾	137,084	153,345	140,881	12,487	443,797	—	443,797
Total Securities ⁽³⁾	\$ 248,259	\$ 380,968	\$ 140,881	\$ 45,949	\$ 816,057	\$ 469,369	\$ 1,285,426

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 September 30, 2019 and December 31, 2018, senior Sequoia and third-party securities included \$58 million and \$82 million of IO securities, respectively. At September 30, 2019 and December 31, 2018, subordinate third-party securities included \$13 million and \$12 million of IO securities, respectively. Our interest-only securities included \$29 million and \$43 million of A-IO-S securities at September 30, 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 September 30, 2019, excluded \$257 million, \$454 million, and \$214 million of securities we owned that were issued by consolidated Sequoia Choice, Freddie Mac SLST, and Freddie Mac K-Series 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 \$8.85 billion of residential loans and \$7.93 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 three and nine months ended September 30, 2019 and 2018.

Table 19 – Interest Income — AFS Securities

Three Months Ended September 30, 2019

(Dollars in Thousands)	Interest Income	Discount (Premium) Amortization	Total Interest Income	Average Amortized Cost	Yield as a Result of		
					Interest Income	Discount (Premium) Amortization	Total Interest Income
Residential							
Senior	\$ 417	\$ 813	\$ 1,230	\$ 23,539	7.09%	13.83%	20.92%
Mezzanine	106	25	131	10,988	3.86%	0.90%	4.76%
Subordinate	2,813	996	3,809	140,003	8.04%	2.85%	10.89%
Total AFS Securities	\$ 3,336	\$ 1,834	\$ 5,170	\$ 174,530	7.65%	4.20%	11.85%

Three Months Ended September 30, 2018

(Dollars in Thousands)	Interest Income	Discount (Premium) Amortization	Total Interest Income	Average Amortized Cost	Yield as a Result of		
					Interest Income	Discount (Premium) Amortization	Total Interest Income
Residential							
Senior	\$ 1,514	\$ 1,977	\$ 3,491	\$ 101,226	5.98%	7.81%	13.79%
Mezzanine	353	150	503	33,817	4.18%	1.77%	5.95%
Subordinate	2,913	1,196	4,109	146,776	7.94%	3.26%	11.20%
Total AFS Securities	\$ 4,780	\$ 3,323	\$ 8,103	\$ 281,819	6.78%	4.72%	11.50%

Nine Months Ended September 30, 2019

(Dollars in Thousands)	Interest Income	Discount (Premium) Amortization	Total Interest Income	Average Amortized Cost	Yield as a Result of		
					Interest Income	Discount (Premium) Amortization	Total Interest Income
Residential							
Senior	\$ 1,793	\$ 2,571	\$ 4,364	\$ 33,303	7.18%	10.29%	17.47%
Mezzanine	556	224	780	18,503	4.01%	1.61%	5.62%
Subordinate	8,204	3,028	11,232	138,075	7.92%	2.92%	10.84%
Total AFS Securities	\$ 10,553	\$ 5,823	\$ 16,376	\$ 189,881	7.41%	4.09%	11.50%

Nine Months Ended September 30, 2018

(Dollars in Thousands)	Interest Income	Discount (Premium) Amortization	Total Interest Income	Average Amortized Cost	Yield as a Result of		
					Interest Income	Discount (Premium) Amortization	Total Interest Income
Residential							
Senior	\$ 5,081	\$ 6,648	\$ 11,729	\$ 116,274	5.83%	7.62%	13.45%
Mezzanine	1,651	692	2,343	52,149	4.22%	1.77%	5.99%
Subordinate	8,597	3,891	12,488	150,817	7.60%	3.44%	11.04%
Total AFS Securities	\$ 15,329	\$ 11,231	\$ 26,560	\$ 319,240	6.40%	4.69%	11.09%

Residential Loans Held-for-Investment at Sequoia Choice Portfolio

As of September 30, 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 September 30, 2019, our economic investment in the consolidated Sequoia Choice entities had an estimated fair value of \$259 million. The securities retained from our consolidated Sequoia Choice entities included senior and subordinate securities of \$13 million and \$244 million, respectively, at September 30, 2019.

The following tables present the statements of income for the three and nine months ended September 30, 2019 and 2018 and the balance sheets of the consolidated Sequoia Choice entities at September 30, 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 Investment Portfolio segment.

Table 20 – Consolidated Sequoia Choice Entities Statements of Income

(In Thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2019	2018	Change	2019	2018	Change
Interest income	\$ 27,555	\$ 20,900	\$ 6,655	\$ 80,046	\$ 43,970	\$ 36,076
Interest expense	(23,576)	(18,019)	(5,557)	(68,823)	(37,702)	(31,121)
Net interest income	3,979	2,881	1,098	11,223	6,268	4,955
Investment fair value changes, net	2,722	(943)	3,665	8,866	44	8,822
Net Income from Consolidated Sequoia Choice Entities	\$ 6,701	\$ 1,938	\$ 4,763	\$ 20,089	\$ 6,312	\$ 13,777

Table 21 – Consolidated Sequoia Choice Entities Balance Sheets

(In Thousands)	September 30, 2019	December 31, 2018
Residential loans, held-for-investment, at fair value	\$ 2,618,316	\$ 2,079,382
Other assets	10,821	10,010
Total Assets	\$ 2,629,137	\$ 2,089,392
Other liabilities	\$ 8,964	\$ 8,202
Asset-backed securities issued, at fair value	2,361,111	1,885,010
Total liabilities	2,370,075	1,893,212
Equity (fair value of Redwood's retained investments in entities)	259,062	196,180
Total Liabilities and Equity	\$ 2,629,137	\$ 2,089,392

The following table presents residential loan activity at the consolidated Sequoia Choice entities for the three and nine months ended September 30, 2019.

Table 22 – Residential Loans Held-for-Investment at Sequoia Choice - Activity

(In Thousands)	Three Months Ended		Nine Months Ended	
	September 30, 2019		September 30, 2019	
Balance at beginning of period	\$	2,147,356	\$	2,079,382
New securitization issuance		727,088		1,076,671
Principal repayments		(245,099)		(542,577)
Changes in fair value, net		(11,029)		4,840
Balance at End of Period	\$	2,618,316	\$	2,618,316

The outstanding loans held-for-investment at our Sequoia Choice entities at September 30, 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 4.74%, the weighted average FICO score of borrowers backing these loans was 745 (at origination) and the weighted average original LTV ratio was 75% (at origination). At September 30, 2019, six of these loans with an aggregate unpaid principal balance of \$4 million were greater than 90 days delinquent and one of these loans with an unpaid principal balance of \$1 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.

Residential Loans Held-for-Investment at Freddie Mac SLST Portfolio

Beginning in the fourth quarter of 2018, we invested in certain subordinate securities backed by a pool 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 September 30, 2019, our economic investment in the consolidated Freddie Mac SLST entities had an estimated fair value of \$456 million, and was comprised of subordinate securities.

The following tables present the statements of income for the three and nine months ended September 30, 2019 and 2018 and the balance sheets of the consolidated Freddie Mac SLST entities at September 30, 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 Investment Portfolio segment.

Table 23 – Consolidated Freddie Mac SLST Entities Statements of Income

(In Thousands)	Three Months Ended			Nine Months Ended		
	September 30,			September 30,		
	2019	2018	Change	2019	2018	Change
Interest income	\$ 11,830	\$ —	\$ 11,830	\$ 35,221	\$ —	\$ 35,221
Interest expense	(8,709)	—	(8,709)	(26,014)	—	(26,014)
Net interest income	3,121	—	3,121	9,207	—	9,207
Investment fair value changes, net	17,300	—	17,300	31,702	—	31,702
Net Income from Consolidated Freddie Mac SLST Entities	\$ 20,421	\$ —	\$ 20,421	\$ 40,909	\$ —	\$ 40,909

Table 24 – Consolidated Freddie Mac SLST Entities Balance Sheets

(In Thousands)	September 30, 2019	December 31, 2018
Residential loans, held-for-investment, at fair value	\$ 2,441,223	\$ 1,222,669
Other assets	7,299	3,926
Total Assets	\$ 2,448,522	\$ 1,226,595
Other liabilities	\$ 5,498	\$ 2,907
Asset-backed securities issued, at fair value	1,987,473	993,748
Total liabilities	1,992,971	996,655
Equity (fair value of Redwood's investments in entities)	455,551	229,940
Total Liabilities and Equity	\$ 2,448,522	\$ 1,226,595

The following table presents residential loan activity at the consolidated Freddie Mac SLST entities for the three and nine months ended September 30, 2019.

Table 25 – Residential Loans Held-for-Investment at Freddie Mac SLST - Activity

(In Thousands)	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Balance at beginning of period	\$ 1,235,089	\$ 1,222,669
Consolidation of residential loans held in securitization trusts	1,190,995	1,190,995
Principal repayments	(24,559)	(67,144)
Transfers to REO	(84)	(84)
Changes in fair value, net	39,782	94,787
Balance at End of Period	\$ 2,441,223	\$ 2,441,223

The outstanding re-performing and non-performing residential loans held-for-investment at the Freddie Mac SLST entities at September 30, 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 599 and the weighted average LTV ratio of these loans was 68%. At September 30, 2019, 288 of these loans with an aggregate unpaid principal balance of \$75 million were greater than 90 days delinquent and 150 of these loans with an aggregate unpaid principal balance of \$24 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 September 30, 2019, delinquencies and credit losses in the portfolio remain in line with our expectations.

Multifamily Loans Held-for-Investment at Freddie Mac K-Series Portfolio

Beginning in the second half of 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 September 30, 2019, our economic investment in the consolidated Freddie Mac K-Series entities had an estimated fair value of \$215 million, and was comprised of subordinate securities.

The following tables present the statements of income for the three and nine months ended September 30, 2019 and 2018 and the balance sheets of the consolidated Freddie Mac K-Series entities at September 30, 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 Investment Portfolio segment.

Table 26 – Consolidated Freddie Mac K-Series Entities Statements of Income

(In Thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2019	2018	Change	2019	2018	Change
Interest income	\$ 36,829	\$ 5,578	\$ 31,251	\$ 94,134	\$ 5,578	\$ 88,556
Interest expense	(35,328)	(5,145)	(30,183)	(90,088)	(5,145)	(84,943)
Net interest income	1,501	433	1,068	4,046	433	3,613
Investment fair value changes, net	7,445	511	6,934	13,810	511	13,299
Net Income from Consolidated Freddie Mac K-Series Entities	\$ 8,946	\$ 944	\$ 8,002	\$ 17,856	\$ 944	\$ 16,912

Table 27 – Consolidated Freddie Mac K-Series Entities Balance Sheets

(In Thousands)	September 30, 2019	December 31, 2018
Multifamily loans, held-for-investment, at fair value	\$ 3,791,622	\$ 2,144,598
Other assets	11,300	6,595
Total Assets	\$ 3,802,922	\$ 2,151,193
Other liabilities	\$ 10,805	\$ 6,239
Asset-backed securities issued, at fair value	3,577,577	2,019,075
Total liabilities	3,588,382	2,025,314
Equity (fair value of Redwood's retained investments in entities)	214,540	125,879
Total Liabilities and Equity	\$ 3,802,922	\$ 2,151,193

The following table presents multifamily loan activity at the consolidated Freddie Mac K-Series entities for the three and nine months ended September 30, 2019.

Table 28 – Multifamily Loans Held-for-Investment at Freddie Mac K-Series - Activity

(In Thousands)	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Balance at beginning of period	\$ 3,749,657	\$ 2,144,598
Consolidation of multifamily loans held in securitization trusts	—	1,481,554
Principal repayments	(5,388)	(12,904)
Changes in fair value, net	47,353	178,374
Balance at End of Period	\$ 3,791,622	\$ 3,791,622

The outstanding multifamily loans held-for-investment at the Freddie Mac K-Series entities at September 30, 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 September 30, 2019, the weighted average coupon of these loans was 4.19% and the weighted average loan term was six years. At both September 30, 2019 and December 31, 2018, none of these loans were greater than 90 days delinquent or in foreclosure.

Mortgage Servicing Rights Portfolio

Our MSR 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 three and nine months ended September 30, 2019.

Table 29 – MSR Activity

(In Thousands)	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Balance at beginning of period	\$ 47,396	\$ 60,281
Additions		
MSRs retained from third-party loan sales	—	868
Sales	(69)	(69)
Market valuation adjustments	(7,490)	(21,243)
Balance at End of Period	\$ 39,837	\$ 39,837

The following table presents characteristics of our MSR investments and their associated loans at September 30, 2019.

Table 30 – Characteristics of MSR Investments Portfolio

(Dollars in Thousands)	September 30, 2019
Unpaid principal balance	\$ 4,610,339
Fair value of MSRs	\$ 39,837
MSR values as percent of unpaid principal balance	0.86 %
Gross cash yield ⁽¹⁾	0.32 %
Number of loans	7,199
Average loan size	\$ 640
Average coupon	3.98 %
Average loan age (months)	61
Average original loan-to-value	67 %
Average original FICO score	770
60+ day delinquencies	0.15 %

(1) Gross cash yield is calculated by dividing the annualized quarterly gross servicing fees we received for the three months ended September 30, 2019, by the weighted average notional balance of loans associated with MSRs we owned during that period.

At September 30, 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 both September 30, 2019 and December 31, 2018, we had \$1 million 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 MSR associated with legacy RMBS (See Note 10 of our Notes to Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for additional detail). At September 30, 2019, our servicer advance investments and excess MSR associated with this investment had a carrying value of \$223 million and \$16 million, respectively. The following table presents characteristics of the residential mortgage loans underlying these investments at September 30, 2019.

Table 31 – Characteristics of Servicing Investments

(Dollars in Thousands)	September 30, 2019
Unpaid principal balance	\$ 8,381,331
Number of loans	42,671
Average loan size	\$ 196
Average coupon	5.21 %
Average loan age (months)	169
Average original loan-to-value	74 %
Average original FICO score	696
60+ day delinquencies ⁽¹⁾	9.17 %

(1) Includes unpaid principal balance of \$501 million, or 6% of total portfolio, of loans in foreclosure or transferred to REO.

Mortgage Banking Segment

Our Mortgage Banking segment includes activity from both our residential and business purpose mortgage banking operations. Our business purpose mortgage banking operations includes activity from our wholly-owned subsidiary 5 Arches and our inventory of held-for-sale single-family rental loans. The following table presents the components of segment contribution for the Mortgage Banking segment for the three and nine months ended September 30, 2019 and 2018.

Table 32 – Mortgage Banking Segment Contribution

(In Thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2019	2018	Change	2019	2018	Change
Interest income	\$ 12,491	\$ 14,427	\$ (1,936)	\$ 34,220	\$ 40,408	\$ (6,188)
Interest expense	(6,657)	(7,537)	880	(18,816)	(21,303)	2,487
Net interest income	5,834	6,890	(1,056)	15,404	19,105	(3,701)
Mortgage banking activities, net ⁽¹⁾	9,515	11,224	(1,709)	40,984	48,396	(7,412)
Other income (expense), net ⁽²⁾	(252)	—	(252)	(575)	—	(575)
Direct operating expenses ⁽³⁾	(11,907)	(6,570)	(5,337)	(31,582)	(20,941)	(10,641)
Segment contribution before income taxes	3,190	11,544	(8,354)	24,231	46,560	(22,329)
Provision for income taxes	203	(2,079)	2,282	(1,775)	(7,485)	5,710
Segment Contribution	\$ 3,393	\$ 9,465	\$ (6,072)	\$ 22,456	\$ 39,075	\$ (16,619)

(1) Mortgage banking activities, net includes \$5 million and \$4 million from our residential mortgage banking and business purpose mortgage banking operations, respectively, for the three months ended September 30, 2019. Mortgage banking activities, net includes \$31 million and \$10 million from our residential mortgage banking and business purpose mortgage banking operations, respectively, for the nine months ended September 30, 2019.

(2) Other income (expense), net for our business purpose mortgage banking operations includes intangible asset amortization expense of \$2 million and \$4 million for the three and nine months ended September 30, 2019, respectively, related to our acquisition of 5 Arches.

(3) Direct operating expenses includes \$6 million from both our residential mortgage banking and business purpose mortgage banking operations for the three months ended September 30, 2019. Direct operating expenses includes \$17 million and \$14 million from our residential mortgage banking and business purpose mortgage banking operations, respectively, for the nine months ended September 30, 2019.

The following tables provide the activity of unsecuritized residential loans during the three and nine months ended September 30, 2019 and 2018.

Table 33 – Residential Loans Held-for-Sale — Activity

(In Thousands)	Three Months Ended September 30,					
	2019			2018		
	Select	Choice	Total	Select	Choice	Total
Balance at beginning of period	\$ 514,785	\$ 541,502	\$ 1,056,287	\$ 680,816	\$ 423,844	\$ 1,104,660
Acquisitions	813,970	668,816	1,482,786	1,169,130	634,995	1,804,125
Sales	(648,829)	(197,848)	(846,677)	(1,110,994)	(22,084)	(1,133,078)
Transfers between portfolios ⁽¹⁾	(8,361)	(727,088)	(735,449)	(6,426)	(889,703)	(896,129)
Principal repayments	(14,000)	(12,737)	(26,737)	(15,046)	(6,152)	(21,198)
Changes in fair value, net	(1,758)	(2,565)	(4,323)	2,117	5,947	8,064
Balance at End of Period	\$ 655,807	\$ 270,080	\$ 925,887	\$ 719,597	\$ 146,847	\$ 866,444

(In Thousands)	Nine Months Ended September 30,					
	2019			2018		
	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	2,437,192	1,590,275	4,027,467	3,780,284	1,790,701	5,570,985
Sales	(2,459,766)	(472,405)	(2,932,171)	(4,101,597)	(34,370)	(4,135,967)
Transfers between portfolios ⁽¹⁾	4	(1,145,375)	(1,145,371)	(28,968)	(1,936,487)	(1,965,455)
Principal repayments	(40,828)	(35,735)	(76,563)	(35,654)	(17,173)	(52,827)
Changes in fair value, net	3,012	712	3,724	4,176	17,587	21,763
Balance at End of Period	\$ 655,807	\$ 270,080	\$ 925,887	\$ 719,597	\$ 146,847	\$ 866,444

(1) Represents the net transfers of loans out of our Mortgage Banking segment into our Investment Portfolio segment and their reclassification from held-for-sale to held-for-investment. Includes \$727 million and \$1.08 billion of Choice loans securitized during the three and nine months ended September 30, 2019, respectively, and \$796 million and \$1.78 billion of Choice loans securitized during the three and nine months ended September 30, 2018, respectively, which were not treated as sales for GAAP purposes and continue to be reported on our consolidated balance sheets within our Investment Portfolio segment.

Overview

Segment contribution from our mortgage banking business decreased during the three- and nine-month periods, driven primarily by lower margins and lower loan purchase volumes on our residential loans as compared to the prior year. Margins for our residential mortgage banking operations were above our long-term expectations for the first half of 2019 and below our expectations for the third quarter of 2019. For the remainder of 2019, we expect residential loan volumes to remain stable and for margins to normalize in-line with our long-term expectations. For the third quarter of 2019, our business purpose mortgage banking operations generated a segment contribution close to break-even, as our volumes were somewhat impacted by the continued integration of 5 Arches. During the third quarter, we completed one Select securitization and two Choice securitizations.

During the first nine months of 2019, we purchased \$4.03 billion of predominately prime residential jumbo loans, securitized \$1.14 billion of jumbo Select loans that were accounted for as sales, and sold \$1.79 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 loans to our Investment Portfolio segment that were financed with borrowings from the FHLBC. Our pipeline of residential loans identified for purchase at September 30, 2019 included \$1.32 billion of jumbo loans.

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 September 30, 2019, we funded \$78 million of single-family rental loans, of which \$19 million were transferred to our investment portfolio and financed with FHLB borrowings, and the remaining loans were retained in our mortgage banking segment. Going forward, we anticipate transferring the majority of our remaining 5 Arches-originated single-family rental loans to our investment portfolio and financing them at the FHLB. During the period from March 1, 2019 to September 30, 2019, we have funded \$219 million of residential bridge loans, of which \$47 million were sold to a third party and the remaining loans were transferred to our investment portfolio. In October 2019, 5 Arches originated an additional \$162 million of business purpose loans, all of which we have retained on our balance sheet.

We utilize a combination of capital and our loan warehouse facilities to manage our inventory of loans held-for-sale. At September 30, 2019, we had \$233 million of warehouse debt outstanding to fund our residential loans held-for-sale. The weighted average cost of the borrowings outstanding under these facilities during the third quarter of 2019 was 3.87% per annum. Jumbo loan warehouse capacity at September 30, 2019 totaled \$1.43 billion across four separate counterparties, which should continue to provide sufficient liquidity to fund our mortgage banking operations in the near-term.

At September 30, 2019, we had \$59 million of warehouse debt outstanding to fund our single-family rental loans held-for-sale. The weighted average cost of the borrowings outstanding under these facilities during the third quarter of 2019 was 5.07% per annum. Our single-family rental loan warehouse capacity totaled \$400 million across two separate counterparties.

At September 30, 2019, residential mortgage banking had 482 loan sellers, down from 501 at the end of 2018. This included 184 jumbo sellers and 298 sellers from various FHLB districts participating in the FHLB's MPF Direct program.

Net Interest Income

Net interest income from mortgage banking is primarily comprised of interest income earned on loans from the time we purchase the loans to when we sell or securitize them, offset by interest expense incurred on short-term warehouse debt used in part to finance the loans while we hold them on our balance sheet.

The decrease in net interest income during the three- and nine-month periods was primarily due to a decrease in interest income driven by a lower average balance of residential loans held-for-sale and lower loan purchase volumes.

The amount of net interest income we earn on loans held-for-sale is dependent on many variables, including the amount of loans and the time they are outstanding on our consolidated balance sheet and their interest rates, as well as the amount of leverage we employ through the use of short-term debt to finance the loans and the interest rates on that debt. These factors will impact net interest income in future periods.

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 or transfer it into our 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. In addition, beginning in the first quarter of 2019, mortgage banking activities includes fees from the origination of loans from our business purpose mortgage banking operations.

The following table presents the components of 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, derivatives and hedges outstanding at the end of each period.

Table 34 – Components of Mortgage Banking Activities, Net

(In Thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2019	2018	Change	2019	2018	Change
Residential Mortgage Banking Activities, Net						
Changes in fair value of:						
Residential loans, at fair value ⁽¹⁾	\$ 6,320	\$ 7,236	\$ (916)	\$ 41,431	\$ 8,406	\$ 33,025
Risk management derivatives ⁽²⁾	(1,710)	3,796	(5,506)	(11,608)	38,378	(49,986)
Other income, net ⁽³⁾	407	313	94	1,380	1,733	(353)
Total residential mortgage banking activities, net	5,017	11,345	(6,328)	31,203	48,517	(17,314)
Business Purpose Mortgage Banking Activities, Net						
Changes in fair value of:						
Single-family rental loans, at fair value ⁽¹⁾	1,847	(121)	1,968	5,473	(121)	5,594
Risk management derivatives ⁽²⁾	(1,262)	—	(1,262)	(3,779)	—	(3,779)
Residential bridge loans, at fair value	1,010	—	1,010	2,108	—	2,108
Other income, net ⁽³⁾	2,903	—	2,903	5,979	—	5,979
Total business purpose mortgage banking activities, net	4,498	(121)	4,619	9,781	(121)	9,902
Mortgage Banking Activities, Net	\$ 9,515	\$ 11,224	\$ (1,709)	\$ 40,984	\$ 48,396	\$ (7,412)

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

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

(3) Includes other fee income from loan originations and acquisitions as well as the provision for repurchase expense, presented net.

The decrease in mortgage banking activities, net for the three- and nine-month periods was mostly the result of lower gross margins and lower loan purchase volumes. During the third quarter of 2019, gross margins were negatively impacted by deteriorated securitization execution driven by rate volatility that improved toward the end of the quarter.

Residential loan purchase commitments ("LPCs"), adjusted for fallout expectations, were \$1.70 billion and \$4.59 billion for the three and nine months ended September 30, 2019, respectively. Our gross margins for our residential loans in the third quarter of 2019, which we define as net interest income plus income from mortgage banking activities, divided by LPCs, declined during 2019 but remain within our long-term expectations.

At September 30, 2019 and December 31, 2018, we had repurchase reserves of \$3 million and \$4 million outstanding, respectively, related to residential loans sold through this segment. For the nine months ended September 30, 2019 and 2018, we recorded less than \$0.1 million of reversal of provision for repurchases and \$0.1 million 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.

Residential Loans Held-for-Sale

The following table details outstanding principal balances for residential loans held-for-sale by product type at September 30, 2019.

Table 35 – Characteristics of Residential Loans Held-for-Sale

September 30, 2019 (Dollars in Thousands)	Principal Value	Weighted Average Coupon
First Lien Prime		
Fixed - 30 year	\$ 696,677	4.28%
Fixed - 10, 15, & 20 year	54,544	3.73%
Hybrid	152,761	4.00%
ARM	143	4.45%
Total Outstanding Principal	\$ 904,125	

Single-Family Rental Loans Held-for-Sale

The \$110 million of outstanding single-family rental loans held-for-sale at September 30, 2019 were first-lien, fixed-rate loans with original maturities of five, seven, or ten years. At September 30, 2019, the weighted average coupon of our single-family rental loans was 5.35% and the weighted average remaining loan term was six years. At origination, the weighted average LTV ratio of these loans was 68% and the weighted average debt service coverage ratio ("DSCR") was 1.36 times.

Operating Expenses and Taxes

Operating expenses for this segment primarily include costs associated with the origination, purchase and sale of residential and business purpose loans, including expenses from the 5 Arches platform we acquired in March 2019. For the three- and nine-month periods, the increase in operating expenses was primarily due to additional expenses from the consolidated 5 Arches operations.

All mortgage banking activities are performed at our taxable REIT subsidiary and 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. The decrease in provision for income taxes resulted primarily from the reduction in GAAP income earned in this segment.

Results of 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 September 30, 2019, the estimated fair value of our investments in the consolidated Legacy Sequoia entities was \$10 million.

The following tables present the statements of income for the three and nine months ended September 30, 2019 and 2018 and the balance sheets of the consolidated Legacy Sequoia entities at September 30, 2019 and December 31, 2018. All amounts in the statements of income and balance sheets presented below are included in our consolidated financial statements.

Table 36 – Consolidated Legacy Sequoia Entities Statements of Income

(In Thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2019	2018	Change	2019	2018	Change
Interest income	\$ 4,295	\$ 5,174	\$ (879)	\$ 13,924	\$ 15,003	\$ (1,079)
Interest expense	(3,452)	(4,257)	805	(11,548)	(12,324)	776
Net interest income	843	917	(74)	2,376	2,679	(303)
Investment fair value changes, net	(407)	(248)	(159)	(904)	(976)	72
Net Income from Consolidated Legacy Sequoia Entities	\$ 436	\$ 669	\$ (233)	\$ 1,472	\$ 1,703	\$ (231)

Table 37 – Consolidated Legacy Sequoia Entities Balance Sheets

(In Thousands)	September 30, 2019	December 31, 2018
Residential loans, held-for-investment, at fair value	\$ 429,159	\$ 519,958
Other assets	1,319	4,911
Total Assets	\$ 430,478	\$ 524,869
Other liabilities	\$ 456	\$ 571
Asset-backed securities issued, at fair value	419,890	512,240
Total liabilities	420,346	512,811
Equity (fair value of Redwood's retained investments in entities)	10,132	12,058
Total Liabilities and Equity	\$ 430,478	\$ 524,869

Net Interest Income at Consolidated Legacy Sequoia Entities

The decrease in net interest income for the three- and six-month periods was 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 periods presented was primarily related to the decline in fair value changes on retained IO securities, as the basis of these assets continue 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 three and nine months ended September 30, 2019 and 2018.

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

(In Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Balance at beginning of period	\$ 457,750	\$ 592,029	\$ 519,958	\$ 632,817
Principal repayments	(28,390)	(41,476)	(95,869)	(113,567)
Transfers to REO	(98)	(304)	(200)	(2,139)
Changes in fair value, net	(103)	3,709	5,270	36,847
Balance at End of Period	\$ 429,159	\$ 553,958	\$ 429,159	\$ 553,958

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 September 30, 2019, the weighted average FICO score of borrowers backing these loans was 727 (at origination) and the weighted average original LTV ratio was 66% (at origination). At September 30, 2019 and December 31, 2018, the aggregate unpaid principal balance of loans at consolidated Legacy Sequoia entities delinquent greater than 90 days was \$13 million and \$14 million, respectively, of which the aggregate unpaid principal balance of loans in foreclosure was \$3 million and \$5 million, respectively.

Taxable Income and Tax Provision

Taxable Income

The following table summarizes our taxable income and distributions to shareholders for the three and nine months ended September 30, 2019 and 2018.

Table 39 – Taxable Income

(In Thousands, except per Share Data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019 est. ⁽¹⁾	2018	2019 est. ⁽¹⁾	2018
REIT taxable income	\$ 38,626	\$ 22,644	\$ 91,948	\$ 82,912
Taxable REIT subsidiary income	2,821	17,239	25,865	53,203
Total Taxable Income	\$ 41,447	\$ 39,883	\$ 117,813	\$ 136,115
REIT taxable income per share	\$ 0.34	\$ 0.27	\$ 0.89	\$ 1.06
Total taxable income per share	\$ 0.37	\$ 0.48	\$ 1.16	\$ 1.75
Distributions to shareholders	\$ 33,627	\$ 24,877	\$ 91,931	\$ 68,792
Distributions to shareholders per share	\$ 0.30	\$ 0.30	\$ 0.90	\$ 0.88

(1) Our tax results for the three and nine months ended September 30, 2019 are estimates until we file tax returns for 2019.

Under normal circumstances, our minimum REIT dividend requirement would be 90% of our annual REIT taxable income. However, we currently maintain a \$39 million federal net operating loss carry forward (NOL) at the REIT that affords us the option of retaining REIT taxable income up to the NOL amount, tax free, rather than distributing it as dividends. Federal income tax rules require the dividends paid deduction to be applied to reduce REIT taxable income before the applicability of NOLs is considered. It is possible our estimated REIT taxable income will exceed our dividend distributions in 2019; therefore, we may utilize a portion of our NOL in 2019 and any remaining amount will carry forward into 2020.

We also currently expect all or nearly all of the distributions to shareholders in 2019 will be taxable as dividend income and a smaller portion, if any, will be a return of capital, which is generally non-taxable. Additionally, a portion of our 2019 dividend distributions are expected to be characterized as long-term capital gains for federal income tax purposes.

Tax Provision under GAAP

For the three and nine months ended September 30, 2019, we recorded a tax benefit of \$0.1 million and a tax provision of \$3 million, respectively. For the three and nine months ended September 30, 2018, we recorded tax provisions of \$5 million and \$12 million, respectively. Our tax provision is primarily derived from the activities at our TRS as we do not book a material tax provision associated with income generated at our REIT. The reduction in tax provision year-over-year was primarily the result of the lower GAAP income earned at our TRS as well as the recognition of discrete tax benefits in the first quarter ancillary to the 5 Arches acquisition, which impacted our tax provision by less than \$2 million. Our TRS effective tax rate in 2019 is expected to be approximately equal to the federal corporate tax rate, excluding the one-time discrete tax benefits. The income or loss generated at our TRS will not directly affect the tax characterization of our 2019 dividends.

Realization of our deferred tax assets ("DTAs") 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 our DTAs is not assured and establish a valuation allowance accordingly. At December 31, 2018, we reported net federal ordinary and capital deferred tax liabilities ("DTLs"), and, as such, had no associated valuation allowance. As a result of GAAP income at our TRS, we forecast that we will report net federal ordinary and capital DTLs at December 31, 2019 and consequently no valuation allowance is expected to be recorded against any federal DTA. Consistent with prior periods, we continued to maintain a valuation allowance against our net state DTAs. 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.

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 are 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 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.

The table below reconciles our estimated total taxable income to our GAAP income for the nine months ended September 30, 2019.

Table 40 – Differences between Estimated Total Taxable Income and GAAP Net Income

(In Thousands, except per Share Data)	Nine Months Ended September 30, 2019				
	REIT (Est.)	TRS (Est.)	Total Tax (Est.)	GAAP	Differences
Interest income	\$ 184,943	\$ 41,231	\$ 226,174	\$ 429,700	\$ (203,526)
Interest expense	(95,686)	(40,047)	(135,733)	(332,100)	196,367
Net interest income	89,257	1,184	90,441	97,600	(7,159)
Realized credit losses	197	—	197	—	197
Mortgage banking activities, net	—	39,670	39,670	40,984	(1,314)
Investment fair value changes, net	527	276	803	34,741	(33,938)
Operating expenses	(31,912)	(39,185)	(71,097)	(76,229)	5,132
Other income, net	6,306	9,328	15,634	7,819	7,815
Realized gains, net	27,797	14,769	42,566	18,227	24,339
Provision for income taxes	(224)	(177)	(401)	(3,102)	2,701
Net Income	\$ 91,948	\$ 25,865	\$ 117,813	\$ 120,040	\$ (2,227)
Income per basic common share	\$ 0.89	\$ 0.27	\$ 1.16	\$ 1.20	\$ (0.04)

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 described in the Taxable Income portion of the *Results of Operations* section in the MD&A included in Part II, Item 7, of our Annual Report on Form 10-K.

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 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 September 30, 2019, our total capital was \$2.55 billion and included \$1.79 billion of equity capital and \$0.77 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 September 30, 2019, our cash and liquidity capital included \$590 million of capital available for investment and an additional \$201 million of capital reserved for the repayment of our exchangeable debt maturing in November 2019. In October 2019, we completed the acquisition of CoreVest for \$492 million, net of in-place financing on financial assets acquired, with a mix of cash on hand and shares of Redwood stock. At the end of October, adjusting for the acquisition of CoreVest and other activity, we estimate we had approximately \$100 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 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 interest 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!*"

Cash Flows and Liquidity for the Nine Months Ended September 30, 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/originations 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 \$1.20 billion during the nine months ended September 30, 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, origination, sale, and principal payments of loans classified as held-for-sale, cash flows from operating activities were negative \$123 million and positive \$84 million during the first nine months of 2019 and 2018, respectively. For the nine months ended September 30, 2019, cash flows from operating activities included net cash outflows of \$159 million related to the funding of derivative margin obligations and the settlement of derivatives. These cash outflows were the result of declining benchmark interest rates during 2019.

Cash Flows from Investing Activities

During the nine months ended September 30, 2019, our net cash provided by investing activities was \$916 million 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 Sequoia and Freddie Mac SLST and K-Series entities would generally be used to repay ABS issued by those entities.

During the three months ended September 30, 2019, we deployed capital into several new investments, including \$73 million into Freddie Mac SLST re-performing residential loan securities and \$21 million into business purpose loans originated by 5 Arches.

As presented in the "Supplemental Noncash Information" subsection of our consolidated statements of cash flows, during the nine months ended September 30, 2019, 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 the nine months ended September 30, 2019, our net cash provided by financing activities was \$587 million. This primarily resulted from proceeds of \$1.02 billion from the issuance of asset-backed securities from our Sequoia Choice securitizations, proceeds of \$427 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 \$721 million of repayments of ABS issued and \$427 million of net repayments of short-term debt.

During the nine months ended September 30, 2019, we paid \$94 million of cash dividends on our common stock, representing cumulative dividends of \$0.90 per share. In November 2019, the Board of Directors declared a regular dividend of \$0.30 per share for the fourth quarter of 2019, which is payable on December 30, 2019 to shareholders of record on December 16, 2019.

In accordance with the terms of our outstanding deferred 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.

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 September 30, 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.

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 of residential 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 September 30, 2019, we had four short-term residential loan warehouse facilities with a total outstanding debt balance of \$233 million (secured by residential loans with an aggregate fair value of \$253 million) and a total uncommitted borrowing limit of \$1.43 billion. In addition, at September 30, 2019, we had an aggregate outstanding short-term debt balance of \$1.16 billion under nine securities repurchase facilities, which were secured by securities with a fair market value of \$736 million. In addition, at September 30, 2019, the fair value of our real estate securities pledged as collateral included \$113 million of securities retained from our consolidated Sequoia Choice securitizations, as well as \$385 million and \$209 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 September 30, 2019.

To finance our business purpose residential loan investments, at September 30, 2019, we had two single-family rental loan warehouse facilities with a total outstanding debt balance of \$59 million (secured by single-family rental loans with an aggregate fair value of \$78 million) and a total uncommitted borrowing limit of \$400 million. In addition, at September 30, 2019, we had four residential bridge loan warehouse facilities with a total outstanding debt balance of \$139 million (secured by residential bridge loans with an aggregate fair value of \$176 million) and a total uncommitted borrowing limit of \$330 million. We also had a business purpose loan working capital line with no outstanding balance and a total uncommitted borrowing limit of \$15 million.

Servicer advance financing consists of non-recourse short-term securitization debt used to finance servicer advance investments we made in the fourth quarter of 2018. At September 30, 2019, the fair value of servicer advances, cash and restricted cash pledged as collateral was \$243 million. At September 30, 2019, the accrued interest payable balance on this debt was \$0.2 million and the unamortized capitalized commitment costs were \$0.4 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. At September 30, 2019, the accrued interest payable balance on this debt was \$4 million. See *Note 15* for additional information on our convertible notes.

At September 30, 2019, we had \$1.98 billion of short-term debt outstanding. During the first nine months of 2019, the highest balance of our short-term debt outstanding was \$2.65 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 September 30, 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 mortgage loans. During the nine months ended September 30, 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 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.

At September 30, 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 2.31% per annum and a weighted average maturity of six years. At September 30, 2019, accrued interest payable on these borrowings was \$8 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 September 30, 2019, our total advances under this agreement were secured by residential mortgage loans with a fair value of \$2.27 billion, securities with a fair value of \$41 million, and \$77 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 September 30, 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 September 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 September 30, 2019, we had borrowings under this facility totaling \$186 million, net of \$1 million of deferred issuance costs, for a carrying value of \$185 million. At September 30, 2019, the fair value of real estate securities pledged as collateral under this long-term debt facility was \$253 million, which included \$126 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 September 30, 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 September 30, 2019, the outstanding principal amount of these notes was \$201 million and the accrued interest payable balance on this debt was \$0.2 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 September 30, 2019, the outstanding principal amount of these notes was \$200 million and the accrued interest payable balance on this debt was \$2 million.

In August 2017, we issued \$245 million principal amount of 4.75% convertible senior notes due 2023. After deducting the underwriting discount and offering 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 September 30, 2019, the outstanding principal amount of these notes was \$245 million and the accrued interest payable balance on this debt was \$1 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 offering 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 first quarter of 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. At September 30, 2019, the outstanding principal amount of these notes was \$201 million and the accrued interest payable balance on this debt was \$4 million.

Trust Preferred Securities and Subordinated Notes

At September 30, 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 September 30, 2019, there were \$446 million (principal balance) of loans owned at consolidated Legacy Sequoia securitization entities, which were funded with \$438 million (principal balance) of ABS issued at these entities. At September 30, 2019, there were \$2.55 billion (principal balance) of loans owned at consolidated Sequoia Choice securitization entities, which were funded with \$2.29 billion (principal balance) of ABS issued at these entities. At September 30, 2019, there were \$2.47 billion (principal balance) of loans owned at the consolidated Freddie Mac SLST securitization entity, which were funded with \$1.89 billion (principal balance) of ABS issued at this entity. At September 30, 2019, there were \$3.54 billion (principal balance) of loans owned at the consolidated Freddie Mac K-Series securitization entities, which were funded with \$3.24 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 *Results of Consolidated Legacy Sequoia Entities*, *"Residential Loans Held-for-Investment at Sequoia Choice Portfolio"*, *"Residential Loans Held-for-Investment at Freddie Mac SLST Portfolio"*, and *"Multifamily Loans Held-for-Investment at Freddie Mac K-Series Portfolio"* in the *Results of Operations* section of this MD&A for additional details on these entities.

Other Commitments and Contingencies

For additional information on commitments and contingencies that could impact our liquidity and capital resources, see *Note 16* of our *Notes to Consolidated Financial Statements* in Part I, Item 1 of this Quarterly Report on Form 10-Q.

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 of mortgage loans (including those we acquire 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. Risks relating to debt incurred under these facilities are described in Part I, Item 2 of our Annual Report on Form 10-K for the year ended December 31, 2018, under the caption “*Risks Relating to Debt Incurred under Short- and Long-Term Borrowing Facilities*.”

Our sources of debt financing include short-term secured borrowings under mortgage loan warehouse facilities, short-term securities repurchase facilities, a \$10 million committed line of short-term secured credit from a bank, and secured borrowings by our wholly-owned subsidiary, RWT Financial, LLC, under its borrowing facility with the FHLBC.

Aggregate borrowing limits are stated under certain of these facilities, and certain other facilities have no stated borrowing limit, but each of the facilities (with the exception of the \$10 million committed line of short-term secured credit and two business purpose residential loan warehouse facilities secured by residential bridge loans) is uncommitted, which means that any request we make to borrow funds under these uncommitted 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. In general, financing under these facilities is obtained by transferring or pledging mortgage loans or securities to the counterparty in exchange for cash proceeds (in an amount less than 100% of the principal amount of the transferred or pledged assets). While transferred or pledged assets are financed under a facility, to the extent the market value of the assets declines, we are generally required to either immediately reacquire the assets or meet a margin requirement to transfer or pledge additional assets or cash in an amount at least equal to the decline in value. Margin call provisions under these facilities are further described in Part I, Item 2 of our Annual Report on Form 10-K for the year ended December 31, 2018 under the caption “*Risks Relating to Debt Incurred under Short- and Long-Term Borrowing Facilities - Margin Call Provisions Associated with Short-Term Debt and Other Debt Financing*.” Financial covenants included in these facilities are further described Part I, Item 2 of our Annual Report on Form 10-K for the year ended December 31, 2018 under the caption “*Risks Relating to Debt Incurred under Short- and Long-Term Borrowing Facilities - Financial Covenants Associated with Short-Term Debt and Other Debt Financing*.”

Because these borrowing facilities are uncommitted (except two business purpose residential loan warehouse facilities 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 our Annual Report on Form 10-K for the year ended December 31, 2018 under the heading “*Risk Factors*,” and in Part II, Item 7A of our Annual Report on Form 10-K for the year ended December 31, 2018 under the heading “*Market Risks*.” In addition, with respect to mortgage 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 our Annual Report on Form 10-K for the year ended December 31, 2018 under the heading “*Risk Factors*,” and in Part II, Item 7A of our Annual Report on Form 10-K for the year ended December 31, 2018 under the heading “*Market Risks*,” if and when those loans or securities become ineligible to be financed, decline in value, or have been financed for the maximum term permitted under the applicable facility. Additionally, our access to financing under the borrowing facility with the FHLBC is 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 our Annual Report on Form 10-K for the year ended December 31, 2018.

At September 30, 2019, and through the date of this Quarterly Report on Form 10-Q, 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 September 30, 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 September 30, 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.

OFF-BALANCE SHEET ARRANGEMENTS AND CONTRACTUAL OBLIGATIONS

In the normal course of business, we enter into transactions that may require future cash payments. As required by GAAP, some of these obligations are recorded on the balance sheet, while others are off-balance sheet or recorded on the balance sheet in amounts different from the full contract or notional amount of the transaction.

For additional information on our contractual obligations, see the *Off-Balance Sheet Arrangements and Contractual Obligations* section in the MD&A included in Part II, Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2018.

For additional information on our commitments and contingencies as of September 30, 2019, see *Note 16* of our *Notes to Consolidated Financial Statements* in Part I, Item 1 of this Quarterly Report on Form 10-Q.

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 3 — Summary of Significant Accounting Policies* included in Part I, Item 1 of this Quarterly Report on Form 10-Q and in Part I, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2018. 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. Our critical accounting policies and the possible effects of changes in estimates on our consolidated financial statements are included in the "*Critical Accounting Policies and Estimates*" section of Part II, Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2018.

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 in Part II, Item 7A of our Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

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*" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018 and in this Quarterly Report on Form 10-Q.

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 I, Item 1 of this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Information concerning market risk is incorporated herein by reference to Part II, Item 7A of our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, as supplemented by the information under "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" and "*Market Risks*" within Item 2 above. Other than the developments described thereunder, including changes in the fair values of our assets, there have been no other material changes in our quantitative or qualitative exposure to market risk since December 31, 2018.

Item 4. 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.

There have been no changes in our internal control over financial reporting during the third quarter of 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. 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. The Seattle Certificate was issued with an original principal amount of approximately \$133 million, and, at September 30, 2019, approximately \$128 million of principal and \$12 million of interest payments had been made in respect of the Seattle Certificate. As of September 30, 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 September 30, 2019, approximately \$14 million of principal and \$1 million of interest payments had been made in respect of the Schwab Certificate. As of September 30, 2019, the Schwab Certificate had a remaining outstanding principal amount of approximately \$1 million. 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.

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 September 30, 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 1A. Risk Factors

Our risk factors are discussed under Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2018 and under Part II, Item 1A of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2019. In addition, the following risk factors reflect recent developments.

State and/or local 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 single-family rental 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, committing waste 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 single-family rental 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 single-family rental 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.

Our acquisition of 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.

On October 15, 2019, we completed the acquisition of equity interests in CoreVest American Finance Lender LLC and several of its affiliates (CAFL and such affiliates collectively, “CoreVest”), an originator and portfolio manager of business-purpose real estate loans. Prior to the completion of this acquisition, we previously acquired 5 Arches in March 2019. If we experience challenges with the performance or integration of the CoreVest and 5 Arches platforms that we did not anticipate or cannot mitigate, the returns we expected with respect to this investment may not be generated, in the same manner as described in the risk factor titled “*Our acquisition of 5 Arches 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*” under Part II, Item 1A of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2019.

Additionally, CoreVest engages in and sponsors securitization transactions relating to single-family rental mortgage loans, and in connection with the acquisition of CoreVest, we acquired, and we expect to continue to acquire, 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 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*” under Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2018.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

During the three months ended September 30, 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 September 30, 2019, \$100 million of this current authorization remained available for the repurchase of shares of our common stock.

The following table contains information on the shares of our common stock that we purchased or otherwise acquired during the three months ended September 30, 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
July 1, 2019 - July 31, 2019	—	\$ —	—	\$ —
August 1, 2019 - August 31, 2019	—	\$ —	—	\$ —
September 1, 2019 - September 30, 2019	—	\$ —	—	\$ 100,000
Total	—	\$ —	—	\$ 100,000

Item 3. Defaults Upon Senior Securities

None.

Item 4. Not Applicable

Item 5. Other Information

At the close of business on Friday, November 8, 2019, Lola Bondar will cease to serve as Redwood's principal accounting officer. Ms. Bondar will remain employed by Redwood during a subsequent transition period prior to her departure from Redwood. Collin Cochrane, Redwood's Chief Financial Officer, will also be designated as Redwood's principal accounting officer effective at the close of business on November 8, 2019. In connection with assuming the principal accounting officer role, Mr. Cochrane will not receive any additional compensation or benefits and will not enter into any written contract or arrangement with Redwood. Information responsive to the requirements of Form 8-K, Item 5.02(c)&(e), with respect to Mr. Cochrane has been previously disclosed in Redwood's 2019 Annual Proxy Statement, filed with the SEC on April 5, 2019, and such information is incorporated herein by reference.

Item 6. Exhibits**Exhibit
Number****Exhibit**

-
- | Exhibit Number | Exhibit |
|----------------|---|
| 3.1 | <u>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)</u> |
| 3.1.1 | <u>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)</u> |
| 3.1.2 | <u>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)</u> |
| 3.1.3 | <u>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)</u> |
| 3.1.4 | <u>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)</u> |
| 3.1.5 | <u>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)</u> |
| 3.1.6 | <u>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)</u> |
| 3.1.7 | <u>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)</u> |
| 3.1.8 | <u>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)</u> |
| 3.1.9 | <u>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)</u> |
| 3.1.10 | <u>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)</u> |
| 3.1.11 | <u>Articles of Amendment of the Registrant, effective May 16, 2019 (incorporated by reference to the Registrant's Current Report on Form 8-K, Exhibit 3.1, filed on May 17, 2019)</u> |
| 3.2.1 | <u>Amended and Restated Bylaws of the Registrant, as adopted on March 5, 2008 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 3.2.1, filed on August 8, 2018)</u> |
| 3.2.2 | <u>First Amendment to Amended and Restated Bylaws of the Registrant, as adopted on May 17, 2012 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 3.2.2, filed on August 8, 2018)</u> |
| 3.2.3 | <u>Second Amendment to Amended and Restated Bylaws of the Registrant, as adopted on May 22, 2018 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, Exhibit 3.2.3, filed on August 8, 2018)</u> |
| 10.1 | <u>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)</u> |
| 10.2 | <u>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)</u> |
| 10.3 | <u>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 (filed herewith)</u> |
| 10.4 | <u>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 (filed herewith)</u> |
| 10.5 | <u>Lease, between the Irvine Company LLC and 5 Arches, LLC, dated as of January 27, 2015 (filed herewith)</u> |
| 10.6 | <u>First Amendment to Lease, between the Irvine Company LLC and 5 Arches, LLC, dated as of September 9, 2016 (filed herewith)</u> |
| 10.7 | <u>Second Amendment to Lease, between the Irvine Company LLC and 5 Arches, LLC, dated as of September 30, 2016 (filed herewith)</u> |
| 10.8 | <u>Assignment and Assumption of Lease, between 5 Arches, LLC and 5 Arch Group, LLC, dated as of October 10, 2016 (filed herewith)</u> |
| 10.9 | <u>Third Amendment to Lease, between the Irvine Company LLC and 5 Arch Group, LLC, dated as of November 17, 2016 (filed herewith)</u> |
| 10.10 | <u>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 (filed herewith)</u> |

Exhibit Number	Exhibit
10.11	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 [March 1, 2019] (filed herewith)
31.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of the Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101	Pursuant to Rule 405 of Regulation S-T, the following financial information from the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2019, is filed in inline XBRL-formatted interactive data files:
	<ul style="list-style-type: none"> (i) Consolidated Balance Sheets at September 30, 2019 and December 31, 2018; (ii) Consolidated Statements of Income for the three and nine months ended September 30, 2019 and 2018; (iii) Statements of Consolidated Comprehensive Income for the three and nine months ended September 30, 2019 and 2018; (iv) Consolidated Statements of Changes in Stockholders' Equity for the three and nine months ended September 30, 2019 and 2018; (v) Consolidated Statements of Cash Flows for the nine months ended September 30, 2019 and 2018; and (vi) Notes to Consolidated Financial Statements.
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

REDWOOD TRUST, INC.

Date: November 8, 2019

By: /s/ Christopher J. Abate
Christopher J. Abate
Chief Executive Officer
(Principal Executive Officer)

Date: November 8, 2019

By: /s/ Collin L. Cochrane
Collin L. Cochrane
Chief Financial Officer
(Principal Financial Officer)

Date: November 8, 2019

By: /s/ Lola Bondar
Lola Bondar
Managing Director, Chief Accounting Officer
(Principal Accounting Officer)

MAIN PLAZA
IRVINE, CALIFORNIA

OFFICE LEASE

SRI NINE MAIN PLAZA LLC,
a Delaware limited liability company,
Landlord

and

COLONY AMERICAN FINANCE, LLC,
a Delaware limited liability company,
Tenant

DATED AS OF: October 7, 2015

TABLE OF CONTENTS

<u>Paragraph</u>		<u>Page</u>
1.	Premises.....	1
2.	Certain Basic Lease Terms.....	1
3.	Term; Delivery of Possession of Premises.....	2
4.	Condition of Premises.....	2
5.	Monthly Rent.....	4
6.	Security Deposit.....	4
7.	Additional Rent: Increases in Operating Expenses and Tax Expenses.....	5
8.	Use of Premises; Compliance with Law.....	9
9.	Alterations and Restoration.....	11
10.	Repair.....	11
11.	Abandonment.....	12
12.	Liens.....	12
13.	Assignment and Subletting.....	12
14.	Indemnification of Landlord.....	16
15.	Insurance.....	16
16.	Mutual Waiver of Subrogation Rights.....	17
17.	Utilities.....	18
18.	Personal Property and Other Taxes.....	20
19.	Rules and Regulations.....	20
20.	Surrender; Holding Over.....	20
21.	Subordination and Attornment.....	21
22.	Financing Condition.....	21
23.	Entry by Landlord.....	21
24.	Insolvency or Bankruptcy.....	22
25.	Default and Remedies.....	22
26.	Damage or Destruction.....	24
27.	Eminent Domain.....	25
28.	Landlord's Liability; Sale of Building.....	26
29.	Estoppel Certificates.....	26
30.	Right of Landlord to Perform.....	26
31.	Late Charge; Late Payments.....	27
32.	Attorneys' Fees; Waiver of Jury Trial.....	27
33.	Waiver.....	27
34.	Notices.....	28
35.	Notice of Surrender.....	28
36.	Defined Terms and Marginal Headings.....	28
37.	Time and Applicable Law.....	28
38.	Successors.....	28
39.	Entire Agreement; Modifications.....	28
40.	Light and Air.....	29
41.	Name of Building.....	29
42.	Severability.....	29



44.	No Offer	29
45.	Real Estate Brokers	29
46.	Consents and Approvals	29
47.	Reserved Rights	29
48.	Financial Statements	30
49.	Substitution of Premises	30
50.	Nondisclosure of Lease Terms	30
51.	Hazardous Substance Disclosure	31
52.	Signage Rights	31
53.	Parking	31
54.	Transportation Management	32
55.	Renovation of the Project and Other Improvements	32
56.	Quiet Enjoyment	33
57.	No Discrimination	33
58.	CASp Inspection	33

EXHIBITS:

- A - Outline of Premises
- B - Rules and Regulations
- C - Form of Commencement Date Letter
- D - Tenant Approved Plan

LEASE

THIS LEASE is made as of the 7th day of October, 2015, between SRI NINE MAIN PLAZA LLC, a Delaware limited liability company (“**Landlord**”), and COLONY AMERICAN FINANCE, LLC, a Delaware limited liability company (“**Tenant**”).

1. Premises. Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, on the terms and conditions set forth herein, the space outlined on the attached Exhibit A (the “**Premises**”). The Premises are located on the floor(s) specified in Paragraph 2 below of the building (the “**Building**”) located at 1920 Main Street, Irvine, California. The Building, the parcel(s) of land (the “**Land**”) on which the Building is located and the other improvements on the Land (including the walkways and landscaping) are referred to herein as the “**Real Property**.” The Real Property is a part of the office, retail and garage project commonly known as Main Plaza (the “**Project**”).

Tenant’s lease of the Premises shall include the right to use, in common with others and subject to the other provisions of this Lease, the public lobbies, entrances, stairs, elevators and other public portions of the Building, as well as the common areas of the other portions of the Project that are pertinent to Tenant’s occupancy and use of the Premises. Tenant shall comply with all recorded covenants, conditions and restrictions currently or hereinafter affecting the Project and agrees that this Lease shall be subject and subordinate thereto. All of the windows and outside walls of the Premises and any space in the Premises used for shafts, stacks, pipes, conduits, ducts, electrical equipment or other utilities or Building facilities are reserved solely to Landlord and Landlord shall, subject to the provisions of Paragraph 23 below, have rights of access through the Premises for the purpose of operating, maintaining and repairing the same.

2. Certain Basic Lease Terms. As used herein, the following terms shall have the meaning specified below:

- a. Floor(s) on which the Premises are located: Eighth (8th) floor. The Premises are currently designated as Suite 850, which designation may be subject to change by Landlord upon not less than ten (10) Business Days prior written notice to Tenant. Landlord and Tenant agree that for the purpose of this Lease, the Premises shall be deemed to contain 7,812 rentable square feet of space.
- b. Lease term: Approximately five (5) years and five (5) months, commencing on the later of (i) the date the Tenant Improvements (as defined in Paragraph 4.a. below) are Substantially Completed (as defined in Paragraph 4.b. below) and (ii) November 1, 2015 (the “**Commencement Date**”), and ending on the last day of the sixty-fifth (65th) full calendar month thereafter (the “**Expiration Date**”).
- c. Monthly Rent: The amounts set forth below for the respective periods:

<u>Period</u>	<u>Monthly Rate per RSF</u>	<u>Monthly Rent</u>
First Lease Year	\$2.85	\$22,264.20**
Second Lease Year	\$2.96	\$23,154.77***
Third Lease Year	\$3.08	\$24,080.96
Fourth Lease Year	\$3.21	\$25,044.20
Fifth Lease Year	\$3.33	\$26,045.96
Sixth Lease Year	\$3.47	\$27,087.80

The “**First Lease Year**” is the period commencing on the Commencement Date and ending on the last day of the twelfth (12th) full calendar month thereafter, and each period of twelve (12) full calendar months thereafter constitutes a “**Lease Year**,” except that the Sixth Lease Year shall end on the Expiration Date.

**Notwithstanding the above, (i) for the second (2nd) and third (3rd) months of the First Lease Year, Monthly Rent shall be fully abated, and (ii) for the fourth (4th) month of the First Lease Year, Monthly Rent shall be abated in the amount of \$11,132.10 so that the Monthly Rent payment for such month is \$11,132.10.



***Notwithstanding the above, (i) for the first (1st) and second (2nd) months of the Second Lease Year, Monthly Rent shall be fully abated, and (ii) for the third (3rd) month of the Second Lease Year, Monthly Rent shall be abated in the amount of \$9,350.96 so that the Monthly Rent payment for such month is \$13,803.81.

- d. Security Deposit: Twenty Nine Thousand Eight Hundred Eighteen and 40/100 Dollars (\$29,818.40).
- e. Tenant's Share: 2.6880%.
- f. Base Year: The calendar year 2016.
- g. Initial Contemplated Use of Premises: Finance real estate, financial services, investments, and investment advisory and management services. Paragraph 8.a. below sets forth the permitted uses of the Premises.
- h. Real estate broker(s): ORION Property Partners, Inc. (representing Landlord) and Cresa Orange County (representing Tenant).

3. Term; Delivery of Possession of Premises.

a. Term. The term of this Lease shall commence on the Commencement Date (as defined in Paragraph 2.b.) and, unless sooner terminated pursuant to the terms hereof or at law, shall expire on the Expiration Date (as defined in Paragraph 2.b.). Upon either party's request after the Commencement Date, Landlord and Tenant shall execute a letter in substantially the form of Exhibit C attached hereto confirming the Commencement Date and the Expiration Date.

b. Delivery of Possession. The Premises shall be delivered to Tenant upon Substantial Completion of the Tenant Improvements to be constructed in the Premises by Landlord pursuant to Paragraph 4 below. The parties presently estimate that the date of Substantial Completion will be on or about November 15, 2015. Notwithstanding the foregoing, except as otherwise expressly provided below, if Substantial Completion of the Tenant Improvements and delivery of possession of the Premises is delayed for any reason whatsoever, this Lease shall not be void or voidable nor shall such delay amend Tenant's obligations under this Lease, but Landlord shall use reasonable efforts to Substantially Complete the Tenant Improvements and deliver the Premises to Tenant as soon as commercially reasonably possible after November 15, 2015. Notwithstanding the foregoing, if the Commencement Date has not occurred on or before January 1, 2016 (the "**Termination Trigger Date**") (which Termination Trigger Date shall be extended by the length of any delay in the delivery of possession of the Premises to Tenant with the Tenant Improvements Substantially Completed that results from a Tenant Delay or from strikes, lockout, labor disputes, shortages of material or labor, fire or other casualty, acts of God or any other cause beyond the commercially reasonable control of Landlord ("**Force Majeure**"), except that extensions on account of Force Majeure shall not exceed thirty (30) days), Tenant, as Tenant's sole remedy, may notify Landlord in writing that Tenant elects to terminate this Lease effective as of the date fifteen (15) days following the date of such written notice, and, if Landlord does not deliver possession of the Premises to Tenant with the Tenant Improvements Substantially Completed on or before the end of such fifteen (15) day period, this Lease shall terminate. Notwithstanding the above, Tenant's foregoing termination right shall not apply in the event that delivery of possession of the Premises by Landlord beyond the Termination Trigger Date was due to any action or inaction of the City of Irvine related to the Tenant Improvements.

c. Early Occupancy. If, at Tenant's request, Landlord permits Tenant to take occupancy of the Premises prior to the Commencement Date, then the Commencement Date shall be the date of such early occupancy by Tenant; provided, however, that the Expiration Date shall not be affected by such early occupancy. Tenant's entry into the Premises solely for the purposes permitted under Paragraph 4.e. below shall not constitute "occupancy of the Premises" for the purposes of this Paragraph 3.c.

4. Condition of Premises. Except as otherwise expressly provided in this Paragraph 4, Tenant shall accept the Premises in their "as-is" condition and Landlord shall have no obligation to make or pay for any improvements or renovations in or to the Premises to prepare the Premises for Tenant's occupancy.

a. Tenant Improvements. Landlord, at Landlord's sole cost and expense, shall cause Landlord's designated contractor ("**Contractor**") to perform the following work in the Premises using Building standard materials:

- i. Install building standard electrical and telecommunications conduit pursuant to the plan attached hereto as Exhibit D (the "**Tenant Approved Plan**"),
- ii. Demolish two (2) interior offices as shown on the Tenant Approved Plan, including patching the carpet and adjusting the HVAC, electrical and lighting, as required in connection therewith, and
- iii. Repaint the Premises throughout with Building standard paint, the color of which to be selected by Tenant from Building standard colors, with the interior office wood doors and frames to be changed to white.

Notwithstanding the foregoing, after the execution hereof, Landlord shall prepare construction drawings, based on the Tenant Approved Plan and the other work described in items i. through iii. above, as required to obtain governmental permits for the construction of the improvements and for Contractor to secure complete bids from qualified contractors to construct the improvements. Tenant shall promptly submit to Landlord (but in no event later than three (3) Business Days after Landlord's request) any information required by Landlord to complete such construction drawings. The construction drawings, as approved in writing by Tenant and Landlord, are hereinafter called the "**Final Plans**" and the improvements to be constructed in accordance with the Final Plans are hereinafter called the "**Tenant Improvements.**"

b. Construction: Substantial Completion. Landlord shall cause Contractor to commence the construction of the Tenant Improvements as soon as is reasonably possible after approval of the Final Plans. Notwithstanding anything to the contrary herein, Landlord and Tenant shall cooperate with each other to resolve any space plan issues raised by applicable local building codes. The Tenant Improvements shall be deemed to be "**Substantially Completed**" when (i) they have, in Landlord's and Tenant's reasonable judgment, been completed in accordance with the Final Plans, subject only to correction or completion of "Punch List" items, which items shall be limited to minor items of incomplete or defective work or materials or mechanical maladjustments that are of such a nature that they do not materially interfere with or impair Tenant's use of the Premises for Tenant's business and (ii) the Premises are in compliance with all Legal Requirements (including, without limitation, Title III of the Americans with Disabilities Act) with which the Premises must comply in order for Tenant to occupy the Premises for general office purposes in a normal and customary manner (but without regard to Tenant's particular employees requiring special physical accommodations, if any).

c. Changes. If Tenant requests any change, addition or alteration in or to the Tenant Approved Plan, or once, approved, the Final Plans ("**Changes**"), such Changes shall be subject to Landlord's reasonable approval. As soon as practicable, Landlord shall notify Tenant of the estimated cost of the Change. Within three (3) Business Days after receipt of such cost estimate, Tenant shall notify Landlord in writing whether Tenant approves the Change. If Tenant approves the Change, Landlord shall proceed with the Change and Tenant shall be liable for any additional cost resulting from the Change, which cost shall be payable, at Landlord's option, either prior to commencement of work on the Change or during the course of construction. If Tenant fails to approve the Change within such three (3) Business Day period, the requested Change shall not be incorporated into the Tenant Improvements.

d. Tenant Delays. Tenant shall be responsible for, and shall pay to Landlord, any and all costs and expenses incurred by Landlord in connection with any delay in the commencement or completion of any Tenant Improvements and any increase in the cost of Tenant Improvements caused by (i) any Changes requested by Tenant in the Tenant Approved Plan or the Final Plans (including any cost or delay resulting from proposed changes that are not ultimately made), (ii) any failure by Tenant to timely pay any amounts due from Tenant hereunder, including any additional costs resulting from any Change (it being acknowledged that if Tenant fails to make or otherwise delays making such payments, Landlord may stop work on the Tenant Improvements rather than incur costs which Tenant is obligated to fund but has not yet funded and any delay from such a work stoppage will be a Tenant Delay), (iii) the inclusion in the Tenant Improvements of any so-called "long lead" materials (such as fabrics, paneling, carpeting or other items that are not readily available within industry standard lead times (e.g., custom made items that require time to procure beyond that customarily required for standard items, or items that are currently out of stock and will require extra time to back order) and for which suitable substitutes exist), (iv) Tenant's failure to respond within three (3) Business Days to reasonable inquiries by Landlord or Contractor regarding

the construction of the Tenant Improvements, or (v) any other delay requested or caused by Tenant. Each of the foregoing is referred to herein as a “**Tenant Delay.**”

Main P – Colony American lease v3
Das10-7-15

e. Early Access. Notwithstanding anything to the contrary in this Lease, Tenant may, during the seven (7) day period prior to the Substantial Completion of Tenant Improvements, enter the Premises at any reasonable time for the purpose of installing telephones, electronic communication or related equipment, fixtures, furniture and equipment, provided that Tenant shall be solely responsible for any of such equipment, fixtures, furniture or material and for any loss or damage thereto from any cause whatsoever, excluding only the gross negligence or deliberate misconduct of Landlord or Landlord's contractors. Such early access to the Premises and such installation shall be permitted only to the extent that Landlord determines that such early access and installation activities will not delay Landlord's Substantial Completion of the Tenant Improvements. Landlord and Tenant shall cooperate in the scheduling of Tenant's early access to the Premises and of Tenant's installation activities in an attempt to maximize the benefits to Tenant of this Paragraph 4.e. without interfering with Landlord's completion of the construction of the Tenant Improvements. The provisions of the final grammatical paragraph of Paragraph 8.a. below, the provisions of Paragraph 9.a. below, and the provisions of Paragraphs 14 and 15 below shall apply in full during the period of any such early entry, and Tenant shall (i) provide certificates of insurance evidencing the existence and amounts of liability insurance carried by Tenant and its agents and contractors, reasonably satisfactory to Landlord, prior to such early entry, and (ii) comply with all applicable Legal Requirements applicable to such early entry work in the Premises. No Monthly Rent or Additional Rent shall accrue or be due under Paragraphs 5 or 7 hereof for such early access period.

5. Monthly Rent.

a. Commencing as of the Commencement Date, and continuing thereafter on or before the first day of each calendar month during the term hereof, Tenant shall pay to Landlord, as monthly rent for the Premises, the Monthly Rent specified in Paragraph 2 above. If Tenant's obligation to pay Monthly Rent hereunder commences on a day other than the first day of a calendar month, or if the term of this Lease terminates on a day other than the last day of a calendar month, then the Monthly Rent payable for such partial month shall be appropriately prorated on the basis of a thirty (30)-day month. Monthly Rent and the Additional Rent specified in Paragraph 7 shall be paid by Tenant to Landlord, in advance, without deduction, offset, prior notice or demand (except as otherwise expressly provided in this Lease), in immediately available funds of lawful money of the United States of America, or by good check as described below, to the lockbox location designated by Landlord, or to such other person or at such other place as Landlord may from time to time designate in writing. Payments made by check must be drawn either on a California financial institution or on a financial institution that is a member of the federal reserve system. Notwithstanding the foregoing, Tenant shall pay to Landlord together with Tenant's execution of this Lease an amount equal to the Monthly Rent payable for the first full calendar month of the Lease term after Tenant's obligation to pay Monthly Rent shall have commenced hereunder, which amount shall be applied to the Monthly Rent first due and payable hereunder. Further, if the date of Substantial Completion of the Tenant Improvements is delayed as a result of a Tenant Delay, then Tenant's obligation to pay rent for the Premises shall be accelerated by the number of days of such delay.

b. All amounts payable by Tenant to Landlord under this Lease, or otherwise payable in connection with Tenant's occupancy of the Premises, in addition to the Monthly Rent hereunder and Additional Rent under Paragraph 7, shall constitute rent owed by Tenant to Landlord hereunder.

c. Any rent not paid by Tenant to Landlord within five (5) Business Days following written notice to Tenant that such sum is past due shall bear interest from the date due to the date of payment by Tenant at an annual rate of interest (the "Interest Rate") equal to the lesser of (i) twelve percent (12%) per annum or (ii) the maximum annual interest rate allowed by law on such due date for business loans (not primarily for personal, family or household purposes) not exempt from the usury law; except that Landlord shall only be required to give two (2) such notices in any calendar year, and after two (2) such notices are given, any failure by Tenant in such calendar year to pay Monthly Rent, Additional Rent or any other amount due hereunder on the date due will subject Tenant to the default interest at the Interest Rate, without the requirement of notice from Landlord of such failure.

d. No security or guaranty which may now or hereafter be furnished to Landlord for the payment of rent due hereunder or for the performance by Tenant of the other terms of this Lease shall in any way be a bar or defense to any of Landlord's remedies under this Lease or at law.

6. Security Deposit. Upon execution of this Lease, Tenant shall pay to Landlord the Security Deposit specified in Paragraph 2.d. above as security for Tenant's performance of all of

Tenant's covenants and obligations under this Lease; provided, however, that the Security Deposit is not an advance rent deposit or an advance payment of any other kind, nor a measure of Landlord's

Main P – Colony American lease v3
Das10-7-15

damages upon Tenant's default. Landlord shall not be required to segregate the Security Deposit from its other funds and no interest shall accrue or be payable to Tenant with respect thereto. Landlord may (but shall not be required to) use the Security Deposit or any portion thereof to cure any Event of Default or to compensate Landlord for any damage Landlord incurs as a result of Tenant's failure to perform any of its covenants or obligations hereunder, it being understood that any use of the Security Deposit shall not constitute a bar or defense to any of Landlord's remedies under this Lease or at law. In such event and upon written notice from Landlord to Tenant specifying the amount of the Security Deposit so utilized by Landlord and the particular purpose for which such amount was applied, Tenant shall immediately deposit with Landlord an amount sufficient to return the Security Deposit to an amount equal to the amount specified in Paragraph 2.d. above. Tenant's failure to make such payment to Landlord within five (5) Business Days of Landlord's notice shall constitute an Event of Default. If Tenant is not in default at the expiration or termination of this Lease, Landlord shall return to Tenant the Security Deposit or the balance thereof then held by Landlord; provided, however, that in no event shall any such return be construed as an admission by Landlord that Tenant has performed all of its covenants and obligations hereunder. No holder of a Superior Interest (as defined in Paragraph 21 below), nor any purchaser at any judicial or private foreclosure sale of the Real Property or any portion thereof, shall be responsible to Tenant for the Security Deposit unless and only to the extent such holder or purchaser shall have actually received the same. Tenant hereby unconditionally and irrevocably waives the benefits and protections of California Civil Code Section 1950.7, and, without limitation of the scope of such waiver, acknowledges that Landlord may use all or any part of the Security Deposit to compensate Landlord for damages resulting from termination of this Lease and the tenancy created hereunder (including, without limitation, damages recoverable under California Civil Code Section 1951.2).

Notwithstanding anything to the contrary above, if additional space is added to the Premises after the date hereof, then the amount of the Security Deposit provided for above shall, effective as of the Lease commencement date as to the subject additional space, be increased so that, based on the new total rentable square footage of the Premises (with the additional space added thereto) the amount of the Security Deposit is the same amount per rentable square foot of the Premises that was in effect on the date immediately prior to the date the subject additional space was added to the Premises.

7. Additional Rent: Increases in Operating Expenses and Tax Expenses.

a. Operating Expenses. Tenant shall pay to Landlord, at the times hereinafter set forth, Tenant's Share, as specified in Paragraph 2.e. above, of any increase in the Operating Expenses (as defined below) incurred by Landlord in each calendar year subsequent to the Base Year specified in Paragraph 2.f. above, over the Operating Expenses incurred by Landlord during the Base Year. The amounts payable under this Paragraph 7.a. and Paragraph 7.b. below are termed "**Additional Rent**" herein.

The term "**Operating Expenses**" shall mean the total costs and expenses incurred by Landlord in connection with the management, operation, maintenance, repair and ownership of the Real Property, including, without limitation, the following costs: (1) salaries, wages, bonuses and other compensation (including hospitalization, medical, surgical, retirement plan, pension plan, union dues, life insurance, including group life insurance, welfare and other fringe benefits, and vacation, holidays and other paid absence benefits) relating to employees of Landlord or its agents engaged in the operation, repair, or maintenance of the Real Property; (2) payroll, social security, workers' compensation, unemployment and similar taxes with respect to such employees of Landlord or its agents, and the cost of providing disability or other benefits imposed by law or otherwise, with respect to such employees; (3) the cost of uniforms (including the cleaning, replacement and pressing thereof) provided to such employees; (4) premiums and other charges incurred by Landlord with respect to fire, other casualty, rent and liability insurance, any other insurance as is deemed necessary or advisable in the reasonable judgment of Landlord, or any insurance required by the holder of any Superior Interest (as defined in Paragraph 21 below), and, after the Base Year, costs of repairing an insured casualty to the extent of the deductible amount under the applicable insurance policy; except that Landlord shall not include in Operating Expenses any insurance premium increase that resulted from the gross negligence or willful misconduct of Landlord or its agents; (5) water charges and sewer rents or fees; (6) license, permit and inspection fees; (7) sales, use and excise taxes on goods and services purchased by Landlord in connection with the operation, maintenance or repair of the Real Property and Building systems and equipment; (8) telephone, telegraph, postage, stationery supplies and other expenses incurred in connection with the operation, maintenance, or repair of the Real Property; (9) commercially reasonable management fees; (10) costs of repairs to and maintenance of the Real Property, including building systems and appurtenances thereto and normal repair and replacement of worn-out equipment, facilities and installations, but excluding the replacement of major building systems (except to the extent provided in (16) and (17) below);

(11) fees and expenses for janitorial, window cleaning, guard, extermination, water treatment, rubbish removal, plumbing and other services and inspection or service contracts for elevator, electrical,

Main P – Colony American lease v3
Das10-7-15

mechanical, HVAC and other building equipment and systems or as may otherwise be necessary or proper for the operation, repair or maintenance of the Real Property (provided, however, that if the cost of any such service for the Base Year is greater than the cost of such service in subsequent year(s) of the Lease term due to unusual increases or fluctuations in the rate or scope of such service in the Base Year and such unusual increases or fluctuations are not present in the applicable subsequent year(s), Operating Expenses for the Base Year may be adjusted, for purposes of determining the Operating Expenses payable by Tenant in the applicable subsequent year(s), to reflect what the cost of such service would have been in the Base Year had the normal rates and scope of service applied); (12) costs of supplies, tools, materials, and equipment used in connection with the operation, maintenance or repair of the Real Property; (13) accounting, legal and other professional fees and expenses; (14) fees and expenses for painting the exterior or the public or common areas of the Building and the cost of maintaining the sidewalks, landscaping and other common areas of the Real Property; (15) costs and expenses for electricity, chilled water, air conditioning, water for heating, gas, fuel, steam, heat, lights, power and other energy related utilities required in connection with the operation, maintenance and repair of the Real Property (provided, however, that if the cost of any energy related utility for the Base Year is greater than the cost of such utility in subsequent year(s) of the Lease term due to unusual increases or fluctuations in the rate for such utility in the Base Year and such unusual increases or fluctuations are not present in the applicable subsequent year(s), Operating Expenses for the Base Year may be adjusted, for purposes of determining the Operating Expenses payable by Tenant in the applicable subsequent year(s), to reflect what the cost of such utility would have been in the Base Year had normal rates applied); (16) the cost of any capital improvements made by Landlord to the Real Property or capital assets acquired by Landlord after the Base Year in order to comply with any local, state or federal law, ordinance, rule, regulation, code or order of any governmental entity or insurance requirement (collectively, "**Legal Requirement**") with which the Real Property was not required to comply during the Base Year, or to comply with any amendment or other change to the enactment or interpretation of any Legal Requirement from its enactment or interpretation during the Base Year; (17) the cost of any capital improvements made by Landlord to the Building or capital assets acquired by Landlord after the Base Year for the protection of the health and safety of the occupants of the Real Property or that are designed to reduce other Operating Expenses; (18) the cost of furniture, draperies, carpeting, landscaping and other customary and ordinary items of personal property (excluding paintings, sculptures and other works of art) provided by Landlord for use in common areas of the Building or the Real Property or in the Building office (to the extent that such Building office is dedicated to the operation and management of the Real Property); provided, however, that leasing or rental costs of a rotating or other art program for the common areas of the Building or the Real Property shall be included in Operating Expenses; (19) any expenses and costs resulting from substitution of work, labor, material or services in lieu of any of the above itemizations, or for any additional work, labor, services or material resulting from compliance with any Legal Requirement applicable to the Real Property or any parts thereof; and (20) Building office rent or rental value. If the Real Property is or becomes subject to any covenants, conditions or restrictions, reciprocal easement agreement, common area declaration or similar agreement, then Operating Expenses shall include all fees, costs or other expenses allocated to the Real Property under such agreement. With respect to the costs of items included in Operating Expenses under (16) and (17), such costs shall be amortized over a reasonable period, as determined by Landlord, together with interest on the unamortized balance at a rate per annum equal to three (3) percentage points over the six-month United States Treasury bill rate in effect at the time such item is constructed or acquired, or at such higher rate as may have been paid by Landlord on funds borrowed for the purpose of constructing or acquiring such item, but in either case not more than the maximum rate permitted by law at the time such item is constructed or acquired.

Notwithstanding the foregoing, Operating Expenses shall not include the following: (i) depreciation on the Building or equipment or systems therein; (ii) financing or refinancing costs, including all interest, principal, points and other fees or expenses incurred in the application for or obtaining any loan; (iii) rental under any ground or underlying lease; (iv) interest (except as expressly provided in this Paragraph 7.a.); (v) Tax Expenses (as defined in Paragraph 7.b. below); (vi) attorneys' and other professional fees and expenses incurred in connection with lease negotiations with current or prospective Building tenants, lease disputes with past, current or prospective Building tenants, the enforcement of leases affecting the Real Property, the sale or refinancing of all or any part of the Real Property, the defense of Landlord's title to or interest in the Real Property, or disputes with past, current or prospective employees of Landlord or Landlord's agents; (vii) the cost (including any amortization thereof) of any equipment, improvements or alterations which would be properly classified as capital expenditures according to generally accepted property management practices (except to the extent expressly included in Operating Expenses pursuant to Paragraphs 7.a.(16) and (17) above); (viii) the cost (including architectural, engineering and permit costs) of decorating, improving for tenant occupancy, painting or redecorating portions of the Building to be demised to tenants; (ix) wages, salaries, benefits or other similar compensation paid to executive employees of Landlord or Landlord's agents above the rank of Property Manager or the cost of labor and

employees with respect to personnel not located at the Building on a full-time basis unless such costs are appropriately allocated between the Building and the other responsibilities of such personnel; (x)

Main P – Colony American lease v3
Das10-7-15

advertising and promotional expenditures; (xi) real estate broker's or other leasing or sales commissions; (xii) penalties or other costs incurred and actually paid by Landlord due to a violation by Landlord of any or all of the terms and conditions of this Lease or any other lease relating to the Building, except to the extent such costs reflect costs that would have been incurred by Landlord absent such violation; (xiii) subject to the provisions of item (4) above, repairs and other work occasioned by fire, windstorm or other casualty, to the extent Landlord is reimbursed by insurance proceeds, and other work paid from insurance or condemnation; (xiv) overhead and profit increments paid to subsidiaries or affiliates of Landlord for management or other services on or to the Building or for supplies or other materials to the extent that the cost of the services, supplies or materials materially exceed the amounts normally payable for similar goods and services under similar circumstances (taking into account the market factors in effect on the date any relevant contracts were negotiated) in comparable buildings in the John Wayne Airport area marketplace; (xv) charitable and political contributions; (xvi) the cost of any hazardous substance abatement, removal, or other remedial activities, provided, however, Operating Expenses may include the costs attributable to those minor abatement, removal, or other remedial activities taken by Landlord in connection with the ordinary operation and maintenance of the Building, including costs of cleaning up any minor chemical spills, when such removal or spill is directly related to such ordinary maintenance and operation; or (xvii) Landlord's general corporate overhead and administrative expense.

b. **Tax Expenses.** Tenant shall pay to Landlord as Additional Rent under this Lease, at the times hereinafter set forth, Tenant's Share, as specified in Paragraph 2.e. above, of any increase in Tax Expenses (as defined below) incurred by Landlord in each calendar year subsequent to the Base Year specified in Paragraph 2.f. above, over Tax Expenses incurred by Landlord during the Base Year. Notwithstanding the foregoing, if any reassessment, reduction or recalculation of any item included in Tax Expenses during the term results in a reduction of Tax Expenses, then for purposes of calculating Tenant's Share of increases in Tax Expenses from and after the calendar year in which such adjustment occurs, Tax Expenses for the Base Year shall be adjusted to reflect such reduction.

The term "**Tax Expenses**" shall mean all taxes, assessments (whether general or special), excises, transit charges, housing fund assessments or other housing charges, improvement districts, levies or fees, ordinary or extraordinary, unforeseen as well as foreseen, of any kind, which are assessed, levied, charged, confirmed or imposed on the Real Property, on Landlord with respect to the Real Property, on the act of entering into leases of space in the Real Property, on the use or occupancy of the Real Property or any part thereof, with respect to services or utilities consumed in the use, occupancy or operation of the Real Property, on any improvements, fixtures and equipment and other personal property of Landlord located in the Real Property and used in connection with the operation of the Real Property, or on or measured by the rent payable under this Lease or in connection with the business of renting space in the Real Property, including, without limitation, any gross income tax or excise tax levied with respect to the receipt of such rent, by the United States of America, the State of California, the County of Orange, the City of Irvine, any political subdivision, public corporation, district or other political or public entity or public authority, and shall also include any other tax, fee or other excise, however described, which may be levied or assessed in lieu of, as a substitute (in whole or in part) for, or as an addition to, any other Tax Expense. Tax Expenses shall include reasonable attorneys' and professional fees, costs and disbursements incurred in connection with proceedings to contest, determine or reduce Tax Expenses. If it shall not be lawful for Tenant to reimburse Landlord for any increase in Tax Expenses as defined herein, the Monthly Rent payable to Landlord prior to the imposition of such increases in Tax Expenses shall be increased to net Landlord the same net Monthly Rent after imposition of such increases in Tax Expenses as would have been received by Landlord prior to the imposition of such increases in Tax Expenses.

Tax Expenses shall not include income, franchise, transfer, inheritance or capital stock taxes, unless, due to a change in the method of taxation, any of such taxes is levied or assessed against Landlord in lieu of, as a substitute (in whole or in part) for, or as an addition to, any other charge which would otherwise constitute a Tax Expense.

c. **Adjustment for Occupancy Factor: Allocation of Operating Expenses and Tax Expenses.** Notwithstanding any other provision herein to the contrary, in the event the Building is not at least ninety-five percent (95%) occupied during the Base Year or any calendar year during the term, an adjustment shall be made by Landlord in computing Operating Expenses for such year so that the Operating Expenses shall be computed for such year as though the Building had been ninety-five percent (95%) occupied during such year. In addition, if any particular work or service includable in Operating Expenses is not furnished to a tenant who has undertaken to perform such work or service itself, Operating Expenses shall be deemed to be increased by an amount equal to the additional Operating Expenses which would have been incurred if Landlord had furnished such work or service to such tenant. The parties agree that statements in this Lease to the effect that Landlord is

to perform certain of its obligations hereunder at its own or sole cost and expense shall not be

Main P – Colony American lease v3
Das10-7-15

interpreted as excluding any cost from Operating Expenses or Tax Expenses if such cost is an Operating Expense or Tax Expense pursuant to the terms of this Lease.

Landlord shall have the right to equitably allocate some or all of Operating Expenses among particular classes or groups of tenants in the Building (for example, retail tenants) to reflect Landlord's good faith determination that measurably different amounts or types of services, work or benefits associated with Operating Expenses are being provided to or conferred upon such classes or groups. Further, Landlord shall have the right from time to time, to equitably allocate some or all of the Operating Expenses and/or Tax Expenses among different buildings of the Project. In such event, Landlord shall reasonably determine a method of allocating such Operating Expenses and/or Tax Expenses attributable to such other buildings of the Project to the Building and Tenant shall be responsible for paying its proportionate share of such expenses.

d. Intention Regarding Expense Pass-Through. It is the intention of Landlord and Tenant that the Monthly Rent paid to Landlord throughout the term of this Lease shall be absolutely net of all increases, respectively, in Tax Expenses and Operating Expenses over, respectively, Tax Expenses for the Base Year and Operating Expenses for the Base Year, and the foregoing provisions of this Paragraph 7 are intended to so provide.

e. Notice and Payment. On or before the first day of each calendar year during the term hereof subsequent to the Base Year, or as soon as practicable thereafter, Landlord shall give to Tenant notice of Landlord's estimate of the Additional Rent, if any, payable by Tenant pursuant to Paragraphs 7.a. and 7.b. for such calendar year subsequent to the Base Year. On or before the first day of each month during each such subsequent calendar year, Tenant shall pay to Landlord one-twelfth (1/12th) of the estimated Additional Rent; provided, however, that if Landlord's notice is not given prior to the first day of any calendar year Tenant shall continue to pay Additional Rent on the basis of the prior year's estimate until the month after Landlord's notice is given. If at any time it appears to Landlord that the Additional Rent payable under Paragraphs 7.a. and/or 7.b. will vary from Landlord's estimate by more than five percent (5%), Landlord may, by written notice to Tenant, revise its estimate for such year, and subsequent payments by Tenant for such year shall be based upon the revised estimate. On the first monthly payment date after any new estimate is delivered to Tenant, Tenant shall also pay any accrued cost increases, based on such new estimate.

f. Annual Accounting. Within one hundred fifty (150) days after the close of each calendar year subsequent to the Base Year, or as soon after such one hundred fifty (150) day period as practicable, Landlord shall deliver to Tenant a statement of the Additional Rent payable under Paragraphs 7.a. and 7.b. for such year. If the annual statement shows that Tenant's payments of Additional Rent for such calendar year pursuant to Paragraph 7.e. above exceeded Tenant's obligations for the calendar year, Landlord shall credit the excess to the next succeeding installments of estimated Additional Rent. If the annual statement shows that Tenant's payments of Additional Rent for such calendar year pursuant to Paragraph 7.e. above were less than Tenant's obligation for the calendar year, Tenant shall pay the deficiency to Landlord within ten (10) days after delivery of such statement.

Landlord's annual statement shall be final and binding upon Landlord and Tenant unless either party, within four (4) months after Tenant's receipt thereof, shall contest or correct, as applicable, any item therein by giving written notice to the other, specifying each item contested or corrected, as applicable, and the reason therefor. Landlord and Tenant shall endeavor in good faith to resolve any issues raised by Tenant with regard to Operating Expenses and Taxes Expenses covered by the annual statement and, in connection therewith, Landlord shall provide Tenant with pertinent information reasonably required for Tenant to review the contested items covered by the annual statement. Notwithstanding the foregoing, Tenant's right to contest any portion of the annual statement shall be conditioned upon (i) Tenant having paid the total amounts billed by Landlord under this Paragraph 7 within the time stipulated in Paragraph 7.e. above and this Paragraph 7.f. for payment (including, without limitation, the contested amounts) and (ii) Tenant executing a non-disclosure agreement on Landlord's customary form providing for Tenant to keep confidential the information delivered to Tenant and the results of any such contest or any action taken by Landlord in response thereto. If Tenant's challenge of an annual statement results in the agreement by Landlord and Tenant that there was an aggregate overstatement of Operating Expenses of five percent (5%) or more (or, in the absence of such agreement, such overstatement is confirmed by a court of competent jurisdiction or such other dispute resolution mechanism as to which the parties mutually agree in writing), then Landlord shall bear Tenant's reasonable out of pocket costs of conducting the challenge. Notwithstanding anything to the contrary above, the Tax Expenses included in any such annual statement may be modified by any subsequent adjustment or retroactive application of Tax Expenses by the taxing authority affecting the calculation of such Tax Expenses.

g. Proration for Partial Lease Year. If this Lease commences on a day other than the first day of a calendar year or terminates on a day other than the last day of a calendar year,

Main P – Colony American lease v3
Das10-7-15

the Additional Rent payable by Tenant pursuant to this Paragraph 7 applicable to the such partial calendar year shall be prorated on the basis that the number of days of such partial calendar year bears to three hundred sixty (360).

8. Use of Premises; Compliance with Law.

a. Use of Premises. The Premises may be used solely for general office purposes for the initial contemplated use of the Premises described in Paragraph 2.g. above or for any other general office use consistent with the operation of the Building as a first-class office building, provided in no event may the use of the Premises be changed to (1) a use which materially increases the operating costs for the Building, the burden on the Building services, or the foot traffic, elevator usage or security concerns in the Building, or which creates an increased probability of the comfort and/or safety of the Landlord or other tenants of the Building being compromised or reduced, or (2) use as a school or training facility, an entertainment, sports or recreation facility, retail sales to the public, a personnel or employment agency, an office or facility of any governmental or quasi-governmental agency or authority, a place of public assembly (including without limitation a meeting center, theater or public forum), any use by or affiliation with a foreign government (including without limitation an embassy or consulate or similar office), or a facility for the provision of social, welfare or clinical health services or sleeping accommodations (whether temporary, daytime or overnight), or (3) a use which may conflict with any exclusive uses granted to other tenants of the Real Property, or with the terms of any easement, covenant, condition or restriction, or other agreement affecting the Real Property. Upon Tenant's written request from time to time, Landlord shall advise Tenant as to whether a particular proposed use would conflict with any then existing exclusive right or use restriction affecting the Real Property.

Tenant shall not do or suffer or permit anything to be done in or about the Premises or the Project, nor bring or keep anything therein, which would in any way subject Landlord, Landlord's agents or the holder of any Superior Interest (as defined in Paragraph 21) to any liability, increase the premium rate of or affect any fire, casualty, liability, rent or other insurance relating to the Project or any of the contents of the Building, or cause a cancellation of, or give rise to any defense by the insurer to any claim under, or conflict with, any policies for such insurance. If any act or omission of Tenant results in any such increase in premium rates, Tenant shall pay to Landlord upon demand the amount of such increase. Tenant shall not do or suffer or permit anything to be done in or about the Premises or the Project which will in any way obstruct or interfere with the rights of other tenants or occupants of the Project or injure or annoy them, or use or suffer or permit the Premises to be used for any immoral, unlawful or objectionable purpose, nor shall Tenant cause, maintain, suffer or permit any nuisance in, on or about the Premises or the Project. Without limiting the foregoing, no loudspeakers or other similar device which can be heard outside the Premises shall, without the prior written approval of Landlord, be used in or about the Premises. Tenant shall not commit or suffer to be committed any waste in, to or about the Premises. Landlord may from time to time conduct fire and life safety training for tenants of the Building, including evacuation drills and similar procedures. Tenant agrees to participate in such activities as reasonably requested by Landlord.

Tenant agrees not to employ any person, entity or contractor for any work in the Premises (including moving Tenant's equipment and furnishings in, out or around the Premises) whose presence may give rise to a labor or other disturbance in the Building and, if necessary to prevent such a disturbance in a particular situation, Landlord may require Tenant to employ union labor for the work.

b. Compliance with Law. Tenant shall not do or permit anything to be done in or about the Premises which will in any way conflict with any Legal Requirement (as defined in Paragraph 7.a.(16) above) now in force or which may hereafter be enacted. Tenant, at its sole cost and expense, shall promptly comply with all such present and future Legal Requirements relating to the condition, use or occupancy of the Premises, and shall perform all work to the Premises or other portions of the Project required to effect such compliance (or, at Landlord's election, Landlord may perform such work at Tenant's cost). Notwithstanding the foregoing, however, Tenant shall not be required to perform any structural changes to the Premises or other portions of the Project unless such changes are related to or affected or triggered by (i) Tenant's Alterations (as defined in Paragraph 9 below), (ii) Tenant's particular use of the Premises (as opposed to Tenant's use of the Premises for general office purposes in a normal and customary manner), (iii) Tenant's particular employees or employment practices, or (iv) the construction of initial improvements to the Premises, if any. The judgment of any court of competent jurisdiction or the admission of Tenant in an action against Tenant, whether or not Landlord is a party thereto, that Tenant has violated any Legal Requirement shall be conclusive of that fact as between Landlord and Tenant. Tenant shall immediately furnish Landlord with any notices received from any insurance company or governmental agency or

inspection bureau regarding any unsafe or unlawful conditions within the Premises or the violation of any Legal Requirement. Upon Landlord's written request, Tenant shall deliver to Landlord, in form

Main P – Colony American lease v3
Das10-7-15

reasonably acceptable to Landlord, information relating to Tenant's electricity consumption at the Premises or any other matter related to Tenant's occupancy to the extent such requested information is required in order for Landlord to comply with reporting requirements imposed upon Landlord by any federal, state or local law regarding energy use or any other matter.

Subject to Tenant's obligations above, Landlord shall be responsible for causing the Building to comply with any and all Legal Requirements (including without limitation Title III of the Americans with Disabilities Act) with which the Building must comply in order for Tenant to occupy the Premises for the purposes leased and to use the common areas of the Project that are reasonably anticipated to be utilized by Tenant during the term of this Lease. The costs of such compliance shall be included in Operating Expenses to the extent permitted under Paragraph 7.a. above.

c. Hazardous Materials. Tenant shall not cause or permit the storage, use, generation, release, handling or disposal (collectively, "**Handling**") of any Hazardous Materials (as defined below), in, on, or about the Premises or the Project by Tenant or any agents, employees, contractors, licensees, subtenants, customers, guests or invitees of Tenant (collectively with Tenant, "**Tenant Parties**," and each individually, a "**Tenant Party**"), except that Tenant shall be permitted to use normal quantities of office supplies or products (such as copier fluids or cleaning supplies) customarily used in the conduct of general business office activities ("**Common Office Chemicals**"), provided that the Handling of such Common Office Chemicals shall comply at all times with all Legal Requirements, including Hazardous Materials Laws (as defined below). Notwithstanding anything to the contrary contained herein, however, in no event shall Tenant permit any usage of Common Office Chemicals in a manner that may cause the Premises or the Project to be contaminated by any Hazardous Materials or in violation of any Hazardous Materials Laws. Tenant shall immediately advise Landlord in writing of (a) any and all enforcement, cleanup, remedial, removal, or other governmental or regulatory actions instituted, completed, or threatened pursuant to any Hazardous Materials Laws relating to any Hazardous Materials affecting the Premises; and (b) all claims made or threatened by any third party against Tenant, Landlord, the Premises or the Project relating to damage, contribution, cost recovery, compensation, loss, or injury resulting from any Hazardous Materials on or about the Premises. Without Landlord's prior written consent, Tenant shall not take any remedial action or enter into any agreements or settlements in response to the presence of any Hazardous Materials in, on, or about the Premises. Tenant shall be solely responsible for and shall indemnify, defend and hold Landlord and all other Indemnitees (as defined in Paragraph 14.b. below), harmless from and against all Claims (as defined in Paragraph 14.b. below), arising out of or in connection with, or otherwise relating to (i) any Handling of Hazardous Materials by any Tenant Party or Tenant's breach of its obligations hereunder, or (ii) any removal, cleanup, or restoration work and materials necessary to return the Project or any other property of whatever nature located on the Project to their condition existing prior to the Handling of Hazardous Materials in, on or about the Premises by any Tenant Party. Tenant's obligations under this paragraph shall survive the expiration or other termination of this Lease. For purposes of this Lease, "**Hazardous Materials**" means any explosive, radioactive materials, hazardous wastes, or hazardous substances, including without limitation asbestos containing materials, PCB's, CFC's, or substances defined as "hazardous substances" in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. Section 9601-9657; the Hazardous Materials Transportation Act of 1975, 49 U.S.C. Section 1801-1812; the Resource Conservation and Recovery Act of 1976, 42 U.S.C. Section 6901-6987; or any other Legal Requirement regulating, relating to, or imposing liability or standards of conduct concerning any such materials or substances now or at any time hereafter in effect (collectively, "**Hazardous Materials Laws**"). Notwithstanding anything to the contrary herein or elsewhere in this Lease, in no event shall Tenant be responsible or liable to Landlord or any other Indemnitee for any violation of any Hazardous Materials Laws occurring prior to the Commencement Date.

To the best of Landlord's actual knowledge (which for purposes hereof is limited to the actual knowledge of Mariellen Ignelzi-Smith, the property manager for the Real Property), as of the date hereof, neither the Premises nor the Premises are in violation of any Hazardous Materials Laws. Throughout the Lease term, Landlord shall operate the Building in compliance with all applicable Hazardous Materials Laws. The costs of such compliance shall be included in Operating Expenses only to the extent expressly permitted under Paragraph 7.a. above. Notwithstanding the foregoing, if the violation of Hazardous Materials Laws is located outside of the Premises and is the responsibility of another tenant of the Building to correct, then Landlord shall use commercially reasonable efforts to cause such tenant to promptly correct the violation (any such cost involved in requiring a third party tenant to comply with its obligations with respect to Hazardous Materials Laws shall not be included within Operating Expenses).

d. Applicability of Paragraph. The provisions of this Paragraph 8 are for the benefit of Landlord, the holder of any Superior Interest (as defined in Paragraph 21 below), and the

other Indemnitees only and are not nor shall they be construed to be for the benefit of any tenant or occupant of the Building.

Main P – Colony American lease v3
Das10-7-15

9. Alterations and Restoration.

a. Tenant shall not make or permit to be made any alterations, modifications, additions, decorations or improvements to the Premises, or any other work whatsoever that would directly or indirectly involve the penetration or removal (whether permanent or temporary) of, or require access through, in, under, or above any floor, wall or ceiling, or surface or covering thereof in the Premises (collectively, "**Alterations**"), except as expressly provided in this Paragraph 9. If Tenant desires any Alteration, Tenant must obtain Landlord's prior written approval of such Alteration.

All Alterations shall be made at Tenant's sole cost and expense (including the expense of complying with all present and future Legal Requirements, including those regarding asbestos, if applicable, and any other work required to be performed in other areas within or outside the Premises by reason of the Alterations). Tenant shall either (i) arrange for Landlord to perform the work on terms and conditions acceptable to Landlord and Tenant, each in its sole discretion or (ii) bid the project out to contractors approved by Landlord in writing in advance (which approval shall not be unreasonably withheld). Tenant shall provide Landlord with a copy of the information submitted to bidders at such time as the bidders receive their copy. Regardless of the contractors who perform the work pursuant to the above, Tenant shall pay Landlord on demand prior to or during the course of such construction an amount (the "**Alteration Operations Fee**") equal to five percent (5%) of the total cost of the Alteration (and for purposes of calculating the Alteration Operations Fee, such cost shall include architectural and engineering fees, but shall not include permit fees) as compensation to Landlord for Landlord's internal review of Tenant's Plans and general oversight of the construction (which oversight shall be solely for the benefit of Landlord and shall in no event be a substitute for Tenant's obligation to retain such project management or other services as shall be necessary to ensure that the work is performed properly and in accordance with the requirements of this Lease). Tenant shall also reimburse Landlord for Landlord's actual and reasonable out-of-pocket expenses, such as additional cleaning expenses and/or security services (if applicable), and fees and charges paid to third party architects, engineers and other consultants for review of the work and the plans and specifications with respect thereto.

All such work shall be performed diligently and in a first-class workmanlike manner and in accordance with plans and specifications approved by Landlord, and shall comply with all Legal Requirements and Landlord's construction standards, procedures, conditions and requirements for the Building as in effect from time to time (including Landlord's requirements relating to insurance and contractor qualifications). To the extent applicable, and without limitation of the foregoing, Tenant shall cause a timely Notice of Completion to be recorded in the office of the Recorder of Orange County in accordance with Section 8182 of the California Civil Code or any successor statute. Tenant shall deliver to Landlord, within thirty (30) days following the completion of the Alterations, a copy of as-built drawings of the Alterations in a form acceptable to Landlord. In no event shall Tenant employ any person, entity or contractor to perform work in the Premises whose presence may give rise to a labor or other disturbance in the Building. Default by Tenant in the payment of any sums agreed to be paid by Tenant for or in connection with an Alteration (regardless of whether such agreement is pursuant to this Paragraph 9 or separate instrument) shall entitle Landlord to all the same remedies as for non-payment of rent hereunder. Any Alterations, including, without limitation, moveable partitions that are affixed to the Premises (but excluding moveable, free standing partitions) and all carpeting, shall at once become part of the Building and the property of Landlord. Tenant shall give Landlord not less than five (5) days prior written notice of the date the construction of the Alteration is to commence. Landlord may post and record an appropriate notice of nonresponsibility with respect to any Alteration and Tenant shall maintain any such notices posted by Landlord in or on the Premises.

b. At Landlord's sole election any or all Alterations made for or by Tenant shall be removed by Tenant from the Premises at the expiration or sooner termination of this Lease and the Premises shall be restored by Tenant to their condition prior to the making of the Alterations, ordinary wear and tear excepted. The removal of the Alterations and the restoration of the Premises shall be performed by a general contractor selected by Tenant and approved by Landlord, in which event Tenant shall pay the general contractor's fees and costs in connection with such work. Any separate work letter or other agreement which is hereafter entered into between Landlord and Tenant pertaining to Alterations shall be deemed to automatically incorporate the terms of this Lease without the necessity for further reference thereto.

10. Repair.

a. Tenant, at Tenant's sole cost and expense, shall keep the Premises and every part thereof (including the interior walls and ceilings of the Premises, all above-standard

electrical, plumbing or other Building facilities or distribution thereof that exclusively serve the Premises and all improvements and Alterations) in good condition and repair; provided that Tenant

Main P – Colony American lease v3
Das10-7-15

shall not be responsible for repairs to the extent such repairs are (i) necessitated by the negligence or willful misconduct of Landlord or Landlord's agents, employees or contractors, or (ii) Landlord's obligation pursuant to Paragraph 10.b. below. Tenant waives all rights to make repairs at the expense of Landlord as provided by any Legal Requirement now or hereafter in effect. It is specifically understood and agreed that, except as specifically set forth in this Lease, Landlord has no obligation and has made no promises to alter, remodel, improve, repair, decorate or paint the Premises or any part thereof, and that no representations respecting the condition of the Premises or the Building have been made by Landlord to Tenant. Tenant hereby waives the provisions of California Civil Code Sections 1932(1), 1941 and 1942 and of any similar Legal Requirement now or hereafter in effect.

b. Repairs to the Premises due to fire, earthquake, acts of God or the elements shall be governed by Paragraph 26 below, and repairs to the Premises due to a governmental taking shall be governed by Paragraph 27 below. Landlord shall repair the Premises if they are damaged due to item (i) described in Paragraph 10.a. above (subject to Paragraph 16 below). Further, Landlord shall repair and maintain in good condition and repair the roof, exterior walls, exterior windows of the Building and the structural portions of the Building and all Building systems, including plumbing, air conditioning, heating, electrical, life safety and other systems installed or furnished by Landlord, but excluding above-standard electrical, plumbing or other Building facilities or distribution thereof that exclusively serve the Premises; provided, however, that to the extent repairs which Landlord is required to make pursuant to this Paragraph 10.b. are necessitated by the negligence or deliberate misconduct of Tenant or Tenant's agents, employees or contractors, then Tenant shall reimburse Landlord for the cost of such repair to the extent Landlord is not reimbursed therefor by insurance. Landlord shall in no event be obligated to repair any wear and tear to the Premises.

11. Abandonment. Tenant shall not abandon the Premises or any part thereof at any time during the term hereof. Tenant's mere vacating of the Premises during the term hereof shall not constitute an abandonment under this Lease nor an Event of Default so long as Tenant continues to pay Monthly Rent, Additional Rent and all other sums due Landlord under this Lease and maintains the insurance coverage required pursuant to Paragraph 15 of this Lease. Upon the expiration or earlier termination of this Lease, or if Tenant abandons or surrenders all or any part of the Premises or is dispossessed of the Premises by process of law, or otherwise, any movable furniture, equipment, trade fixtures, or other personal property belonging to Tenant and left on the Premises shall at the option of Landlord be deemed to be abandoned and, whether or not the property is deemed abandoned, Landlord shall have the right to remove such property from the Premises and charge Tenant for the removal and any restoration of the Premises as provided in Paragraph 9. Landlord may charge Tenant for the storage of Tenant's property left on the Premises at such rates as Landlord may from time to time reasonably determine, or, Landlord may, at its option, store Tenant's property in a public warehouse at Tenant's expense. Notwithstanding the foregoing, neither the provisions of this Paragraph 11 nor any other provision of this Lease shall impose upon Landlord any obligation to care for or preserve any of Tenant's property left upon the Premises, and Tenant hereby waives and releases Landlord from any claim or liability in connection with the removal of such property from the Premises and the storage thereof and specifically waives the provisions of California Civil Code Section 1542 with respect to such release. Landlord's action or inaction with regard to the provisions of this Paragraph 11 shall not be construed as a waiver of Landlord's right to require Tenant to remove its property, restore any damage to the Premises and the Building caused by such removal, and make any restoration required pursuant to Paragraph 9 above.

12. Liens. Tenant shall not permit any mechanic's, materialman's or other liens arising out of work performed at the Premises by or on behalf of Tenant to be filed against the fee of the Real Property nor against Tenant's interest in the Premises. Landlord shall have the right to post and keep posted on the Premises any notices which it deems necessary for protection from such liens. If any such liens are filed, Landlord may, upon ten (10) days' written notice to Tenant, without waiving its rights based on such breach by Tenant and without releasing Tenant from any obligations hereunder, pay and satisfy the same and in such event the sums so paid by Landlord shall be due and payable by Tenant immediately without notice or demand, with interest from the date paid by Landlord through the date Tenant pays Landlord, at the Interest Rate. Tenant agrees to indemnify, defend and hold Landlord and the other Indemnitees (as defined in Paragraph 14.b. below) harmless from and against any Claims (as defined in Paragraph 14.b. below) for mechanics', materialmen's or other liens in connection with any Alterations, repairs or any work performed, materials furnished or obligations incurred by or for Tenant.

13. Assignment and Subletting.

a. Landlord's Consent. Landlord's and Tenant's agreement with regard to Tenant's right to transfer all or part of its interest in the Premises is as expressly set forth in this

Paragraph 13. Tenant agrees that, except upon Landlord's prior written consent, which consent shall not (subject to Landlord's rights under Paragraph 13.d. below) be unreasonably withheld, neither this

Lease nor all or any part of the leasehold interest created hereby shall, directly or indirectly, voluntarily or involuntarily, by operation of law or otherwise, be assigned, mortgaged, pledged, encumbered or otherwise transferred by Tenant or Tenant's legal representatives or successors in interest (collectively, an "assignment") and neither the Premises nor any part thereof shall be sublet or be used or occupied for any purpose by anyone other than Tenant (collectively, a "sublease"). Any assignment or subletting without Landlord's prior written consent shall, at Landlord's option, be void and shall constitute an Event of Default entitling Landlord to terminate this Lease and to exercise all other remedies available to Landlord under this Lease and at law.

The parties hereto agree and acknowledge that, among other circumstances for which Landlord may reasonably withhold its consent to an assignment or sublease, it shall be reasonable for Landlord to withhold its consent where: (i) the proposed assignee or subtenant is (x) a prospective tenant of the Project whom Landlord has submitted to, or received from, a written proposal or inquiry within the prior three (3) months regarding the leasing of space in the Project and Landlord has adequate space in the Project to meet such prospective tenant's space requirements or (y) a current tenant of the Building and Landlord has adequate available space in the Building to meet such current tenant's expansion requirements; (ii) Landlord disapproves of the proposed assignee's or subtenant's reputation or creditworthiness; (iii) Landlord determines that the character of the business that would be conducted by the proposed assignee or subtenant at the Premises, or the manner of conducting such business, would be inconsistent with the character of the Building as a first-class office building; (iv) the proposed assignee or subtenant is an entity or related to an entity with whom Landlord or any affiliate of Landlord has had adverse dealings; (v) Landlord determines that the proposed assignee may be unable to perform all of Tenant's obligations under this Lease or the proposed subtenant may be unable to perform all of its obligations under the proposed sublease; (vi) the assignment or subletting would involve a change in use from that expressly permitted under Paragraph 8.a. above; or (vii) as of the date Tenant requests Landlord's consent or as of the date Landlord responds thereto, a breach or default by Tenant under this Lease shall have occurred and be continuing. Landlord's foregoing rights and options shall continue throughout the entire term of this Lease.

For purposes of this Paragraph 13, the following events shall be deemed an assignment or sublease, as appropriate: (i) the issuance of equity interests (whether stock, partnership interests or otherwise) in Tenant or any subtenant or assignee, or any entity controlling any of them, to any person or group of related persons, in a single transaction or a series of related or unrelated transactions, such that, following such issuance, such person or group shall have Control (as defined below) of Tenant or any subtenant or assignee; (ii) a transfer of Control of Tenant or any subtenant or assignee, or any entity controlling any of them, in a single transaction or a series of related or unrelated transactions (including, without limitation, by consolidation, merger, acquisition or reorganization), except that the transfer of outstanding capital stock or other listed equity interests by persons or parties other than "insiders" within the meaning of the Securities Exchange Act of 1934, as amended, through the "over-the-counter" market or any recognized national or international securities exchange, shall not be included in determining whether Control has been transferred; (iii) a reduction of Tenant's assets to the point that this Lease is substantially Tenant's only asset; (iv) a change or conversion in the form of entity of Tenant, any subtenant or assignee, or any entity controlling any of them, which has the effect of limiting the liability of any of the partners, members or other owners of such entity; or (v) the agreement by a third party to assume, take over, or reimburse Tenant for, any or all of Tenant's obligations under this Lease, in order to induce Tenant to lease space with such third party. "Control" shall mean direct or indirect ownership of fifty percent (50%) or more of all of the voting stock of a corporation or fifty percent (50%) or more of the legal or equitable interest in any other business entity, or the power to direct the operations of any entity (by equity ownership, contract or otherwise).

If this Lease is assigned, whether or not in violation of the terms of this Lease, Landlord may collect rent from the assignee. If the Premises or any part thereof is sublet, Landlord may, upon an Event of Default by Tenant hereunder, collect rent from the subtenant. In either event, Landlord may apply the amount collected from the assignee or subtenant to Tenant's monetary obligations hereunder.

The consent by Landlord to an assignment or subletting hereunder shall not relieve Tenant or any assignee or subtenant from the requirement of obtaining Landlord's express prior written consent to any other or further assignment or subletting. In no event shall any subtenant be permitted to assign its sublease or to further sublet all or any portion of its subleased premises without Landlord's prior written consent, which consent may be withheld by Landlord at its sole and absolute discretion. Neither an assignment or subletting nor the collection of rent by Landlord from any person other than Tenant, nor the application of any such rent as provided in this Paragraph 13.a. shall be deemed a waiver of any of the provisions of this Paragraph 13.a. or release Tenant from its obligation to comply with the provisions of this Lease and Tenant shall remain fully and primarily liable for all

of Tenant's obligations under this Lease. If Landlord approves of an assignment or subletting hereunder and this Lease contains any renewal options, expansion options, rights of first refusal,

Main P – Colony American lease v3
Das10-7-15

rights of first negotiation or any other rights or options pertaining to additional space in the Building, such rights and/or options shall not run to the subtenant or assignee, it being agreed by the parties hereto that any such rights and options are personal to the Tenant originally named herein and may not be transferred.

b. Processing Expenses. Tenant shall pay to Landlord, as Landlord's cost of processing each proposed assignment or subletting, an amount equal to the sum of (i) Landlord's reasonable attorneys' and other professional fees, plus (ii) the sum of One Thousand Dollars (\$1,000.00) for the cost of Landlord's administrative, accounting and clerical time (collectively, "**Processing Costs**"), and the amount of all direct and indirect costs and expenses incurred by Landlord arising from the assignee or sublessee taking occupancy of the subject space (including, without limitation, costs of freight elevator operation for moving of furnishings and trade fixtures, security service, janitorial and cleaning service, and rubbish removal service). Notwithstanding anything to the contrary herein, Landlord shall not be required to execute Landlord's consent to an assignment or subletting until Tenant has paid to Landlord the amount of Landlord's estimate of the Processing Costs.

c. Consideration to Landlord. In the event of any assignment or sublease, whether or not requiring Landlord's consent, Landlord shall be entitled to receive, as additional rent hereunder, fifty percent (50%) of any consideration (including, without limitation, payment for leasehold improvements) paid by the assignee or subtenant for the assignment or sublease (which shall in no event be deemed to be less than the "**Leasehold Profit**", as defined below) and, in the case of a sublease, fifty percent (50%) of the excess of the amount of rent paid for the sublet space by the subtenant over the amount of Monthly Rent under Paragraph 5 above and Additional Rent under Paragraph 7 above attributable to the sublet space for the corresponding month; except that Tenant may recapture, on a straight line amortized basis over the term of the sublease or assignment, (i) brokerage commissions paid by Tenant in connection with the subletting or assignment (not to exceed commissions typically paid in the market at the time of such subletting or assignment), (ii) reasonable legal fees incurred by Tenant in connection with such assignment or subletting (provided that Tenant shall submit to Landlord evidence reasonably acceptable to Landlord of such legal fees actually paid by Tenant, which evidence shall include copies of the applicable attorney bills) and (iii) any improvement allowance or construction costs incurred by Tenant in connection with the assignment or sublease (collectively the "**Assignment or Subletting Costs**"), provided that, as a condition to Tenant recapturing the Assignment or Subletting Costs, Tenant shall provide to Landlord, within ninety (90) days of Landlord's execution of Landlord's consent to the assignment or subletting, a detailed accounting of the Assignment or Subletting Costs and supporting documents, such as receipts and construction invoices. To effect the foregoing, Tenant shall deduct from the monthly amounts received by Tenant from the subtenant or assignee as rent or consideration (i) the Monthly Rent and Additional Rent payable by Tenant to Landlord for the subject space and (ii) the incremental amount, on an amortized basis, of the Assignment or Subletting Costs, and fifty percent (50%) of the then remaining sum shall be paid promptly to Landlord. Upon Landlord's request, Tenant shall assign to Landlord all amounts to be paid to Tenant by any such subtenant or assignee and that belong to Landlord and shall direct such subtenant or assignee to pay the same directly to Landlord. If there is more than one sublease under this Lease, the amounts (if any) to be paid by Tenant to Landlord pursuant to this Paragraph 13.c. shall be separately calculated for each sublease and amounts due Landlord with regard to any one sublease may not be offset against rental and other consideration pertaining to or due under any other sublease. "**Leasehold Profit**" shall be the value allocated to the leasehold between the parties to the assignment or sublease, but in no event less than Landlord's reasonable determination of (i) in the case of an assignment, the excess of the present value of the fair market rent of the Premises for the remaining term of this Lease after such assignment, over the present value of the Monthly Rent payable hereunder for such remaining term or (ii) in the case of a sublease, the excess of the present value of the fair market rent of the Premises for the term of the sublease, over the present value of the Monthly Rent payable hereunder for such term. Upon Landlord's request, Tenant shall provide Landlord with a detailed written statement of all sums payable by the assignee or subtenant to Tenant so that Landlord can determine the total sums, if any, due from Tenant to Landlord under this Paragraph 13.c.

d. Procedures. If Tenant desires to assign this Lease or any interest therein or sublet all or part of the Premises, Tenant shall give Landlord written notice thereof and the terms proposed (the "**Sublease Notice**"), which Sublease Notice shall be accompanied by Tenant's proposed assignment or sublease agreement (in which the proposed assignee or subtenant shall be named, shall be executed by Tenant and the proposed assignee or subtenant, and which agreement shall otherwise meet the requirements of Paragraph 13.e. below), together with a current financial statement of such proposed assignee or subtenant and any other information reasonably requested by Landlord. Landlord shall have the prior right and option (to be exercised by written notice to Tenant given within twenty (20) days after receipt of Tenant's notice) (i) in the case of any proposed

assignment of this Lease, to terminate this Lease in its entirety, or (ii) in the case of a proposed sublease of all or any portion of the Premises the term of which (including all renewal terms in the

sublease) will expire during the last twelve (12) months of this Lease, to terminate this Lease as it pertains to the portion of the Premises so proposed by Tenant to be sublet, or (iii) to approve or reasonably disapprove the proposed assignment or sublease. If Landlord fails to exercise any such option to sublet or to terminate, this shall not be construed as or constitute a waiver of any of the provisions of Paragraphs 13.a., b., c. or d. herein as to any future assignment or sublease. If Landlord exercises any option to terminate, any costs of demising the portion of the Premises affected by such subleasing or termination shall be borne one-half by Landlord and one-half by Tenant. In addition, Landlord shall have no liability for any real estate brokerage commission(s) or with respect to any of the costs and expenses that Tenant may have incurred in connection with its proposed assignment or subletting, and Tenant agrees to indemnify, defend and hold Landlord and all other Indemnitees harmless from and against any and all Claims (as defined in Paragraph 14.b. below), including, without limitation, claims for commissions, arising from such proposed assignment or subletting. Landlord's foregoing rights and options shall continue throughout the entire term of this Lease.

e. Documentation. No permitted assignment or subletting by Tenant shall be effective until there has been delivered to Landlord a fully executed counterpart of the assignment or sublease which expressly provides that (i) the assignee or subtenant may not further assign this Lease or the sublease, as applicable, or sublet the Premises or any portion thereof, without Landlord's prior written consent (which, in the case of a further assignment proposed by an assignee of this Lease, shall not be unreasonably withheld, subject to Landlord's rights under the provisions of this Paragraph 13, and in the case of a subtenant's assignment of its sublease or further subletting of its subleased premises or any portion thereof, may be withheld in Landlord's sole and absolute discretion), (ii) the assignee or subtenant will comply with all of the provisions of this Lease, and Landlord may enforce the Lease provisions directly against such assignee or subtenant, (iii) in the case of an assignment, the assignee assumes all of Tenant's obligations under this Lease arising on or after the date of the assignment, and (iv) in the case of a sublease, the subtenant agrees to be and remain jointly and severally liable with Tenant for the payment of rent pertaining to the sublet space in the amount set forth in the sublease, and for the performance of all of the terms and provisions of this Lease applicable to the sublet space. In addition to the foregoing, no assignment or sublease by Tenant shall be effective until there has been delivered to Landlord a fully executed counterpart of Landlord's consent to assignment or consent to sublease form. The failure or refusal of a subtenant or assignee to execute any such instrument shall not release or discharge the subtenant or assignee from its liability as set forth above. Notwithstanding the foregoing, however, no subtenant or assignee shall be permitted to occupy the Premises or any portion thereof unless and until such subtenant or assignee provides Landlord with certificates evidencing that such subtenant or assignee is carrying all insurance coverage required of such subtenant or assignee under this Lease.

f. No Merger. Without limiting any of the provisions of this Paragraph 13, if Tenant has entered into any subleases of any portion of the Premises, the voluntary or other surrender of this Lease by Tenant, or a mutual cancellation by Landlord and Tenant, shall not work a merger, and shall, at the option of Landlord, terminate all or any existing subleases or subtenancies or, at the option of Landlord, operate as an assignment to Landlord of any or all such subleases or subtenancies. If Landlord does elect that such surrender or cancellation operate as an assignment of such subleases or subtenancies, Landlord shall in no way be liable for any previous act or omission by Tenant under the subleases or for the return of any deposit(s) under the subleases that have not been actually delivered to Landlord, nor shall Landlord be bound by any sublease modification(s) executed without Landlord's consent or for any advance rental payment by the subtenant in excess of one month's rent.

g. Special Transfer Prohibitions. Notwithstanding anything set forth above to the contrary, Tenant may not (a) sublet the Premises or assign this Lease to any person or entity in which Landlord owns an interest, directly or indirectly (by applying constructive ownership rules set forth in Section 856(d)(5) of the Internal Revenue Code (the "Code"); or (b) sublet the Premises or assign this Lease in any other manner which could cause any portion of the amounts received by Landlord pursuant to this Lease or any sublease to fail to qualify as "rents from real property" within the meaning of Section 856(d) of the Code, or which could cause any other income received by Landlord to fail to qualify as income described in Section 856(c)(2) of the Code.

h. Affiliates. Notwithstanding anything to the contrary in Paragraphs 13.a. and 13.d., but subject to Paragraphs 13.b., 13.c., 13.e. and 13.f., Tenant may assign this Lease or sublet the Premises or any portion thereof, without Landlord's consent, to any partnership, corporation or other entity which controls, is controlled by, or is under common control with Tenant or Tenant's parent (control being defined for such purposes as ownership of at least 50% of the equity interests in, and the power to direct the management of, the relevant entity), or to any partnership, corporation or other entity resulting from a merger or consolidation with Tenant or Tenant's parent, or to any person or entity which acquires all or substantially all the assets of Tenant as a going concern (including by means of a purchase of all or substantially all of Tenant's stock) (collectively,

an "Affiliate"), provided that (i) Landlord receives at least ten (10) days' prior written notice of the assignment or subletting, together with evidence that the requirements of this Paragraph 13.h. have

been met, (ii) the Affiliate's net worth is not less than Tenant's net worth as of the date of this Lease or as of the date immediately prior to the assignment or subletting (or series of transactions of which the same is a part), whichever is greater, (iii) except in the case of an assignment where the assignor is dissolved as a matter of law following the series of transactions of which the assignment is a part (e.g. a merger) and where such assignor makes sufficient reserves for contingent liabilities (including its obligations under this Lease) as required by applicable law, the Affiliate remains an Affiliate for the duration of the subletting or the balance of the term in the event of an assignment, (iv) the Affiliate assumes (in the event of an assignment) in writing all of Tenant's obligations under this Lease, and agrees (in the event of a sublease) that such subtenant will, at Landlord's election, atorn directly to Landlord in the event that this Lease is terminated for any reason, (v) Landlord receives a fully executed copy of an assignment or sublease agreement between Tenant and the Affiliate, (vi) in the case of an assignment by means of a purchase of all or substantially all of Tenant's stock, the essential purpose of such assignment is to transfer an active, ongoing business with substantial assets in addition to this Lease, and in the case of an assignment (by any means), or a sublease, the transaction is for legitimate business purposes unrelated to this Lease and the transaction is not a subterfuge by Tenant to avoid it obligations under this Lease or the restrictions on assignment and subletting contained herein, and (vii) in the case of a sublease, the Affiliate executes and Tenant delivers to Landlord a fully executed counterpart of Landlord's waiver and acknowledgement form for an Affiliate sublease.

14. Indemnification of Landlord.

a. Landlord and the holders of any Superior Interests (as defined in Paragraph 21 below) shall not be liable to Tenant and Tenant hereby waives all claims against such parties for any loss, injury or other damage to person or property in or about the Premises or the Project from any cause whatsoever, including without limitation, water leakage of any character from the roof, walls, basement, fire sprinklers, appliances, air conditioning, plumbing or other portion of the Premises or the Project, or gas, fire, explosion, falling plaster, steam, electricity, or any malfunction within the Premises or the Project, or acts of other tenants of the Building; provided, however, that, subject to Paragraph 16 below and to the provisions of Paragraph 28 below regarding exculpation of Landlord from Special Claims, the foregoing waiver shall be inapplicable to any loss, injury or damage resulting directly from Landlord's gross negligence or willful misconduct.

b. Tenant shall hold Landlord and the holders of any Superior Interest, and the constituent shareholders, partners or other owners thereof, and all of their agents, contractors, servants, officers, directors, employees and licensees (collectively with Landlord, the "**Indemnitees**") harmless from and indemnify the Indemnitees against any and all claims, liabilities, damages, costs and expenses, including reasonable attorneys' fees and costs incurred in defending against the same (collectively, "**Claims**"), to the extent arising from (a) the acts or omissions of Tenant or any other Tenant Parties (as defined in Paragraph 8.c. above) in, on or about the Project, or (b) any construction or other work undertaken by or on behalf of Tenant in, on or about the Premises, whether prior to or during the term of this Lease, or (c) any breach or Event of Default under this Lease by Tenant, or (d) any accident, injury or damage, howsoever and by whomsoever caused, to any person or property, occurring in, on or about the Premises; except to the extent such Claims are caused directly by the gross negligence or willful misconduct of Landlord or its authorized representatives. In case any action or proceeding be brought against any of the Indemnitees by reason of any such Claim, Tenant, upon notice from Landlord, covenants to resist and defend at Tenant's sole expense such action or proceeding by counsel reasonably satisfactory to Landlord. The provisions of this Paragraph 14.b. shall survive the expiration or earlier termination of this Lease with respect to any injury, illness, death or damage occurring prior to such expiration or termination.

15. Insurance.

a. Tenant's Insurance: Coverage Amounts. Tenant shall, at Tenant's expense, maintain during the term of this Lease (and, if Tenant occupies or conducts activities in or about the Premises prior to or after the term hereof, then also during such pre-term or post-term period): (i) commercial general liability insurance including contractual liability coverage, with minimum coverages of Five Million Dollars (\$5,000,000.00) per occurrence combined single limit for bodily injury and property damage, Five Million Dollars (\$5,000,000.00) for products-completed operations coverage, One Hundred Thousand Dollars (\$100,000.00) fire legal liability, Five Million Dollars (\$5,000,000.00) for personal and advertising injury, with a Six Million Dollars (\$6,000,000.00) general aggregate limit, for injuries to, or illness or death of, persons and damage to property occurring in or about the Premises or otherwise resulting from Tenant's operations in the Building, provided that the foregoing coverage amounts may be provided through any combination of primary and umbrella/excess coverage policies; (ii) property insurance protecting Tenant against loss or damage by fire and such other risks as are insurable under then-available standard forms of

“special form” (previously known as “all risk”) insurance policies (excluding earthquake and flood but including water damage and earthquake sprinkler leakage), covering Tenant’s personal property

Main P – Colony American lease v3
Das10-7-15

and trade fixtures in or about the Premises or the Real Property, and any above Building standard Alterations installed in the Premises by or at the request of Tenant (including those installed by Landlord at Tenant's request, whether prior or subsequent to the commencement of the Lease term), for the full replacement value thereof without deduction for depreciation; (iii) workers' compensation insurance in statutory limits; (iv) at least three months' coverage for loss of business income and continuing expenses, providing protection against any peril included within the classification "special form" insurance, excluding earthquake and flood but including water damage and earthquake sprinkler leakage; and (v) if Tenant operates owned, leased or non-owned vehicles on the Real Property, comprehensive automobile liability insurance with a minimum coverage of Two Million Dollars (\$2,000,000.00) per occurrence, combined single limit; provided that the foregoing coverage amount may be provided through any combination of primary and umbrella/excess coverage policies. In no event shall any insurance maintained by Tenant hereunder or required to be maintained by Tenant hereunder be deemed to limit or satisfy Tenant's indemnification or other obligations or liability under this Lease. Landlord reserves the right to increase the foregoing amount of liability coverage from time to time as Landlord reasonably determines is required to adequately protect Landlord and the other parties designated by Landlord from the matters insured thereby (provided, however, that Landlord makes no representation that the limits of liability required hereunder from time to time shall be adequate to protect Tenant), and to require that Tenant cause any of its contractors, vendors, movers or other parties conducting activities in or about or occupying the Premises to obtain and maintain insurance as reasonably determined by Landlord and as to which Landlord and such other parties designated by Landlord shall be additional insureds.

b. Policy Form. Each insurance policy required pursuant to Paragraph 15.a. above shall be issued by an insurance company authorized to do business in the State of California and with a general policyholders' rating of "A-" or better and a financial size ranking of "Class VIII" or higher in the most recent edition of Best's Insurance Guide. Tenant shall provide Landlord with not less than thirty (30) days' prior written notice if an insurance policy obtained by Tenant hereunder is materially changed, cancelled or will be allowed to lapse. If any of the above policies are subject to deductibles, the deductible amounts shall not exceed amounts approved in advance in writing by Landlord. The liability policies and any umbrella/excess coverage policies carried pursuant to clauses (i) and (v) of Paragraph 15.a. above shall (i) name Landlord and all the other Indemnitees and any other parties designated by Landlord as additional insureds, (ii) provide that no act or omission of Tenant shall affect or limit the obligations of the insurer with respect to any other insured and (iii) provide that the policy and the coverage provided shall be primary, that Landlord, although an additional insured, shall nevertheless be entitled to recovery under such policy for any damage to Landlord or the other Indemnitees by reason of acts or omissions of Tenant, and that any coverage carried by Landlord shall be noncontributory with respect to policies carried by Tenant. The property insurance policy carried under item (ii) of Paragraph 15.a. above shall include all waiver of subrogation rights endorsements necessary to effect the provisions of Paragraph 16 below. Each such insurance policy required of Tenant pursuant to this Paragraph 15, or a certificate thereof, shall be delivered to Landlord by Tenant on or before the effective date of such policy and thereafter Tenant shall deliver to Landlord renewal policies or certificates at least thirty (30) days prior to the expiration dates of expiring policies. If Tenant fails to procure such insurance or to deliver such policies or certificates, Landlord may, at its option, procure the same for Tenant's account, and the cost thereof shall be paid to Landlord by Tenant upon demand. Landlord may at any time, and from time to time, inspect and/or copy any and all insurance policies required by this Lease.

c. No Implication. Nothing in this Paragraph 15 shall be construed as creating or implying the existence of (i) any ownership by Tenant of any fixtures, additions, Alterations, or improvements in or to the Premises or (ii) any right on Tenant's part to make any addition, Alteration or improvement in or to the Premises.

16. Mutual Waiver of Subrogation Rights. Each party hereto hereby releases the other respective party and, in the case of Tenant as the releasing party, the other Indemnitees, and the respective partners, shareholders, agents, employees, officers, directors and authorized representatives of such released party, from any claims such releasing party may have for damage to the Building, the Premises or any of such releasing party's fixtures, personal property, improvements and alterations in or about the Premises, the Building or the Project that is caused by or results from risks insured against under any "special form" insurance policies actually carried by such releasing party or deemed to be carried by such releasing party; provided, however, that such waiver shall be limited to the extent of the net insurance proceeds payable by the relevant insurance company with respect to such loss or damage (or in the case of deemed coverage, the net proceeds that would have been payable). For purposes of this Paragraph 16, Tenant shall be deemed to be carrying any of the insurance policies required pursuant to Paragraph 15 but not actually carried by Tenant, and Landlord shall be deemed to carry standard fire and extended coverage policies on the Project. Each party hereto shall cause each such fire and extended coverage insurance policy obtained by it to provide

that the insurance company waives all rights of recovery by way of subrogation against the other respective party and the other released parties in connection with any matter covered by such policy.

Main P – Colony American lease v3
Das10-7-15

17. Utilities.

a. Basic Services. Landlord shall furnish the following utilities and services (“**Basic Services**”) for the Premises: (i) during the hours of 8 A.M. to 6 P.M. (“**Business Hours**”) Monday through Friday (except public holidays) (“**Business Days**”), electricity for Building standard lighting and power suitable for the use of the Premises for ordinary general office purposes, (ii) during Business Hours on Business Days and, provided that Tenant requests such service through the Building’s automated system for requesting after-hour HVAC service, from 8 A.M. to 12 P.M. on Saturday (except public holidays), heat and air conditioning required in Landlord’s judgment for the comfortable use and occupancy of the Premises for ordinary general office purposes, (iii) unheated water for the restroom(s) in the public areas serving the Premises, (iv) elevator service to the floor(s) of the Premises by non-attended automatic elevators for general office pedestrian usage, and (v) five (5) days per week (excluding public holidays), janitorial services limited to emptying and removal of general office refuse, light vacuuming as needed and window washing as determined by Landlord. Notwithstanding the foregoing, however, Tenant may use water, heat, air conditioning, electric current, elevator and janitorial service in excess of that provided in Basic Services (“**Excess Services**,” which shall include without limitation any power usage other than through existing standard 110-volt AC outlets; electricity in excess of the lesser of that described in clause (i) above or clause (ii) of Paragraph 17.c. below; electricity and/or water consumed by Tenant in connection with any dedicated or supplemental heating, ventilating and/or air conditioning, computer power, telecommunications and/or other special units or systems of Tenant; chilled, heated or condenser water; or water used for any purpose other than ordinary drinking and lavatory purposes), provided that the Excess Services desired by Tenant are reasonably available to Landlord and to the Premises (it being understood that in no event shall Landlord be obligated to make available to the Premises more than the pro rata share of the capacity of any Excess Service available to the Building or the applicable floor of the Building, as the case may be), and provided further that Tenant complies with the procedures established by Landlord from time to time for requesting and paying for such Excess Services and with all other provisions of this Paragraph 17. Landlord reserves the right to install in the Premises or the Real Property electric current and/or water meters (including, without limitation, any additional wiring, conduit or panel required therefor) to measure the electric current or water consumed by Tenant or to cause the usage to be measured by other reasonable methods (e.g., by temporary “check” meters or by survey).

Notwithstanding anything to the contrary in this Lease (subject to any temporary shutdown for repairs, for security purposes, for compliance with any legal restrictions, or due to strikes, lockouts, labor disputes, fire or other casualty, acts of God, acts of terror, or other causes beyond the reasonable control of Landlord) Tenant shall have access to the Premises 24 hours a day, each day of the Lease term.

b. Payment for Utilities and Services. The cost of Basic Services shall be included in Operating Expenses. In addition, Tenant shall pay to Landlord upon demand (i) the cost, at Landlord’s prevailing rate, of any Excess Services used by Tenant, (ii) the reasonable cost of installing, operating, maintaining or repairing any meter or other device used to measure Tenant’s consumption of utilities, (iii) the reasonable cost of installing, operating, maintaining or repairing any Temperature Balance Equipment (as defined in Paragraph 17.d. below) for the Premises and/or any equipment required in connection with any Excess Services requested by Tenant, and (iv) any cost otherwise reasonably incurred by Landlord in keeping account of or determining any Excess Services used by Tenant. Landlord’s failure to bill Tenant for any of the foregoing shall not waive Landlord’s right to bill Tenant for the same at a later time.

c. Utility Connections. Tenant shall not connect or use any apparatus or device in the Premises (i) using current in excess of 110 volts, or (ii) which would cause Tenant’s electrical demand load to exceed an average of two and one-half (2.5) watts per usable square foot, or (iii) which would exceed the capacity of the existing panel or transformer serving the Premises. Tenant shall not connect with electric current (except through existing outlets in the Premises or such additional outlets as may be installed in the Premises as part of initial improvements or Alterations approved by Landlord), or water pipes, any apparatus or device for the purpose of using electrical current or water.

Landlord will not permit additional coring or channeling of the floor of the Premises in order to install new electric outlets in the Premises unless Landlord is satisfied, on the basis of such information to be supplied by Tenant at Tenant’s expense, that coring and/or channeling of the floor in order to install such additional outlets will not weaken the structure of the floor.

d. Temperature Balance. If the temperature otherwise maintained in any portion of the Premises by the heating, air conditioning or ventilation system is affected as a result of

(i) the type or quantity of any lights, machines or equipment (including without limitation typical office equipment) used by Tenant in the Premises, (ii) the occupancy of such portion of the Premises

by more than one person per two hundred (200) square feet of rentable area therein, (iii) an electrical load for lighting or power in excess of the limits specified in Paragraph 17.c. above, or (iv) any rearrangement of partitioning or other improvements, then at Tenant's sole cost, Landlord may install any equipment, or modify any existing equipment (including the standard air conditioning equipment) Landlord deems necessary to restore the temperature balance (such new equipment or modifications to existing equipment termed herein "**Temperature Balance Equipment**"). Tenant agrees to keep closed, when necessary, draperies and/or window treatments which, because of the sun's position, must be closed to provide for the efficient operation of the air conditioning system, and Tenant agrees to cooperate with Landlord and to abide by the regulations and requirements which Landlord may prescribe for the proper functioning and protection of the heating, ventilating and air conditioning system. Landlord makes no representation to Tenant regarding the adequacy or fitness of the heating, air conditioning or ventilation equipment in the Building to maintain temperatures that may be required for, or because of, any computer or communications rooms, machine rooms, conference rooms or other areas of high concentration of personnel or electrical usage, or any other uses other than or in excess of the fractional horsepower normally required for office equipment, and Landlord shall have no liability for loss or damage suffered by Tenant or others in connection therewith.

e. **Interruption of Services.** Landlord's obligation to provide utilities and services for the Premises are subject to the Rules and Regulations of the Building, applicable Legal Requirements (including the rules or actions of the public utility company furnishing the utility or service), and shutdowns for maintenance and repairs, for security purposes, or due to strikes, lockouts, labor disputes, fire or other casualty, acts of God, or other causes beyond the control of Landlord. In the event of an interruption in, or failure or inability to provide any service or utility for the Premises for any reason, such interruption, failure or inability shall not constitute an eviction of Tenant, constructive or otherwise, or impose upon Landlord any liability whatsoever, including, but not limited to, liability for consequential damages or loss of business by Tenant, or entitle Tenant to any abatement or offset of Monthly Rent, Additional Rent or any other amounts due from Tenant under this Lease. Tenant hereby waives the provisions of California Civil Code Section 1932(1) or any other applicable existing or future Legal Requirement permitting the termination of this Lease due to such interruption, failure or inability. Notwithstanding the foregoing, if any interruption in or failure or inability to provide any of the services or utilities described in Paragraph 17.a. (a "**Service Interruption**") is (i) within the reasonable control of Landlord to correct and continues for five (5) or more consecutive Business Days after Landlord becomes aware thereof, whether by Tenant's written notice to Landlord thereof or otherwise, or (ii) outside of Landlord's reasonable control to correct and continues for fifteen (15) or more consecutive days after Landlord becomes aware thereof, whether by Tenant's written notice to Landlord thereof or otherwise, and Tenant is unable to conduct and does not conduct any business in a portion of the Premises as a result thereof, then Tenant shall be entitled to an abatement of Monthly Rent under Paragraph 5 hereof and Additional Rent under Paragraph 7 hereof, which abatement shall commence as of the first day after the expiration of such five (5) Business Day or fifteen (15) day period (as applicable) and terminate upon the cessation of such Service Interruption, and which abatement shall be based on the portion of the Premises rendered unusable for Tenant's business by such Service Interruption; provided, however, that, with regard to a Service Interruption that is outside of Landlord's reasonable control to correct, if, during any portion of the aforementioned fifteen (15) day period that such Service Interruption continued and Tenant was unable to and did not conduct business in a portion of the Premises, Landlord is entitled to recover under Landlord's rental loss insurance coverage Landlord's rental loss resulting from the Service Interruption, then, Tenant's Monthly Rent and Additional Rent *shall* abate during such period to the extent Tenant could not and did not use the Premises, but only to the extent that the amounts Landlord receives under such rental loss insurance coverage would be proportionately attributable to Tenant's rent during such period, and only if Tenant pays Tenant's proportionate share of any subject deductible amounts. If the portion of the Premises that is usable is too small for Tenant to reasonably conduct any business (and Tenant does not conduct any business in any portion of the Premises) then Tenant's rental obligations shall be abated for the entire Premises. The abatement rights set forth above shall be inapplicable to any interruption, failure or inability described in this Paragraph 17.e. that is caused by (x) damage from fire or other casualty (it being acknowledged that such situation shall be governed by Paragraph 26 below), or (y) to any other interruption, failure or inability described in this Paragraph 17.e. to the extent caused by the negligence or willful misconduct of Tenant or its agents, employees or contractors.

f. **Governmental Controls; Certification.** In the event any governmental authority having jurisdiction over the Project or the Building promulgates or revises any Legal Requirement or building, fire or other code or imposes mandatory or voluntary controls or guidelines on Landlord or the Project or the Building relating to the use or conservation of energy or utilities or the reduction of automobile or other emissions (collectively, "**Controls**") or in the event Landlord is required or elects to make alterations to the Project or the Building in order to comply with such mandatory or voluntary Controls, Landlord may, in its sole discretion, comply with such Controls or

make such alterations to the Project or the Building related thereto. Such compliance and the making of such alterations shall not constitute an eviction of Tenant, constructive or otherwise, or impose

upon Landlord any liability whatsoever, including, but not limited to, liability for consequential damages or loss of business by Tenant.

Without limitation of any provision of Paragraph 8.b. above (entitled "Compliance with Law"), Tenant shall, upon Landlord's written request, deliver to Landlord information relating to the Premises that is necessary for the Building to earn and maintain performance certifications (including, without limitation, ENERGY STAR and LEED certification), which information shall be in sufficient detail for the Building to comply with the applicable certification criteria and/or requirements, including, without limitation, those applicable to data centers and to any other particular use that is subject to special certification criteria and/or requirements.

18. Personal Property and Other Taxes. Tenant shall pay, at least ten (10) days before delinquency, any and all taxes, fees, charges or other governmental impositions levied or assessed against Landlord or Tenant (a) upon Tenant's equipment, furniture, fixtures, improvements and other personal property (including carpeting installed by Tenant) located in the Premises, (b) by virtue of any Alterations made by Tenant to the Premises, and (c) upon this transaction or any document to which Tenant is a party creating or transferring an interest or an estate in the Premises. If any such fee, charge or other governmental imposition is paid by Landlord, Tenant shall reimburse Landlord for Landlord's payment upon demand.

19. Rules and Regulations. Tenant shall comply with the rules and regulations set forth on Exhibit B attached hereto, as such rules and regulations may be modified or amended by Landlord from time to time (the "**Rules and Regulations**"). Landlord shall not be responsible to Tenant for the nonperformance or noncompliance by any other tenant or occupant of the Building of or with any of the Rules and Regulations, but Landlord agrees not to enforce the Rules and Regulations in a discriminatory manner. In the event of any conflict between the Rules and Regulations and the balance of this Lease, the balance of this Lease shall control.

20. Surrender; Holding Over.

a. Surrender. Upon the expiration or other termination of this Lease, Tenant shall surrender the Premises to Landlord vacant and broom-clean, with all improvements and Alterations (except as provided below) in their original condition, except for reasonable wear and tear, damage from casualty or condemnation and any changes resulting from approved Alterations; provided, however, that prior to the expiration or termination of this Lease Tenant shall remove from the Premises any Alterations that Tenant is required by Landlord to remove under the provisions of this Lease and all of Tenant's personal property (including, without limitation, all voice and data cabling) and trade fixtures, and, at Landlord's sole election, any other improvements, whether installed by Landlord or Tenant, that are of a type or quantity that would not be installed by or for a typical tenant using space for general office purposes, or are otherwise nonstandard. If such removal is not completed at the expiration or other termination of this Lease, Landlord may remove the same at Tenant's expense. Any damage to the Premises or the Building caused by such removal shall be repaired promptly by Tenant (including the patching or repairing of ceilings and walls) or, if Tenant fails to do so, Landlord may do so at Tenant's expense. The removal of Alterations from the Premises shall be governed by Paragraph 9 above. Tenant's obligations under this paragraph shall survive the expiration or other termination of this Lease. Upon expiration or termination of this Lease or of Tenant's possession, Tenant shall surrender all keys to the Premises or any other part of the Building and shall make known to Landlord the combination of locks on all safes, cabinets and vaults that may be located in the Premises.

b. Holding Over. If Tenant remains in possession of the Premises after the expiration or earlier termination of this Lease with the express written consent of Landlord, Tenant's occupancy shall be a month-to-month tenancy at a rent agreed upon by Landlord and Tenant, but in no event less than one hundred fifty percent (150%) of the Monthly Rent and Additional Rent payable under this Lease during the last full month prior to the date of the expiration of this Lease. Except as provided in the preceding sentence, the month-to-month tenancy shall be on the terms and conditions of this Lease, except that any renewal options, expansion options, rights of first refusal, rights of first negotiation or any other rights or options pertaining to additional space in the Building contained in this Lease shall be deemed to have terminated and shall be inapplicable thereto. Landlord's acceptance of rent after such holding over with Landlord's written consent shall not result in any other tenancy or in a renewal of the original term of this Lease. If Tenant remains in possession of the Premises after the expiration or earlier termination of this Lease without Landlord's consent, Tenant's continued possession shall be on the basis of a tenancy at sufferance and Tenant shall pay as Monthly Rent during the holdover period an amount equal to the greater of (i) one hundred fifty percent (150%) of the fair market rental (as reasonably determined by Landlord) for the Premises or (ii) two hundred percent (200%) of the Monthly Rent and Additional Rent payable under this Lease for the

last full month prior to the date of such expiration or termination.

Main P – Colony American lease v3
Das10-7-15

20

c. Indemnification. Tenant shall indemnify, defend and hold Landlord harmless from and against all Claims incurred by or asserted against Landlord and arising directly or indirectly from Tenant's failure to timely surrender the Premises, including but not limited to (i) any rent payable by or any loss, cost, or damages, including lost profits, claimed by any prospective tenant of the Premises or any portion thereof, and (ii) Landlord's damages as a result of such prospective tenant rescinding or refusing to enter into the prospective lease of the Premises or any portion thereof by reason of such failure to timely surrender the Premises.

21. Subordination and Attornment. This Lease is expressly made subject and subordinate to any mortgage, deed of trust, ground lease, underlying lease or like encumbrance affecting any part of the Real Property or any interest of Landlord therein which is now existing or hereafter executed or recorded, any present or future modification, amendment or supplement to any of the foregoing, and to any advances made thereunder (any of the foregoing being a "**Superior Interest**") without the necessity of any further documentation evidencing such subordination. Notwithstanding the foregoing, Tenant shall, within ten (10) days after Landlord's request, execute and deliver to Landlord a document evidencing the subordination of this Lease to a particular Superior Interest. Tenant hereby irrevocably appoints Landlord as Tenant's attorney-in-fact to execute and deliver any such instrument in the name of Tenant if Tenant fails to do so within such time. If the interest of Landlord in the Real Property or the Building is transferred to any person ("**Purchaser**") pursuant to or in lieu of foreclosure or other proceedings for enforcement of any Superior Interest, Tenant shall immediately attorn to the Purchaser, and this Lease shall continue in full force and effect as a direct lease between the Purchaser and Tenant on the terms and conditions set forth herein, provided that Purchaser acquires and accepts the Real Property or the Building subject to this Lease. Upon Purchaser's request, including any such request made by reason of the termination of this Lease as a result of such foreclosure or other proceedings, Tenant shall enter in to a new lease with Purchaser on the terms and conditions of this Lease applicable to the remainder of the term hereof. Notwithstanding the subordination of this Lease to Superior Interests as set forth above, the holder of any Superior Interest may at any time (including as part of foreclosure or other proceedings for enforcement of such Superior Interest), upon written notice to Tenant, elect to have this Lease be prior and superior to such Superior Interest.

22. Financing Condition. If any lender or ground lessor that intends to acquire an interest in, or holds a mortgage, ground lease or deed of trust encumbering any portion of the Project should require either the execution by Tenant of an agreement requiring Tenant to send such lender written notice of any default by Landlord under this Lease and giving such lender the right to cure such default until such lender has completed foreclosure, and preventing Tenant from terminating this Lease (to the extent such termination right would otherwise be available) unless such default remains uncured after foreclosure has been completed, and/or any modification of the agreements, covenants, conditions or provisions of this Lease, then Tenant agrees that it shall, within ten (10) days after Landlord's request, execute and deliver such agreement and modify this Lease as required by such lender or ground lessor; provided, however, that no such modification shall affect the length of the term or increase the rent payable by Tenant under Paragraphs 5 and 7. Tenant acknowledges and agrees that its failure to timely execute any such agreement or modification required by such lender or ground lessor may cause Landlord serious financial damage by causing the failure of a financing transaction and giving Landlord all of its rights and remedies under Paragraph 25 below, including its right to damages caused by the loss of such financing.

23. Entry by Landlord. Landlord may, at any and all reasonable times, and upon reasonable advance notice (provided that no advance notice need be given if an emergency necessitates an immediate entry or prior to entry to provide routine janitorial services, which janitorial service shall be provided after Business Hours), enter the Premises to (a) inspect the same and to determine whether Tenant is in compliance with its obligations hereunder, (b) supply janitorial and any other service Landlord is required to provide hereunder, (c) show the Premises to prospective lenders or purchasers, and, during the final twelve (12) months of the Lease term, prospective tenants, (d) post notices of non-responsibility, and (e) alter, improve or repair the Premises or any other portion of the Project. In connection with any such alteration, improvement or repair, Landlord may erect in the Premises or elsewhere in the Project scaffolding and other structures reasonably required for the work to be performed. In no event shall such entry or work entitle Tenant to an abatement of rent, constitute an eviction of Tenant, constructive or otherwise, or impose upon Landlord any liability whatsoever, including but not limited to liability for consequential damages or loss of business or profits by Tenant. Landlord shall use good faith efforts to cause all such work to be done in such a manner as to cause as little interference to Tenant as reasonably possible without incurring additional expense. Landlord shall at all times retain a key with which to unlock all of the doors in the Premises, except Tenant's vaults and safes. If an emergency necessitates immediate access to the Premises, Landlord may use whatever force is necessary to enter the Premises and any such entry to the Premises shall not constitute a forcible or unlawful entry into the Premises, a detainer of the

Premises, or an eviction of Tenant from the Premises, or any portion thereof.

Main P – Colony American lease v3
Das10-7-15

Notwithstanding the foregoing provisions of this Paragraph 23, if any such entry or work by Landlord within the Premises is not due to Tenant's request for Alterations to be performed in the Premises or routine maintenance and repair for the Premises, and, during the period of entry or work, all or a substantial part of the Premises are rendered unusable for a period in excess of five (5) consecutive Business Days due to such entry or work such that Tenant is unable to, and does not, conduct its business in a material portion of the Premises (the area affected shall not be deemed a "material portion" of the Premises if Tenant's business operations are not materially adversely affected by the loss of such space and/or, during the course of Landlord's entry into the Premises, Tenant is reasonably able to make use of other space in the Premises in substitution of the affected space), then, during the period commencing on the fifth (5th) consecutive Business Day of such entry or work and terminating upon the cessation of such entry or work, Tenant shall be entitled to an abatement of Monthly Rent and Additional Rent, which abatement shall be based on the portion of the Premises rendered unusable due to such entry or work. The foregoing provisions shall not apply to any entry or work necessitated due to (i) damage from fire or other casualty which shall be governed by Paragraph 26 or (ii) the negligence or willful misconduct of Tenant or its agents, employees or contractors.

24. Insolvency or Bankruptcy. The occurrence of any of the following shall constitute an Event of Default under Paragraph 25 below:

a. Tenant ceases doing business as a going concern, makes an assignment for the benefit of creditors, is adjudicated an insolvent, files a petition (or files an answer admitting the material allegations of such petition) seeking for Tenant any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar arrangement under any state or federal bankruptcy or other law, or Tenant consents to or acquiesces in the appointment, pursuant to any state or federal bankruptcy or other law, of a trustee, receiver or liquidator for the Premises, for Tenant or for all or any substantial part of Tenant's assets; or

b. Tenant fails within sixty (60) days after the commencement of any proceedings against Tenant seeking reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any state or federal bankruptcy or other Legal Requirement, to have such proceedings dismissed, or Tenant fails, within sixty (60) days after an appointment pursuant to any state or federal bankruptcy or other Legal Requirement without Tenant's consent or acquiescence, of any trustee, receiver or liquidator for the Premises, for Tenant or for all or any substantial part of Tenant's assets, to have such appointment vacated; or

c. Tenant is unable, or admits in writing its inability, to pay its debts as they mature; or

d. Tenant gives notice to any governmental body of its insolvency or pending insolvency, or of its suspension or pending suspension of operations.

In no event shall this Lease be assigned or assignable by reason of any voluntary or involuntary bankruptcy, insolvency or reorganization proceedings, nor shall any rights or privileges hereunder be an asset of Tenant, the trustee, debtor-in-possession, or the debtor's estate in any bankruptcy, insolvency or reorganization proceedings.

25. Default and Remedies.

a. Events of Default. The occurrence of any of the following shall constitute an "Event of Default" by Tenant:

1. Tenant fails to pay Monthly Rent, Additional Rent or any other rent due hereunder within five (5) Business Days following written notice from Landlord that such sum is past due; provided, however, that Landlord shall only be required to give two (2) such notices in any calendar year, and after two (2) such notices are given any failure by Tenant in such calendar year to pay Monthly Rent, Additional Rent or any other rent due hereunder on or before the date due will constitute an Event of Default without the requirement of notice from Landlord of such failure; or

2. Intentionally Deleted; or

3. Tenant fails to deliver any estoppel certificate pursuant to Paragraph 29 below, subordination agreement pursuant to Paragraph 21 above, or document required pursuant to Paragraph 22 above, within the applicable period set forth therein; or

4. Tenant violates the bankruptcy and insolvency provisions of

Paragraph 24 above; or 4. Tenant violates the bankruptcy and insolvency provisions of

Main P – Colony American lease v3
Das10-7-15

5. Tenant makes or has made or furnishes or has furnished any warranty, representation or statement to Landlord in connection with this Lease, or any other agreement made by Tenant for the benefit of Landlord, which is or was false or misleading in any material respect when made or furnished; or

6. Tenant assigns this Lease or subleases any portion of the Premises in violation of Paragraph 13 above; or

7. The default by any guarantor of Tenant's obligations under this Lease of any provision of such guarantor's guaranty, or the attempted repudiation or revocation of any such guaranty or any provision thereof, or the application of items 4 or 5 of this Paragraph 25.a. with the reference to "Tenant" therein being deemed to refer instead to such guarantor; or

8. Intentionally Deleted; or

9. Tenant fails to comply with any other provision of this Lease in the manner and within the time required.

b. **Remedies.** Upon the occurrence of an Event of Default Landlord shall have the following remedies, which shall not be exclusive but shall be cumulative and shall be in addition to any other remedies now or hereafter allowed by law:

1. Landlord may terminate Tenant's right to possession of the Premises at any time by written notice to Tenant. Tenant expressly acknowledges that in the absence of such written notice from Landlord, no other act of Landlord, including, but not limited to, its re-entry into the Premises, its efforts to relet the Premises, its reletting of the Premises for Tenant's account, its storage of Tenant's personal property and trade fixtures, its acceptance of keys to the Premises from Tenant, its appointment of a receiver, or its exercise of any other rights and remedies under this Paragraph 25 or otherwise at law, shall constitute an acceptance of Tenant's surrender of the Premises or constitute a termination of this Lease or of Tenant's right to possession of the Premises.

Upon such termination in writing of Tenant's right to possession of the Premises, this Lease shall terminate and Landlord shall be entitled to recover damages from Tenant as provided in California Civil Code Section 1951.2 or any other applicable existing or future Legal Requirement providing for recovery of damages for such breach, including but not limited to the following:

(i) The reasonable cost of recovering the Premises; plus

(ii) The reasonable cost of removing Tenant's Alterations, trade fixtures and improvements; plus

(iii) All unpaid rent due or earned hereunder prior to the date of termination, less the proceeds of any reletting or any rental received from subtenants prior to the date of termination applied as provided in Paragraph 25.b.2. below, together with interest at the Interest Rate, on such sums from the date such rent is due and payable until the date of the award of damages; plus

(iv) The amount by which the rent which would be payable by Tenant hereunder, including Additional Rent under Paragraph 7 above, as reasonably estimated by Landlord, from the date of termination until the date of the award of damages, exceeds the amount of such rental loss as Tenant proves could have been reasonably avoided, together with interest at the Interest Rate on such sums from the date such rent is due and payable until the date of the award of damages; plus

(v) The amount by which the rent which would be payable by Tenant hereunder, including Additional Rent under Paragraph 7 above, as reasonably estimated by Landlord, for the remainder of the then term, after the date of the award of damages exceeds the amount such rental loss as Tenant proves could have been reasonably avoided, discounted at the discount rate published by the Federal Reserve Bank of San Francisco for member banks at the time of the award plus one percent (1%); plus

(vi) Such other reasonable amounts in addition to or in lieu of the foregoing as may be permitted from time to time by applicable law, including without limitation any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom.

of things would be likely to result therefrom.

Main P – Colony American lease v3
Das10-7-15

2. Landlord has the remedy described in California Civil Code Section 1951.4 (a landlord may continue the lease in effect after the tenant's breach and abandonment and recover rent as it becomes due, if the tenant has the right to sublet and assign subject only to reasonable limitations), and may continue this Lease in full force and effect and may enforce all of its rights and remedies under this Lease, including, but not limited to, the right to recover rent as it becomes due. After the occurrence of an Event of Default, Landlord may enter the Premises without terminating this Lease and sublet all or any part of the Premises for Tenant's account to any person, for such term (which may be a period beyond the remaining term of this Lease), at such rents and on such other terms and conditions as Landlord deems advisable. In the event of any such subletting, rents received by Landlord from such subletting shall be applied (i) first, to the payment of the costs of maintaining, preserving, altering and preparing the Premises for subletting, the other costs of subletting, including but not limited to customary brokers' commissions, reasonable attorneys' fees and expenses of removal of Tenant's personal property, trade fixtures and Alterations; (ii) second, to the payment of rent then due and payable hereunder; (iii) third, to the payment of future rent as the same may become due and payable hereunder; (iv) fourth, the balance, if any, shall be paid to Tenant upon (but not before) expiration of the term of this Lease. If the rents received by Landlord from such subletting, after application as provided above, are insufficient in any month to pay the rent due and payable hereunder for such month, Tenant shall pay such deficiency to Landlord monthly upon demand. Notwithstanding any such subletting for Tenant's account without termination, Landlord may at any time thereafter, by written notice to Tenant, elect to terminate this Lease by virtue of a previous Event of Default.

During the continuance of an Event of Default, for so long as Landlord does not terminate Tenant's right to possession of the Premises and subject to Paragraph 13, entitled Assignment and Subletting, and the options granted to Landlord thereunder, Landlord shall not unreasonably withhold its consent to an assignment or sublease of Tenant's interest in the Premises or in this Lease.

3. During the continuance of an Event of Default, Landlord may enter the Premises without terminating this Lease and remove all Tenant's personal property, Alterations and trade fixtures from the Premises and store them at Tenant's risk and expense. If Landlord removes such property from the Premises and stores it at Tenant's risk and expense, and if Tenant fails to pay the cost of such removal and storage after written demand therefor and/or to pay any rent then due, then after the property has been stored for a period of thirty (30) days or more Landlord may sell such property at public or private sale, in the manner and at such times and places as Landlord deems commercially reasonable following reasonable notice to Tenant of the time and place of such sale. The proceeds of any such sale shall be applied first to the payment of the expenses for removal and storage of the property, the preparation for and the conducting of such sale, and for attorneys' fees and other legal expenses incurred by Landlord in connection therewith, and the balance shall be applied as provided in Paragraph 25.b.2. above.

Except in the event of Landlord's gross negligence or willful misconduct, Tenant hereby waives all claims for damages that may be caused by Landlord's reentering and taking possession of the Premises or removing and storing Tenant's personal property pursuant to this Paragraph 25, and Tenant shall indemnify, defend and hold Landlord harmless from and against any and all Claims resulting from any such act. No reentry by Landlord shall constitute or be construed as a forcible entry by Landlord.

4. Landlord may require Tenant to remove any and all Alterations from the Premises or, if Tenant fails to do so within ten (10) Business Days after Landlord's request, Landlord may do so at Tenant's expense.

5. Landlord may cure the Event of Default at Tenant's expense, it being understood that such performance shall not waive or cure the subject Event of Default. If Landlord pays any sum or incurs any expense in curing the Event of Default, Tenant shall reimburse Landlord upon demand for the amount of such payment or expense with interest at the Interest Rate from the date the sum is paid or the expense is incurred until Landlord is reimbursed by Tenant. Any amount due Landlord under this subsection shall constitute additional rent hereunder.

c. Waiver of Redemption. Tenant hereby waives, for itself and all persons claiming by and under Tenant, all rights and privileges which it might have under any present or future Legal Requirement to redeem the Premises or to continue this Lease after being dispossessed or ejected from the Premises.

26. Damage or Destruction. If all or any part of the Premises or any material portion of the balance of the Real Property is damaged by fire or other casualty, and the damage can,

in Landlord's reasonable opinion, be repaired within sixty (60) days of the damage, then Landlord shall repair the damage and this Lease shall remain in full force and effect. If the repairs cannot, in

Main P – Colony American lease v3
Das10-7-15

Landlord's opinion, be made within the sixty (60)-day period, Landlord at its option exercised by written notice to Tenant within the sixty (60)-day period, shall either (a) repair the damage, in which event this Lease shall continue in full force and effect, or (b) terminate this Lease as of the date specified by Landlord in the notice, which date shall be not less than thirty (30) days nor more than sixty (60) days after the date such notice is given, and this Lease shall terminate on the date specified in the notice. Notwithstanding the foregoing, Landlord shall not be obligated to repair or replace any of Tenant's movable furniture, equipment, trade fixtures and other personal property, nor any above Building standard Alterations that were installed in the Premises by or at the request of Tenant (including those installed by Landlord at Tenant's request, whether prior or subsequent to the commencement of the Lease term) and no damage to any of the foregoing shall entitle Tenant to any rent abatement, and Tenant shall, at Tenant's sole cost and expense, repair and replace such items. All such repair and replacement of above Building standard Alterations shall be constructed by Tenant in accordance with Paragraph 9 above regarding Alterations.

If the fire or other casualty damages the Premises or the common areas of the Real Property necessary for Tenant's use and occupancy of the Premises, Tenant ceases to use any portion of the Premises as a result of such damage, and the damage does not result from the negligence or willful misconduct of Tenant or any other Tenant Parties, then during the period the Premises or portion thereof are rendered unusable by such damage and repair, Tenant's Monthly Rent and Additional Rent under Paragraphs 5 and 7 above shall be proportionately reduced based upon the extent to which the damage and repair prevents Tenant from conducting, and Tenant does not conduct, its business at the Premises.

A total destruction of the Building shall automatically terminate this Lease. In no event shall Tenant be entitled to any compensation or damages from Landlord for loss of use of the whole or any part of the Premises or for any inconvenience occasioned by any such destruction, rebuilding or restoration of the Premises, the Building or access thereto, except for the rent abatement expressly provided above. Tenant hereby waives California Civil Code Sections 1932(2) and 1933(4), providing for termination of hiring upon destruction of the thing hired and Sections 1941 and 1942, providing for repairs to and of premises.

27. Eminent Domain.

a. If all or any part of the Premises is taken by any public or quasi-public authority under the power of eminent domain, or any agreement in lieu thereof (a "taking"), this Lease shall terminate as to the portion of the Premises taken effective as of the date of taking. If only a portion of the Premises is taken, Landlord or Tenant may terminate this Lease as to the remainder of the Premises upon written notice to the other party within ninety (90) days after the taking; provided, however, that Tenant's right to terminate this Lease is conditioned upon the remaining portion of the Premises being of such size or configuration that such remaining portion of the Premises is unusable or uneconomical for Tenant's business. Landlord shall be entitled to all compensation, damages, income, rent awards and interest thereon whatsoever which may be paid or made in connection with any taking and Tenant shall have no claim against Landlord or any governmental authority for the value of any unexpired term of this Lease or of any of the improvements or Alterations in the Premises; provided, however, that the foregoing shall not prohibit Tenant from prosecuting a separate claim against the taking authority for an amount separately designated for Tenant's relocation expenses or the interruption of or damage to Tenant's business or as compensation for Tenant's personal property, trade fixtures, Alterations or other improvements paid for by Tenant so long as any award to Tenant will not reduce the award to Landlord.

In the event of a partial taking of the Premises which does not result in a termination of this Lease, the Monthly Rent and Additional Rent under Paragraphs 5 and 7 hereunder shall be equitably reduced. If all or any material part of the Real Property other than the Premises is taken, Landlord may terminate this Lease upon written notice to Tenant given within ninety (90) days after the date of taking.

b. Notwithstanding the foregoing, if all or any portion of the Premises is taken for a period of time of one (1) year or less ending prior to the end of the term of this Lease, this Lease shall remain in full force and effect and Tenant shall continue to pay all rent and to perform all of its obligations under this Lease; provided, however, that Tenant shall be entitled to all compensation, damages, income, rent awards and interest thereon that is paid or made in connection with such temporary taking of the Premises (or portion thereof), except that any such compensation in excess of the rent or other amounts payable to Landlord hereunder shall be promptly paid over to Landlord as received. Landlord and Tenant each hereby waive the provisions of California Code of Civil Procedure Section 1265.130 and any other applicable existing or future Legal Requirement providing for, or allowing either party to petition the courts of the state in which the Real Property is

located for, a termination of this Lease upon a partial taking of the Premises and/or the Building.

Main P – Colony American lease v3
Das10-7-15

28. Landlord's Liability: Sale of Building. The term "Landlord," as used in this Lease, shall mean only the owner or owners of the Real Property at the time in question. Notwithstanding any other provision of this Lease, the liability of Landlord for its obligations under this Lease is limited solely to Landlord's interest in the Real Property as the same may from time to time be encumbered, and no personal liability shall at any time be asserted or enforceable against any other assets of Landlord or against the constituent shareholders, partners, members, or other owners of Landlord, or the directors, officers, employees and agents of Landlord or such constituent shareholder, partner, member or other owner, on account of any of Landlord's obligations or actions under this Lease. In addition, in the event of any conveyance of title to the Real Property, then the grantor or transferor shall be relieved of all liability with respect to Landlord's obligations to be performed under this Lease after the date of such conveyance. In no event shall Landlord be deemed to be in default under this Lease unless Landlord fails to perform its obligations under this Lease, Tenant delivers to Landlord written notice specifying the nature of Landlord's alleged default, and Landlord fails to cure such default within thirty (30) days following receipt of such notice (or, if the default cannot reasonably be cured within such period, to commence action within such thirty (30)-day period and proceed diligently thereafter to cure such default). Upon any conveyance of title to the Real Property, the grantee or transferee shall be deemed to have assumed Landlord's obligations to be performed under this Lease from and after the date of such conveyance, subject to the limitations on liability set forth above in this Paragraph 28. If Tenant provides Landlord with any security for Tenant's performance of its obligations hereunder, Landlord shall transfer such security to the grantee or transferee of Landlord's interest in the Real Property, and upon such transfer Landlord shall be released from any further responsibility or liability for such security. Any claim, defense or other right of Tenant arising in connection with this Lease shall be barred unless Tenant files an action or interposes a defense based thereon within one hundred eighty (180) days after the date of the alleged event on which Tenant is basing its claim, defense or right. Notwithstanding any other provision of this Lease, but not in limitation of the provisions of Paragraph 14.a. above, Landlord shall not be liable for any consequential damages or interruption or loss of business, income or profits, or claims of constructive eviction, nor shall Landlord be liable for loss of or damage to artwork, currency, jewelry, bullion, unique or valuable documents, securities or other valuables, or for other property not in the nature of ordinary fixtures, furnishings and equipment used in general administrative and executive office activities and functions (all of the foregoing, collectively, "**Special Claims**"). Wherever in this Lease Tenant (a) releases Landlord from any claim or liability, (b) waives or limits any right of Tenant to assert any claim against Landlord or to seek recourse against any property of Landlord or (c) agrees to indemnify Landlord against any matters, the relevant release, waiver, limitation or indemnity shall run in favor of and apply to Landlord, the constituent shareholders, partners, members, or other owners of Landlord, and the directors, officers, employees and agents of Landlord and each such constituent shareholder, partner, member or other owner.

29. Estoppel Certificates. At any time and from time to time, upon not less than ten (10) Business Days' prior notice from Landlord, Tenant shall execute, acknowledge and deliver to Landlord a statement certifying the commencement date of this Lease, stating that this Lease is unmodified and in full force and effect (or if there have been modifications, that this Lease is in full force and effect as modified and the date and nature of each such modification), that Landlord is not in default under this Lease (or, if Landlord is in default, specifying the nature of such default), that Tenant is not in default under this Lease (or, if Tenant is in default, specifying the nature of such default), the current amounts of and the dates to which the Monthly Rent and Additional Rent has been paid, and setting forth such other matters as may be reasonably requested by Landlord. Any such statement may be conclusively relied upon by a prospective purchaser of the Real Property or by a lender obtaining a lien on the Real Property as security. If Tenant fails to deliver such statement within the time required hereunder, such failure shall be conclusive upon Tenant that (i) this Lease is in full force and effect, without modification except as may be represented by Landlord, (ii) there are no uncured defaults in Landlord's performance of its obligations hereunder, (iii) not more than one month's installment of Monthly Rent has been paid in advance, and (iv) any other statements of fact included by Landlord in such statement are correct. Tenant acknowledges and agrees that its failure to execute such certificate may cause Landlord serious financial damage by causing the failure of a sale or financing transaction and giving Landlord all of its rights and remedies under Paragraph 25 above, including its right to damages caused by the loss of such sale or financing.

At any time from time to time, upon not less than ten (10) Business Days' prior notice from Tenant, Landlord shall similarly execute and deliver to Tenant a statement similar to that described in the immediately preceding paragraph.

30. Right of Landlord to Perform. If Tenant fails to make any payment required hereunder (other than Monthly Rent and Additional Rent) or fails to perform any other of its obligations hereunder, Landlord may, but shall not be obliged to, and without waiving any default of Tenant or releasing Tenant from any obligations to Landlord hereunder, make any such payment or

perform any other such obligation on Tenant's behalf. Tenant shall pay to Landlord, within ten (10) days of Landlord's written demand therefor, one hundred ten percent (110%) of all sums so paid by

Landlord and all necessary incidental costs incurred by Landlord in connection with the performance by Landlord of an obligation of Tenant. If such sum is not paid by Tenant within the required ten (10) day period, interest shall accrue on such sum at the Interest Rate from the end of such ten (10) day period until paid by Tenant. Further, Tenant's failure to make such payment within such ten (10) day period shall entitle Landlord to the same rights and remedies provided Landlord in the event of non-payment of rent.

31. Late Charge; Late Payments. Tenant acknowledges that late payment of any installment of Monthly Rent or Additional Rent or any other amount required under this Lease will cause Landlord to incur costs not contemplated by this Lease and that the exact amount of such costs would be extremely difficult and impracticable to fix. Such costs include, without limitation, processing and accounting charges, late charges that may be imposed on Landlord by the terms of any encumbrance or note secured by the Real Property and the loss of the use of the delinquent funds. Therefore, if any installment of Monthly Rent or Additional Rent or any other amount due from Tenant is not received when due, Tenant shall pay to Landlord on demand, on account of the delinquent payment, an additional sum equal to the greater of (i) five percent (5%) of the overdue amount, or (ii) One Hundred Dollars (\$100.00), which additional sum represents a fair and reasonable estimate of the costs that Landlord will incur by reason of late payment by Tenant. Acceptance of any late charge shall not constitute a waiver of Tenant's default with respect to the overdue amount, nor prevent Landlord from exercising its right to collect interest as provided above, rent, or any other damages, or from exercising any of the other rights and remedies available to Landlord.

Following the occurrence of three instances in any twelve (12) month period of Tenant's payment of Monthly Rent and/or Additional Rent more than ten (10) days late, Landlord may, upon written notice to Tenant and without prejudice to any other rights or remedies available to Landlord, (i) require that all remaining installments of Monthly Rent and monthly payments of Additional Rent be payable three months in advance and/or (ii) require that Tenant increase the amount of the Security Deposit (if any) by an amount equal to one (1) month's Rent.

32. Attorneys' Fees; Waiver of Jury Trial. In the event of any action or proceeding between Landlord and Tenant (including an action or proceeding between Landlord and the trustee or debtor in possession while Tenant is a debtor in a proceeding under any bankruptcy law) to enforce any provision of this Lease, the losing party shall pay to the prevailing party all costs and expenses, including, without limitation, reasonable attorneys' fees and expenses, incurred in such action and in any appeal in connection therewith by such prevailing party. The "**prevailing party**" will be determined by the court before whom the action was brought based upon an assessment of which party's major arguments or positions taken in the suit or proceeding could fairly be said to have prevailed over the other party's major arguments or positions on major disputed issues in the court's decision. Notwithstanding the foregoing, however, Landlord shall be deemed the prevailing party in any unlawful detainer or other action or proceeding instituted by Landlord based upon any default or alleged default of Tenant hereunder if (i) judgment is entered in favor of Landlord, or (ii) prior to trial or judgment Tenant pays all or any portion of the rent claimed by Landlord, vacates the Premises, or otherwise cures the default claimed by Landlord.

If Landlord becomes involved in any litigation or dispute, threatened or actual, by or against anyone not a party to this Lease, but arising by reason of or related to any act or omission of Tenant or any Tenant Party, Tenant agrees to pay Landlord's reasonable attorneys' fees and other costs incurred in connection with the litigation or dispute, regardless of whether a lawsuit is actually filed.

IF ANY ACTION OR PROCEEDING BETWEEN LANDLORD AND TENANT TO ENFORCE THE PROVISIONS OF THIS LEASE (INCLUDING AN ACTION OR PROCEEDING BETWEEN LANDLORD AND THE TRUSTEE OR DEBTOR IN POSSESSION WHILE TENANT IS A DEBTOR IN A PROCEEDING UNDER ANY BANKRUPTCY LAW) PROCEEDS TO TRIAL, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, LANDLORD AND TENANT HEREBY WAIVE THEIR RESPECTIVE RIGHTS TO A JURY IN SUCH TRIAL. Landlord and Tenant agree that this paragraph constitutes a written consent to waiver of trial by jury within the meaning of California Code of Civil Procedure Section 631(d)(2), and each party does hereby authorize and empower the other party to file this paragraph and/or this Lease, as required, with the clerk or judge of any court of competent jurisdiction as a written consent to waiver of jury trial.

33. Waiver. No provisions of this Lease shall be deemed waived by Landlord unless such waiver is in a writing signed by Landlord. The waiver by Landlord of any breach of any provision of this Lease shall not be deemed a waiver of any subsequent breach of the same or any other provision of this Lease. No delay or omission in the exercise of any right or remedy of Landlord

upon any default by Tenant shall impair such right or remedy or be construed as a waiver. Landlord's acceptance of any payments of rent due under this Lease shall not be deemed a waiver of any default

Main P – Colony American lease v3
Das10-7-15

by Tenant under this Lease (including Tenant's recurrent failure to timely pay rent) other than Tenant's nonpayment of the accepted sums, and no endorsement or statement on any check or accompanying any check or payment shall be deemed an accord and satisfaction. Landlord's consent to or approval of any act by Tenant requiring Landlord's consent or approval shall not be deemed to waive or render unnecessary Landlord's consent to or approval of any subsequent act by Tenant.

34. Notices. All notices and demands which may or are required to be given by either party to the other hereunder shall be in writing. All notices and demands by Landlord to Tenant shall be delivered personally or sent by United States mail, postage prepaid, or by any reputable overnight or same-day courier, addressed to Tenant at the Premises, or to such other place as Tenant may from time to time designate by notice to Landlord hereunder; provided, however, that prior to the Commencement Date, notices to Tenant shall be addressed to Tenant at 515 S. Flower Street, 44th floor, Los Angeles, CA 90071, attn.: Ryan McBride, Chief Operating Officer. All notices and demands by Tenant to Landlord shall be sent by United States mail, postage prepaid, or by any reputable overnight or same-day courier, addressed to Landlord in care of Shorenstein Properties LLC, 235 Montgomery Street, 16th floor, San Francisco, California 94104, Attn: Corporate Secretary, with a copy to the management office of the Building, or to such other place as Landlord may from time to time designate by notice to Tenant hereunder. Notices delivered personally or sent same-day courier will be effective immediately upon delivery to the addressee at the designated address; notices sent by overnight courier will be effective one (1) Business Day after acceptance by the service for delivery; notices sent by mail will be effective two (2) Business Days after mailing. In the event Tenant requests multiple notices hereunder, Tenant will be bound by such notice from the earlier of the effective times of the multiple notices.

35. Notice of Surrender. At least sixty (60) days before the last day of the term hereof, Tenant shall give to Landlord a written notice of intention to surrender the Premises on that date, but neither this paragraph nor any failure by Landlord to protest the lack of such notice by Tenant shall be construed as an extension of the term or as a consent by Landlord to any holding over by Tenant.

36. Defined Terms and Marginal Headings. When required by the context of this Lease, the singular includes the plural. If more than one person or entity signs this Lease as Tenant, the obligations hereunder imposed upon Tenant shall be joint and several, and the act of, written notice to or from, refund to, or signature of, any Tenant signatory to this Lease (including, without limitation, modifications of this Lease made by fewer than all such Tenant signatories) shall bind every other Tenant signatory as though every other Tenant signatory had so acted, or received or given the written notice or refund, or signed. The headings and titles to the paragraphs of this Lease are for convenience only and are not to be used to interpret or construe this Lease. Wherever the term "including" or "includes" is used in this Lease it shall be construed as if followed by the phrase "without limitation." Whenever in this Lease a right, option or privilege of Tenant is conditioned upon Tenant (or any affiliate thereof or successor thereto) being in "occupancy" of a specified portion or percentage of the Premises, for such purposes "**occupancy**" shall mean Tenant's (or such affiliate's or successor's) physical occupancy of the space for the conduct of such party's business, and shall not include any space that is subject to a sublease or that has been vacated by such party, other than a vacation of the space as reasonably necessary in connection with the performance of approved Alterations or by reason of a fire or other casualty or a taking. The language in all parts of this Lease shall in all cases be construed as a whole and in accordance with its fair meaning and not construed for or against any party simply because one party was the drafter thereof.

37. Time and Applicable Law. Time is of the essence of this Lease and of each and all of its provisions, except as to the conditions relating to the delivery of possession of the Premises to Tenant. This Lease shall be governed by and construed in accordance with the laws of the State of California, and the venue of any action or proceeding under this Lease shall be the City and County of San Francisco, California.

38. Successors. Subject to the provisions of Paragraphs 13 and 28 above, the covenants and conditions hereof shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, personal representatives, successors, executors, administrators and assigns.

39. Entire Agreement; Modifications. This Lease (including any exhibit, rider or attachment hereto) constitutes the entire agreement between Landlord and Tenant with respect to Tenant's lease of the Premises. No provision of this Lease may be amended or otherwise modified except by an agreement in writing signed by the parties hereto. Neither Landlord nor Landlord's agents have made any representations or warranties with respect to the Premises, the Building, the Real Property or this Lease except as expressly set forth herein, including without limitation any representations or warranties as to the suitability or fitness of the Premises for the conduct of Tenant's

business or for any other purpose, nor has Landlord or its agents agreed to undertake any alterations or construct any improvements to the Premises except those, if any, expressly provided in this Lease,

and no rights, easements or licenses shall be acquired by Tenant by implication or otherwise unless expressly set forth herein. Neither this Lease nor any memorandum hereof shall be recorded by Tenant.

40. Light and Air. Tenant agrees that no diminution of light, air or view by any structure which may hereafter be erected (whether or not by Landlord) shall entitle Tenant to any reduction of rent hereunder, result in any liability of Landlord to Tenant, or in any other way affect this Lease.

41. Name of Building. Tenant shall not use the name of the Building for any purpose other than as the address of the business conducted by Tenant in the Premises without the written consent of Landlord. Landlord reserves the right to change the name of the Building at any time in its sole discretion by written notice to Tenant and Landlord shall not be liable to Tenant for any loss, cost or expense on account of any such change of name.

42. Severability. If any provision of this Lease or the application thereof to any person or circumstance shall be invalid or unenforceable to any extent, the remainder of this Lease and the application of such provisions to other persons or circumstances shall not be affected thereby and shall be enforced to the greatest extent permitted by law.

43. Authority. If Tenant is a corporation, partnership, trust, association or other entity, Tenant and each person executing this Lease on behalf of Tenant, hereby covenants and warrants that (a) Tenant is duly incorporated or otherwise established or formed and validly existing under the laws of its state of incorporation, establishment or formation, (b) Tenant has and is duly qualified to do business in the state in which the Real Property is located, (c) Tenant has full corporate, partnership, trust, association or other appropriate power and authority to enter into this Lease and to perform all Tenant's obligations hereunder, and (d) each person (and all of the persons if more than one signs) signing this Lease on behalf of Tenant is duly and validly authorized to do so.

44. No Offer. Submission of this instrument for examination and signature by Tenant does not constitute an offer to lease or a reservation of or option for lease, and is not effective as a lease or otherwise until execution and delivery by both Landlord and Tenant.

45. Real Estate Brokers. Tenant represents and warrants that it has negotiated this Lease directly with the real estate broker(s) identified in Paragraph 2 and has not authorized or employed, or acted by implication to authorize or to employ, any other real estate broker or salesman to act for Tenant in connection with this Lease. Tenant shall indemnify, defend and hold Landlord harmless from and against any and all Claims by any real estate broker or salesman other than the real estate broker(s) identified in Paragraph 2 for a commission, finder's fee or other compensation as a result of Tenant's entering into this Lease.

46. Consents and Approvals. Wherever the consent, approval, judgment or determination of Landlord is required or permitted under this Lease, Landlord may exercise its sole discretion in granting or withholding such consent or approval or in making such judgment or determination without reference to any extrinsic standard of reasonableness, unless the provision providing for such consent, approval, judgment or determination specifies that Landlord's consent or approval is not to be unreasonably withheld, or that the standard for such consent, approval, judgment or determination is to be reasonable, or otherwise specifies the standards under which Landlord may withhold its consent. Whenever Tenant requests Landlord to take any action or give any consent or approval, Tenant shall reimburse Landlord for all of Landlord's costs incurred in reviewing the proposed action or consent (whether or not Landlord consents to any such proposed action), including without limitation reasonable attorneys' or consultants' fees and expenses, within ten (10) days after Landlord's delivery to Tenant of a statement of such costs. If it is determined that Landlord failed to give its consent or approval where it was required to do so under this Lease, Tenant's sole remedy will be an order of specific performance or mandatory injunction of the Landlord's agreement to give its consent or approval. The review and/or approval by Landlord of any item shall not impose upon Landlord any liability for accuracy or sufficiency of any such item or the quality or suitability of such item for its intended use. Any such review or approval is for the sole purpose of protecting Landlord's interest in the Real Property, and neither Tenant nor any Tenant Party nor any person or entity claiming by, through or under Tenant, nor any other third party shall have any rights hereunder by virtue of such review and/or approval by Landlord.

47. Reserved Rights. Landlord retains and shall have the rights set forth below, exercisable without notice and without liability to Tenant for damage or injury to property, person or business and without effecting an eviction, constructive or actual, or disturbance of Tenant's use or possession of the Premises or giving rise to any claim for rent abatement:



a. To grant to anyone the exclusive right to conduct any business or render any service in or to the Building and its tenants, provided that such exclusive right shall not operate to require Tenant to use or patronize such business or service or to exclude Tenant from its use of the Premises expressly permitted herein.

b. To reduce, increase, enclose or otherwise change at any time and from time to time the size, number, location, lay-out and nature of the common areas and facilities and other tenancies and premises in the Project and to create additional rentable areas through use or enclosure of common areas.

c. If portions of the Project or property adjacent to the Project (collectively, the "Other Improvements") are owned by an entity other than Landlord, Landlord, at its option, in its sole and absolute discretion, may enter into an agreement with the owner or owners of any or all of the Other Improvements to provide (i) for reciprocal rights of access and/or use of the Project and the Other Improvements, (ii) for the common management, operation, maintenance, improvement and/or repair of all or any portion of the Project and the Other Improvements, (iii) for the allocation of a portion of the Operating Expenses to the Other Improvements and the operating expenses and taxes for the Other Improvements to the Project, and (iv) for the use or improvement of the Other Improvements and/or the Project in connection with the improvement, construction, and/or excavation of the Other Improvements and/or the Project. Nothing contained herein shall be deemed or construed to limit or otherwise affect Landlord's right to convey all or any portion of the Project or any other of Landlord's rights described in this Lease.

48. Financial Statements. Upon submission of this Lease to Landlord and at any time thereafter within thirty (30) days after Landlord's request therefor, Tenant shall furnish to Landlord copies of true and accurate financial statements reflecting Tenant's then current financial situation (including without limitation balance sheets, statements of profit and loss, and changes in financial condition), Tenant's most recent audited or certified annual financial statements, and Tenant's federal income tax returns pertaining to Tenant's business, and in addition shall cause to be furnished to Landlord similar financial statements and tax returns for any guarantor(s) of this Lease. Tenant agrees to deliver to any lender, prospective lender, purchaser or prospective purchaser designated by Landlord such financial statements of Tenant as may be reasonably requested by such lender or purchaser. Notwithstanding the foregoing, Landlord shall not request financial information from Tenant under this Paragraph 48 more than one (1) time in any twelve (12) month period, unless the Building is then for sale or subject to refinancing, or an Event of Default has occurred and is continuing.

49. Substitution of Premises. Subject to the provisions of this Paragraph 49, Landlord reserves the right from time to time, upon not less than ninety (90) days prior written notice, to relocate Tenant to another part of the Project (in either the Building or the 2010 Main Street building) prior to or during the term; provided that (i) the substitute space is not less than 7,500 rentable square feet in size, (ii) if the substitute space is on the second (2nd) through fifth (5th) floors of the subject building, the substitute space does not directly and substantially face the Parking Facilities (and, if the substitute space is above the fifth (5th) floor of the subject building, the substitute space may be on any side of the subject building), (iii) prior to such relocation, Landlord constructs in the substitute space (at Landlord's sole cost and expense) improvements substantially comparable in lay-out, materials and finishes to the improvements in the Premises Tenant is being required to vacate, (iv) the Monthly Rent and Additional Rent under Paragraphs 5 and 7 hereof is not greater than the Monthly Rent and Additional Rent that would have been payable for the original Premises under the terms of this Lease and (v) if the substitute space is smaller than the original Premises (to the extent permitted above), Tenant's Monthly Rent and Additional Rent shall be proportionately reduced. From and after the date of any such relocation, the term "Premises" as used herein shall mean the substituted space in the Project, and Landlord and Tenant shall execute an appropriate amendment to this Lease describing the new Premises. If a relocation occurs after Tenant has occupied the Premises (or any previously substituted Premises) then Landlord shall reimburse Tenant for (A) Tenant's reasonable out-of-pocket expenses in moving Tenant's furnishings and equipment from the occupied Premises to the substituted Premises (including the cost of installation in the substitute Premises of Tenant's then-existing telephone and computer cabling, but expressly excluding the cost of any new, additional or replacement equipment), (B) the cost of modifying Tenant's suite number (or Tenant's address, if the new space is in the 2010 Main Street building) on Tenant's stationery then on hand (as reasonably evidenced by Tenant to Landlord); provided, however, that Landlord's reimbursement under this clause (B) for a subject move shall not exceed Two Thousand Five Hundred Dollars (\$2,500.00), and (C) Tenant's reasonable attorneys' fees incurred in connection with Tenant's review of the Lease amendment required in accordance with this Paragraph 49 (not to exceed Two Thousand Dollars, (\$2,000.00)).

50. Nondisclosure of Lease Terms. Tenant agrees that the terms of this Lease are confidential and constitute proprietary information of Landlord, and that disclosure of the terms

hereof could adversely affect the ability of Landlord to negotiate with other tenants. Tenant hereby agrees that Tenant and its partners, officers, directors, employees, agents, real estate brokers and sales persons and attorneys shall not disclose the terms of this Lease to any other person without Landlord's prior written consent, except to any accountants of Tenant in connection with the preparation of Tenant's financial statements or tax returns, to an assignee of this Lease or sublessee of the Premises, or to an entity or person to whom disclosure is required by applicable law or in connection with any action brought to enforce this Lease.

51. Hazardous Substance Disclosure. California law requires landlords to disclose to tenants the existence of certain hazardous substances. Accordingly, the existence of gasoline and other automotive fluids, maintenance fluids, copying fluids and other office supplies and equipment, certain construction and finish materials, tobacco smoke, cosmetics and other personal items, and asbestos-containing materials ("ACM") must be disclosed. Gasoline and other automotive fluids are found in the garage area of the Building. Cleaning, lubricating and hydraulic fluids used in the operation and maintenance of the Project are found in the utility areas of the Project not generally accessible to Project occupants or the public. Many Building occupants use copy machines and printers with associated fluids and toners, and pens, markers, inks, and office equipment that may contain hazardous substances. Certain adhesives, paints and other construction materials and finishes used in portions of the Project may contain hazardous substances. Although smoking is prohibited in the public areas of the Project, these areas may, from time to time, be exposed to tobacco smoke. Project occupants and other persons entering the Project from time-to-time may use or carry prescription and non-prescription drugs, perfumes, cosmetics and other toiletries, and foods and beverages, some of which may contain hazardous substances. Landlord has made no special investigation of the Premises with respect to any hazardous substances.

52. Signage Rights.

a. Except to the extent expressly provided in this Paragraph 52, Tenant shall not (i) place or install (or permit to be placed or installed by any Tenant Party) any signs, advertisements, logos, identifying materials, pictures or names of any type on the roof, exterior areas or common areas of the Building or the Project or in any area of the Building, Premises or Project which is visible from the exterior of the Building or outside of the Premises or (ii) place or install (or permit to be placed or installed by any Tenant Party) in or about any portion of the Premises any window covering (even if behind Building standard window coverings) or any other material visible from outside of the Premises or from the exterior of the Building.

b. Subject to compliance with applicable Legal Requirements and such Building signage criteria as Landlord shall apply from time to time and subject to receipt of Landlord's prior written consent, (i) in the case where Tenant occupies an entire floor in the Building, Tenant may place in any portion of such floor which is not visible from the exterior of the Building such identification signage as Tenant shall desire and (ii) in the case where Tenant occupies less than an entire floor in the Building, (A) Landlord shall, at Landlord's sole cost and expense, install in the multi-tenant corridor on the floor of the Building where the Premises are located, Building standard directional signage showing the suite number of the Premises (but not Tenant's name), and (B) Landlord shall install, at the entry to the Premises, Building standard identification signage with Tenant's name and suite number in accordance with Landlord's signage program (as the same may exist from time to time) and Landlord shall bear the cost of the portion of the signage that contains the suite number, but Tenant shall bear the cost of the portion of the signage that contains Tenant's name, and (C) Tenant may place in any portion of the inside of the Premises not visible from the exterior of the Building or from outside of the Premises such identification signage as Tenant shall desire. All signage described in this Paragraph 52 shall be treated as Tenant's personal property under the provisions of Paragraph 20.a. above with respect to Tenant's obligations at the expiration or early termination of this Lease.

53. Parking.

a. Commencing upon the Commencement Date and continuing throughout the term of this Lease, Landlord shall lease to Tenant, and Tenant shall lease from Landlord, on an unassigned, non-exclusive and unlabeled basis, thirty-nine (39) parking spaces in the parking facilities for the Building (the "**Parking Facilities**"). Tenant shall have the right to convert up to three (3) of the unlabeled parking spaces to reserved parking spaces in the Parking Facilities. During the initial Lease term, Tenant shall pay Landlord or the operator of the Parking Facility, as directed by Landlord, for the parking spaces leased by Tenant pursuant to the above at the following rates:

(i) for the unassigned parking spaces, Sixty Dollars (\$60.00) per month per unassigned parking space; provided, however, that the monthly charge for each of the

unassigned parking spaces shall be fully abated for the first six (6) months of the initial Lease term, and

Main P – Colony American lease v3
Das10-7-15

(ii) for reserved parking spaces, One Hundred Forty-Five Dollars (\$145.00) per month for each reserved parking space.

If the term of this Lease is extended beyond the initial Lease term, during the extended Lease term, Tenant shall pay for the parking spaces leased hereunder the rate or charge in effect from time to time for parking in the Parking Facilities for the type of space leased. The aforementioned parking charges (for both the initial term and any extension term) shall be in addition to all taxes, assessments or other impositions imposed by any governmental entity in connection with Tenant's use of the parking spaces, which taxes shall be paid by Tenant, or if required to be paid by Landlord, shall be reimbursed to Landlord by Tenant (in either case as rent) concurrently with the payment of the parking charges described above.

Notwithstanding anything to the contrary above, Tenant shall not be required to accept all of the parking spaces allocated to Tenant above and shall only pay for those parking spaces actually accepted by Tenant. Tenant shall advise Landlord of the number of parking spaces Tenant desires from time to time. If Tenant desires to lease a parking space(s) not previously accepted by Tenant, Tenant shall advise Landlord thereof in writing and Landlord shall make such parking spaces available to Tenant not later than forty-five (45) days after Tenant's written request therefor.

b. Tenant shall provide Landlord with advance written notice of the names of each individual to whom Tenant from time to time distributes Tenant's parking rights hereunder, and shall cause each such individual to execute the standard waiver form for garage users used in the Parking Facilities. If the parking charge for a particular parking space is not paid when due, and such failure continues for ten (10) days after written notice to Tenant of such failure, then in addition to any other remedies afforded Landlord under this Lease by reason of nonpayment of rent, Landlord may terminate Tenant's rights under this Paragraph 53 as to such parking space.

c. The parking spaces to be made available to Tenant hereunder may contain a reasonable mix of spaces for compact cars. Landlord shall take reasonable actions to ensure the availability of the parking spaces leased by Tenant, but Landlord does not guarantee the availability of those spaces at all times against the actions of other tenants of the Project and users of the Parking Facilities. Without limiting the foregoing, in no event shall this Lease be void or voidable, nor shall Landlord be liable to Tenant for any loss or damage, nor shall there be any abatement of rent hereunder (other than the parking charge paid hereunder for any parking space no longer made available), by reason of any reduction in Tenant's parking rights hereunder by reason of strikes, lock-outs, labor disputes, shortages of material or labor, fire, flood or other casualty, acts of God or any other cause beyond the reasonable control of Landlord. Access to the parking spaces to be made available to Tenant shall, at Landlord's option, be by card, pass, bumper sticker, decal or other appropriate identification issued by Landlord, and Tenant's right to use the Parking facilities is conditioned on Tenant's abiding by and shall otherwise be subject to such reasonable rules and regulations as may be promulgated by Landlord or Landlord's designee from time to time for the Parking Facilities. If applicable, Tenant's employees and occupants shall only have the right to park in Tenant's designated area(s). Landlord shall have the right to modify, change, add to or delete the design, configuration, layout, size, ingress, egress, areas, method of operation, and other characteristics of or relating to the Parking Facilities at any time, and/or to provide for nonuse, partial use or restricted use of portions thereof. The Parking Facilities shall at all times comply with applicable Legal Requirements regarding handicap parking spaces.

d. The parking rights provided to Tenant pursuant to this Paragraph 53 are provided to Tenant solely for use by officers, directors, and employees of Tenant, its affiliates, sublessees and assignees, and such rights may not otherwise be transferred, assigned, subleased or otherwise alienated by Tenant to any other type of transferee without Landlord's prior written approval, which may be withheld in Landlord's sole discretion.

e. Tenant's business visitors may park in the Parking Facilities on a space-available basis, upon payment of the prevailing fee for parking charged to visitors to the Building.

54. Transportation Management. Tenant shall fully comply with all present or future programs intended to manage parking, transportation or traffic in and around the Project, and in connection therewith, Tenant shall take responsible action for the transportation planning and management of all employees located at the Premises by working directly with Landlord, any governmental transportation management organization or any other transportation-related committees or entities.

55. Renovation of the Project and Other Improvements. Tenant acknowledges

that portions of the Building, Project and/or the Other Improvements (as defined in Paragraph 47.d. above) may be under construction following Tenant's occupancy of the Premises, and that such

construction may result in levels of noise, dust, obstruction of access, etc. which are in excess of that present in a fully constructed project. It is agreed and acknowledged that no representations respecting the condition of the Premises, the Building or the Project have been made by Landlord to Tenant except as specifically set forth in this Lease. Tenant acknowledges and agrees that Landlord may alter, remodel, improve and/or renovate (collectively, the "Renovation Work") the Building, Premises, and/or the Project, and in connection with any Renovation Work, Landlord may, among other things, erect scaffolding or other necessary structures in the Building or the Project, restrict access to portions of the Project, including portions of the common areas, or perform work in the Building and/or the Project. Tenant hereby agrees that such Renovation Work and Landlord's actions in connection with such Renovation Work shall in no way constitute a constructive eviction of Tenant nor entitle Tenant to any abatement of Rent. Landlord shall have no responsibility or liability to Tenant for any injury to or interference with Tenant's business arising from any such Renovation Work, and Tenant shall not be entitled to any damages from Landlord for loss of use of the Premises, in whole or in part, or for loss of Tenant's personal property or improvements, resulting from the Renovation Work or Landlord's actions in connection therewith or for any inconvenience occasioned by such Renovation Work or Landlord's actions in connection therewith.

56. Quiet Enjoyment. If, and so long as, Tenant pays the rent and keeps, observes and performs each and every term, covenant and condition of this Lease on the part or on behalf of Tenant to be kept, observed and performed, Tenant shall peaceably and quietly enjoy the Premises throughout the term without hindrance by Landlord or any person lawfully claiming through or under Landlord, subject to the provisions of this Lease.

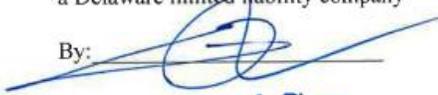
57. No Discrimination. Tenant covenants by and for itself and its successors, heirs, personal representatives and assigns and all persons claiming under or through Tenant that there shall be no discrimination against or segregation of any person or of a group of persons on account of race, color, religion, creed, sex or national origin in the leasing, subleasing, transferring, use, occupancy, tenure or enjoyment of the Premises nor shall Tenant or any person claiming under or through Tenant establish or permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, sublessees, subtenants or assignees of the Premises.

58. CASp Inspection. As of the date of this Lease, the Premises and the common areas of the Real Property expected to be in Tenant's path of travel during the Lease term, have not undergone an inspection by a Certified Access Specialist regarding compliance with construction-related accessibility standards. This disclosure is made pursuant to Section 1938 of the California Civil Code.

THIS LEASE IS EXECUTED by Landlord and Tenant as of the date set forth at the top of page 1 hereof.

Landlord:

SRI NINE MAIN PLAZA LLC,
a Delaware limited liability company

By: 

Name: James A. Pierre
Vice President

Title: _____

Tenant:

COLONY AMERICAN FINANCE, LLC, a
Delaware limited liability company

By: 

Name: Mark M. Hedstrom
Vice President

Title: _____



FIRST AMENDMENT TO LEASE
(Expansion of Premises)

THIS FIRST AMENDMENT TO LEASE ("**Amendment**") is dated as of the 21 day of May, 2018 ("**Effective Date**"), between BROADWAY MICHELSON LLC, a Delaware limited liability company ("**Landlord**"), as successor to SRI Nine Main Plaza LLC, a Delaware limited liability company ("**Original Landlord**"), and COREVEST AMERICAN FINANCE LENDER, LLC, a Delaware limited liability company ("**Tenant**"), as successor in interest to Colony American Finance Lender, LLC, a Delaware limited liability company ("**Colony Lender**"), as successor in interest to Colony American Finance, LLC, a Delaware limited liability company ("**Colony Finance**") with reference to the following facts:

RECITALS

A. Original Landlord and Colony Finance are parties to that certain Office Lease dated as of October 7, 2015 (as assigned, the "**Lease**"), whereby Original Landlord leased to Colony Finance and Colony Finance leased from Original Landlord that certain space containing approximately 7,812 rentable square feet (and 6,561 usable square feet), known as Suite 850, located on the eighth (8th) floor (the "**Existing Premises**") of that certain building located at 1920 Main Street, Irvine, California (the "**Building**").

B. CF COREVEST HOLDINGS I LLC, a Delaware limited liability company and CF COREVEST HOLDINGS II LLC, a Delaware limited liability company (collectively "**Guarantors**") is the guarantor of the Lease pursuant to that certain Continuing Guaranty of Lease dated as of July 17, 2017 ("**Guaranty**").

C. Landlord and Tenant desire to amend the Lease to (i) expand the Existing Premises to include approximately 2,319 rentable square feet (and 1,916 usable square feet) located on the eighth (8th) floor of the Building commonly known as Suite 830 as depicted on Exhibit A attached hereto (the "**Expansion Space**"); and (ii) otherwise modify the Lease, all upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the foregoing, Landlord and Tenant hereby agree as follows:

1. Capitalized Terms. All capitalized terms when used herein shall have the same meanings given such terms in the Lease unless expressly superseded by the terms of this Amendment. All references in the Lease and in this Amendment to "**the Lease**" or "**this Lease**" shall be construed to mean the Lease referenced above as amended and supplemented by this Amendment.

2. Addition of Expansion Space; Expansion Space Term. Commencing upon the Expansion Space Commencement Date (as defined below), the Existing Premises shall be deemed to include the Expansion Space for a term (the "**Expansion Space Term**") that shall expire coterminously with the expiration of the term of the Lease (i.e., April 30, 2021). Therefore, for purposes of the Lease, effective as of the Expansion Space Commencement Date (a) the "Premises" will mean the Existing Premises together with the Expansion Space and (b) the Premises will contain approximately 10,131 rentable square feet (and 8,477 usable square feet).

3. Expansion Space Commencement Date. For purposes of this Amendment, the term "**Expansion Space Commencement Date**" shall mean the date of "Substantial Completion" of the

Expansion Space, as that term is defined in, and determined by Landlord's architect or space planner

pursuant to Paragraph 4(b) of the Lease, and Substantial Completion is anticipated to occur on or about June 1, 2018, subject to force majeure delays or Tenant Delays (as such term is defined in Section 4(d) of the Lease). For purposes of this Amendment, "Rentable Square Feet" and "Usable Square Feet" of the Premises and the Building shall be calculated using the Office Buildings: Standard Methods of Measurement ANSI/BOMA Z65.1-2010 Method B Capped Factor.

4. Beneficial Occupancy. Tenant shall have the right to access the Expansion Space up to two (2) weeks prior to the delivery of the Expansion Space for the purpose of installing its furniture, fixtures and equipment, provided that Tenant's installation of the same does not interfere with the completion of Landlord's Work (as defined in Section 9 below).

5. Confirmation of Expansion Space Commencement Date. The date that the Expansion Space Commencement Date actually occurs shall be confirmed by the parties in writing in Landlord's Form of Commencement Date Letter the Expansion Space (herein the "**Commencement Notice**"), which Commencement Notice shall be in substantially the form of **Exhibit C** attached to the Lease. The Commencement Notice shall be served upon Tenant after Landlord delivers or tenders possession of the substantially completed Expansion Space to Tenant. The Commencement Notice shall be binding upon Tenant unless Tenant objects to the Commencement Notice in writing served upon Landlord within five (5) days after Tenant's receipt of the Commencement Notice.

6. Expansion Space Monthly Rent. From and after the Expansion Space Commencement Date or ("**ESCD**"), Tenant shall pay as Monthly Rent for the Expansion Space the amounts set forth below for the respective periods:

<u>Periods of Expansion Space Term</u>	<u>Monthly Rate per RSF</u>	<u>Monthly Rent</u>
ESCD – 11/30/18	\$3.08	\$7,142.52*
12/01/18 – 11/30/19	\$3.20	\$7,428.22
12/01/19 – 11/30/20	\$3.33	\$7,725.35
12/01/20 – 04/30/21	\$3.46	\$8,034.36

*Notwithstanding anything to the contrary contained herein and provided that Tenant faithfully performs all of the terms and conditions of the Lease, Tenant's Monthly Rent for the Expansion Space shall be fully abated for months two (2) and three (3) of the Expansion Space Term. Any abatement right afforded to Tenant is personal to the tenant originally named herein and is conditioned upon no Event of Default existing at the time the abatement (or free rent) would otherwise be available to Tenant.

7. Operating Expenses; Base Year. Effective as of Expansion Space Commencement Date, Tenant's Share (as defined in Paragraph 2.e of the Lease) shall mean 3.43% (i.e., 10,131 rentable square feet in the Premises / by 295,502 total rentable square feet of the Building). In addition, from and after the Expansion Space Commencement Date, the Base Year relative to the Expansion Space only shall be the 2018 calendar year.

8. After-Hour HVAC Service. As of the Effective Date hereof, Landlord shall provide, upon Tenant's request and at Tenant's expense, after-hour HVAC on an hourly basis under terms and conditions to be established by Landlord. As of the Effective Date hereof, Landlord's current after-hour HVAC rate is Sixty-Five 0/100 Dollars (\$65.00) per hour.

9. Condition of Premises. Tenant accepts the Expansion Space in its current "AS IS" condition without any covenants, warranties, or representations, and shall be deemed to have

condition without any agreements, representations, understandings or obligations on the part of Landlord to perform or pay for any alterations, repairs or improvements subject to Landlord's performance of the

following minor cosmetic upgrades, at Landlord's sole cost and expense, using Building standard materials and as configured according to the space plan attached hereto as **Exhibit B** (collectively, the "**Landlord's Work**"):

- a. The removal of two sections of drywall;
- b. The patching of the carpet and touch up paint as required;
- c. The painting of one wall in the open area in an accent color;
- d. The addition of a wall mounted electrical capacity if necessary to support Tenant's furniture systems;
- e. Only at Tenant's request, the removal of any existing cabling.

10. **Security Deposit.** The parties hereby acknowledge and agree that as of the Effective Date: (a) Landlord currently holds a Security Deposit in the amount of Twenty-Nine Thousand Eight Hundred Eighteen and 40/100 Dollars (\$29,818.40); (b) concurrently with Tenant's execution of this Amendment, Tenant shall deliver to Landlord the sum of Eight Thousand Eight Hundred Thirty Seven and 80/100 Dollars (\$8,837.80) ("**Additional Security**") and the effectiveness of this Amendment is conditioned on Landlord's receipt of the same; and (c) the Addition Security shall be added to and shall increase the existing Security Deposit currently held by Landlord such that the total Security Deposit thereafter held by Landlord shall equal Thirty-Eight Thousand Six Hundred Fifty-Six and 20/100 Dollars (\$38,656.20) ("**Revised Security Deposit Amount**").

11. **Signage.** Tenant shall be entitled, at Tenant's sole cost and expense, to Building-standard identification signage outside of the Expansion Space on the floor on which the Expansion Space is located, and Building standard directional signage on such floor. The location, quality, design, style, and size of such signage shall be consistent with the Landlord's Building standard signage program. All costs associated with the installation and eventual removal of such signage shall be borne exclusively by Tenant.

12. **Use.** Tenant shall use the Expansion Space solely for general office and administrative purposes consistent with the operation of the Building as a first-class office building.

13. **Parking.** Effective as of Expansion Space Commencement Date, the Lease is hereby amended by revising **Paragraph 53** to provide that: (i) Tenant shall have the right, but not the obligation, to lease from Landlord, on an unassigned, non-exclusive and unreserved basis, forty six (46) parking spaces in the parking facilities for the Building ("**Parking Facilities**"); (ii) subject to availability, Landlord shall provide Tenant an additional nineteen (19) unassigned, non-exclusive and unreserved parking spaces in the Parking Facilities; and (iii) Tenant has the right to convert up to four (4) of the unreserved parking spaces to reserved parking spaces in the Parking Facilities. During the initial term, the unassigned, non-exclusive and unreserved parking spaces are \$60.00 per parking space per month and the reserved parking spaces are \$145.00 per parking space per month. In addition, visitor parking is available on the first and second floors of the Parking Facilities. The current visitor parking rates are One and 50/100 Dollars (\$1.50) per fifteen (15) minute period with a fifteen (15) minute grace period and a daily maximum of Seventeen Dollars (\$17.00). Tenant visitors and guests shall be required to pay Landlord's prevailing rates. Tenant may elect to validate such parking for their guests at its own cost.

14. **Reaffirmation of Guarantors.** Guarantors approve of, consent to and join in the execution of this Amendment and reaffirms for Landlord each and every agreement, covenant and obligation set forth in the Lease and hereby confirms that the Guaranty remains unmodified and in full force and effect, notwithstanding the execution and delivery of this Amendment.

15. **Certification as to Lease.** Tenant certifies that (a) the Lease is in full force and effect and

ASSIGNMENT OF LEASE. Tenant certifies that (a) the Lease is in full force and effect and has not been assigned or amended; (b) there are no uncured defaults on the part of Tenant or Landlord

under the Lease; (c) there are no outstanding obligations by Landlord to Tenant related to any Tenant Improvements to the Premises, including but not limited to any tenant improvement allowances; (d) there are no outstanding or unpaid broker or leasing commissions relating to the Lease; (e) Tenant has taken possession of the Premises and has no claims of default as of the condition of the Premises or the Building, and (f) there are no rights of first refusal relating to the Premises or the Lease. Tenant hereby waives and releases all demands, charges, claims, accounts, or causes of action of any nature whatsoever against Landlord or Landlord's members, officers, employees or agents, including without limitation, both known and unknown demands, charges, claims, accounts, and causes of action that have previously arisen out of or in connection with the Lease.

16. Brokers. Landlord and Tenant hereby warrant to each other that they have had no dealings with any real estate broker or agent in connection with the negotiation of this Amendment other than Savills Studley ("**Tenant's Representative**") and ORION Property Partners, Inc. ("**Landlord's Representative**") (collectively, the "**Brokers**"), and that they know of no other real estate broker or agent who is entitled to a commission in connection with this Amendment. Each party agrees to indemnify and defend the other party against and hold the other party harmless for, from and against any and all claims, demands, losses, liabilities, lawsuits, judgments, and costs and expenses (including without limitation reasonable attorneys' fees) with respect to any leasing commission or equivalent compensation alleged to be owing on account of the indemnifying party's dealings with any real estate broker or agent other than the Brokers. If this Amendment is executed by Landlord and Tenant, Tenant's Representative shall receive a commission equal to Four Percent (4%) of the Monthly Rent for the Expansion Space Term.

17. Authority. If Tenant is a corporation, partnership, trust, association or other entity, Tenant and each person executing this Amendment on behalf of Tenant hereby covenants and warrants that (a) Tenant is duly incorporated or otherwise established or formed and validly existing under the laws of its state of incorporation, establishment or formation, (b) Tenant has and is duly qualified to do business in the state of California, (c) Tenant has full corporate, partnership, trust, association or other appropriate power and authority to enter into this Amendment and to perform all Tenant's obligations under the Lease, as amended by this Amendment, and (d) each person (and all of the persons if more than one signs) signing this Amendment on behalf of Tenant is duly and validly authorized to do so.

18. No Offer. Submission of this instrument for examination and signature by Tenant does not constitute an offer to lease or to amend the Lease, or a reservation of or option for lease or to amend the Lease, and this instrument will not be effective as a lease amendment or otherwise until executed and delivered by both Landlord and Tenant.

19. Lease in Full Force and Effect. Except as set forth herein, all of the terms, covenants, and conditions of the Lease shall remain in full force and effect. If a conflict or inconsistency exists between the terms and provisions of this Amendment and the terms and provisions of the Lease, the terms and provisions of this Amendment shall control to the extent of any such conflict or inconsistency.

20. Counterparts. This Amendment may be executed in any number of counterparts, all of which shall be deemed an original, but such counterparts, when taken together, shall constitute one agreement. The parties hereto may deliver their signatures to this Amendment by facsimile, electronic mail, or other electronic transmission, and agree to accept such digital image of this Amendment, as executed, as a true and correct original and admissible as if such signatures were original executed versions of this Amendment. In the event a signature is transmitted electronically, the party so transmitting shall deliver original signature pages within three (3) business days thereafter.

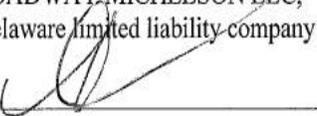
[SIGNATURES APPEAR ON THE FOLLOWING PAGE.]



IN WITNESS WHEREOF, the parties have executed this document as of the date and year first above written.

Landlord:

BROADWAY MICHELSON LLC,
a Delaware limited liability company

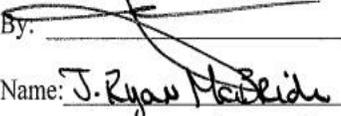
By: 

Name: Alison Pappas

Title: Authorized Signatory

Tenant:

COREVEST AMERICAN FINANCE
LENDER, LLC,
a Delaware limited liability company

By: 

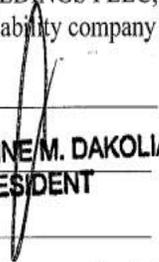
Name: J. Ryan McBride

Title: Chief Operating Officer

Agreed and accepted this 21 day of May, 2018 by the undersigned.

Guarantor:

CF COREVEST HOLDINGS I LLC,
a Delaware limited liability company

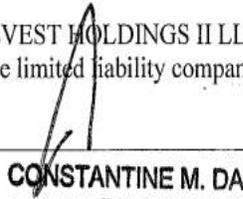
By: 

Name: **CONSTANTINE M. DAKOLIAS**
PRESIDENT

Title: _____

Guarantor:

CF COREVEST HOLDINGS II LLC,
a Delaware limited liability company

By: 

Name: **CONSTANTINE M. DAKOLIAS**
PRESIDENT

Title: _____



LEASE

BETWEEN

THE IRVINE COMPANY LLC

AND

5 ARCHES, LLC

**LEASE
(Short Form)**

THIS LEASE is made as of January 27, 2015, by and between **THE IRVINE COMPANY LLC**, a Delaware limited liability company, hereafter called "**Landlord**," and **5 ARCHES, LLC**, a California limited liability company, hereafter called "**Tenant**."

ARTICLE 1. BASIC LEASE PROVISIONS

Each reference in this Lease to the "**Basic Lease Provisions**" shall mean and refer to the following collective terms, the application of which shall be governed by the provisions in the remaining Articles of this Lease.

1. **Tenant's Trade Name:**
N/A

2. **Premises:** Suite Nos. 490 ("**Suite 490**") and 1150 ("**Suite 1150**"). Suite 490 and Suite 1150 shall collectively be referred to herein as the "Premises"

Address of Building: 19800 MacArthur Boulevard, Irvine, CA 92612

Project Description: Newport Gateway
(The Premises are more particularly described in Section 2.1).

3. **Use of Premises:** General office and for no other use.

4. **Estimated Commencement Date for Suite 1150:** 13 weeks following the full and final execution of this Lease

Estimated Commencement Date for Suite 490: 6 weeks following the Commencement Date for Suite 1150

5. **Lease Term:** 72 months, plus such additional days as may be required to cause this Lease to expire on the final day of the calendar month (it being understood the Term for Suite 490, although co-terminus with Suite 1150, shall be slightly less in accordance with Item 6.B. below).

6. **Basic Rent:**

A. The Monthly Basic Rent payable with respect to Suite 1150 is the following:

Months of Term or Period	Monthly Rate Per Rentable Square Foot	Monthly Basic Rent (rounded to the nearest dollar)
1 to 12	\$2.27	\$16,503.00
13 to 24	\$2.37	\$17,230.00
25 to 36	\$2.48	\$18,030.00
37 to 48	\$2.59	\$18,829.00
49 to 60	\$2.71	\$19,702.00
61 to 72	\$2.83	\$20,574.00

Notwithstanding the above schedule of Basic Rent to the contrary, as long as Tenant is not in monetary Default (as defined in Section 14.1) under this Lease beyond all applicable notice and cure periods, Tenant shall be entitled to an abatement of 2 full calendar months of Basic Rent in the aggregate amount of \$33,006.00 (i.e. \$16,503.00 per month) (the "**Suite 1150 Abated Basic Rent**") for the 1st and 2nd full calendar months of the Term for Suite 1150 (the "**Suite 1150 Abatement Period**"). In the event of a monetary Tenant Default at any time during the Term for Suite 1150 beyond all applicable notice and cure periods, all Suite 1150 Abated Basic Rent shall immediately become due and payable. The payment by Tenant of the Suite 1150 Abated Basic Rent in the event of a Default shall not limit or affect any of Landlord's other rights, pursuant to this Lease or at law or in equity.

Only Basic Rent shall be abated during the Suite 1150 Abatement Period and all other additional rent and other costs and charges specified in this Lease shall remain as due and payable pursuant to the provisions of this Lease.

B. The Monthly Basic Rent payable with respect to Suite 490 is the following:

Months of Term or Period	Monthly Rate Per Rentable Square Foot	Monthly Basic Rent (rounded to the nearest dollar)
Commencement Date for Suite 490 to 12 th month following the Commencement Date for Suite 1150	\$2.18	\$4,558.00
13 to 24	\$2.28	\$4,767.00
25 to 36	\$2.38	\$4,977.00
37 to 48	\$2.49	\$5,207.00
49 to 60	\$2.60	\$5,437.00
61 to 72	\$2.72	\$5,688.00

Notwithstanding the above schedule of Basic Rent to the contrary, as long as Tenant is not in monetary Default (as defined in Section 14.1) under this Lease beyond all applicable notice and cure periods, Tenant shall be entitled to an abatement of 2 full calendar months of Basic Rent in the aggregate amount of \$9,116.00 (i.e. \$4,558.00 per month) (the "Suite 490 Abated Basic Rent") for the 1st and 2nd full calendar months of the Term for Suite 490 (the "Suite 490 Abatement Period"). In the event of a monetary Tenant Default at any time during the Term for Suite 490 beyond all applicable notice and cure periods, all Suite 490 Abated Basic Rent shall immediately become due and payable. The payment by Tenant of the Suite 490 Abated Basic Rent in the event of a Default shall not limit or affect any of Landlord's other rights, pursuant to this Lease or at law or in equity. Only Basic Rent shall be abated during the Suite 490 Abatement Period and all other additional rent and other costs and charges specified in this Lease shall remain as due and payable pursuant to the provisions of this Lease.

7. **Property Tax Base:** The Property Taxes per rentable square foot incurred by Landlord and attributable to the twelve month period ending June 30, 2015 (the "Base Year").

Project Cost Base: The Project Costs per rentable square foot incurred by Landlord and attributable to the Base Year.

Expense Recovery Period: Every twelve month period during the Term (or portion thereof during the first and last Lease years) ending June 30.

8. **Floor Area of Premises:** approximately 9,361 rentable square feet (comprised of 7,270 rentable square feet for Suite 1150 and 2,091 rentable square feet for Suite 490) (Landlord and Tenant stipulate and agree that the Floor Area of Premises is correct).

Floor Area of Building: approximately 298,673 rentable square feet

9. **Security Deposit:**
\$28,888.00

10. **Broker(s):** Irvine Realty Company ("Landlord's Broker") is the agent of Landlord exclusively and Studley / Irvine ("Tenant's Broker") is the agent of Tenant exclusively

11. **Parking:** Tenant shall have the right but not the obligation to utilize up to 32 unreserved parking passes in accordance with the provisions set forth in **Exhibit F** to this Lease.

12. **Address for Payments and Notices:**

LANDLORD

Payment Address:

THE IRVINE COMPANY LLC
PO Box #846329
Los Angeles, CA 90084-6329

Notice Address:

THE IRVINE COMPANY LLC
19900 MacArthur Boulevard, Suite 100
Irvine, CA, 92612
Attn: Property Manager

with a copy of notices to:

THE IRVINE COMPANY LLC
550 Newport Center Drive
Newport Beach, CA 92660
Attn: Senior Vice President, Property Operations
Irvine Office Properties

TENANT

5 ARCHES, LLC
19800 MacArthur Boulevard, Suite 1150
Irvine, CA 92612
Attn: Shawn Miller

13. **List of Lease Exhibits** (all exhibits, riders and addenda attached to this Lease are hereby incorporated into and made a part of this Lease):

Exhibit A	Description of Premises
Exhibit B	Operating Expenses
Exhibit C	Utilities and Services
Exhibit D	Tenant's Insurance
Exhibit E	Rules and Regulations
Exhibit F	Parking
Exhibit G	Additional Provisions
Exhibit X	Work Letter

ARTICLE 2. PREMISES

2.1. LEASED PREMISES. Landlord leases to Tenant and Tenant leases from Landlord the Premises shown in **Exhibit A** (the "**Premises**"), containing approximately the floor area set forth in Item 8 of the Basic Lease Provisions (the "**Floor Area**"). The Premises are located in the building identified in Item 2 of the Basic Lease Provisions (the "**Building**"), which is a portion of the project described in Item 2 (the "**Project**").

2.2. ACCEPTANCE OF PREMISES. Tenant acknowledges that neither Landlord nor any representative of Landlord has made any representation or warranty with respect to the Premises, the Building or the Project or the suitability or fitness of either for any purpose, except as set forth in this Lease. The taking of possession or use of the Premises by Tenant for any purpose other than construction shall conclusively establish that the Premises and the Building were in satisfactory condition and in conformity with the provisions of this Lease in all respects. Nothing contained in this Section 2.2 shall affect the commencement of the Term or the obligation of Tenant to pay rent.

ARTICLE 3. TERM

3.1. GENERAL. The term of this Lease ("**Term**") shall be for the period shown in Item 5 of the Basic Lease Provisions. The Term shall commence ("**Commencement Date**") on the Commencement Date for Suite 1150. The Commencement Date for Suite 1150 shall be the earlier of (a) the date the Suite 1150 is deemed "ready for occupancy" (as hereinafter defined) and possession thereof is delivered to Tenant, or (b) the date Tenant commences its regular business activities within Suite 1150. In no event shall the Commencement Date for Suite 1150 occur earlier than May 1, 2015. The Commencement Date for Suite 490 shall be the earlier of (a) the date the Suite 490 is deemed "ready for occupancy" and possession thereof is delivered to Tenant, or (b) the date Tenant commences its regular business activities within Suite 490. Promptly following request by Landlord, the parties shall memorialize on a form provided by Landlord (the "**Commencement Memorandum**") the actual Commencement Date and the expiration date

("Expiration Date") of this Lease; should Tenant fail to execute and return the Commencement Memorandum to Landlord within 5 business days (or provide specific written objections thereto within that period), then Landlord's determination of the Commencement and Expiration Dates as set forth in the Commencement Memorandum shall be conclusive. Suite 1150 and Suite 490 shall each be deemed "ready for occupancy" when Landlord, to the extent applicable, has substantially completed all the work required to be completed by Landlord pursuant to the Work Letter attached to this Lease for each suite but for minor punch list matters, and has obtained the requisite governmental approvals for Tenant's occupancy in connection with such work.

3.2. DELAY IN POSSESSION. If Landlord, for any reason whatsoever, cannot deliver possession of the Premises to Tenant on or before the Estimated Commencement Date for Suite 1150 or the Estimated Commencement Date for Suite 490 set forth in Item 4 of the Basic Lease Provisions, this Lease shall not be void or voidable nor shall Landlord be liable to Tenant for any resulting loss or damage. However, Tenant shall not be liable for any rent for each suite until the respective Commencement Date occurs as provided in Section 3.1 above, except that if Landlord's failure to substantially complete all work required of Landlord pursuant to Section 3.1 above is attributable to any action or inaction by Tenant (including without limitation any Tenant Delay described in the Work Letter attached to this Lease), then each suite shall be deemed ready for occupancy, and Landlord shall be entitled to full performance by Tenant (including the payment of rent), as of the date Landlord would have been able to substantially complete such work and deliver the Premises to Tenant but for Tenant's delay(s).

ARTICLE 4. RENT AND OPERATING EXPENSES

4.1. BASIC RENT. From and after the Commencement Date, Tenant shall pay to Landlord without deduction or offset a Basic Rent for the Premises in the total amount shown (including subsequent adjustments, if any) in Item 6 of the Basic Lease Provisions (the "Basic Rent"). If the Commencement Date is other than the first day of a calendar month, any rental adjustment shown in Item 6 shall be deemed to occur on the first day of the next calendar month following the specified monthly anniversary of the Commencement Date. The Basic Rent shall be due and payable in advance commencing on the Commencement Date and continuing thereafter on the first day of each successive calendar month of the Term, as prorated for any partial month. No demand, notice or invoice shall be required. An installment in the amount of 1 full month's Basic Rent at the initial rate specified in Item 6 of the Basic Lease Provisions shall be delivered to Landlord concurrently with Tenant's execution of this Lease, or at Landlord's election, within 5 business days following the full execution of this Lease (but in no event later than the Commencement Date).

4.2. OPERATING EXPENSES. Tenant shall pay Tenant's Share of Operating Expenses in accordance with Exhibit B of this Lease.

4.3. SECURITY DEPOSIT. Concurrently with Tenant's delivery of this Lease, or at Landlord's election, within 5 business days following the full execution of this Lease (but in no event later than the Commencement Date), Tenant shall deposit with Landlord the sum, if any, stated in Item 9 of the Basic Lease Provisions (the "Security Deposit"), to be held by Landlord as security for the full and faithful performance of Tenant's obligations under this Lease, to pay any rental sums, including without limitation such additional rent as may be owing under any provision hereof, and to maintain the Premises as required by this Lease. Upon any breach of the foregoing obligations by Tenant, Landlord may apply all or part of the Security Deposit as full or partial compensation. If any portion of the Security Deposit is so applied, Tenant shall within 5 days after written demand by Landlord deposit cash with Landlord in an amount sufficient to restore the Security Deposit to its original amount. Landlord shall not be required to keep this Security Deposit separate from its general funds, and Tenant shall not be entitled to interest on the Security Deposit. In no event may Tenant utilize all or any portion of the Security Deposit as a payment toward any rental sum due under this Lease. Any unapplied balance of the Security Deposit shall be returned to Tenant or, at Landlord's option, to the last assignee of Tenant's interest in this Lease within 30 days following the termination of this Lease and Tenant's vacation of the Premises. Tenant hereby waives the provisions of Section 1950.7 of the California Civil Code, or any similar or successor laws now or hereafter in effect.

ARTICLE 5. USES

5.1. USE. Tenant shall use the Premises only for the purposes stated in Item 3 of the Basic Lease Provisions and for no other use whatsoever. Tenant shall not do or permit anything to be done in or about the Premises which will in any way interfere with the rights or quiet enjoyment of other occupants of the Building or the Project, or use or allow the Premises to be used for any unlawful purpose, nor shall Tenant permit any nuisance in the Premises or the Project. Tenant shall comply at its expense with all present and future laws, ordinances and requirements of all governmental authorities that pertain to Tenant or its use of the Premises, and with all energy usage reporting

requirements of Landlord. As of the date of this Lease, there has been no inspection of the Building and Project by a Certified Access Specialist as referenced in Section 1938 of the California Civil Code.

5.2. SIGNS. Landlord shall affix and maintain a sign (restricted solely to Tenant's name as set forth herein or such other name as Landlord may consent to in writing) adjacent to the entry door of the Premises, together with a directory strip listing Tenant's name as set forth herein in the lobby directory of the Building. Tenant shall not place or allow to be placed any other sign, decoration or advertising matter of any kind that is visible from the exterior of the Premises.

5.3 HAZARDOUS MATERIALS. Tenant shall not generate, handle, store or dispose of hazardous or toxic materials (as such materials may be identified in any federal, state or local law or regulation) in the Premises or Project without the prior written consent of Landlord. Tenant acknowledges that it has read, understands and, if applicable, shall comply with the provisions of **Exhibit H** to this Lease, if that Exhibit is attached.

ARTICLE 6. LANDLORD SERVICES

6.1. UTILITIES AND SERVICES. Landlord and Tenant shall be responsible to furnish those utilities and services to the Premises to the extent provided in Exhibit C, subject to the conditions and payment obligations and standards set forth in this Lease. Landlord's failure to furnish, or any interruption, diminishment or termination of, services due to the application of laws, the failure of any equipment, the performance of repairs, improvements or alterations, utility interruptions or the occurrence of an event of force majeure (defined in Section 20.8) shall not render Landlord liable to Tenant, constitute a constructive eviction of Tenant, give rise to an abatement of Rent, nor relieve Tenant from the obligation to fulfill any covenant or agreement. However, if the Premises, or a material portion of the Premises, are made untenable for a period in excess of 5 consecutive business days as a result of a service interruption or repair that is reasonably within the control of Landlord to correct and through no fault of Tenant and for reasons other than as contemplated in Article 11, then Tenant, as its sole remedy, shall be entitled to receive an abatement of Rent payable hereunder during the period beginning on the 6th consecutive business day of the service interruption or repair and ending on the day the service has been restored.

6.2. OPERATION AND MAINTENANCE OF COMMON AREAS. During the Term, Landlord shall operate all Common Areas within the Building and the Project. The term "**Common Areas**" shall mean all areas within the Building, Project and other buildings in the Project which are not held for exclusive use by persons entitled to occupy space.

6.3. USE OF COMMON AREAS. The occupancy by Tenant of the Premises shall include the use of the Common Areas in common with Landlord and with all others for whose convenience and use the Common Areas may be provided by Landlord, subject, however, to compliance with Rules and Regulations described in Article 17 below. Landlord shall at all times during the Term have exclusive control of the Common Areas, and may restrain or permit any use or occupancy. Landlord may temporarily close any portion of the Common Areas for repairs, remodeling and/or alterations, to prevent a public dedication or the accrual of prescriptive rights, or for any other reasonable purpose.

ARTICLE 7. REPAIRS AND MAINTENANCE

7.1. TENANT'S MAINTENANCE AND REPAIR. Subject to Articles 11 and 12, Tenant at its sole expense shall make all repairs necessary to keep the Premises and all improvements and fixtures therein in good condition and repair, excepting ordinary wear and tear. Tenant's maintenance obligation shall include without limitation all appliances, interior glass, doors, door closures, hardware, fixtures, electrical, plumbing, fire extinguisher equipment and other equipment installed in the Premises, together with any supplemental HVAC equipment servicing only the Premises. Should Landlord or its management agent agree to make a repair on behalf of Tenant and at Tenant's request, Tenant shall promptly reimburse Landlord as additional rent for all reasonable costs incurred (including the standard supervision fee) upon submission of an invoice.

7.2. LANDLORD'S MAINTENANCE AND REPAIR. Subject to Articles 11 and 12, Landlord shall provide service, maintenance and repair with respect to the heating, ventilating and air conditioning ("**HVAC**") equipment of the Building (exclusive of any supplemental HVAC equipment servicing only the Premises) and shall maintain in good repair the Common Areas, roof, foundations, footings, the exterior surfaces of the exterior walls of the Building (including exterior glass), and the structural, electrical, mechanical and plumbing systems of the Building (including elevators, if any, serving the Building), except to the extent provided in Section 7.1 above. Notwithstanding any provision of the California Civil Code or any similar or successor laws to the contrary, Tenant understands that it shall not make repairs at Landlord's expense or by rental offset. Except as provided in Section 11.1 and Article 12 below, there shall be no abatement of

rent and no liability of Landlord by reason of any injury to or interference with Tenant's business arising from the making of any repairs, alterations or improvements to any portion of the Building, including repairs to the Premises, nor shall any related activity by Landlord constitute an actual or constructive eviction. Tenant hereby waives any and all rights under and benefits of subsection 1 of Section 1932, and Sections 1941 and 1942 of the California Civil Code, or any similar or successor laws now or hereafter in effect.

7.3. ALTERATIONS. Except for cosmetic alteration projects that do not exceed \$10,000.00 during each calendar year and that do not affect the structural, electrical or mechanical components or systems of the Building, are not visible from the exterior of the Premises, do not change the basic floor plan of the Premises, and utilize only Landlord's building standard materials (which work shall require notice to Landlord but not Landlord's consent), Tenant shall make no alterations, additions, decorations or improvements (collectively referred to as "**Alterations**") to the Premises without the prior written consent of Landlord. Landlord may impose, as a condition to its consent, any commercially reasonable requirements that Landlord in its discretion may deem reasonable or desirable. Tenant shall use Landlord's designated mechanical and electrical contractors, obtain all required permits for the Alterations and shall perform the work in compliance with all applicable laws, regulations and ordinances with contractors reasonably acceptable to Landlord. Landlord shall be entitled to a supervision fee in the amount of 5% of the cost of the Alterations. Landlord may elect to cause its architect to review Tenant's architectural plans, and the reasonable cost of that review shall be reimbursed by Tenant. Should the Alterations proposed by Tenant and consented to by Landlord change the floor plan of the Premises, then Tenant shall, at its expense, furnish Landlord with as-built drawings and CAD disks compatible with Landlord's systems. Unless Landlord otherwise agrees in writing, all Alterations affixed to the Premises, including without limitation all Tenant Improvements constructed pursuant to the Work Letter (except as otherwise provided in the Work Letter), but excluding moveable trade fixtures and furniture, shall become the property of Landlord and shall be surrendered with the Premises at the end of the Term, except that Landlord may, by notice to Tenant given at least 30 days prior to the Expiration Date, require Tenant to remove by the Expiration Date, or sooner termination date of this Lease, all or any Alterations (including without limitation all telephone and data cabling) installed either by Tenant or by Landlord at Tenant's request (collectively, the "**Required Removables**"). In connection with its removal of Required Removables, Tenant shall repair any damage to the Premises arising from that removal and shall restore the affected area to its pre-existing condition, reasonable wear and tear excepted.

7.4. MECHANIC'S LIENS. Tenant shall keep the Premises free from any liens arising out of any work performed, materials furnished, or obligations incurred by or for Tenant. In the event that Tenant shall not, within 15 days following the imposition of any lien, cause the lien to be released of record by payment or posting of a proper bond in accordance with California Civil Code Section 8424 or any successor statute, Landlord shall have, in addition to all other available remedies, the right to cause the lien to be released by any means it deems proper, including payment of or defense against the claim giving rise to the lien. All expenses so incurred by Landlord shall be reimbursed by Tenant promptly following Landlord's demand. Tenant shall give Landlord no less than 20 days' prior notice in writing before commencing construction of any kind on the Premises.

7.5. ENTRY AND INSPECTION. Landlord shall at all reasonable times and with reasonable prior verbal notice, except in emergencies or to provide Building services, have the right to enter the Premises to inspect them, to supply services in accordance with this Lease, to make repairs and renovations as reasonably deemed necessary by Landlord, and to submit the Premises to prospective or actual purchasers or encumbrance holders (or, during the final twelve months of the Term or when an uncured Default exists, to prospective tenants), all without being deemed to have caused an eviction of Tenant and without abatement of rent except as provided elsewhere in this Lease.

ARTICLE 8. SPACE PLANNING AND SUBSTITUTION

Landlord shall have the right, upon providing not less than 60 days written notice, to move Tenant to other space of comparable size and quality on the 7th floor or higher in the Building or in the Project. The new space shall be provided with improvements of comparable quality to those within the Premises and shall contain similar finishes as the Premises, approximately the same rentable square footage as the Premises and approximately the same number of work stations, offices, breakrooms and reception areas as are contained in the Premises as of the date Tenant receives Landlord's notice of relocation. The total monthly Basic Rent for the new space shall in no event exceed the total monthly Basic Rent for the Premises prior to the relocation and Tenant's Share for the new space shall in no event exceed Tenant's Share for the Premises prior to the relocation. Landlord shall pay the reasonable out-of-pocket costs to relocate and reconnect Tenant's personal property and equipment within the new space. Landlord shall also reimburse Tenant for such other reasonable out-of-pocket costs that Tenant may incur in connection with the relocation. Within 10 days following request by Landlord, Tenant shall execute an amendment to this Lease prepared by Landlord to memorialize the relocation.

Notwithstanding the foregoing, if Landlord provides Tenant with a notice of relocation and Tenant, in its reasonable judgment, determines that the new space is not of reasonably comparable size and utility when compared to the Premises, Tenant shall have the right to terminate this Lease by giving written notice of termination to Landlord within 10 days after the date of Landlord's notice of relocation to Tenant. Tenant's notice of termination shall set forth the reasons why Tenant believes the new space is not comparable to the Premises. Such termination shall be effective 60 days after the date of Landlord's notice of relocation, provided that Landlord, within 10 days after receipt of Tenant's notice of termination, shall have the right to withdraw its notice of relocation. In such event, this Lease shall continue in full force and effect as if Landlord had never provided Tenant with a notice of relocation.

ARTICLE 9. ASSIGNMENT AND SUBLETTING

9.1. RIGHTS OF PARTIES. Tenant shall not, directly or indirectly, assign, sublease, transfer or encumber any interest in this Lease or allow any third party to use any portion of the Premises (collectively or individually, a "Transfer") without the prior written consent of Landlord, which consent shall not be unreasonably withheld if Landlord does not exercise its recapture rights. Tenant agrees that it is not unreasonable for Landlord to withhold consent to a Transfer to a proposed assignee or subtenant who is an existing tenant or occupant of the Building or Project or to a prospective tenant with whom Landlord or Landlord's affiliate has been actively negotiating within the last six (6) months. Within 30 days after receipt of executed copies of the transfer documentation and such other information as Landlord may request, Landlord shall either: (a) consent to the Transfer by execution of a consent agreement in a form reasonably designated by Landlord; (b) refuse to consent to the Transfer; or (c) recapture only the portion of the Premises that Tenant is proposing to Transfer. Tenant hereby waives the provisions of Section 1995.310 of the California Civil Code, or any similar or successor Laws, now or hereinafter in effect, and all other remedies, including, without limitation, any right at law or equity to terminate this Lease, on its own behalf and, to the extent permitted under all applicable laws, on behalf of the proposed transferee. In no event shall any Transfer release or relieve Tenant from any obligation under this Lease, as same may be amended. Tenant shall pay Landlord a review fee of \$1,000.00 for Landlord's review of any requested Transfer. Tenant shall pay Landlord, as additional Rent, 50% of all rent and other consideration which Tenant receives as a result of a Transfer that is in excess of the Rent payable to Landlord for the portion of the Premises and Term covered by the Transfer. For purposes herein, such transfer costs shall include all reasonable and customary expenses directly incurred by Tenant attributable to the Transfer, including brokerage fees, legal fees, construction costs, and Landlord's review fee. If Tenant is in Default, Landlord may require that all sublease payments be made directly to Landlord, in which case Tenant shall receive a credit against Rent in the amount of Tenant's share of payments received by Landlord.

9.2. PERMITTED TRANSFER. Notwithstanding the foregoing, Tenant may assign this Lease to a successor to Tenant by merger, consolidation or the purchase of substantially all of Tenant's assets, or assign this Lease or sublet all or a portion of the Premises to an Affiliate (defined below), without the consent of Landlord, provided that all of the following conditions are satisfied (a "Permitted Transfer"): (i) Tenant is not then in Default hereunder; (ii) Tenant gives Landlord written notice prior to such Permitted Transfer; and (iii) the successor entity resulting from any merger or consolidation of Tenant or the sale of all or substantially all of the assets of Tenant, has a net worth at the time of the Permitted Transfer that is at least equal to the net worth of Tenant immediately before the Permitted Transfer. "Affiliate" shall mean an entity controlled by, controlling or under common control with Tenant.

ARTICLE 10. INSURANCE AND INDEMNITY

10.1. TENANT'S INSURANCE. Tenant, at its sole cost and expense, shall provide and maintain in effect the insurance described in **Exhibit D**. Evidence of that insurance must be delivered to Landlord prior to the Commencement Date.

10.2. TENANT'S INDEMNITY. To the fullest extent permitted by law, but subject to Section 10.4 below, Tenant shall defend, indemnify and hold harmless Landlord and Landlord's agents, employees, lenders, and affiliates, from and against any and all negligence, claims, liabilities, damages, costs or expenses arising either before or after the Commencement Date which arise from or are caused by Tenant's use or occupancy of the Premises, the Building or the Common Areas of the Project, or from the conduct of Tenant's business, or from any activity, work, or thing done, permitted or suffered by Tenant or Tenant's agents, employees, subtenants, vendors, contractors, invitees or licensees in or about the Premises, the Building or the Common Areas of the Project, or from any Default in the performance of any obligation on Tenant's part to be performed under this Lease, or from any act, omission or negligence on the part of Tenant or Tenant's agents, employees, subtenants, vendors, contractors, invitees or licensees. Landlord may, at its option, require Tenant to assume Landlord's defense in any action covered by this Section 10.2 through counsel

reasonably satisfactory to Landlord. Notwithstanding the foregoing, Tenant shall not be obligated to indemnify Landlord against any liability or expense to the extent it is ultimately determined that the same was caused by the negligence or willful misconduct of Landlord, its agents, contractors or employees.

10.3. LANDLORD'S NONLIABILITY. Unless caused by the negligence or intentional misconduct of Landlord, its agents, employees or contractors but subject to Section 10.4 below, Landlord shall not be liable to Tenant, its employees, agents and invitees, and Tenant hereby waives all claims against Landlord, its employees and agents for loss of or damage to any property, or any injury to any person, resulting from any condition including, but not limited to, acts or omissions (criminal or otherwise) of third parties and/or other tenants of the Project, or their agents, employees or invitees, fire, explosion, falling plaster, steam, gas, electricity, water or rain which may leak or flow from or into any part of the Premises or from the breakage, leakage, obstruction or other defects of the pipes, sprinklers, wires, appliances, plumbing, air conditioning, electrical works or other fixtures in the Building, whether the damage or injury results from conditions arising in the Premises or in other portions of the Building. Notwithstanding anything to the contrary contained in this Lease, in no event shall Landlord be liable for Tenant's loss or interruption of business or income (including without limitation, Tenant's consequential damages, lost profits or opportunity costs), or for interference with light or other similar intangible interests.

10.4. WAIVER OF SUBROGATION. Landlord and Tenant each hereby waives all rights of recovery against the other on account of loss and damage occasioned to the property of such waiving party to the extent that the waiving party is entitled to proceeds for such loss and damage under any property insurance policies carried or otherwise required to be carried by this Lease; provided however, that the foregoing waiver shall not apply to the extent of Tenant's obligation to pay deductibles under any such policies and this Lease.

ARTICLE 11. DAMAGE OR DESTRUCTION

11.1. RESTORATION.

(a) If the Building of which the Premises are a part is damaged as the result of an event of casualty, then subject to the provisions below, Landlord shall repair that damage as soon as reasonably possible unless Landlord reasonably determines that: (i) the Premises have been materially damaged and there is less than 1 year of the Term remaining on the date of the casualty; (ii) any Mortgagee (defined in Section 13.1) requires that the insurance proceeds be applied to the payment of the mortgage debt; or (iii) proceeds necessary to pay the full cost of the repair are not available from Landlord's insurance, including without limitation earthquake insurance. Should Landlord elect not to repair the damage for one of the preceding reasons, Landlord shall so notify Tenant in the "Casualty Notice" (as defined below), and this Lease shall terminate as of the date of delivery of that notice.

(b) As soon as reasonably practicable following the casualty event but not later than 60 days thereafter, Landlord shall notify Tenant in writing ("**Casualty Notice**") of Landlord's election, if applicable, to terminate this Lease. If this Lease is not so terminated, the Casualty Notice shall set forth the anticipated period for repairing the casualty damage. If the anticipated repair period exceeds 180 days and if the damage is so extensive as to reasonably prevent Tenant's substantial use and enjoyment of the Premises, then either party may elect to terminate this Lease by written notice to the other within 10 days following delivery of the Casualty Notice.

(c) In the event that neither Landlord nor Tenant terminates this Lease pursuant to Section 11.1(b), Landlord shall repair all material damage to the Premises or the Building as soon as reasonably possible and this Lease shall continue in effect for the remainder of the Term. Upon notice from Landlord, Tenant shall assign or endorse over to Landlord (or to any party designated by Landlord) all property insurance proceeds payable to Tenant under Tenant's insurance with respect to any Alterations or any tenant improvements installed by or for the benefit of Tenant. Within 15 days of demand, Tenant shall also pay Landlord for any additional excess costs that are determined during the performance of the repairs to such Alterations.

(d) From and after the casualty event, the rental to be paid under this Lease shall be abated in the same proportion that the Floor Area of the Premises that is rendered unusable by the damage from time to time bears to the total Floor Area of the Premises.

(e) Notwithstanding the provisions of subsections (a), (b) and (c) of this Section 11.1, but subject to Section 10.4, the cost of any repairs shall be borne by Tenant, and Tenant shall not be entitled to rental abatement or termination rights, if the damage is due to the fault or neglect of Tenant or its employees, subcontractors, contractors, invitees or representatives.

11.2. LEASE GOVERNS. Tenant agrees that the provisions of this Lease, including without limitation Section 11.1, shall govern any damage or destruction and shall accordingly supersede any contrary statute or rule of law.

ARTICLE 12. EMINENT DOMAIN

Either party may terminate this Lease if any material part of the Premises is taken or condemned for any public or quasi-public use under Law, by eminent domain or private purchase in lieu thereof (a "**Taking**"). Landlord shall also have the right to terminate this Lease if there is a Taking of any portion of the Building or Project which would have a material adverse effect on Landlord's ability to profitably operate the remainder of the Building. The termination shall be effective as of the effective date of any order granting possession to, or vesting legal title in, the condemning authority. All compensation awarded for a Taking shall be the property of Landlord. Tenant agrees that the provisions of this Lease shall govern any Taking and shall accordingly supersede any contrary statute or rule of law.

ARTICLE 13. SUBORDINATION; ESTOPPEL CERTIFICATE

13.1. SUBORDINATION. Tenant accepts this Lease subject and subordinate to any mortgage(s), deed(s) of trust, ground lease(s) or other lien(s) now or subsequently arising upon the Premises, the Building or the Project, and to renewals, modifications, refinancings and extensions thereof (collectively referred to as a "**Mortgage**"). The party having the benefit of a Mortgage shall be referred to as a "**Mortgagee**." This clause shall be self-operative, but upon request from a Mortgagee, Tenant shall execute a commercially reasonable subordination and attornment agreement in favor of the Mortgagee, provided such agreement provides a non-disturbance covenant benefitting Tenant. Alternatively, a Mortgagee shall have the right at any time to subordinate its Mortgage to this Lease. Upon request, Tenant, without charge, shall attorn to any successor to Landlord's interest in this Lease in the event of a foreclosure of any mortgage. Tenant agrees that any purchaser at a foreclosure sale or lender taking title under a deed in lieu of foreclosure shall not be responsible for any act or omission of a prior landlord, shall not be subject to any offsets or defenses Tenant may have against a prior landlord, and shall not be liable for the return of the Security Deposit not actually recovered by such purchaser nor bound by any rent paid in advance of the calendar month in which the transfer of title occurred; provided that (a) the foregoing shall not release the applicable prior landlord from any liability for those obligations, and (b) Tenant shall continue to receive the full benefit of having made such Security Deposit and/or prepaid rent. Tenant acknowledges that Landlord's Mortgagees and their successors-in-interest are intended third party beneficiaries of this Section 13.1.

13.2. ESTOPPEL CERTIFICATE. Tenant shall, within 10 days after receipt of a written request from Landlord, execute and deliver a commercially reasonable estoppel certificate in favor of those parties as are reasonably requested by Landlord (including a Mortgagee or a prospective purchaser of the Building or the Project).

ARTICLE 14. DEFAULTS AND REMEDIES

14.1. TENANT'S DEFAULTS. In addition to any other event of default set forth in this Lease, the occurrence of any one or more of the following events shall constitute a "**Default**" by Tenant:

(a) The failure by Tenant to make any payment of Rent required to be made by Tenant, as and when due, where the failure continues for a period of five (5) business days after written notice from Landlord to Tenant. The term "**Rent**" as used in this Lease shall be deemed to mean the Basic Rent and all other sums required to be paid by Tenant to Landlord pursuant to the terms of this Lease.

(b) Except where a specific time period is otherwise set forth for Tenant's performance in this Lease (in which event the failure to perform by Tenant within such time period shall be a Default), the failure or inability by Tenant to observe or perform any of the covenants or provisions of this Lease to be observed or performed by Tenant, other than as specified in any other subsection of this Section 14.1, where the failure continues for a period of 30 days after written notice from Landlord to Tenant specifying in reasonable detail the nature and extent of the failure; provided, however, that if the nature of Tenant's obligation is such that more than 30 days are required for its performance, then Tenant shall not be deemed to be in default if it commences performance within the 30 day period and thereafter diligently pursues the cure to completion.

The notice periods provided herein are in lieu of, and not in addition to, any notice periods provided by law, and Landlord shall not be required to give any additional notice under California Code of Civil Procedure Section 1161, or any successor statute, in order to be entitled to commence an unlawful detainer proceeding.

14.2. LANDLORD'S REMEDIES.

(a) Upon the occurrence of any Default by Tenant, then in addition to any other remedies available to Landlord, Landlord may exercise the following remedies:

(i) Landlord may terminate Tenant's right to possession of the Premises by any lawful means, in which case this Lease shall terminate and Tenant shall immediately surrender possession of the Premises to Landlord. Such termination shall not affect any accrued obligations of Tenant under this Lease. Upon termination, Landlord shall have the right to reenter the Premises and remove all persons and property. Landlord shall also be entitled to recover from Tenant:

(1) The worth at the time of award of the unpaid Rent which had been earned at the time of termination;

(2) The worth at the time of award of the amount by which the unpaid Rent which would have been earned after termination until the time of award exceeds the amount of such loss that Tenant proves could have been reasonably avoided;

(3) The worth at the time of award of the amount by which the unpaid Rent for the balance of the Term after the time of award exceeds the amount of such loss that Tenant proves could be reasonably avoided;

(4) Any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result from Tenant's default, including, but not limited to, the cost of recovering possession of the Premises, commissions and other expenses of reletting, including necessary repair, renovation, improvement and alteration of the Premises for a new tenant, reasonable attorneys' fees, and any other reasonable costs; and

(5) At Landlord's election, all other amounts in addition to or in lieu of the foregoing as may be permitted by law. Any sum, other than Basic Rent, shall be computed on the basis of the average monthly amount accruing during the 24 month period immediately prior to Default, except that if it becomes necessary to compute such rental before the 24 month period has occurred, then the computation shall be on the basis of the average monthly amount during the shorter period. As used in subparagraphs (1) and (2) above, the "worth at the time of award" shall be computed by allowing interest at the rate of 10% per annum. As used in subparagraph (3) above, the "worth at the time of award" shall be computed by discounting the amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus 1%.

(ii) Employ the remedy described in California Civil Code § 1951.4 (Landlord may continue this Lease in effect after Tenant's breach and abandonment and recover Rent as it becomes due, if Tenant has the right to sublet or assign, subject only to reasonable limitations).

(b) The various rights and remedies reserved to Landlord in this Lease or otherwise shall be cumulative and, except as otherwise provided by California law, Landlord may pursue any or all of its rights and remedies at the same time. No delay or omission of Landlord to exercise any right or remedy shall be construed as a waiver of the right or remedy or of any breach or Default by Tenant. The acceptance by Landlord of rent shall not be a (i) waiver of any preceding breach or Default by Tenant of any provision of this Lease, other than the failure of Tenant to pay the particular rent accepted, regardless of Landlord's knowledge of the preceding breach or Default at the time of acceptance of rent, or (ii) a waiver of Landlord's right to exercise any remedy available to Landlord by virtue of the breach or Default. No payment by Tenant or receipt by Landlord of a lesser amount than the rent required by this Lease shall be deemed to be other than a partial payment on account of the earliest due stipulated rent, nor shall any endorsement or statement on any check or letter be deemed an accord and satisfaction and Landlord shall accept the check or payment without prejudice to Landlord's right to recover the balance of the rent or pursue any other remedy available to it. Tenant hereby waives any right of redemption or relief from forfeiture under California Code of Civil Procedure Section 1174 or 1179, or under any successor statute, in the event this Lease is terminated by reason of any Default by Tenant. No act or thing done by Landlord or Landlord's agents during the Term shall be deemed an acceptance of a surrender of the Premises, and no agreement to accept a surrender shall be valid unless in writing and signed by Landlord.

14.3. LATE PAYMENTS. Any Rent due under this Lease that is not paid to Landlord within 5 business days of the date when due shall bear interest at the maximum rate permitted by law from the date due until fully paid and if

any Rent due from Tenant shall not be received by Landlord or Landlord's designee within 5 days after the date due, then Tenant shall pay to Landlord, in addition to the interest, a late charge for each delinquent payment equal to the greater of (i) 5% of that delinquent payment or (ii) \$100.00.

14.4. DEFAULT BY LANDLORD. Landlord shall not be deemed to be in default in the performance of any obligation under this Lease unless and until it has failed to perform the obligation within 30 days after written notice by Tenant to Landlord specifying in reasonable detail the nature and extent of the failure; provided, however, that if the nature of Landlord's obligation is such that more than 30 days are required for its performance, then Landlord shall not be deemed to be in default if it commences performance within the 30 day period and thereafter diligently pursues the cure to completion.

14.5. EXPENSES AND LEGAL FEES. Should either Landlord or Tenant bring any action in connection with this Lease, the prevailing party shall be entitled to recover as a part of the action its reasonable attorneys' fees, and all other reasonable costs. The prevailing party for the purpose of this paragraph shall be determined by the trier of the facts.

14.6. WAIVER OF JURY TRIAL/JUDICIAL REFERENCE.

(a) **LANDLORD AND TENANT EACH ACKNOWLEDGES THAT IT IS AWARE OF AND HAS HAD THE ADVICE OF COUNSEL OF ITS CHOICE WITH RESPECT TO ITS RIGHT TO TRIAL BY JURY, AND EACH PARTY DOES HEREBY EXPRESSLY AND KNOWINGLY WAIVE AND RELEASE ALL SUCH RIGHTS TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM BROUGHT BY EITHER PARTY HERETO AGAINST THE OTHER (AND/OR AGAINST ITS OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, OR SUBSIDIARY OR AFFILIATED ENTITIES) ON ANY MATTERS WHATSOEVER ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS LEASE, TENANT'S USE OR OCCUPANCY OF THE PREMISES, AND/OR ANY CLAIM OF INJURY OR DAMAGE.**

(b) In the event that the jury waiver provisions of Section 14.6 (a) are not enforceable under California law, then, unless otherwise agreed to by the parties, the provisions of this Section 14.6 (b) shall apply. Landlord and Tenant agree that any disputes arising in connection with this Lease (including but not limited to a determination of any and all of the issues in such dispute, whether of fact or of law) shall be resolved (and a decision shall be rendered) by way of a general reference as provided for in Part 2, Title 8, Chapter 6 (§§ 638 et. seq.) of the California Code of Civil Procedure, or any successor California statute governing resolution of disputes by a court appointed referee. Nothing within this Section 14.6 shall apply to an unlawful detainer action.

14.7. SATISFACTION OF JUDGMENT. The obligations of Landlord do not constitute the personal obligations of the individual partners, trustees, directors, officers, members or shareholders of Landlord or its constituent partners or members. Should Tenant recover a money judgment against Landlord, such judgment shall be satisfied only from the interest of Landlord in the Project and out of the rent or other income from such property receivable by Landlord, and no action for any deficiency may be sought or obtained by Tenant.

ARTICLE 15. END OF TERM

15.1. HOLDING OVER. If Tenant holds over for any period after the Expiration Date (or earlier termination of the Term), such tenancy shall constitute a tenancy at sufferance only and possession shall be subject to all of the terms of this Lease, except that the monthly rental shall be 150% of the total monthly rental for the month immediately preceding the date of termination. The acceptance by Landlord of monthly hold-over rental in a lesser amount shall not constitute a waiver of Landlord's right to recover the full amount due unless otherwise agreed in writing by Landlord. If Tenant fails to surrender the Premises upon the expiration of this Lease despite demand to do so by Landlord, Tenant shall indemnify and hold Landlord harmless from all loss or liability, including without limitation, any claims made by any succeeding tenant relating to such failure to surrender. The foregoing provisions of this Section 15.1 are in addition to and do not affect Landlord's right of re-entry or any other rights of Landlord under this Lease or at law.

15.2. SURRENDER OF PREMISES; REMOVAL OF PROPERTY. Upon the Expiration Date or upon any earlier termination of this Lease, Tenant shall quit and surrender possession of the Premises to Landlord in as good order, condition and repair as when received or as hereafter may be improved by Landlord or Tenant, reasonable wear and tear and repairs which are Landlord's obligation excepted, and shall remove or fund to Landlord the cost of removing all wallpapering, voice and/or data transmission cabling installed by or for Tenant and Required Removables, together with all personal property and debris, and shall perform all work required under Section 7.3 of this Lease. If Tenant

shall fail to comply with the provisions of this Section 15.2, Landlord may effect the removal and/or make any repairs, and the cost to Landlord shall be additional rent payable by Tenant upon demand.

ARTICLE 16. PAYMENTS AND NOTICES

All sums payable by Tenant to Landlord shall be paid, without deduction or offset, in lawful money of the United States to Landlord at its address set forth in Item 12 of the Basic Lease Provisions, or at any other place as Landlord may designate in writing. Unless this Lease expressly provides otherwise, all payments shall be due and payable within 5 business days after demand. All payments requiring proration shall be prorated on the basis of the number of days in the pertinent calendar month or year, as applicable. Any notice, election, demand, consent or approval to be given or other document to be delivered by either party to the other may be delivered to the other party, at the address set forth in Item 12 of the Basic Lease Provisions, by personal service or by any courier or "overnight" express mailing service. Either party may, by written notice to the other, served in the manner provided in this Article, designate a different address. The refusal to accept delivery of a notice, or the inability to deliver the notice (whether due to a change of address for which notice was not duly given or other good reason), shall be deemed delivery and receipt of the notice as of the date of attempted delivery.

ARTICLE 17. RULES AND REGULATIONS

Tenant agrees to comply with the Rules and Regulations attached as **Exhibit E**, and any reasonable and nondiscriminatory amendments, modifications and/or additions as may be adopted by Landlord from time to time.

ARTICLE 18. BROKER'S COMMISSION

The parties recognize as the broker(s) who negotiated this Lease the firm(s) whose name(s) is (are) stated in Item 10 of the Basic Lease Provisions, and agree that Landlord shall be responsible for the payment of brokerage commissions to those broker(s) unless otherwise provided in this Lease. Tenant agrees to indemnify and hold Landlord harmless from any cost, expense or liability (including reasonable attorneys' fees) for any compensation, commissions or charges claimed by any other real estate broker or agent employed or claiming to represent or to have been employed by Tenant in connection with the negotiation of this Lease.

ARTICLE 19. TRANSFER OF LANDLORD'S INTEREST

Landlord shall have the right to transfer and assign, in whole or in part, all of its ownership interest, rights and obligations in the Building, Project or Lease, including the Security Deposit, and upon transfer Landlord shall be released from any further obligations hereunder, and Tenant agrees to look solely to the successor in interest of Landlord for the performance of such obligations and the return of any Security Deposit.

ARTICLE 20. INTERPRETATION

20.1. NUMBER. Whenever the context of this Lease requires, the words "Landlord" and "Tenant" shall include the plural as well as the singular.

20.2. JOINT AND SEVERAL LIABILITY. If more than one person or entity is named as Tenant, the obligations imposed upon each shall be joint and several and the act of or notice from, or notice or refund to, or the signature of, any one or more of them shall be binding on all of them with respect to the tenancy of this Lease, including, but not limited to, any renewal, extension, termination or modification of this Lease.

20.3. SUCCESSORS. Subject to Sections 13.1 and 22.1 and to Articles 9 and 19 of this Lease, all rights and liabilities given to or imposed upon Landlord and Tenant shall extend to and bind their respective heirs, executors, administrators, successors and assigns. Nothing contained in this Section 20.3 is intended, or shall be construed, to grant to any person other than Landlord and Tenant and their successors and assigns any rights or remedies under this Lease.

20.4. TIME OF ESSENCE. Time is of the essence with respect to the performance of every provision of this Lease in which time of performance is a factor.

20.5. CONTROLLING LAW/VENUE. This Lease shall be governed by and interpreted in accordance with the laws of the State of California.

20.6. SEVERABILITY. If any term or provision of this Lease, the deletion of which would not adversely affect the receipt of any material benefit by either party or the deletion of which is consented to by the party adversely affected, shall be held invalid or unenforceable to any extent, the remainder of this Lease shall not be affected and each term and provision of this Lease shall be valid and enforceable to the fullest extent permitted by law.

20.7. WAIVER. One or more waivers by Landlord or Tenant of any breach of any term, covenant or condition contained in this Lease shall not be a waiver of any subsequent breach of the same or any other term, covenant or condition. Consent to any act by one of the parties shall not be deemed to render unnecessary the obtaining of that party's consent to any subsequent act. No breach of this Lease shall be deemed to have been waived unless the waiver is in a writing signed by the waiving party.

20.8. INABILITY TO PERFORM. In the event that either party shall be delayed or hindered in or prevented from the performance of any work or in performing any act required under this Lease by reason of any cause beyond the reasonable control of that party, then the performance of the work or the doing of the act shall be excused for the period of the delay and the time for performance shall be extended for a period equivalent to the period of the delay. The provisions of this Section 20.8 shall not operate to excuse Tenant from the prompt payment of Rent.

20.9. ENTIRE AGREEMENT. This Lease constitutes the entire agreement between the parties and supersedes all prior agreements and understandings related to the Premises. This Lease may be modified only by a written agreement signed by Landlord and Tenant.

20.10. QUIET ENJOYMENT. Upon the observance and performance of all the covenants, terms and conditions on Tenant's part to be observed and performed, and subject to the other provisions of this Lease, Tenant shall have the right of quiet enjoyment and use of the Premises for the Term without hindrance or interruption by Landlord or any other person claiming by or through Landlord.

20.11. SURVIVAL. All covenants of Landlord or Tenant which reasonably would be intended to survive the expiration or sooner termination of this Lease, including without limitation any warranty or indemnity hereunder, shall so survive and continue to be binding upon and inure to the benefit of the respective parties and their successors and assigns.

ARTICLE 21. EXECUTION

21.1. COUNTERPARTS; DIGITAL SIGNATURES . This Lease may be executed in one or more counterparts, each of which shall constitute an original and all of which shall be one and the same agreement. The parties agree to accept a digital image (including but not limited to an image in the form of a PDF, JPEG, GIF file, or other e-signature) of this Lease, if applicable, reflecting the execution of one or both of the parties, as a true and correct original.

21.2. CORPORATE AND PARTNERSHIP AUTHORITY . Tenant represents and warrants to Landlord, and agrees, that each individual executing this Lease on behalf of Tenant is authorized to do so on behalf of Tenant.

21.3. EXECUTION OF LEASE; NO OPTION OR OFFER. The submission of this Lease to Tenant shall be for examination purposes only, and shall not constitute an offer to or option for Tenant to lease the Premises unless and until Landlord has executed and delivered this Lease to Tenant.

21.4 BROKERS. By the execution of this Lease, each of Landlord and Tenant hereby acknowledge and confirm (a) receipt of a copy of a Disclosure Regarding Real Estate Agency Relationship conforming to the requirements of California Civil Code 2079.16, and (b) the agency relationships specified in Section 10 of the Basic Lease Provisions, which acknowledgement and confirmation is expressly made for the benefit of Tenant's Broker identified in Section 10 of the Basic Lease Provisions. If there is no Tenant's Broker so identified in Section 10 of the Basic Lease Provisions, then such acknowledgement and confirmation is expressly made for the benefit of Landlord's Broker. By the execution of this Lease, Landlord and Tenant are executing the confirmation of the agency relationships set forth in Section 10 of the Basic Lease Provisions.

ARTICLE 22. MISCELLANEOUS

22.1. MORTGAGEE PROTECTION. No act or failure to act on the part of Landlord which would otherwise entitle Tenant to be relieved of its obligations hereunder or to terminate this Lease shall result in such a release or termination

unless (a) Tenant has given notice by registered or certified mail to any Mortgagee of a Mortgage covering the Building whose address has been furnished to Tenant and (b) such Mortgagee is afforded a reasonable opportunity to cure the default by Landlord. Tenant shall comply with any written directions by any Mortgagee to pay Rent due hereunder directly to such Mortgagee without determining whether a default exists under such Mortgagee's Mortgage.

22.2. SDN LIST. Tenant hereby represents and warrants that neither Tenant nor any officer, director, employee, partner, member or other principal of Tenant (collectively, "**Tenant Parties**") is listed as a Specially Designated National and Blocked Person ("**SDN**") on the list of such persons and entities issued by the U.S. Treasury Office of Foreign Assets Control (OFAC). In the event Tenant or any Tenant Party is or becomes listed as an SDN, Tenant shall be deemed in breach of this Lease and Landlord shall have the right to terminate this Lease immediately upon written notice to Tenant.

22.3. FITNESS CENTER AND SHOWER FACILITY. Subject to the provisions of this Section 22.3, so long as Tenant is not in Default under this Lease, and provided Tenant's employees execute Landlord's standard waiver of liability form and pay the applicable one time or monthly fee, if any, then Tenant's employees (the "**Fitness Center Users**") shall be entitled to use the fitness center (the "**Fitness Center**") and the shower facility (the "**Shower Facility**") located at the Project. No separate charges shall be assessed to Fitness Center Users for the use of the Fitness Center (with the exception of towel/laundry fees, if any) during the initial Term of this Lease, provided, however, that the costs of operating, maintaining and repairing the Fitness Center shall be included as part of Operating Expenses. The use of the Fitness Center and Shower Facility shall be subject to the reasonable rules and regulations (including rules regarding hours of use) established from time to time by Landlord. Landlord and Tenant acknowledge that the use of the Fitness Center by the Fitness Center Users shall be at their own risk and that the terms and provisions of Section 10.2 of this Lease shall apply to Tenant and the Fitness Center User's use of the Fitness Center. Tenant acknowledges that the provisions of this Section shall not be deemed to be a representation by Landlord that Landlord shall continuously maintain the Fitness Center (or any other fitness facility) and Shower Facility throughout the Term of this Lease, and Landlord shall have the right, at Landlord's sole discretion, to expand, contract, eliminate or otherwise modify the Fitness Center. No expansion, contraction, elimination or modification of the Fitness Center, and no termination of Tenant's or the Fitness Center Users' rights to the Fitness Center shall entitle Tenant to an abatement or reduction in Basic Rent constitute a constructive eviction, or result in an event of default by Landlord under this Lease. Tenant hereby voluntarily releases, discharges, waives and relinquishes any and all actions or causes of action for personal injury or property damage occurring to Tenant or its employees or agents arising as a result of the use of the Fitness Center and Shower Facility, or any activities incidental thereto, wherever or however the same may occur, and further agrees that Tenant will not prosecute any claim for personal injury or property damage against Landlord or any of its officers, agents, servants or employees for any said causes of action. It is the intention of Tenant with respect to the Fitness Center and Shower Facility to exempt and relieve Landlord from liability for personal injury or property damage caused by negligence.

LANDLORD:

THE IRVINE COMPANY LLC,
a Delaware limited liability company

By /s/ Steven M. Case

Name: Steven M. Case
Title: EVP

TENANT:

5 ARCHES, LLC,
a California limited liability company

By /s/ Gene Clark

Name: Gene Clark
Title: Member

FIRST AMENDMENT TO LEASE

I. PARTIES AND DATE.

THIS FIRST AMENDMENT TO LEASE (the "Amendment") is made and entered into as of September 6, 2016, by and between **THE IRVINE COMPANY LLC**, a Delaware limited liability company ("Landlord") and **5 ARCHES, LLC**, a California limited liability company ("Tenant").

II. RECITALS

Landlord and Tenant are parties to that certain lease dated January 27, 2015 (the "Lease"). Pursuant to the Lease, Landlord has leased to Tenant space currently containing approximately **9,361** rentable square feet (the "Original Premises") described as Suite No. 490 ("Suite 490") on the 4th floor and Suite No. 1150 ("Suite 1150") on the 11th floor of the building located at 19800 MacArthur Boulevard, Irvine, California (the "Building").

Tenant and Landlord agree to relocate Tenant from a portion of the Original Premises only described as Suite 490 to **6,617** rentable square feet of space described as Suite No. 950 ("Suite 950") on the 9th floor of the Building shown on **Exhibit A** attached hereto.

III. MODIFICATIONS.

- A. Basic Lease Provisions. The Basic Lease Provisions are hereby amended as follows:

1. Effective as of the Commencement Date for Suite 950, Item 2 shall be amended by deleting Suite 490 and substituting Suite 950 in lieu thereof:
2. Item 4 is hereby amended by deleting "Estimated Commencement Date for Suite 490 and adding the following:

"Estimated Commencement Date for Suite 950: the earlier of (a) 7 days following the date Suite 950 is deemed "ready for occupancy" (as hereinafter defined) and possession thereof is delivered to Tenant, estimated to be 13 weeks following the full and final execution of this Amendment, or (b) the date Tenant commences its regular business activities within Suite 950."

3. Effective as of the Commencement Date for Suite 950, Item 6 shall be amended by deleting Item 6.B. and substituting the following for Suite 950:

Months of Term or Period	Monthly Rate Per Square Foot	Basic Monthly Rent
1-12	\$2.84	\$18,792.00
13-24	\$2.97	\$19,652.00
25-36	\$3.10	\$20,512.00
37-48	\$3.24	\$21,439.00
49 to 4/30/21	\$3.39	\$22,432.00

5. Effective as of the Commencement Date for Suite 950, Item 7 shall be amended by adding the following for Suite 950:

"7. Property Tax Base: The Property Taxes per rentable square foot incurred by Landlord and attributable to the twelve month period ending June 30, 2018 (the "Base Year").

Project Cost Base: The Building Costs per rentable square foot incurred by Landlord and attributable to the Base Year.

Expense Recovery Period: Every 12 month period during the Term (or portion thereof during the first and last Lease years) ending June 30.”

6. Effective as of the Commencement Date for Suite 950, Item 8 shall be deleted in its entirety and the following shall be substituted in lieu thereof:

“8. **Floor Area of Premises:** approximately 13,887 rentable square feet (comprised of 7,270 rentable square feet for Suite 1150 and 6,617 rentable square feet for Suite 950) (Landlord and Tenant stipulate and agree that the Floor Area of Premises is correct).
Floor Area of Building: approximately 302,296 rentable square feet”
7. Item 9 is hereby deleted in its entirety and the following substituted in lieu thereof:

“9. **Security Deposit:** \$47,307.00”
8. Effective as of the Commencement Date for Suite 950, Item 11 shall be deleted and the following shall be substituted in lieu thereof:

“11. **Parking:** Tenant shall have the right but not the obligation to utilize up to 47 unreserved parking passes (25 unreserved parking passes for Suite 1150 and 22 unreserved parking passes for Suite 950) in accordance with the provisions set forth in Exhibit F to this Lease.”

B. Commencement Date for Suite 950. As used herein, the “**Commencement Date for Suite 950**” shall occur on the earlier of (a) the date Suite 950 is deemed ready for occupancy as set forth below, or (b) the date Tenant commences its business activities within Suite 950. Promptly following request by Landlord, the parties shall memorialize on a form provided by Landlord (the “**Suite 950 Commencement Memorandum**”) the actual Commencement Date for Suite 950 and the Expiration Date of the Lease; should Tenant fail to execute and return the Suite 950 Commencement Memorandum to Landlord within 5 business days (or provide specific written objections thereto within that period), then Landlord’s determination of the Commencement Date for Suite 950 and Expiration Date of the Lease as set forth in the Suite 950 Commencement Memorandum shall be conclusive. Suite 950 shall be deemed “ready for occupancy” when Landlord, to the extent applicable, (i) has substantially completed all the work required to be completed by Landlord pursuant to the Work Letter attached to this Amendment but for minor punch list matters, and has obtained the requisite governmental approvals for Tenant’s occupancy in connection with such work, (ii) has provided reasonable access to Suite 950 for Tenant so that Suite 950 may be used without unreasonable interference, and (iii) has put into operation all building services required to be provided by Landlord under the Lease and essential for the use of Suite 950 by Tenant.

- C. Delay in Possession. If Landlord, for any reason whatsoever, cannot deliver possession of Suite 950 to Tenant on or before the Estimated Commencement Date for Suite 950 set forth in Section III.A.2 above, this Amendment shall not be void or voidable nor shall Landlord be liable to Tenant for any resulting loss or damage. However, Tenant shall not be liable for any rent for Suite 950 until the Commencement Date for Suite 950 occurs as provided in Section III.B above, except that if Landlord’s failure to substantially complete all work required of Landlord pursuant to Section III.B(i) above is attributable to any action or inaction by Tenant (including without limitation any Tenant Delay described in the Work Letter, if any, attached to this Amendment), then Suite 950 shall be deemed ready for occupancy, and Landlord shall be entitled to full performance by Tenant (including the payment of rent), as of the date Landlord would have been able to substantially complete such work and deliver Suite 950 to Tenant but for Tenant’s delay(s).
 - D. Termination as to Suite 490. The parties agree that Tenant’s lease as to Suite 490 shall terminate at midnight on the date prior to the Commencement Date for Suite 950 (the “**Termination Date**” for Suite 490), provided that such termination shall not relieve Tenant of (i) any rent or other charges owed by Tenant, or other obligations required of Tenant, as are set forth in the Lease from and after the date of this Amendment through and including the Termination Date for Suite 490, (ii) any obligations which are set forth in this Amendment, and (iii) any indemnity or hold harmless obligations set forth in the Lease as to Suite 490. Tenant shall quit and surrender possession of Suite 490 to Landlord on or
-

before the Termination Date for Suite 490 as required by the provisions of Section 15.2 of the Lease; it being understood that Tenant shall not be required to remove the existing improvements, however Tenant shall remove or fund to Landlord the cost of removing all wallpapering, voice and/or data transmission cabling installed by or for Tenant.

- E. Security Deposit. Concurrently with Tenant's delivery of this Amendment, Tenant shall deliver the sum of \$18,419.00 to Landlord, which sum shall be added to the Security Deposit presently being held by Landlord in accordance with Section 4.3 of the Lease.
 - F. Operating Expenses. Notwithstanding any contrary provision in the Lease, Landlord hereby agrees that Tenant shall not be obligated to pay Landlord for Operating Expenses accruing during the 12 month period commencing as of the Commencement Date for Suite 950.
 - G. Signage. Landlord, at its sole cost and expense, shall affix and maintain a sign (restricted solely to Tenant's name as set forth herein) adjacent to the entry door of Suite 950. Any subsequent changes to that initial signage shall be made at Tenant's expense in accordance with Section 5.2 of the Lease.
 - H. Monument Signage. Subject to Landlord availability in its sole discretion and provided Tenant is not in Default under any provision of the Lease beyond all applicable notice and cure periods and provided further that Tenant is leasing at least 22,000 rentable square feet in the Building (the "**Monument Signage RSF Threshold**"), Tenant shall have the right to install non-exclusive signage on one slot of the Building monument at the entrance to the Building, which signage shall consist only of the name "5 Arches". The type, location and design of such signage shall be subject to the prior written approval of Landlord and the City of Irvine, and shall be consistent with Landlord's signage criteria for the Project. Fabrication, installation, insurance, and maintenance of such signage shall be at Tenant's sole cost and expense. Tenant understands and agrees that it shall use Landlord's designated contractor for installing the monument signage. Should Tenant fail to have the monument signage installed by such date that is 9 months following Landlord's notice that Tenant is granted such monument signage, then Tenant's right to install same thereafter shall be deemed null and void. Except for the foregoing, no sign, advertisement or notice visible from the exterior of the Premises shall be inscribed, painted or affixed by Tenant on any part of the Premises without prior consent of Landlord. Tenant's signage right shall belong solely to Tenant and may not be transferred or assigned without Landlord's prior written consent, which may be withheld by Landlord in Landlord's sole discretion. In the event Tenant, exclusive of any subtenant(s), fails to satisfy the Monument Signage RSF Threshold, then Tenant shall, within thirty (30) days following notice from Landlord, remove the monument signage at Tenant's expense. Tenant shall also remove such signage promptly following the expiration or earlier termination of the Lease. Any such removal shall be at Tenant's sole expense, and Tenant shall bear the cost of any resulting repairs to the monument that are reasonably necessary due to the removal.
 - I. Floor Plan of Premises. Effective as of the Commencement Date for Suite 950, page 2 of Exhibit A attached to the Lease shall be deleted and Exhibit A attached to this Amendment shall be substituted in lieu thereof.
 - J. Tenant Improvements. Landlord, at its sole cost, hereby agrees to complete the Tenant Improvements for the Substitution Space in accordance with the provisions of **Exhibit B**, Work Letter, attached hereto.
 - K. Parking. Notwithstanding any contrary provision in Exhibit F to the Lease, "Parking," effective as of the Commencement Date for Suite 950, Landlord shall lease to Tenant, and Tenant shall lease from Landlord, a total of up to 22 unreserved parking passes (for Suite 950) (the "**Suite 950 Parking Passes**") through the Expiration Date. Landlord agrees that Tenant may convert up to 3 of the Suite 950 Parking Passes to reserved stalls by providing written notice of such election to Landlord (the "**Converted Suite 950 Parking Passes**"). During the time period commencing as of the Commencement Date for Suite 950 and continuing through the Expiration Date only, Tenant shall pay to Landlord for the lease of the Suite 950 Parking Passes as follows: (i) \$50.00 per unreserved Suite 950 Parking Pass per month utilized, and (ii) if applicable, \$130.00 for each Converted Suite 950 Parking Pass per month utilized. Thereafter, the parking charge shall be at Landlord's scheduled parking rates from time to time. In addition but subject to the month-to-month availability of such parking as determined by Landlord, Tenant shall have the right to purchase such additional parking passes for unreserved parking as Tenant shall request from Landlord (the "**Additional Parking**").
-

Passes") by providing written notice of such election to Landlord at any time following the date of this Amendment. The parking charge for the Additional Parking Passes shall be at Landlord's scheduled parking rates from time to time.

- L. **SDN List.** Tenant hereby represents and warrants that neither Tenant nor any officer, director, employee, partner, member or other principal of Tenant (collectively, "**Tenant Parties**") is listed as a Specially Designated National and Blocked Person ("**SDN**") on the list of such persons and entities issued by the U.S. Treasury Office of Foreign Assets Control (OFAC). In the event Tenant or any Tenant Party is or becomes listed as an SDN, Tenant shall be deemed in breach of the Lease and Landlord shall have the right to terminate the Lease immediately upon written notice to Tenant.
- M. **Right of First Offer.** Provided Tenant is not then in Default under any provision of the Lease, and provided further that Tenant is occupying the entire Premises and has not assigned or sublet any of its interest in the Lease (except in connection with a Permitted Transfer of the Lease to an Affiliate as described in Section 9.2 thereof), Landlord hereby grants Tenant a one-time right ("**First Right**") to lease, during the initial 72 month Term of the Lease, any contiguous space on the 11th floor in the Building and shown on **Exhibit A-1** hereto ("**First Right Space**") in accordance with and subject to the provisions of this Section; provided that this First Right shall cease to be effective during the final 12 months of the Term. Except as otherwise provided below, prior to leasing the First Right Space, or any portion thereof, to any other party during the period that this First Right is in effect and after determining that the existing tenant in the First Right Space will not extend or renew the term of its lease, Landlord shall give Tenant written notice of the basic economic terms including but not limited to the Basic Rent, term, operating expense base, security deposit, and tenant improvement allowance (collectively, the "**Economic Terms**"), upon which Landlord is willing to lease such particular First Right Space to Tenant or to a third party; provided that the Economic Terms shall exclude brokerage commissions and other Landlord payments that do not directly inure to the tenant's benefit. It is understood that should Landlord intend to lease other office space in addition to the First Right Space as part of a single transaction, then Landlord's notice shall so provide and all such space shall collectively be subject to the following provisions. Within 5 business days after receipt of Landlord's notice, Tenant must give Landlord written notice pursuant to which Tenant shall elect to (i) lease all, but not less than all, of the space specified in Landlord's notice (the "**Designated Space**") upon such Economic Terms and the same non-Economic Terms as set forth in the Lease; (ii) refuse to lease the Designated Space, specifying that such refusal is not based upon the Economic Terms, but upon Tenant's lack of need for the Designated Space, in which event Landlord may lease the Designated Space upon any terms it deems appropriate; or (iii) refuse to lease the Designated Space, specifying that such refusal is based upon said Economic Terms, in which event Tenant shall also specify revised Economic Terms upon which Tenant shall be willing to lease the Designated Space. In the event that Tenant does not so respond in writing to Landlord's notice within said period, Tenant shall be deemed to have elected clause (ii) above. In the event Tenant gives Landlord notice pursuant to clause (iii) above, Landlord may elect to either (x) lease the Designated Space to Tenant upon such revised Economic Terms and the same other non-Economic Terms as set forth in the Lease, or (y) lease the Designated Space to any third party upon Economic Terms which are not materially more favorable to such party than those Economic Terms proposed by Tenant. Should Landlord so elect to lease the Designated Space to Tenant, then Landlord shall promptly prepare and deliver to Tenant an amendment to the Lease consistent with the foregoing, and Tenant shall execute and return same to Landlord within 10 days. Tenant's failure to timely return the amendment shall entitle Landlord to specifically enforce Tenant's commitment to lease the Designated Space or to lease such space to a third party. Notwithstanding the foregoing, it is understood that Tenant's First Right shall be subject to any extension or expansion rights previously granted by Landlord to any third party tenant in the Building prior to the date hereof, as well as to any such rights which may hereafter be granted by Landlord to any third party tenant occupying the First Right Space or any portion thereof, and Landlord shall in no event be obligated to initiate this First Right prior to leasing any portion of the First Right Space to the then-current occupant thereof. Tenant's rights under this Section shall be personal to the original Tenant named in the Lease and may not be assigned or transferred (except in connection with a Permitted Transfer of the Lease to an Affiliate as described in Section 9.2 thereof). Any other attempted assignment or transfer shall be void and of no force or effect. Time is specifically made of the essence of this Section.

IV. GENERAL.

- A. Effect of Amendments. The Lease shall remain in full force and effect except to the extent that it is modified by this Amendment.
- B. Entire Agreement. This Amendment embodies the entire understanding between Landlord and Tenant and can be changed only by a writing signed by Landlord and Tenant. There have been no additional oral or written representations or agreements. Under no circumstances shall Tenant be entitled to any rent abatement, improvement allowance, leasehold improvements, or any similar economic incentives that may have been provided Tenant in connection with entering into the Lease, unless specifically set forth in this Amendment.
- C. Counterparts: Digital Signatures. If this Amendment is executed in counterparts, each is hereby declared to be an original; all, however, shall constitute but one and the same amendment. In any action or proceeding, any photographic, photostatic, or other copy of this Amendment may be introduced into evidence without foundation. The parties agree to accept a digital image (including but not limited to an image in the form of a PDF, JPEG, GIF file, or other e-signature) of this Amendment, if applicable, reflecting the execution of one or both of the parties, as a true and correct original.
- D. Defined Terms. All words commencing with initial capital letters in this Amendment and defined in the Lease shall have the same meaning in this Amendment as in the Lease, unless they are otherwise defined in this Amendment.
- E. Authority. If Tenant is a corporation, limited liability company or partnership, or is comprised of any of them, each individual executing this Amendment for the corporation, limited liability company or partnership represents that he or she is duly authorized to execute and deliver this Amendment on behalf of such entity and that this Amendment is binding upon such entity in accordance with its terms.
- F. Certified Access Specialist. As of the date of this Amendment, there has been no inspection of the Building and Project by a Certified Access Specialist as referenced in Section 1938 of the California Civil Code.
- G. Attorneys' Fees. The provisions of the Lease respecting payment of attorneys' fees shall also apply to this Amendment.
- H. Brokers. Article 18 of the Lease is amended to provide that the parties recognize the following parties as the brokers who negotiated this Amendment, and agree that Landlord shall be responsible for payment of brokerage commissions to such brokers pursuant to its separate agreements with such brokers: Irvine Realty Company ("**Landlord's Broker**") is the agent of Landlord exclusively and Savills Studley/Irvine ("**Tenant's Broker**") is the agent of Tenant exclusively. By the execution of this Amendment, each of Landlord and Tenant hereby acknowledge and confirm (a) receipt of a copy of a Disclosure Regarding Real Estate Agency Relationship conforming to the requirements of California Civil Code 2079.16, and (b) the agency relationships specified herein, which acknowledgement and confirmation is expressly made for the benefit of Tenant's Broker. By the execution of this Amendment, Landlord and Tenant are executing the confirmation of the agency relationships set forth herein. The warranty and indemnity provisions of Article 18 of the Lease, as amended hereby, shall be binding and enforceable in connection with the negotiation of this Amendment.
- I. Execution of Amendment. Submission of this Amendment by Landlord is not an offer to enter into this Amendment but rather is a solicitation for such an offer by Tenant. Landlord shall not be bound by this Amendment until Landlord has executed and delivered the same to Tenant.
- J. Nondisclosure of Terms. Landlord and Tenant acknowledge that the content of this Amendment and any related documents are confidential information. Except to the extent disclosure is required by law, Landlord and Tenant shall each keep such confidential information strictly confidential and shall not disclose such confidential information to any person or entity other than to its respective financial, legal and space-planning consultants, provided, however, that Tenant may disclose the terms to prospective subtenants or assignees under the Lease, as amended, or pursuant to legal requirement.
-

IN WITNESS WHEREOF, Landlord and Tenant have duly executed this Amendment as of the day and year first above written.

LANDLORD:

THE IRVINE COMPANY LLC,
a Delaware limited liability company

By /s/ Steven M. Case

Name: Steven M. Case

Title: EVP

TENANT:

5 ARCHES, LLC,
a California limited liability company

By /s/ Gene Clark

Name: Gene Clark

Title: EVP

SECOND AMENDMENT TO LEASE

THIS SECOND AMENDMENT TO LEASE ("**Amendment**") is made and entered into as of September 30, 2016, by and between **THE IRVINE COMPANY LLC**, a Delaware limited liability company, ("**Landlord**"), and **5 ARCHES, LLC**, a California limited liability company ("**Tenant**").

RECITALS

- A. Landlord and Tenant are parties to that certain lease dated January 27, 2015 which lease has been previously amended by First Amendment to Lease dated September 9, 2016 (the "**First Amendment**") (collectively, the "**Lease**"). Pursuant to the Lease, Landlord has leased to Tenant space currently containing approximately 13,887 rentable square feet (the "**Premises**") described as Suite No. 950 on the 9th floor and Suite No. 1150 on the 11th floor of the building located at 19800 MacArthur Boulevard, Irvine, California (the "**Building**").
- B. Tenant and Landlord mutually desire that the Lease be amended on and subject to the following terms and conditions.

NOW, THEREFORE, in consideration of the above recitals which by this reference are incorporated herein, the mutual covenants and conditions contained herein and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree as follows:

- I. Amendment. Effective as of the date hereof (unless different effective date(s) is/are specifically referenced in this Section), Landlord and Tenant agree that the Lease shall be amended in accordance with the following terms and conditions:

- A. Section III.A.3 of the First Amendment is hereby deleted in its entirety and the following shall be substituted in lieu thereof:

"3. Effective as of the Commencement Date for Suite 950, Item 6 shall be amended by deleting Item 6.B. and substituting the following for Suite 950:

Months of Term or Period	Monthly Rate Per Square Foot	Basic Monthly Rent
1-12	\$2.84	\$18,792.00
13-24	\$2.97	\$19,652.00
25-36	\$3.10	\$20,512.00
37-48	\$3.24	\$21,439.00
49 to 6/30/21	\$3.39	\$22,432.00"

II. GENERAL.

- A. Effect of Amendments. The Lease shall remain in full force and effect except to the extent that it is modified by this Amendment.
- B. Entire Agreement. This Amendment embodies the entire understanding between Landlord and Tenant and can be changed only by a writing signed by Landlord and Tenant. There have been no additional oral or written representations or agreements. Under no circumstances shall Tenant be entitled to any rent abatement, improvement allowance, leasehold improvements, or any similar economic incentives that may have been provided Tenant in connection with entering into the Lease, unless specifically set forth in this Amendment.
- C. Counterparts: Digital Signatures. If this Amendment is executed in counterparts, each is hereby declared to be an original; all, however, shall constitute but one and the same amendment. In any action or proceeding, any photographic, photostatic, or other copy of this Amendment may be introduced into evidence without foundation. The parties agree to accept a digital image (including

but not limited to an image in the form of a PDF, JPEG, GIF file , or other e-signature) of this Amendment, if applicable, reflecting the execution of one or both of the parties, as a true and correct original.

- D. Defined Terms. All words commencing with initial capital letters in this Amendment and defined in the Lease shall have the same meaning in this Amendment as in the Lease, unless they are otherwise defined in this Amendment.
- E. Authority. If Tenant is a corporation, limited liability company or partnership, or is comprised of any of them, each individual executing this Amendment for the corporation, limited liability company or partnership represents that he or she is duly authorized to execute and deliver this Amendment on behalf of such entity and that this Amendment is binding upon such entity in accordance with its terms.
- F. Certified Access Specialist. As of the date of this Amendment, there has been no inspection of the Building and Project by a Certified Access Specialist as referenced in Section 1938 of the California Civil Code.
- G. Attorneys' Fees. The provisions of the Lease respecting payment of attorneys' fees shall also apply to this Amendment.
- H. Brokers. Article 18 of the Lease is amended to provide that the parties recognize the following parties as the brokers who negotiated this Amendment, and agree that Landlord shall be responsible for payment of brokerage commissions to such brokers pursuant to its separate agreements with such brokers: Irvine Realty Company ("**Landlord's Broker**") is the agent of Landlord exclusively and Savills Studley/Irvine ("**Tenant's Broker**") is the agent of Tenant exclusively. By the execution of this Amendment, each of Landlord and Tenant hereby acknowledge and confirm (a) receipt of a copy of a Disclosure Regarding Real Estate Agency Relationship conforming to the requirements of California Civil Code 2079.16, and (b) the agency relationships specified herein, which acknowledgement and confirmation is expressly made for the benefit of Tenant's Broker. By the execution of this Amendment, Landlord and Tenant are executing the confirmation of the agency relationships set forth herein. The warranty and indemnity provisions of Article 18 of the Lease, as amended hereby, shall be binding and enforceable in connection with the negotiation of this Amendment.
- I. Execution of Amendment. Submission of this Amendment by Landlord is not an offer to enter into this Amendment but rather is a solicitation for such an offer by Tenant. Landlord shall not be bound by this Amendment until Landlord has executed and delivered the same to Tenant.
- J. Nondisclosure of Terms. Landlord and Tenant acknowledge that the content of this Amendment and any related documents are confidential information. Except to the extent disclosure is required by law, Landlord and Tenant shall each keep such confidential information strictly confidential and shall not disclose such confidential information to any person or entity other than to its respective financial, legal and space-planning consultants, provided, however, that Tenant may disclose the terms to prospective subtenants or assignees under the Lease, as amended, or pursuant to legal requirement.

IN WITNESS WHEREOF, Landlord and Tenant have duly executed this Amendment as of the day and year first above written.

LANDLORD:

THE IRVINE COMPANY LLC,
a Delaware limited liability company

By /s/ Steven M. Case

Name: Steven M. Case
Title: EVP

TENANT:

5 ARCHES, LLC,
a California limited liability company

By /s/ Gene Clark

Name: Gene Clark
Title: EVP

CONSENT TO ASSIGNMENT

I. PARTIES AND DATE.

This Consent to Assignment ("**Consent**") dated November 17, 2016, is made by and among 5 ARCHES, LLC, a California limited liability company ("**Assignor**"), 5 ARCH GROUP, LLC, a Delaware limited liability company ("**Assignee**"), and The Irvine Company LLC, a Delaware limited liability company ("**Landlord**").

II. RECITALS.

Landlord and Assignor, as tenant, are parties to an office space lease ("**Lease**") dated January 27, 2015 which lease has been previously amended by First Amendment to Lease dated September 9, 2016 and Second Amendment to Lease dated September 30, 2016 (collectively, the "**Lease**"). Pursuant to the Lease, Landlord has leased to Tenant space currently containing approximately 13,887 rentable square feet (the "**Premises**") described as Suite No. 950 on the 9th floor and Suite No. 1150 on the 11th floor of the building located at 19800 MacArthur Boulevard, Irvine, California (the "**Building**"). Assignor desires Landlord to consent to Assignor's assignment to Assignee of all Assignor's right title and interest in the Lease.

III. TERMS OF CONSENT.

A. Assignor.

For valuable consideration, receipt of which is hereby acknowledged, Assignor:

1. Agrees

a. That it shall not be released from its obligations under the Lease, including all monetary obligations, if Assignee fails to perform them, and that such continuing liability shall not be extinguished or exonerated by any subsequent modification to the Lease by Assignee and Landlord;

b. To promptly cure any default curable by Assignee under the Lease, provided the cure may reasonably be accomplished by Assignor without taking possession of the Premises;

c. That it shall not have any right to take possession of the Premises without the prior written consent of Landlord; and

d. That it is, by a separate agreement ("**Assignment Agreement**") with Assignee, assigning to Assignee all of Assignor's right, title and interest in the Lease, including the security deposit, if any.

2. Represents and warrants that it has not failed to disclose to Landlord any information which, if known by Landlord, might provide grounds for Landlord to reasonably withhold its consent to the Assignment.

B. Assignee

For valuable consideration, receipt of which is hereby acknowledged, Assignee:

1. Agrees

a. That it has accepted the assignment made under the Assignment Agreement;

b. That the Assignment Agreement is subject to the terms of the Lease and does not modify either party's obligations under the Lease;

c. To perform all of the terms under the Lease and any amendment as though Assignee were the original tenant under the Lease; and

d. That its address for receipt of notices under the Lease is:

19800 MacArthur Boulevard, Suite 1150
Irvine, CA 92612
Attn: Shawn Miller

2. Acknowledges that Landlord has not made any express or implied oral or written representation or promise that

a. Future assignments will be approved;

b. Assignee will enjoy financial success in operating any business on the premises;

c. It will grant an extension of the term or enter into any other modification of the

Lease; and

d. Assignor is not in default under the Lease.

3. Acknowledges that it has been provided with a copy of the Lease, together with all amendments, if any, and that it has read the Lease, together with all amendments and fully understands its obligations as tenant under the Lease.

IV. CONSENT.

For valuable consideration, including the assignments, acknowledgments, and representations of Assignor and Assignee set forth above, Landlord consents to Assignor's assignment to Assignee of all of Assignor's right, title and interest in the Lease.

V. GENERAL.

A. Attorney's Fees. The provisions of the Lease respecting attorney's fees shall apply to this Consent.

B. Authority to Execute Agreement. Each individual executing this Consent on behalf of a corporation, limited liability company or partnership represents and warrants that he or she is duly authorized to execute and deliver this Consent and that this Consent is binding upon the corporation, limited liability company or partnership in accordance with its terms.

VI. EXECUTION.

Assignor, Assignee and Landlord have executed this Consent as of the date set forth in "I. PARTIES AND DATE" above.

ASSIGNOR:

5 ARCHES LLC, a California limited liability Company

By 
Printed Name Tim Gannaway
Title EVP

By _____
Printed Name _____
Title _____

ASSIGNEE:

5 ARCH GROUP LLC, a Delaware limited liability Company

By 
Printed Name Steven Davis
Title CIO

By _____
Printed Name _____
Title _____

LANDLORD:

THE IRVINE COMPANY LLC, a Delaware limited liability company

By _____
Steven M. Case
Executive Vice President
Office Properties

By _____
Christopher J. Popma
Regional Vice President, Operations
Office Properties

THIRD AMENDMENT TO LEASE**I. PARTIES AND DATE.**

THIS THIRD AMENDMENT TO LEASE (“**Amendment**”) is made and entered into as of November 17, 2016 by and between **THE IRVINE COMPANY LLC**, a Delaware limited liability company (“**Landlord**”), and **5 ARCHES, LLC**, a Delaware limited liability company (“**Tenant**”).

II. RECITALS.

Landlord and Tenant (as successor in interest to 5 Arches, LLC, a California limited liability company) are parties to that certain lease dated January 27, 2015, which lease was amended by a First Amendment to Lease dated September 9, 2016 (the “**First Amendment**”) and a Second Amendment to Lease dated September 30, 2016 (collectively, the “**Lease**”) for space consisting of approximately 13,887 rentable square feet known as Suite Nos. 950 and 1150 (collectively, the “**Premises**”) in the building located at 19800 MacArthur Boulevard, Irvine, California (“**Building**”).

Landlord and Tenant each desire to modify the Lease to add approximately **1,780** rentable square feet of space known as Suite No. 960 on the 9th floor of the Building (“**Suite 960**”), adjust the Basic Rent, and make such other modifications as are set forth in “III. MODIFICATIONS” next below.

III. MODIFICATIONS.

A. Basic Lease Provisions. The Basic Lease Provisions are hereby amended as follows:

1. Effective as of the Commencement Date for Suite 960, Item 2 shall be amended by adding “**Suite 960**” to the Premises.
2. Item 4 is hereby amended by adding the following:

“**Estimated Commencement Date for Suite 960**: the earlier of (a) the date Suite 960 is deemed “ready for occupancy” (as hereinafter defined) and possession thereof is delivered to Tenant, estimated to be 13 weeks following the full and final execution of this Amendment, or (b) the date Tenant commences its regular business activities within Suite 960.”

3. Item 5 is hereby amended by adding the following:

“5. Lease Term for Suite 960: The Term for Suite 960 shall expire at midnight on the Expiration Date (i.e., June 30, 2021).”

4. Effective as of the Commencement Date for Suite 960, Item 6 shall be amended by adding the following for Suite 960:
-

Months of Term or Period for Suite 960	Monthly Rate Per Rentable Square Foot for Suite 960	Monthly Basic Rent for Suite 960 (rounded to the nearest dollar)
1st to 11th month following the Commencement Date for Suite 950*	\$3.08	\$5,482.00
12th month following the Commencement Date for Suite 950 to 23rd month following the Commencement Date for Suite 950	\$3.10	\$5,518.00
24th month following the Commencement Date for Suite 950 to 35th month following the Commencement Date for Suite 950	\$3.34	\$5,945.00
36th month following the Commencement Date for Suite 950 to 47th month following the Commencement Date for Suite 950	\$3.48	\$6,194.00
48th month following the Commencement Date for Suite 950 to 6/30/21	\$3.63	\$6,461.00

*The Commencement Date for Suite 950 is defined in the First Amendment.

5. Effective as of the Commencement Date for Suite 960, Item 7 shall be amended by adding the following for Suite 960:

"7. Property Tax Base: The Property Taxes per rentable square foot incurred by Landlord and attributable to the twelve month period ending June 30, 2018 (the "**Base Year**").

Project Cost Base: The Project Costs per rentable square foot incurred by Landlord and attributable to the Base Year.

Expense Recovery Period: Every 12 month period during the Term (or portion thereof during the first and last Lease years) ending June 30."

6. Effective as of the Commencement Date for Suite 960, Item 8 shall be amended by adding "and Suite 960 comprising approximately 1,780 rentable square feet."

7. Item 9 is hereby deleted in its entirety and the following substituted in lieu thereof:

"9. **Security Deposit:** \$54,415.00"

8. Effective as of the Commencement Date for Suite 960, Item 11 shall be amended by adding the following:

"11. Parking for Suite 960: up to 6 unreserved vehicle parking passes in accordance with the provisions set forth in **Exhibit F** to this Lease."

B. Commencement Date. As used herein, the "**Commencement Date for Suite 960**" shall occur on the earlier of (a) the date Suite 960 is deemed ready for occupancy as set forth below, or (b) the date Tenant commences its business activities within Suite 960. Promptly following request by Landlord, the parties shall memorialize on a form provided by Landlord (the "**Suite 960 Commencement Memorandum**") the actual Commencement Date for Suite 960; should Tenant fail to execute and return the Suite 960 Commencement Memorandum to Landlord within 5 business days (or provide specific written objections thereto within that period), then Landlord's determination of the Commencement Date for Suite 960 as set forth in the Suite 960 Commencement Memorandum shall be conclusive. Suite 960 shall be deemed "ready for occupancy" if and when Landlord, to the extent applicable, (i) has substantially completed all the work required to be completed by Landlord pursuant to the Work Letter attached to this Amendment but for minor punch list matters, and has obtained the requisite governmental approvals for Tenant's occupancy in connection with such work, (ii) has provided reasonable access to Suite 960 for Tenant so that Suite 960 may be used without

unreasonable interference, and (iii) has put into operation all building services required to be provided by Landlord under the Lease and essential for the use of Suite 960 by Tenant.

- C. Delay in Possession. If Landlord, for any reason whatsoever, cannot deliver possession of Suite 960 to Tenant on or before the Estimated Commencement Date for Suite 960 set forth in Section III.A.2 above, this Amendment shall not be void or voidable nor shall Landlord be liable to Tenant for any resulting loss or damage. However, Tenant shall not be liable for any rent for Suite 960 until the Commencement Date for Suite 960 occurs as provided in Section III.B above, except that if Landlord's failure to substantially complete all work required of Landlord pursuant to Section III.B(i) above is attributable to any action or inaction by Tenant (including without limitation any Tenant Delay described in the Work Letter attached to this Amendment), then Suite 960 shall be deemed ready for occupancy, and Landlord shall be entitled to full performance by Tenant (including the payment of rent), as of the date Landlord would have been able to substantially complete such work and deliver Suite 960 to Tenant but for Tenant's delay(s).
- D. Security Deposit. Concurrently with Tenant's delivery of this Amendment, Tenant shall deliver the sum of \$7,108.00 to Landlord, which sum shall be added to the Security Deposit presently being held by Landlord in accordance with Section 4.3 of the Lease.
- E. Operating Expenses. Notwithstanding any contrary provision in the Lease, Landlord hereby agrees that Tenant shall not be obligated to pay Landlord for Operating Expenses accruing in connection with Suite 960 during the 12 month period commencing as of the Commencement Date for Suite 960.
- F. Signage. Landlord, at its sole cost and expense, shall affix and maintain a sign (restricted solely to Tenant's name as set forth herein) adjacent to the entry door of Suite 960, and shall add an identification strip in the lobby directory of the Building. Any subsequent changes to that initial signage shall be made at Tenant's expense in accordance with Section 5.2 of the Lease.
- G. Floor Plan of Premises. Effective as of the Commencement Date for Suite 960, Exhibit A-1 attached to this Amendment shall be added to Exhibit A of the Lease.
- H. Parking. Notwithstanding any contrary provision in Exhibit F to the Lease, "Parking," effective as of the Commencement Date for Suite 960, Landlord shall lease to Tenant, and Tenant shall lease from Landlord, up to 6 unreserved parking passes (for Suite 960) (the "**Suite 960 Parking Passes**") through the Expiration Date. During the time period commencing as of the Commencement Date for Suite 960 and continuing through the Expiration Date only, Tenant shall pay to Landlord \$50.00 per unreserved Suite 960 Parking Pass per month utilized. Thereafter, the parking charge shall be at Landlord's scheduled parking rates from time to time.
- I. Tenant Improvements. Landlord, at its sole cost, hereby agrees to complete the Tenant Improvements for Suite 960 in accordance with the provisions of **Exhibit B**, Work Letter, attached hereto.
- J. SDN List. Tenant hereby represents and warrants that neither Tenant nor any officer, director, employee, partner, member or other principal of Tenant (collectively, "**Tenant Parties**") is listed as a Specially Designated National and Blocked Person ("**SDN**") on the list of such persons and entities issued by the U.S. Treasury Office of Foreign Assets Control (OFAC). In the event Tenant or any Tenant Party is or becomes listed as an SDN, Tenant shall be deemed in breach of the Lease and Landlord shall have the right to terminate the Lease immediately upon written notice to Tenant.
- K. Deleted Provision. Section III.M of the First Amendment entitled "Right of First Offer" is hereby deleted in its entirety and of no further force or effect.

IV. GENERAL.

- A. Effect of Amendments. The Lease shall remain in full force and effect except to the extent that it is modified by this Amendment.
-

- B. Entire Agreement. This Amendment embodies the entire understanding between Landlord and Tenant and can be changed only by a writing signed by Landlord and Tenant. There have been no additional oral or written representations or agreements. Under no circumstances shall Tenant be entitled to any rent abatement, improvement allowance, leasehold improvements, or any similar economic incentives that may have been provided Tenant in connection with entering into the Lease, unless specifically set forth in this Amendment.
- C. Counterparts; Digital Signatures. If this Amendment is executed in counterparts, each is hereby declared to be an original; all, however, shall constitute but one and the same amendment. In any action or proceeding, any photographic, photostatic, or other copy of this Amendment may be introduced into evidence without foundation. The parties agree to accept a digital image (including but not limited to an image in the form of a PDF, JPEG, GIF file, or other e-signature) of this Amendment, if applicable, reflecting the execution of one or both of the parties, as a true and correct original.
- D. Defined Terms. All words commencing with initial capital letters in this Amendment and defined in the Lease shall have the same meaning in this Amendment as in the Lease, unless they are otherwise defined in this Amendment.
- E. Authority. If Tenant is a corporation, limited liability company or partnership, or is comprised of any of them, each individual executing this Amendment for the corporation, limited liability company or partnership represents that he or she is duly authorized to execute and deliver this Amendment on behalf of such entity and that this Amendment is binding upon such entity in accordance with its terms.
- F. Certified Access Specialist. As of the date of this Amendment, there has been no inspection of the Building and Project by a Certified Access Specialist as referenced in Section 1938 of the California Civil Code.
- G. Attorneys' Fees. The provisions of the Lease respecting payment of attorneys' fees shall also apply to this Amendment.
- H. Nondisclosure of Terms. Landlord and Tenant acknowledge that the content of this Amendment and any related documents are confidential information. Except to the extent disclosure is required by law, Landlord and Tenant shall each keep such confidential information strictly confidential and shall not disclose such confidential information to any person or entity other than to its respective financial, legal and space-planning consultants, provided, however, that Tenant may disclose the terms to prospective subtenants or assignees under the Lease, as amended, or pursuant to legal requirement.
- I. Brokers. Article 18 of the Lease is amended to provide that the parties recognize the following parties as the brokers who negotiated this Amendment, and agree that Landlord shall be responsible for payment of brokerage commissions to such brokers pursuant to its separate agreements with such brokers: Irvine Realty Company ("**Landlord's Broker**") is the agent of Landlord exclusively and Savills Studley/Irvine ("**Tenant's Broker**") is the agent of Tenant exclusively. By the execution of this Amendment, each of Landlord and Tenant hereby acknowledge and confirm (a) receipt of a copy of a Disclosure Regarding Real Estate Agency Relationship conforming to the requirements of California Civil Code 2079.16, and (b) the agency relationships specified herein, which acknowledgement and confirmation is expressly made for the benefit of Tenant's Broker. By the execution of this Amendment, Landlord and Tenant are executing the confirmation of the agency relationships set forth herein. The warranty and indemnity provisions of Article 18 of the Lease, as amended hereby, shall be binding and enforceable in connection with the negotiation of this Amendment.

V. EXECUTION.

Landlord and Tenant executed this Amendment on the date as set forth in "I. PARTIES AND DATE." above.

LANDLORD:

THE IRVINE COMPANY LLC,
a Delaware limited liability company

By /s/ Steven M. Case

Name: Steven M. Case
Title: EVP

TENANT:

5 ARCHES, LLC,
a Delaware limited liability company

By /s/ Shawn Miller

Name: Shawn Miller
Title: CEO

FOURTH AMENDMENT TO LEASE**I. PARTIES AND DATE.**

This Amendment to Lease (“**Amendment**”) dated May 11, 2018, is by and between **NEWPORT GATEWAY OFFICE LLC**, a Delaware limited liability company (“**Landlord**”), and **5 ARCHES, LLC**, a Delaware limited liability company (“**Tenant**”).

II. RECITALS.

Landlord (as successor in interest to The Irvine Company LLC, a Delaware limited liability company) and Tenant (as successor in interest to 5 Arches, LLC, a California limited liability company) entered into an office space lease dated January 27, 2015, which lease was amended by a First Amendment to Lease dated September 9, 2016, by a Second Amendment to Lease dated September 30, 2016, and by a Third Amendment to Lease dated November 17, 2016 (as amended, the “**Lease**”) for space consisting of 15,667 rentable square feet known as Suite Nos. 950, 960 and 1150 (“**Premises**”) in the building located at 19800 MacArthur Boulevard, Irvine, California (“**Building**”).

Landlord and Tenant each desire to modify the Lease to add approximately 2,124 rentable square feet of space known as Suite No. 490 on the fourth floor of the Building (“**Suite 490**”), adjust the Basic Rent, and make such other modifications as are set forth in “III. MODIFICATIONS” next below.

III. MODIFICATIONS.

A. Basic Lease Provisions. The Basic Lease Provisions are hereby amended as follows:

1. Effective as of the Commencement Date for Suite 490, Item 2 shall be amended by adding “and Suite No. 490” to the Premises.

2. Item 4 is hereby amended by adding the following:

“Commencement Date for Suite 490: June 1, 2018”

Tenant shall have the right to access the Premises prior to the Commencement Date for move in purposes, which shall include the installation of cabling, furniture or any other general move in purposes.

3. Item 5 is hereby amended by adding the following:

“Lease Term for Suite 490: The Term for Suite 490 shall expire at midnight on the Expiration Date (i.e., June 30, 2021).”

4. Effective as of the Commencement Date for Suite 490, Item 6 shall be amended by adding the following for Suite 490:

Months of Term or Period for Suite 490	Monthly Rate Per Rentable Square Foot for Suite 490	Monthly Basic Rent for Suite 490 (rounded to the nearest dollar)
1 to 12	\$2.95	\$6,266.00
13 to 24	\$3.07	\$6,521.00
25 to 6/30/21	\$3.19	\$6,776.00

5. Effective as of the Commencement Date for Suite 490, Item 7 shall be amended by adding the following for Suite 490:

"Property Tax Base for Suite 490: The Property Taxes per rentable square foot of Suite 490 incurred by Landlord and attributable to the twelve month period ending June 30, 2019.

Project Cost Base for Suite 490: The Project Costs per rentable square foot of Suite 490 incurred by Landlord and attributable to the twelve month period ending June 30, 2019."

6. Effective as of the Commencement Date for Suite 490, Item 8 shall be amended by adding "and Suite 490 comprising approximately 2,124 rentable square feet."

7. Item 9 is hereby deleted in its entirety and the following substituted in lieu thereof:

"9. Security Deposit: \$61,868.00"

8. Effective as of the Commencement Date for Suite 490, Item 11 shall be amended by adding the following:

"Parking for Suite 490: Tenant shall have the right but not the obligation to utilize up to 7 parking passes for unreserved parking in connection with Tenant's leasing of Suite 490 in accordance with the provisions set forth in **Exhibit F** to this Lease."

B. Security Deposit. Concurrently with Tenant's delivery of this Amendment, Tenant shall deliver the sum of \$7,453.00 to Landlord, which sum shall be added to the Security Deposit presently being held by Landlord in accordance with Section 4.3 of the Lease.

C. Operating Expenses. Notwithstanding any contrary provision in the Lease, Landlord hereby agrees that Tenant shall not be obligated to pay Landlord for Operating Expenses accruing in connection with Suite 490 during the 12 month period commencing as of the Commencement Date for Suite 490.

D. Signage.

1. Initial Signage for Suite 490. Landlord, at its sole cost and expense, shall affix and maintain a sign (restricted solely to Tenant's name as set forth herein) adjacent to the entry door of Suite 490, and shall add an identification strip in the lobby directory of the Building. Any subsequent changes to that initial signage shall be made at Tenant's expense in accordance with Section 5.2 of the Lease.

2. Monument Signage. Section III.H of the First Amendment to Lease is hereby deleted in its entirety and the foregoing shall be substituted in lieu thereof:

"Monument Signage. Provided Tenant is leasing and occupying in excess of 17,000 rentable square feet in the Building during the Term, Tenant shall have the right to install non-exclusive signage on one (1) slot on one (1) of the Building monument signs for the Project as mutually agreed upon by the parties, which signage shall consist only of the name "5 Arch Group, LLC." The type, location and design of such signage shall be subject to the prior written approval of Landlord and the City of Irvine, and shall be consistent with Landlord's signage criteria for the Project. Fabrication, installation, insurance, and maintenance of such signage shall be at Tenant's sole cost and expense. Tenant understands and agrees that it shall use Landlord's designated contractor for installing the monument signage. Should Tenant fail to have the monument signage installed by December 31, 2018, then Tenant's right to install same thereafter shall be deemed null and void. Except for the foregoing, no sign, advertisement or notice visible from the exterior of the Premises shall be inscribed, painted or affixed by Tenant on any part of the Premises without prior consent of Landlord. Tenant's signage right shall belong solely to 5 Arch Group, LLC, a Delaware limited liability company, and may not be transferred or assigned (except in connection with an assignment of this Lease to an Affiliate as described in Section 9.2 of the Lease) without Landlord's prior written consent, which may be withheld by Landlord in Landlord's sole discretion. In the event Tenant, exclusive of any subtenant(s), fails to occupy the entire Premises, then Tenant shall, within 30 days following notice from Landlord, remove the monument signage at Tenant's expense. Tenant shall also remove such signage promptly following the expiration or earlier termination of the Lease. Any such removal shall be at Tenant's sole expense, and Tenant shall

bear the cost of any resulting repairs to the monument that are reasonably necessary due to the removal. Notwithstanding the foregoing, Tenant understands and acknowledges that Landlord may, in its sole and absolute discretion, revoke Tenant's right to the monument signage, and to require the removal thereof by Tenant, at Landlord's sole cost and expense, in the event Landlord requires the monument signage for a third party tenant leasing a full floor or more in the Project; provided, however, that in the event Tenant leases in excess of 21,000 rentable square feet in the Project, then the foregoing right shall be void.

- E. Floor Plan of Premises. Effective as of the Commencement Date for Suite 490, Exhibit A-2 attached to this Amendment shall be added to Exhibit A of the Lease.
- F. Parking. Notwithstanding any contrary provision in the Lease, effective as of the Commencement Date for Suite 490, Tenant may purchase up to 7 additional Parking Passes for unreserved parking spaces in connection with its leasing of Suite 490 (as reflected in Section III.A.8 of this Amendment) (the "**Suite 490 Parking Passes**"). Notwithstanding any contrary provision in Exhibit F to the Lease, during the period commencing as of the Commencement Date for Suite 490 and ending June 30, 2021, the monthly charge for the Suite 490 Parking Passes shall be \$50.00 per Suite 490 Parking Pass per month. From and after July 1, 2021, the parking shall be at Landlord's scheduled parking rates from time to time.
- G. Tenant Improvements. Landlord hereby agrees to complete the Tenant Improvements for the Premises, including Suite 490, in accordance with the provisions of Exhibit X, Work Letter, attached hereto.
- H. Right to Extend. Effective as of the Commencement Date for Suite 490, Suite 490 shall be added to the Premiss with respect to Section 1 of Exhibit G to the Lease entitled "Right to Extend".

IV. GENERAL.

- A. Effect of Amendments. The Lease shall remain in full force and effect except to the extent that it is modified by this Amendment.
 - B. Entire Agreement. This Amendment embodies the entire understanding between Landlord and Tenant with respect to the modifications set forth in "III. MODIFICATIONS" above and can be changed only by a writing signed by Landlord and Tenant.
 - C. Counterparts; Digital Signatures. If this Amendment is executed in counterparts, each is hereby declared to be an original; all, however, shall constitute but one and the same amendment. In any action or proceeding, any photographic, photostatic, or other copy of this Amendment may be introduced into evidence without foundation. The parties agree to accept a digital image (including but not limited to an image in the form of a PDF, JPEG, GIF file, or other e-signature) of this Amendment, if applicable, reflecting the execution of one or both of the parties, as a true and correct original.
 - D. Defined Terms. All words commencing with initial capital letters in this Amendment and defined in the Lease shall have the same meaning in this Amendment as in the Lease, unless they are otherwise defined in this Amendment.
 - E. Authority. If Tenant is a corporation, limited liability company or partnership, or is comprised of any of them, each individual executing this Amendment for the corporation, limited liability company or partnership represents that he or she is duly authorized to execute and deliver this Amendment on behalf of such entity and that this Amendment is binding upon such entity in accordance with its terms.
 - F. California Certified Access Specialist Inspection. Pursuant to California Civil Code § 1938, Landlord hereby states that the Premises have not undergone inspection by a Certified Access Specialist (CASp) (defined in California Civil Code § 55.52(a)(3)). Pursuant to Section 1938 of the California Civil Code, Landlord hereby provides the following notification to Tenant: "A Certified Access Specialist (CASp) can inspect the subject premises and determine whether the subject premises comply with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the subject premises, the commercial property owner or lessor may not
-

prohibit the lessee or tenant from obtaining a CASp inspection of the subject premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction related accessibility standards within the premises." If Tenant requests to perform a CASp inspection of the Premises, Tenant shall, at its cost, retain a CASp approved by Landlord (provided that Landlord may designate the CASp, at Landlord's option) to perform the inspection of the Premises at a time agreed upon by the parties. Tenant shall provide Landlord with a copy of any report or certificate issued by the CASp (the "**CASp Report**") and Tenant shall, at its cost, promptly complete any modifications necessary to correct violations of construction related accessibility standards identified in the CASp Report, notwithstanding anything to the contrary in this Lease. Tenant agrees to keep the information in the CASp Report confidential except as necessary for the Tenant to complete such modifications.

- G. Attorneys' Fees. The provisions of the Lease respecting payment of attorneys' fees shall also apply to this Amendment.
 - H. Nondisclosure of Lease Terms. Tenant acknowledges that the content of this Amendment and any related documents are confidential information. Except to the extent disclosure is required by law, Tenant shall keep such confidential information strictly confidential and shall not disclose such confidential information to any person or entity other than Tenant's financial, legal and space-planning consultants, provided, however, that Tenant may disclose the terms to prospective subtenants or assignees under the Lease or pursuant to legal requirement.
 - I. Brokers. Article 18 of the Lease is amended to provide that the parties recognize the following parties as the brokers who negotiated this Amendment, and agree that Landlord shall be responsible for payment of brokerage commissions to such brokers pursuant to its separate agreements with such brokers: Irvine Management Company ("**Landlord's Broker**") is the agent of Landlord exclusively and Savills Studley/Newport Beach ("**Tenant's Broker**") is the agent of Tenant exclusively. By the execution of this Amendment, each of Landlord and Tenant hereby acknowledge and confirm (a) receipt of a copy of a Disclosure Regarding Real Estate Agency Relationship conforming to the requirements of California Civil Code 2079.16, and (b) the agency relationships specified herein, which acknowledgement and confirmation is expressly made for the benefit of Tenant's Broker. If there is no Tenant's Broker so identified herein, then such acknowledgement and confirmation is expressly made for the benefit of Landlord's Broker. By the execution of this Amendment, Landlord and Tenant are executing the confirmation of the agency relationships set forth herein. The warranty and indemnity provisions of Article 18 of the Lease, as amended hereby, shall be binding and enforceable in connection with the negotiation of this Amendment.
-

V. EXECUTION.

Landlord and Tenant executed this Amendment on the date as set forth in "I. PARTIES AND DATE." above.

LANDLORD:

NEWPORT GATEWAY OFFICE LLC,
a Delaware limited liability company

By /s/ Steven M. Case

Name: Steven M. Case
Title: EVP

TENANT:

5 ARCHES, LLC,
a Delaware limited liability company

By /s/ Shawn Miller

Name: Shawn Miller
Title: CEO

FIFTH AMENDMENT TO LEASE
AND
CONSENT TO ASSIGNMENT

I. PARTIES AND DATE.

This Amendment to Lease and Consent (collectively, the "**Amendment**") dated February 28, 2019 is by and among **NEWPORT GATEWAY OFFICE LLC**, a Delaware limited liability company ("**Landlord**"), **5 ARCH GROUP, LLC**, a Delaware limited liability company ("**Assignor**"), and **5 ARCHES, LLC**, a California limited liability company ("**Assignee**" and "**Tenant**").

II. RECITALS.

Landlord (as successor in interest to The Irvine Company LLC, a Delaware limited liability company) and Tenant entered into an office space lease dated January 27, 2015, which lease was amended by a First Amendment to Lease dated September 9, 2016 and by a Second Amendment to Lease dated September 30, 2016. On November 17, 2016 Landlord consented to an assignment of lease between Tenant and Assignor, assigning all of Tenant's rights under the lease to Assignor. Thereafter, the lease was further amended by a Third Amendment to Lease dated November 17, 2016, by a Fourth Amendment to Lease dated May 11, 2018. The lease, as amended by the First Amendment, the Second Amendment, the Third Amendment, and the Fourth Amendment, is hereinafter referred to as the "Lease." The premises, as provided in the Lease, consist of 17,791 rentable square feet known as Suite Nos. 490 ("**Suite 490**"), 950, 960 and 1150 ("**Premises**") in the building located at 19800 MacArthur Boulevard, Irvine, California ("**Building**").

Assignor desires to assign to Assignee all of Assignor's right, title and interest in the Lease and Assignee desires to accept such assignment subject to Landlord's further consent to Assignor's assignment to Assignee of all Assignor's right, title and interest in the Lease, and Landlord has agreed to give such consent upon the terms and conditions contained in this Agreement.

Landlord and Tenant each further desire to modify the Lease to add approximately 4,409 rentable square feet of space known as Suite No. 1180 on the eleventh floor of the Building ("**Suite 1180**"), terminate Tenant's leasing of Suite 490 only, adjust the Basic Rent, and make such other modifications as are set forth in "III. MODIFICATIONS" next below.

III. MODIFICATIONS.

A. Basic Lease Provisions. The Basic Lease Provisions are hereby amended as follows:

1. Effective as of the Termination Date for Suite 490 (defined below), Item 2 shall be amended by deleting "and Suite No. 490" therefrom. Effective as of the Commencement Date for Suite 1180, Item 2 shall be amended by adding "and Suite No. 1180" to the Premises.

2. Item 4 is hereby amended by adding the following:

"Estimated Commencement Date for Suite 1180: May 1, 2019"

3. Effective as of the Termination Date for Suite 490, Item 5 with respect to the Lease Term for Suite 490 is hereby amended to midnight on February 28, 2019."

Item 5 is hereby amended by adding the following:

"Lease Term for Suite 1180: The Term for Suite 1180 shall expire at midnight on the Expiration Date (i.e., June 30, 2021)."

4. Effective as of the Termination Date for Suite 490, Tenant shall no longer be obligated to pay Basic Rent for Suite 490 as set forth in Item 6 of the Basic Lease Provisions.

Effective as of the Commencement Date for Suite 1180, Item 6 shall be amended by adding the following for Suite 1180:

Months of Term or Period for Suite 1180	Monthly Rate Per Rentable Square Foot for Suite 1180	Monthly Basic Rent for Suite 1180 (rounded to the nearest dollar)
1 to 12	\$3.35	\$14,770.00
13 to 24	\$3.50	\$15,432.00
25 to 6/30/21	\$3.66	\$16,137.00

5. Effective as of the Commencement Date for Suite 1180, Item 7 shall be amended by adding the following for Suite 1180:

"Property Tax Base for Suite 1180: The Property Taxes per rentable square foot of Suite 1180 incurred by Landlord and attributable to the twelve month period ending June 30, 2019.

Project Cost Base for Suite 1180: The Project Costs per rentable square foot of Suite 1180 incurred by Landlord and attributable to the twelve month period ending June 30, 2019."

6. Effective as of the Termination Date for Suite 490, Item 8 shall be amended by deleting "and Suite 490 comprising approximately 2,124 rentable square feet".

Effective as of the Commencement Date for Suite 1180, Item 8 shall be amended by adding "and Suite 1180 comprising approximately 4,409 rentable square feet."

7. Item 9 is hereby deleted in its entirety and the following substituted in lieu thereof:

"9. Security Deposit: \$72,166.00"

8. Effective as of the Termination Date for Suite 490, the Parking for Suite 490 as provided in Section III.A.8 of the Fourth Amendment to Lease shall be deleted in its entirety.

Effective as of the Commencement Date for Suite 1180, Item 11 shall be amended by adding the following:

"Parking for Suite 1180: Tenant shall have the right but not the obligation to utilize up to 13 parking passes for unreserved parking in connection with Tenant's leasing of Suite 1180 in accordance with the provisions set forth in **Exhibit F** to this Lease."

B. Commencement Date. As used herein, the "**Commencement Date for Suite 1180**" shall occur on the earlier of (a) the date Suite 1180 is deemed ready for occupancy as set forth below, or (b) the date Tenant commences its business activities within Suite 1180. Promptly following request by Landlord, the parties shall memorialize on a form provided by Landlord (the "**Suite 1180 Commencement Memorandum**") the actual Commencement Date for Suite 1180; should Tenant fail to execute and return the Suite 1180 Commencement Memorandum to Landlord within 5 business days (or provide specific written objections thereto within that period), then Landlord's determination of the Commencement Date for Suite 1180 as set forth in the Suite 1180 Commencement Memorandum shall be conclusive. Suite 1180 shall be deemed "ready for occupancy" if and when Landlord, to the extent applicable, (i) has substantially completed all the work required to be completed by Landlord pursuant to the Work Letter (if any) attached to this Amendment but for minor punch list matters, and has obtained the requisite governmental approvals for Tenant's occupancy in connection with such work, (ii) has provided reasonable access to Suite 1180 for Tenant so that Suite 1180 may be used without unreasonable interference, and (iii) has put into operation all building services required to be provided by Landlord under the Lease and essential for the use of Suite 1180 by Tenant.

C. Delay in Possession. If Landlord, for any reason whatsoever, cannot deliver possession of Suite 1180 to Tenant on or before the Estimated Commencement Date for Suite 1180 set forth in Section III.A.2 above, this Amendment shall not be void or voidable nor shall Landlord be liable to Tenant for any resulting loss or damage. However, Tenant shall not be liable for any rent for Suite 1180 until the Commencement Date for Suite 1180 occurs as provided in Section III.B above, except that if Landlord's failure to substantially complete all work required of Landlord pursuant to Section III.B(i) above is attributable to any action or inaction by Tenant (including without limitation any Tenant Delay described in the Work Letter, if any, attached to this Amendment), then Suite 1180 shall be deemed ready for occupancy, and Landlord shall be entitled to full performance by Tenant (including the payment of rent), as of the date Landlord would have been able to substantially complete such work and deliver Suite 1180 to Tenant but for Tenant's delay(s).

D. Security Deposit and First Month's Rent. Concurrently with Tenant's delivery of this Amendment, Tenant shall deliver the sum of (a) \$17,751.00 to Landlord, which sum shall be added to the Security Deposit presently being held by Landlord in accordance with Section 4.3 of the Lease, and (b) \$14,770.00 (i.e., the initial installment of 1 full month of Basic Rent for Suite 1180). Effective as of the date of this Amendment, Assignor and Tenant hereby authorize Landlord to transfer \$7,453.00 of the Security Deposit presently being held by Landlord pursuant to Section 4.3 of the Lease, and apply such funds to the security deposit required by Landlord under the new lease for Suite 490 between Landlord and Assignor.

E. Operating Expenses. Notwithstanding any contrary provision in the Lease, Landlord hereby agrees that Tenant shall not be obligated to pay Landlord for Operating Expenses accruing in connection with Suite 1180 during the 12 month period commencing as of the Commencement Date for Suite 1180.

F. Signage. Landlord, at its sole cost and expense, shall affix and maintain a sign (restricted solely to Tenant's name as set forth herein) adjacent to the entry door of Suite 1180, and shall add an identification strip in the lobby directory of the Building. Any subsequent changes to that initial signage shall be made at Tenant's expense in accordance with Section 5.2 of the Lease.

G. Floor Plan of Premises. Effective as of the Commencement Date for Suite 1180, Exhibit A-3 attached to this Amendment shall be added to Exhibit A of the Lease.

H. Parking. Notwithstanding any contrary provision in the Lease, effective as of the Commencement Date for Suite 1180, Tenant may purchase up to 13 additional Parking Passes for unreserved parking spaces in connection with its leasing of Suite 1180 (as reflected in Section III.A.8 of this Amendment) (the "**Suite 1180 Parking Passes**"). Landlord agrees that Tenant may convert up to 2 of the Suite 1180 Parking Passes to reserved stalls by providing written notice of such election to Landlord prior to the Commencement Date for Suite 1180 (the "**Suite 1180 Converted Stalls**"). Tenant acknowledges that if such written notice of election is not delivered to Landlord prior to the Commencement Date for Suite 1180, then the conversion of the Suite 1180 Parking Passes to reserved stalls shall be subject to the month to month availability of such reserved stalls as determined by Landlord and the reserved stalls shall be at Landlord's scheduled rates. Notwithstanding any contrary provision in Exhibit F to the Lease but subject to the foregoing, during the period commencing as of the Commencement Date for Suite 1180 and ending June 30, 2021, the monthly parking charges for the Suite 1180 Parking Passes shall be \$55.00 per month and, if applicable, shall be \$140.00 per Suite 1180 Converted Stall per month. From and after July 1, 2021, the parking charges for the Suite 1180 Parking Passes and, if applicable, Suite 1180 Converted Stalls shall be at Landlord's scheduled parking charges from time to time.

I. Tenant Improvements. Landlord hereby agrees to complete the Tenant Improvements for Suite 1180 in accordance with the provisions of Exhibit X, Work Letter, attached hereto.

J. Termination of Suite 490. Landlord and Tenant agree that the rights and obligations of the parties under the Lease with respect to Suite 490 shall terminate in their entirety, effective as of midnight on February 28, 2019 ("**Termination Date for Suite 490**"), provided that such termination shall not relieve Tenant of (a) any accrued obligation or liability under the Lease with respect to Suite 490 as of said termination date, or (b) any obligation under the Lease with respect to Suite 490 which was reasonably intended to survive the expiration or termination thereof. Tenant understands and agrees that it shall completely vacate Suite 490 by midnight on February 28, 2019, and shall remove all property therefrom in accordance with the provisions of Section 15.2 of the Lease, except as otherwise agreed by Assignor under the terms of the new lease for Suite 490 between Landlord and Assignor. Effective as of the Termination Date for Suite 490, Exhibit A showing Suite 490 shall be deleted in its entirety.

IV. TERMS OF CONSENT TO ASSIGNMENT.

A. Assignor.

For valuable consideration, receipt of which is hereby acknowledged, Assignor:

1. Agrees

a. To execute, concurrently with the execution of this Amendment, the attached Guarantee (**Exhibit B**). Notwithstanding the foregoing, within 60 days following the date of this Fifth Amendment and Consent to Assignment Agreement, Tenant may cause to be delivered to Landlord an executed replacement Guarantee in the form attached hereto as **Exhibit B** (the "**Replacement Guarantee**") from Redwood Trust, Inc., a Maryland corporation. Upon Landlord's receipt of the executed Replacement Guarantee, the Guarantee of Lease from Assignor shall be automatically void and of no further force and effect, and references to the Guarantee in the Lease shall mean the Replacement Guarantee; and

b. That it is, by a separate agreement ("**Assignment Agreement**") with Assignee, assigning to Assignee all of Assignor's right, title and interest in the Lease, including the security deposit, if any.

2. Represents and warrants that it has not failed to disclose to Landlord any information which, if known by Landlord, might provide grounds for Landlord to reasonably withhold its consent to the Assignment.

B. Assignee

For valuable consideration, receipt of which is hereby acknowledged, Assignee:

1. Agrees

a. That it has accepted the assignment made under the Assignment Agreement;

b. That the Assignment Agreement is subject to the terms of the Lease and does not modify either party's obligations under the Lease;

c. To perform all of the terms under the Lease and any amendment as though Assignee were the original tenant under the Lease; and

d. That its address for receipt of notices under the Lease is:

19800 MacArthur Boulevard, Suite 1150
Irvine, CA 92612
Attn: Shawn Miller

2. Acknowledges that Landlord has not made any express or implied oral or written representation or promise that

a. Future assignments will be approved;

b. Assignee will enjoy financial success in operating any business on the premises;

c. It will grant an extension of the term or enter into any other modification of the Lease; and

d. Assignor is not in default under the Lease.

3. Acknowledges that it has been provided with a copy of the Lease, together with all amendments, if any, and that it has read the Lease, together with all amendments and fully understands its obligations as Assignee under the Lease.

V. CONSENT TO ASSIGNMENT.

For valuable consideration, including the assignments, acknowledgments, and representations of Assignor and Assignee set forth above, Landlord hereby consents to Assignor's assignment to Assignee of all of Assignor's right, title and interest in the Lease and concurrently releases Assignor from any obligation under the Lease, except as may be provided in the Guarantee.

VI. GENERAL.

A. Effect of Amendments. The Lease shall remain in full force and effect except to the extent that it is modified by this Amendment.

B. Entire Agreement. This Amendment embodies the entire understanding between Landlord and Tenant with respect to the modifications set forth in "III. MODIFICATIONS" above and can be changed only by a writing signed by Landlord and Tenant.

C. Counterparts: Digital Signatures. If this Amendment is executed in counterparts, each is hereby declared to be an original; all, however, shall constitute but one and the same amendment. In any action or proceeding, any photographic, photostatic, or other copy of this Amendment may be introduced into evidence without foundation. The parties agree to accept a digital image (including but not limited to an image in the form of a PDF, JPEG, GIF file, or other e-signature) of this Amendment, if applicable, reflecting the execution of one or both of the parties, as a true and correct original.

D. Defined Terms. All words commencing with initial capital letters in this Amendment and defined in the Lease shall have the same meaning in this Amendment as in the Lease, unless they are otherwise defined in this Amendment.

E. Authority. If Tenant is a corporation, limited liability company or partnership, or is comprised of any of them, each individual executing this Amendment for the corporation, limited liability company or partnership represents that he or she is duly authorized to execute and deliver this Amendment on behalf of such entity and that this Amendment is binding upon such entity in accordance with its terms.

F. California Certified Access Specialist Inspection. Pursuant to California Civil Code § 1938, Landlord hereby states that the Premises have not undergone inspection by a Certified Access Specialist (CASp) (defined in California Civil Code § 55.52(a)(3)). Pursuant to Section 1938 of the California Civil Code, Landlord hereby provides the following notification to Tenant: "A Certified Access Specialist (CASp) can inspect the subject premises and determine whether the subject premises comply with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the subject premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the subject premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction related accessibility standards within the premises." If Tenant requests to perform a CASp inspection of the Premises, Tenant shall, at its cost, retain a CASp approved by Landlord (provided that Landlord may designate the CASp, at Landlord's option) to perform the inspection of the Premises at a time agreed upon by the parties. Tenant shall provide Landlord with a copy of any report or certificate issued by the CASp (the "**CASp Report**") and Tenant shall, at its cost, promptly complete any modifications necessary to correct violations of construction related accessibility standards identified in the CASp Report, notwithstanding anything to the contrary in this Lease. Tenant agrees to keep the information in the CASp Report confidential except as necessary for the Tenant to complete such modifications.

G. Attorneys' Fees. The provisions of the Lease respecting payment of attorneys' fees shall also apply to this Amendment.

H. Nondisclosure of Lease Terms. Tenant acknowledges that the content of this Amendment and any related documents are confidential information. Except to the extent disclosure is required by law, Tenant shall keep such confidential information strictly confidential and shall not disclose such confidential information to any person or entity other than Tenant's financial, legal and space-planning consultants, provided, however, that Tenant may disclose the terms to prospective subtenants or assignees under the Lease or pursuant to legal requirement.

I. Brokers. Article 18 of the Lease is amended to provide that the parties recognize the following parties as the brokers who negotiated this Amendment, and agree that Landlord shall be responsible for payment of brokerage commissions to such brokers pursuant to its separate agreements with such brokers: Irvine Management Company ("**Landlord's Broker**") is the agent of Landlord exclusively and Savills Studley ("**Tenant's Broker**") is the agent of Tenant exclusively. By the execution of this Amendment, each of Landlord and Tenant hereby acknowledge and confirm (a) receipt of a copy of a Disclosure Regarding Real Estate Agency Relationship conforming to the requirements of California Civil Code 2079.16, and (b) the agency relationships specified herein, which acknowledgement and confirmation is expressly made for the benefit of Tenant's Broker. If there is no Tenant's Broker so identified herein, then such acknowledgement and confirmation is expressly made for the benefit of Landlord's Broker. By the execution of this Amendment, Landlord and Tenant are executing the confirmation of the agency relationships set forth herein. The warranty and indemnity provisions of Article 18 of the Lease, as amended hereby, shall be binding and enforceable in connection with the negotiation of this Amendment.

V. EXECUTION.

Landlord and Tenant executed this Amendment on the date as set forth in "I. PARTIES AND DATE." above.

LANDLORD:

NEWPORT GATEWAY OFFICE LLC,
a Delaware limited liability company

By /s/ Steven M. Case

Name: Steven M. Case
Title: Executive Vice President

ASSIGNEE AND TENANT:

5 ARCHES, LLC,
a California limited liability company

By /s/ Shawn Miller

Name: Shawn Miller
Title: CEO

ASSIGNOR:

5 ARCH GROUP, LLC,
a Delaware limited liability company

By /s/ Shawn Miller

Name: Shawn Miller
Title: CEO

**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 Quarterly Report on Form 10-Q 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: November 8, 2019

/s/ Christopher J. Abate

Christopher J. Abate
Chief Executive Officer

**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 Quarterly Report on Form 10-Q 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: November 8, 2019

/s/ Collin L. Cochrane

Collin L. Cochrane
Chief Financial Officer

CERTIFICATION

Pursuant to 18 U.S.C. §1350, the undersigned officer of Redwood Trust, Inc. (the “Registrant”) hereby certifies that the Registrant’s Quarterly Report on Form 10-Q for the three months ended September 30, 2019 (the “Quarterly 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 Quarterly Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: November 8, 2019

/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 Quarterly Report or as a separate disclosure document.

CERTIFICATION

Pursuant to 18 U.S.C. §1350, the undersigned officer of Redwood Trust, Inc. (the "Registrant") hereby certifies that the Registrant's Quarterly Report on Form 10-Q for the three months ended September 30, 2019 (the "Quarterly 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 Quarterly Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: November 8, 2019

/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 Quarterly Report or as a separate disclosure document.