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UNITED STATES
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 March 31, 2019

Commission File Number: 000-15637

SVB FINANCIAL GROUP

(Exact name of registrant as specified in its charter)

Delaware	**91-1962278**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
3003 Tasman Drive, Santa Clara, California	**95054-1191**
(Address of principal executive offices)	(Zip Code)

(408) 654-7400
(Registrant's telephone number, including area code)

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 (§232.405 of this chapter) 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. (Check one):

Large accelerated filer ☒ Accelerated filer ☐

Non-accelerated filer ☐ Smaller reporting company ☐

Emerging growth company ☐

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

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

Securities registered pursuant to Section 12(b) of the Act

Title of Each Class	**Trading Symbol**	**Name of Exchange on Which Registered**
Common Stock, par value $0.001 per share	SIVB	NASDAQ Global Select Market

At April 30, 2019, 52,027,190 shares of the registrant's common stock ($0.001 par value) were outstanding.

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Glossary of Acronyms that may be used in this Report

AFS— Available-for-Sale

APIC— Additional Paid-in Capital

ASC— Accounting Standards Codification

ASU— Accounting Standards Update

CET— Common Equity Tier

EHOP— Employee Home Ownership Program of the Company

EPS— Earnings Per Share

ERI— Energy and Resource Innovation

ESOP— Employee Stock Ownership Plan of the Company

ESPP— 1999 Employee Stock Purchase Plan of the Company

FASB— Financial Accounting Standards Board

FDIC— Federal Deposit Insurance Corporation

FHLB— Federal Home Loan Bank

FRB— Federal Reserve Bank

FTE— Full-Time Employee

FTP— Funds Transfer Pricing

GAAP— Accounting principles generally accepted in the United States of America

HTM— Held-to-Maturity

IASB— International Accounting Standards Board

IPO— Initial Public Offering

IRS— Internal Revenue Service

IT— Information Technology

LIBOR— London Interbank Offered Rate

M&A— Merger and Acquisition

OTTI— Other Than Temporary Impairment

SEC— Securities and Exchange Commission

SPD-SVB— SPD Silicon Valley Bank Co., Ltd. (the Bank's joint venture bank in China)

TDR— Troubled Debt Restructuring

UK— United Kingdom

VIE— Variable Interest Entity

PART I - FINANCIAL INFORMATION

ITEM 1. INTERIM CONSOLIDATED FINANCIAL STATEMENTS

SVB FINANCIAL GROUP AND SUBSIDIARIES
INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

(Dollars in thousands, except par value and share data)	March 31, 2019	December 31, 2018
Assets		
Cash and cash equivalents	$ 7,066,883	$ 3,571,539
Available-for-sale securities, at fair value (cost of $6,776,896 and $7,862,311, respectively)	6,755,094	7,790,043
Held-to-maturity securities, at cost (fair value of $14,996,508 and $15,188,236, respectively)	15,055,255	15,487,442
Non-marketable and other equity securities	974,979	941,104
Total investment securities	22,785,328	24,218,589
Loans, net of unearned income	28,850,445	28,338,280
Allowance for loan losses	(300,151)	(280,903)
Net loans	28,550,294	28,057,377
Premises and equipment, net of accumulated depreciation and amortization	139,003	129,213
Goodwill	135,190	—
Other intangible assets, net	58,029	—
Lease right-of-use assets	164,659	—
Accrued interest receivable and other assets	1,260,899	951,261
Total assets	$ 60,160,285	$ 56,927,979
Liabilities and total equity		
Liabilities:		
Noninterest-bearing demand deposits	$ 39,278,712	$ 39,103,422
Interest-bearing deposits	13,048,485	10,225,478
Total deposits	52,327,197	49,328,900
Short-term borrowings	14,455	631,412
Lease liabilities	205,167	—
Other liabilities	1,432,928	1,006,359
Long-term debt	696,715	696,465
Total liabilities	54,676,462	51,663,136
Commitments and contingencies (Note 16 and Note 19)		
SVBFG stockholders' equity:		
Preferred stock, $0.001 par value, 20,000,000 shares authorized; no shares issued and outstanding	—	—
Common stock, $0.001 par value, 150,000,000 shares authorized; 52,322,105 shares and 52,586,498 shares issued and outstanding, respectively	52	53
Additional paid-in capital	1,394,130	1,378,438
Retained earnings	3,963,965	3,791,838
Accumulated other comprehensive loss	(15,374)	(54,120)
Total SVBFG stockholders' equity	5,342,773	5,116,209
Noncontrolling interests	141,050	148,634
Total equity	5,483,823	5,264,843
Total liabilities and total equity	$ 60,160,285	$ 56,927,979

See accompanying notes to interim consolidated financial statements (unaudited).

SVB FINANCIAL GROUP AND SUBSIDIARIES
INTERIM CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

(Dollars in thousands, except per share amounts)	Three months ended March 31, 2019	2018
Interest income:		
Loans	$ 394,144	$ 297,073
Investment securities:		
Taxable	126,717	124,477
Non-taxable	10,937	5,092
Federal funds sold, securities purchased under agreements to resell and other short-term investment securities	19,216	5,756
Total interest income	551,014	432,398
Interest expense:		
Deposits	27,907	4,097
Borrowings	10,221	8,438
Total interest expense	38,128	12,535
Net interest income	512,886	419,863
Provision for credit losses	28,551	27,972
Net interest income after provision for credit losses	484,335	391,891
Noninterest income:		
Gains on investment securities, net	29,028	9,058
Gains on equity warrant assets, net	21,305	19,191
Foreign exchange fees	38,048	33,827
Credit card fees	27,483	21,692
Deposit service charges	20,939	17,699
Client investment fees	44,482	22,875
Lending related fees	13,937	10,735
Letters of credit and standby letters of credit fees	9,354	8,182
Investment banking revenue	49,795	—
Commissions	14,108	—
Other	11,897	12,259
Total noninterest income	280,376	155,518
Noninterest expense:		
Compensation and benefits	238,061	165,806
Professional services	36,986	28,725
Premises and equipment	21,700	18,545
Net occupancy	16,048	13,616
Business development and travel	15,354	11,191
FDIC and state assessments	3,979	9,430
Other	33,536	18,104
Total noninterest expense	365,664	265,417
Income before income tax expense	399,047	281,992
Income tax expense	107,435	73,966
Net income before noncontrolling interests	291,612	208,026
Net income attributable to noncontrolling interests	(2,880)	(13,065)
Net income available to common stockholders	$ 288,732	$ 194,961
Earnings per common share—basic	$ 5.49	$ 3.69
Earnings per common share—diluted	5.44	3.63

See accompanying notes to interim consolidated financial statements (unaudited).

SVB FINANCIAL GROUP AND SUBSIDIARIES
INTERIM CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)

(Dollars in thousands)	Three months ended March 31, 2019	2018
Net income before noncontrolling interests	$ 291,612	$ 208,026
Other comprehensive income (loss), net of tax:		
Change in foreign currency cumulative translation gains and losses:		
Foreign currency translation gains	2,806	3,106
Related tax expense	(782)	(856)
Change in unrealized gains and losses on available-for-sale securities:		
Unrealized holding gains (losses)	46,836	(58,027)
Related tax (expense) benefit	(13,045)	15,926
Reclassification adjustment for losses included in net income	3,630	—
Related tax benefit	(1,010)	—
Reclassification of unrealized gains on equity securities to retained earnings for ASU 2016-01	—	(40,316)
Related tax expense	—	11,145
Amortization of unrealized holding gains on securities transferred from available-for-sale to held-to-maturity	(674)	(1,206)
Related tax benefit	188	333
Reclassification of stranded tax effect to retained earnings for ASU 2018-02	—	(319)
Change in unrealized gains and losses on cash flow hedges:		
Unrealized gains	1,102	—
Related tax expense	(307)	—
Reclassification adjustment for losses included in net income	3	—
Related tax benefit	(1)	—
Other comprehensive income (loss), net of tax	38,746	(70,214)
Comprehensive income	330,358	137,812
Comprehensive income attributable to noncontrolling interests	(2,880)	(13,065)
Comprehensive income attributable to SVBFG	$ 327,478	$ 124,747

See accompanying notes to interim consolidated financial statements (unaudited).

SVB FINANCIAL GROUP AND SUBSIDIARIES
INTERIM CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (UNAUDITED)

(Dollars in thousands)	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total SVBFG Stockholders' Equity	Noncontrolling Interests	Total Equity
Balance at December 31, 2017	**52,835,188**	**$ 53**	**$ 1,314,377**	**$ 2,866,837**	**$ (1,472)**	**$ 4,179,795**	**$ 139,620**	**$ 4,319,415**
Cumulative adjustment for adoption of the revenue standard (ASU 2014-09), net of tax	—	—	—	(5,802)	—	(5,802)	—	(5,802)
Cumulative adjustment for adoption of financial instruments (ASU 2016-01), net of tax	—	—	—	103,766	(29,171)	74,595	—	74,595
Reclassification of stranded tax effect for ASU 2018-02	—	—	—	319	(319)	—	—	—
Common stock issued under employee benefit plans, net of restricted stock cancellations	77,359	—	(479)	—	—	(479)	—	(479)
Common stock issued under ESOP	9,672	—	2,577	—	—	2,577	—	2,577
Net income	—	—	—	194,961	—	194,961	13,065	208,026
Capital calls and distributions, net	—	—	—	—	—	—	(8,407)	(8,407)
Net change in unrealized gains and losses on AFS securities, net of tax	—	—	—	—	(42,101)	(42,101)	—	(42,101)
Amortization of unrealized holding gains on securities transferred from AFS to HTM, net of tax	—	—	—	—	(873)	(873)	—	(873)
Foreign currency translation adjustments, net of tax	—	—	—	—	2,250	2,250	—	2,250
Share-based compensation, net	—	—	10,523	—	—	10,523	—	10,523
Balance at March 31, 2018	**52,922,219**	**$ 53**	**$ 1,326,998**	**$ 3,160,081**	**$ (71,686)**	**$ 4,415,446**	**$ 144,278**	**$ 4,559,724**
Balance at December 31, 2018	**52,586,498**	**$ 53**	**$ 1,378,438**	**$ 3,791,838**	**$ (54,120)**	**$ 5,116,209**	**$ 148,634**	**$ 5,264,843**
Cumulative adjustment for the adoption of premium amortization on purchased callable debt securities (ASU 2017-08) (1)	—	—	—	(583)	—	(583)	—	(583)
Acquisition of SVB Leerink	—	—	—	—	—	—	5,256	5,256
Common stock issued under employee benefit plans, net of restricted stock cancellations	209,743	—	(2,936)	—	—	(2,936)	—	(2,936)
Common stock issued under ESOP	14,442	—	3,506	—	—	3,506	—	3,506
Net income	—	—	—	288,732	—	288,732	2,880	291,612
Capital calls and distributions, net	—	—	—	—	—	—	(15,720)	(15,720)
Net change in unrealized gains and losses on AFS securities, net of tax	—	—	—	—	36,411	36,411	—	36,411
Amortization of unrealized holding gains on securities transferred from AFS to HTM, net of tax	—	—	—	—	(486)	(486)	—	(486)
Foreign currency translation adjustments, net of tax	—	—	—	—	2,024	2,024	—	2,024
Net change in unrealized gains and losses on cash flow hedges, net of tax	—	—	—	—	797	797	—	797
Share-based compensation, net	—	—	15,122	—	—	15,122	—	15,122
Common stock repurchases	(488,578)	(1)	—	(116,022)	—	(116,023)	—	(116,023)
Balance at March 31, 2019	**52,322,105**	**$ 52**	**$ 1,394,130**	**$ 3,963,965**	**$ (15,374)**	**$ 5,342,773**	**$ 141,050**	**$ 5,483,823**

(1) See "Adoption of New Accounting Standards" in Note 1—"Basis of Presentation" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report for additional details.

See accompanying notes to interim consolidated financial statements (unaudited).

SVB FINANCIAL GROUP AND SUBSIDIARIES
INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

(Dollars in thousands)	Three months ended March 31, 2019	2018
Cash flows from operating activities:		
Net income before noncontrolling interests	$ 291,612	$ 208,026
Adjustments to reconcile net income to net cash provided by operating activities:		
Provision for credit losses	28,551	27,972
Changes in fair values of equity warrant assets, net of proceeds from exercises	(10,248)	(17,508)
Changes in fair values of derivatives, net	(3,068)	3,928
Gains on investment securities, net	(29,028)	(9,058)
Distributions of earnings from non-marketable and other equity securities	15,619	11,385
Depreciation and amortization	20,830	14,377
Amortization of premiums and discounts on investment securities, net	1,606	(1,125)
Amortization of share-based compensation	15,122	10,523
Amortization of deferred loan fees	(35,276)	(29,133)
Deferred income tax benefit	(8,834)	(8,834)
Excess tax benefit from exercise of stock options and vesting of restricted shares	(2,804)	(2,543)
Losses from the write-off of premises and equipment	52	—
Changes in other assets and liabilities:		
Accrued interest receivable and payable, net	(3,361)	(18,365)
Accounts receivable and payable, net	30,447	(7,277)
Income tax receivable and payable, net	94,552	69,869
Accrued compensation	(253,769)	(106,356)
Foreign exchange spot contracts, net	169,079	134,638
Other, net	19,668	67,885
Net cash provided by operating activities	340,750	348,404
Cash flows from investing activities:		
Purchases of available-for-sale securities	(204,328)	—
Proceeds from sales of available-for-sale securities	1,171,564	—
Proceeds from maturities and paydowns of available-for-sale securities	116,001	911,839
Purchases of held-to-maturity securities	—	(2,295,985)
Proceeds from maturities and paydowns of held-to-maturity securities	428,433	470,232
Purchases of non-marketable and other equity securities	(16,165)	(20,401)
Proceeds from sales and distributions of capital of non-marketable and other equity securities	19,979	9,377
Net increase in loans	(505,516)	(1,463,998)
Purchases of premises and equipment	(5,504)	(7,717)
Acquisition of SVB Leerink, net of cash acquired	(100,037)	—
Net cash provided by (used for) investing activities	904,427	(2,396,653)
Cash flows from financing activities:		
Net increase in deposits	2,998,297	1,682,457
Net (decrease) increase in short-term borrowings	(616,957)	68,410
(Distributions to noncontrolling interests), net of contributions from noncontrolling interests	(15,720)	(8,407)
Common stock repurchases	(116,023)	—
Proceeds from issuance of common stock, ESPP and ESOP	570	2,098
Net cash provided by financing activities	2,250,167	1,744,558
Net increase (decrease) in cash and cash equivalents	3,495,344	(303,691)
Cash and cash equivalents at beginning of period	3,571,539	2,923,075
Cash and cash equivalents at end of period	**$ 7,066,883**	**$ 2,619,384**
Supplemental disclosures:		
Cash paid during the period for:		
Interest	$ 46,548	$ 20,411
Income taxes	17,570	9,385
Noncash items during the period:		
Changes in unrealized gains and losses on available-for-sale securities, net of tax	$ 36,411	$ (42,101)
Distributions of stock from investments	1,276	2,282

See accompanying notes to interim consolidated financial statements (unaudited).

SVB FINANCIAL GROUP AND SUBSIDIARIES
NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

1. Basis of Presentation

SVB Financial Group is a diversified financial services company, as well as a bank holding company and a financial holding company. SVB Financial was incorporated in the state of Delaware in March 1999. Through our various subsidiaries and divisions, we offer a diverse set of banking and financial products and services to support our clients of all sizes and stages throughout their life cycles. In these notes to our consolidated financial statements, when we refer to "SVB Financial Group," "SVBFG," the "Company," "we," "our," "us" or use similar words, we mean SVB Financial Group and all of its subsidiaries collectively, including Silicon Valley Bank (the "Bank"), unless the context requires otherwise. When we refer to "SVB Financial" or the "Parent" we are referring only to the parent company, SVB Financial Group (not including subsidiaries).

The accompanying unaudited interim consolidated financial statements reflect all adjustments of a normal and recurring nature that are, in the opinion of management, necessary to fairly present our financial position, results of operations and cash flows in accordance with GAAP. Such unaudited interim consolidated financial statements have been prepared in accordance with the instructions to Form 10-Q pursuant to the rules and regulations of the SEC. Certain information and footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to such rules and regulations. The results of operations for the three months ended March 31, 2019 are not necessarily indicative of results to be expected for any future periods. These unaudited interim consolidated financial statements should be read in conjunction with our Annual Report on Form 10-K for the year ended December 31, 2018 ("2018 Form 10-K").

The accompanying unaudited interim consolidated financial statements have been prepared on a consistent basis with the accounting policies described in Consolidated Financial Statements and Supplementary Data—Note 2—"Summary of Significant Accounting Policies" under Part II, Item 8 of our 2018 Form 10-K.

The preparation of unaudited interim consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Estimates may change as new information is obtained. Significant items that are subject to such estimates include measurements of fair value, the valuation of non-marketable and other equity securities, the valuation of equity warrant assets, the adequacy of the allowance for loan losses and allowance for unfunded credit commitments, and the recognition and measurement of income tax assets and liabilities.

Principles of Consolidation and Presentation

Our consolidated financial statements include the accounts of SVB Financial Group and consolidated entities. We consolidate voting entities in which we have control through voting interests or entities through which we have a controlling financial interest in a variable interest entity ("VIE"). We determine whether we have a controlling financial interest in a VIE by determining if we have: (a) the power to direct the activities of the VIE that most significantly impact the entity's economic performance, (b) the obligation to absorb the expected losses, or (c) the right to receive the expected returns of the entity. Generally, we have significant variable interests if our commitments to a limited partnership investment represent a significant amount of the total commitments to the entity. We also evaluate the impact of related parties on our determination of variable interests in our consolidation conclusions. We consolidate VIEs in which we are the primary beneficiary based on a controlling financial interest. If we are not the primary beneficiary of a VIE, we record our pro-rata interests based on our ownership percentage.

VIEs are entities where investors lack sufficient equity at risk for the entity to finance its activities without additional subordinated financial support or equity investors, as a group, lack one of the following characteristics: (a) the power to direct the activities that most significantly impact the entity's economic performance, (b) the obligation to absorb the expected losses of the entity, or (c) the right to receive the expected returns of the entity. We assess VIEs to determine if we are the primary beneficiary of a VIE. A primary beneficiary is defined as a variable interest holder that has a controlling financial interest. A controlling financial interest requires both: (a) the power to direct the activities that most significantly impact the VIE's economic performance, and (b) obligation to absorb losses or receive benefits of a VIE that could potentially be significant to a VIE. Under this analysis, we also evaluate kick-out rights and other participating rights, which could provide us a controlling financial interest. The primary beneficiary of a VIE is required to consolidate the VIE.

We also evaluate fees paid to managers of our limited partnership investments. We exclude those fee arrangements that are not deemed to be variable interests from the analysis of our interests in our investments in VIEs and the determination of a primary beneficiary, if any. Fee arrangements based on terms that are customary and commensurate with the services provided are deemed not to be variable interests and are, therefore, excluded.

All significant intercompany accounts and transactions with consolidated entities have been eliminated. We have not provided financial or other support during the periods presented to any VIE that we were not previously contractually required to provide.

Adoption of New Accounting Standards

In February 2016, the FASB issued a new accounting standard update (ASU 2016-02, Leases (Topic 842)), which requires for all operating leases the recognition of a right-of-use ("ROU") asset and a corresponding lease liability, in the statement of financial position. For short term leases (term of 12 months or less), a lessee is permitted to make an accounting election not to recognize lease assets and lease liabilities. The lease cost will be allocated over the lease term on a straight-line basis. There were further amendments, including practical expedients, with the issuance of ASU 2018-01, “Leases (Topic 842): Land Easement Practical Expedient for Transition to Topic 842” in January 2018. In July 2018 the FASB issued ASU No. 2018-11, "Leases (Topic 842): Targeted Improvements", which provides us with the option to apply the new leasing standard to all open leases as of the adoption date, on a prospective basis.

On January 1, 2019, we adopted the new accounting standard ASU 2016-02, Leases (Topic 842) and all the related amendments ("new lease standard", "ASC 842" or "ASU 2016-02") utilizing the practical expedient to apply the new lease standard as of the January 1, 2019 on a prospective basis. We also elected the "package of expedients" and elected as an accounting policy to exclude recording ROU assets and lease liabilities for leases that meet the definition of short-term leases. In addition to excluding short-term leases, we have implemented an accounting policy in which non-lease components are not separated from lease components in the measurement of ROU assets and lease liabilities for all lease contracts. The "package of expedients" allowed us to continue to account for existing leases for which the commencement date is before January 1, 2019, in accordance with the previous guidance, Leases (Topic 840), throughout the lease term, including periods after adoption of the new guidance. We recognized $146 million in ROU assets and $178 million in lease liabilities as a result of applying the new lease standard as an adjustment to our opening consolidated balance sheet on January 1, 2019. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods. See Note 9—"Leases" of the “Notes to Interim Consolidated Financial Statements (unaudited)” under Part I, Item 1 of this report for additional disclosures related to our leases.

In March 2017, the FASB issued ASU No. 2017-08, Receivables—Nonrefundable Fees and Other Costs (Subtopic 310-20): Premium Amortization on Purchased Callable Debt Securities, which amends the amortization period for certain purchased callable debt securities held at a premium. The ASU requires entities to amortize premiums on debt securities by the first call date when the securities have fixed and determinable call dates and prices. The scope of the ASU includes all accounting premiums, such as purchase premiums and cumulative fair value hedge adjustments. The ASU does not change the accounting for discounts, which continue to be recognized over the contractual life of a security. Adoption of the ASU is on a modified retrospective basis through a cumulative effect adjustment to retained earnings as of the beginning of the year of adoption. Adoption of the ASU primarily affected our HTM portfolio of callable state and municipal debt securities. On January 1, 2019, we adopted the ASU and recognized a net reduction to retained earnings of $583 thousand.

Recent Accounting Pronouncements

In June 2016, the FASB issued a new accounting standard update (ASU 2016-13, Financial Instruments- Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments), which amends the incurred loss impairment methodology in current GAAP with a methodology that reflects expected credit losses over the life of the loan and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. This guidance will be effective January 1, 2020, on a modified retrospective approach, with early adoption permitted, but not before January 1, 2019. We currently have a project team in place and subject matter experts to assist with our review of key interpretive issues and assist in the assessment of our existing credit loss forecasting models and processes against the new guidance to determine what modifications may be required. We are currently evaluating the impact this guidance will have on our financial position, results of operation and stockholders’ equity.

In August 2018, the FASB issued a new accounting standard update (ASU No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement). The ASU primarily modifies certain disclosures with respect to Level 3 fair value measurements. This guidance will be effective January 1, 2020, with early adoption permitted. This guidance will not have an impact on our consolidated financial position or results of operations, and we do not expect the adoption of this standard to have a material impact on the disclosures in our Notes to the Consolidated Financial Statements.

Reclassifications

Certain prior period amounts, primarily related to presentation changes to our financial statement line items and immaterial changes to our reportable segments, have been reclassified to conform to current period presentations.

2. Business Combination

On January 4, 2019, we completed the acquisition of Leerink Holdings LLC, the Boston-based parent company of healthcare and life science investment bank Leerink Partners LLC, now SVB Leerink Holdings LLC ("SVB Leerink"). The acquisition was previously announced on November 13, 2018. SVB Leerink is an investment bank specializing in Equity & Convertible Capital Markets, Mergers & Acquisitions, Equity Research and Sales & Trading for growth and innovation-minded healthcare and life science companies and operates as a wholly-owned subsidiary of SVB Financial.

The acquisition was accounted for as a business combination and accordingly, the results of SVB Leerink's operations have been included in the Company's consolidated statement of income for the three months ended March 31, 2019 from the date of acquisition. We acquired SVB Leerink for approximately $270.9 million comprised of cash and share-based replacement award liabilities. The previously announced agreed upon purchase price of $280.0 million included $9.1 million of post-combination expenses related to share-based replacement awards. In addition, we provided a retention pool for employees of $60.0 million to be paid over five years comprised of a mix of cash and equity issued under the Company's current Equity Incentive Plan. Refer to Note 4—"Share-Based Compensation" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report for more information. The following table summarizes the allocation of the purchase price to the net assets of SVB Leerink as of January 4, 2019:

(Dollars in thousands)	January 4, 2019
Cash paid	$ 263,310
Replacement award liabilities (1)	7,629
Total purchase consideration	$ 270,939
Fair value of net assets acquired	135,749
Goodwill	$ 135,190

(1) The replacement award liabilities recognized as part of the total purchase consideration and the post-combination expenses of $9.1 million related to share-based replacement awards will be paid out in cash in accordance with SVB Leerink's original grant date vesting schedules.

The following table summarizes the estimated fair value of assets acquired and liabilities assumed at the date of acquisition:

(Dollars in thousands)	January 4, 2019
Assets acquired:	
Cash and cash equivalents	$ 163,273
Investment securities	32,986
Accounts receivable	37,538
Intangible assets	60,900
Other assets	35,128
Total assets acquired	329,825
Liabilities assumed:	
Accrued compensation	137,206
Due to broker-dealers	18,483
Other liabilities	33,131
Noncontrolling interests	5,256
Total liabilities assumed	194,076
Fair value of net assets acquired	$ 135,749

The Company recognized provisional identifiable intangible assets of $60.9 million and goodwill of $135.2 million as a result of the acquisition. The goodwill recorded includes revenue generating synergies expected from collaboration between SVB Leerink and the Company. All reported goodwill amounts have been allocated to the SVB Leerink reporting segment and are expected to be deductible for tax purposes. The Company recorded intangible assets of $60.9 million, which are subject to amortization

over their estimated useful lives. These fair value estimates represent our best estimate of fair value at March 31, 2019. The final amounts are subject to the completion of the fiscal 2018 financial statement audit of Leerink Holdings LLC, which is expected to be completed during the second quarter of 2019. The fair value of the noncontrolling interests in Leerink Holdings LLC represents the noncontrolling ownership percentage for SVB Leerink's consolidated VIE investment securities which are measured at net asset value.

The following table summarizes the fair value and estimated useful lives of the other intangible assets at the date of acquisition:

(Dollars in thousands)	Estimated Fair Value	Weighted Average Estimated Useful Life - in Years
Other intangible assets:		
Customer relationships	$ 42,000	11.0
Other	18,900	9.9
Total other intangible assets	$ 60,900	

SVB Leerink's net income from January 4, 2019 through March 31, 2019 was approximately $5.8 million. Supplementary pro forma financial information related to the acquisition is not included because the impact to the Company's consolidated statements of income is not material. The following table represents the amount of revenue and earnings attributable to SVB Leerink that is included in our financial results from January 4, 2019 through March 31, 2019:

(Dollars in thousands)	Three months ended March 31, 2019
Net interest income	$ 442
Noninterest income	68,117
Noninterest expense	60,540
Income before income tax expense	8,019
Income tax expense	2,174
Net income attributable to noncontrolling interests	—
Net income available to common stockholders	$ 5,845

The following table shows the components of acquisition-related activities expense:

(Dollars in thousands)	Three months ended March 31, 2019
Professional fees	$ 368
Other	204
Total acquisition-related expenses	$ 572

3. Stockholders' Equity and EPS

Accumulated Other Comprehensive Income

The following table summarizes the items reclassified out of accumulated other comprehensive income into the Consolidated Statements of Income (unaudited) for the three months ended March 31, 2019 and 2018:

		Three months ended March 31,	
(Dollars in thousands)	**Income Statement Location**	**2019**	**2018**
Reclassification adjustment for losses on available-for-sale securities included in net income	Gains on investment securities, net	$ 3,630	$ —
Related tax benefit	Income tax expense	(1,010)	—
Reclassification adjustment for losses on cash flow hedges included in net income	Net interest income	3	—
Related tax benefit	Income tax expense	(1)	—
Total reclassification adjustment for losses included in net income, net of tax		$ 2,622	$ —

The table below summarizes the activity relating to net gains on our cash flow hedges included in accumulated other comprehensive income for the three months ended March 31, 2019 and 2018. Over the next 12 months, we expect that approximately $0.7 million in accumulated other comprehensive income ("AOCI") at March 31, 2019, related to our cash flow hedges will be reclassified out of AOCI and recognized in net income.

	Three months ended March 31,	
(Dollars in thousands)	**2019**	**2018**
Beginning balance	$ —	$ —
Net increase in fair value, net of tax	795	—
Net realized loss reclassified to net income, net of tax	2	—
Ending balance	$ 797	$ —

EPS

Basic EPS is the amount of earnings available to each share of common stock outstanding during the reporting period. Diluted EPS is the amount of earnings available to each share of common stock outstanding during the reporting period adjusted to include the effect of potentially dilutive common shares. Potentially dilutive common shares include incremental shares issuable for stock options and restricted stock unit awards outstanding under our 2006 Equity Incentive Plan and our ESPP. Potentially dilutive common shares are excluded from the computation of dilutive EPS in periods in which the effect would be antidilutive. The following is a reconciliation of basic EPS to diluted EPS for the three months ended March 31, 2019 and 2018:

	Three months ended March 31,	
(Dollars and shares in thousands, except per share amounts)	**2019**	**2018**
Numerator:		
Net income available to common stockholders	$ 288,732	$ 194,961
Denominator:		
Weighted average common shares outstanding—basic	52,587	52,883
Weighted average effect of dilutive securities:		
Stock options and ESPP	297	420
Restricted stock units and awards	225	382
Weighted average common shares outstanding—diluted	53,109	53,685
Earnings per common share:		
Basic	$ 5.49	$ 3.69
Diluted	5.44	3.63

The following table summarizes the weighted-average common shares excluded from the diluted EPS calculation due to the antidilutive effect for the three months ended March 31, 2019 and 2018:

	Three months ended March 31,	
(Shares in thousands)	2019	2018
Stock options	91	4
Restricted stock units	134	—
Total	225	4

Stock Repurchase Program

On November 13, 2018, the Company announced a new program to repurchase up to $500 million of our outstanding common stock (the "Stock Repurchase Program"). For the three months ended March 31, 2019, we repurchased 0.5 million shares of our outstanding common stock for $116.0 million under the Stock Repurchase Program. As of March 31, 2019, we have repurchased 1.2 million shares of our outstanding common stock for $263.1 million under the Stock Repurchase Program.

4. Share-Based Compensation

For the three months ended March 31, 2019 and 2018, we recorded share-based compensation and related tax benefits as follows:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Share-based compensation expense	$ 15,122	$ 10,523
Income tax benefit related to share-based compensation expense	(3,327)	(2,317)

Unrecognized Compensation Expense

As of March 31, 2019, unrecognized share-based compensation expense was as follows:

(Dollars in thousands)	Unrecognized Expense	Weighted Average Expected Recognition Period - in Years
Stock options	$ 10,714	2.58
Restricted stock units and awards	74,885	2.71
Total unrecognized share-based compensation expense	$ 85,599	

Share-Based Payment Award Activity

The table below provides stock option information related to the 2006 Equity Incentive Plan for the three months ended March 31, 2019:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life - in Years	Aggregate Intrinsic Value of In-The-Money Options
Outstanding at December 31, 2018	679,659	$ 137.19		
Granted	1,328	239.56		
Exercised	(44,973)	73.17		
Forfeited	(1,897)	168.90		
Outstanding at March 31, 2019	634,117	141.85	3.45	$ 58,330,402
Vested and expected to vest at March 31, 2019	620,349	139.89	3.41	57,863,381
Exercisable at March 31, 2019	366,474	103.35	2.36	43,630,770

The aggregate intrinsic value of outstanding options shown in the table above represents the pre-tax intrinsic value based on our closing stock price of $222.36 as of March 31, 2019. The total intrinsic value of options exercised during the three months ended March 31, 2019 was $7.5 million, compared to $9.4 million for the comparable 2018 period.

The table below provides information for restricted stock units and awards under the 2006 Equity Incentive Plan for the three months ended March 31, 2019:

	Shares	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2018	597,296	$ 194.48
Granted (1)	176,076	233.03
Vested	(65,748)	97.06
Forfeited	(16,780)	125.52
Nonvested at March 31, 2019	690,844	215.25

(1) On February 1, 2019, we granted 125,160 restricted stock awards to SVB Leerink employees at a market price of $238.28 under the retention plan previously announced on November 13, 2018. The restricted stock awards will vest over a five-year period.

5. Variable Interest Entities

Our involvement with VIEs includes our investments in venture capital and private equity funds, debt funds, private and public portfolio companies and qualified affordable housing projects.

The following table presents the carrying amounts and classification of significant variable interests in consolidated and unconsolidated VIEs as of March 31, 2019 and December 31, 2018:

(Dollars in thousands)	Consolidated VIEs	Unconsolidated VIEs	Maximum Exposure to Loss in Unconsolidated VIEs
March 31, 2019:			
Assets:			
Cash and cash equivalents	$ 4,660	$ —	$ —
Non-marketable and other equity securities (1)	224,136	591,260	591,260
Accrued interest receivable and other assets	764	—	—
Total assets	$ 229,560	$ 591,260	$ 591,260
Liabilities:			
Other liabilities (1)	1,975	223,206	—
Total liabilities	$ 1,975	$ 223,206	$ —
December 31, 2018:			
Assets:			
Cash and cash equivalents	$ 9,058	$ —	$ —
Non-marketable and other equity securities (1)	221,646	568,272	568,272
Accrued interest receivable and other assets	228	—	—
Total assets	$ 230,932	$ 568,272	$ 568,272
Liabilities:			
Other liabilities (1)	919	205,685	—
Total liabilities	$ 919	$ 205,685	$ —

(1) Included in our unconsolidated non-marketable and other equity securities portfolio at March 31, 2019 and December 31, 2018 are investments in qualified affordable housing projects of $339.9 million and $318.6 million, respectively, and related other liabilities consisting of unfunded credit commitments of $223.2 million and $205.7 million, respectively.

Non-marketable and other equity securities

Our non-marketable and other equity securities portfolio primarily represents investments in venture capital and private equity funds, SPD Silicon Valley Bank Co., Ltd. (the Bank's joint venture bank in China ("SPD-SVB")), debt funds, private and public portfolio companies and qualified affordable housing projects. A majority of these investments are through third- party funds held by SVB Financial in which we do not have controlling or significant variable interests. These investments represent our unconsolidated VIEs in the table above. Our non-marketable and other equity securities portfolio also includes investments from SVB Capital. SVB Capital is the funds management business of SVB Financial Group, which focuses primarily on venture capital investments. The SVB Capital family of funds is comprised of direct venture funds that invest in companies and funds of funds that invest in other venture capital funds. We have a controlling and significant variable interest in four of these SVB Capital funds and consolidate these funds for financial reporting purposes.

All investments are generally nonredeemable and distributions are expected to be received through the liquidation of the underlying investments throughout the life of the investment fund. Investments may only be sold or transferred subject to the notice and approval provisions of the underlying investment agreement. Subject to applicable regulatory requirements, including the Volcker Rule, we also make commitments to invest in venture capital and private equity funds. For additional details, see Note 16—"Off-Balance Sheet Arrangements, Guarantees and Other Commitments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

The Bank also has variable interests in low income housing tax credit funds, in connection with fulfilling its responsibilities under the Community Reinvestment Act ("CRA"), that are designed to generate a return primarily through the realization of federal tax credits. These investments are typically limited partnerships in which the general partner, other than the Bank, holds the power over significant activities of the VIE; therefore, these investments are not consolidated. For additional information on our investments in qualified affordable housing projects, see Note 7—"Investment Securities" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

As of March 31, 2019, our exposure to loss with respect to the consolidated VIEs is limited to our net assets of $227.6 million and our exposure to loss for our unconsolidated VIEs is equal to our investment in these assets of $591.3 million.

6. Cash and Cash Equivalents

The following table details our cash and cash equivalents at March 31, 2019 and December 31, 2018:

(Dollars in thousands)	March 31, 2019	December 31, 2018
Cash and due from banks (1)	$ 6,766,158	$ 3,444,971
Securities purchased under agreements to resell (2)	298,755	123,611
Other short-term investment securities	1,970	2,957
Total cash and cash equivalents	$ 7,066,883	$ 3,571,539

(1) At March 31, 2019 and December 31, 2018, $4.7 billion and $1.7 billion, respectively, of our cash and due from banks was deposited at the Federal Reserve Bank and was earning interest at the Federal Funds target rate, and interest-earning deposits in other financial institutions were $1.4 billion and $1.2 billion, respectively.

(2) At March 31, 2019 and December 31, 2018, securities purchased under agreements to resell were collateralized by U.S. Treasury securities and U.S. agency securities with aggregate fair values of $304.7 million and $126.2 million, respectively. None of these securities were sold or repledged as of March 31, 2019 and December 31, 2018.

7. Investment Securities

Our investment securities portfolio consists of: (i) an available-for-sale securities portfolio and a held-to-maturity securities portfolio, both of which represent interest-earning investment securities, and (ii) a non-marketable and other equity securities portfolio, which primarily represents investments managed as part of our funds management business as well as public equity securities held as a result of equity warrant assets exercised.

Available-for-Sale Securities

The major components of our available-for-sale investment securities portfolio at March 31, 2019 and December 31, 2018 are as follows:

	March 31, 2019			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Carrying Value
Available-for-sale securities, at fair value:				
U.S. Treasury securities	$ 3,767,777	$ 19,425	$ (19,792)	$ 3,767,410
U.S. agency debentures	1,066,279	394	(2,960)	1,063,713
Foreign government debt securities	5,689	—	(4)	5,685
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	1,858,979	—	(19,096)	1,839,883
Agency-issued collateralized mortgage obligations—variable rate	78,172	243	(12)	78,403
Total available-for-sale securities	$ 6,776,896	$ 20,062	$ (41,864)	$ 6,755,094

	December 31, 2018			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Carrying Value
Available-for-sale securities, at fair value:				
U.S. Treasury securities	$ 4,762,182	$ 11,638	$ (35,562)	$ 4,738,258
U.S. agency debentures	1,090,426	61	(6,370)	1,084,117
Foreign government debt securities	5,815	—	(3)	5,812
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	1,922,618	—	(42,400)	1,880,218
Agency-issued collateralized mortgage obligations—variable rate	81,270	383	(15)	81,638
Total available-for-sale securities	$ 7,862,311	$ 12,082	$ (84,350)	$ 7,790,043

The following table summarizes sale activity of available-for-sale securities during the three months ended March 31, 2019 and 2018 as recorded in the line item “Gains on investment securities, net," a component of noninterest income:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Sales proceeds	$ 1,171,564	$ —
Net realized gains and losses:		
Gross realized gains	—	—
Gross realized losses	(3,630)	—
Net realized losses	$ (3,630)	$ —

The following tables summarize our unrealized losses on our available-for-sale securities portfolio into categories of less than 12 months, or 12 months or longer as of March 31, 2019 and December 31, 2018:

	March 31, 2019					
	Less than 12 months		12 months or longer (1)		Total	
(Dollars in thousands)	Fair Value of Investments	Unrealized Losses	Fair Value of Investments	Unrealized Losses	Fair Value of Investments	Unrealized Losses
Available-for-sale securities:						
U.S. Treasury securities	$ 101,342	$ (28)	$ 2,878,665	$ (19,764)	$ 2,980,007	$ (19,792)
U.S. agency debentures	—	—	865,746	(2,960)	865,746	(2,960)
Foreign government debt securities	5,685	(4)	—	—	5,685	(4)
Residential mortgage-backed securities:						
Agency-issued collateralized mortgage obligations—fixed rate	5,085	—	1,834,798	(19,096)	1,839,883	(19,096)
Agency-issued collateralized mortgage obligations—variable rate	2,630	(7)	6,960	(5)	9,590	(12)
Total temporarily impaired securities (1)	$ 114,742	$ (39)	$ 5,586,169	$ (41,825)	$ 5,700,911	$ (41,864)

(1) As of March 31, 2019, we identified a total of 159 investments that were in unrealized loss positions, of which 151 investments totaling $5.6 billion with unrealized losses of $41.8 million have been in an impaired position for a period of time greater than 12 months. As of March 31, 2019, we do not intend to sell any of our impaired securities prior to recovery of our adjusted cost basis, and it is more likely than not that we will not be required to sell any of our securities prior to recovery of our adjusted cost basis. Based on our analysis as of March 31, 2019, we deem all impairments to be temporary, and therefore changes in value for our temporarily impaired securities as of the same date are included in other comprehensive income. Market valuations and impairment analyses on assets in the available-for-sale securities portfolio are reviewed and monitored on a quarterly basis.

	December 31, 2018					
	Less than 12 months		12 months or longer (1)		Total	
(Dollars in thousands)	Fair Value of Investments	Unrealized Losses	Fair Value of Investments	Unrealized Losses	Fair Value of Investments	Unrealized Losses
Available-for-sale securities:						
U.S. Treasury securities	$ 494,287	$ (3,785)	$ 3,568,119	$ (31,777)	$ 4,062,406	$ (35,562)
U.S. agency debentures	443,790	(1,602)	591,216	(4,768)	1,035,006	(6,370)
Foreign government debt securities	5,812	(3)	—	—	5,812	(3)
Residential mortgage-backed securities:						
Agency-issued collateralized mortgage obligations—fixed rate	13,430	(22)	1,866,788	(42,378)	1,880,218	(42,400)
Agency-issued collateralized mortgage obligations—variable rate	—	—	13,516	(15)	13,516	(15)
Total temporarily impaired securities (1)	$ 957,319	$ (5,412)	$ 6,039,639	$ (78,938)	$ 6,996,958	$ (84,350)

(1) As of December 31, 2018, we identified a total of 200 investments that were in unrealized loss positions, of which 162 investments totaling $6.0 billion with unrealized losses of $78.9 million have been in an impaired position for a period of time greater than 12 months.

The following table summarizes the fixed income securities, carried at fair value, classified as available-for-sale as of March 31, 2019 by the remaining contractual principal maturities. For U.S. Treasury securities and U.S. agency debentures, the expected maturity is the actual contractual maturity of the notes. Expected maturities for mortgage-backed securities may differ significantly from their contractual maturities because mortgage borrowers have the right to prepay outstanding loan obligations with or without penalties. Mortgage-backed securities classified as available-for-sale typically have original contractual maturities from 10 to 30 years whereas expected average lives of these securities tend to be significantly shorter and vary based upon structure and prepayments in lower interest rate environments.

	March 31, 2019				
(Dollars in thousands)	Total	One Year or Less	After One Year to Five Years	After Five Years to Ten Years	After Ten Years
U.S. Treasury securities	$ 3,767,410	$ 1,165,910	$ 2,194,840	$ 406,660	$ —
U.S. agency debentures	1,063,713	643,279	420,434	—	—
Foreign government debt securities	5,685	—	5,685	—	—
Residential mortgage-backed securities:					
Agency-issued collateralized mortgage obligations—fixed rate	1,839,883	—	—	8,654	1,831,229
Agency-issued collateralized mortgage obligations—variable rate	78,403	—	—	—	78,403
Total	$ 6,755,094	$ 1,809,189	$ 2,620,959	$ 415,314	$ 1,909,632

Held-to-Maturity Securities

The components of our held-to-maturity investment securities portfolio at March 31, 2019 and December 31, 2018 are as follows:

	March 31, 2019			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Held-to-maturity securities, at cost:				
U.S. agency debentures (1)	$ 585,892	$ 2,858	$ (2,950)	$ 585,800
Residential mortgage-backed securities:				
Agency-issued mortgage-backed securities	7,887,579	41,279	(50,917)	7,877,941
Agency-issued collateralized mortgage obligations—fixed rate	2,058,789	66	(40,414)	2,018,441
Agency-issued collateralized mortgage obligations—variable rate	206,421	114	(727)	205,808
Agency-issued commercial mortgage-backed securities	2,745,662	16,866	(53,676)	2,708,852
Municipal bonds and notes	1,570,912	30,028	(1,274)	1,599,666
Total held-to-maturity securities	$ 15,055,255	$ 91,211	$ (149,958)	$ 14,996,508

(1) Consists of pools of Small Business Investment Company debentures issued and guaranteed by the U.S. Small Business Administration, an independent agency of the United States.

(Dollars in thousands)	December 31, 2018 Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Held-to-maturity securities, at cost:				
U.S. agency debentures (1)	$ 640,990	$ 2,148	$ (4,850)	$ 638,288
Residential mortgage-backed securities:				
Agency-issued mortgage-backed securities	8,103,638	5,011	(157,767)	7,950,882
Agency-issued collateralized mortgage obligations—fixed rate	2,183,204	—	(62,272)	2,120,932
Agency-issued collateralized mortgage obligations—variable rate	214,483	608	(14)	215,077
Agency-issued commercial mortgage-backed securities	2,769,706	6,969	(64,374)	2,712,301
Municipal bonds and notes	1,575,421	2,304	(26,969)	1,550,756
Total held-to-maturity securities	$ 15,487,442	$ 17,040	$ (316,246)	$ 15,188,236

(1) Consists of pools of Small Business Investment Company debentures issued and guaranteed by the U.S. Small Business Administration, an independent agency of the United States.

The following tables summarize our unrealized losses on our held-to-maturity securities portfolio into categories of less than 12 months and 12 months or longer as of March 31, 2019 and December 31, 2018:

(Dollars in thousands)	March 31, 2019 Less than 12 months Fair Value of Investments	Less than 12 months Unrealized Losses	12 months or longer (1) Fair Value of Investments	12 months or longer (1) Unrealized Losses	Total Fair Value of Investments	Total Unrealized Losses
Held-to-maturity securities:						
U.S. agency debentures	$ 86,931	$ (222)	$ 278,876	$ (2,728)	$ 365,807	$ (2,950)
Residential mortgage-backed securities:						
Agency-issued mortgage-backed securities	—	—	4,886,510	(50,917)	4,886,510	(50,917)
Agency-issued collateralized mortgage obligations—fixed rate	—	—	2,002,038	(40,414)	2,002,038	(40,414)
Agency-issued collateralized mortgage obligations—variable rate	162,374	(720)	7,837	(7)	170,211	(727)
Agency-issued commercial mortgage-backed securities	48,634	(70)	1,622,658	(53,606)	1,671,292	(53,676)
Municipal bonds and notes	1,485	—	142,042	(1,274)	143,527	(1,274)
Total temporarily impaired securities (1)	$ 299,424	$ (1,012)	$ 8,939,961	$ (148,946)	$ 9,239,385	$ (149,958)

(1) As of March 31, 2019, we identified a total of 676 investments that were in unrealized loss positions, of which 659 investments totaling $8.9 billion with unrealized losses of $148.9 million have been in an impaired position for a period of time greater than 12 months. As of March 31, 2019, we do not intend to sell any of our impaired securities prior to recovery of our adjusted cost basis, and it is more likely than not that we will not be required to sell any of our securities prior to recovery of our adjusted cost basis, which is consistent with our classification of these securities. Based on our analysis as of March 31, 2019, we deem all impairments to be temporary. Market valuations and impairment analyses on assets in the held-to-maturity securities portfolio are reviewed and monitored on a quarterly basis.

	December 31, 2018					
	Less than 12 months		12 months or longer (1)		Total	
(Dollars in thousands)	Fair Value of Investments	Unrealized Losses	Fair Value of Investments	Unrealized Losses	Fair Value of Investments	Unrealized Losses
Held-to-maturity securities:						
U.S. agency debentures	$ 291,432	$ (2,915)	$ 66,624	$ (1,935)	$ 358,056	$ (4,850)
Residential mortgage-backed securities:						
Agency-issued mortgage-backed securities	2,493,156	(34,956)	3,972,690	(122,811)	6,465,846	(157,767)
Agency-issued collateralized mortgage obligations—fixed rate	16,952	(109)	2,103,980	(62,163)	2,120,932	(62,272)
Agency-issued collateralized mortgage obligations—variable rate	3,364	(1)	8,101	(13)	11,465	(14)
Agency-issued commercial mortgage-backed securities	177,697	(1,580)	1,600,277	(62,794)	1,777,974	(64,374)
Municipal bonds and notes	868,751	(17,075)	340,413	(9,894)	1,209,164	(26,969)
Total temporarily impaired securities (1)	$ 3,851,352	$ (56,636)	$ 8,092,085	$ (259,610)	$ 11,943,437	$ (316,246)

(1) As of December 31, 2018, we identified a total of 1,244 investments that were in unrealized loss positions, of which 695 investments totaling $8.1 billion with unrealized losses of $259.6 million have been in an impaired position for a period of time greater than 12 months.

The following table summarizes the remaining contractual principal maturities on fixed income investment securities classified as held-to-maturity as of March 31, 2019. For U.S. agency debentures, the expected maturity is the actual contractual maturity of the notes. Expected maturities for mortgage-backed securities may differ significantly from their contractual maturities because mortgage borrowers have the right to prepay outstanding loan obligations with or without penalties. Mortgage-backed securities classified as held-to-maturity typically have original contractual maturities from 10 to 30 years whereas expected average lives of these securities tend to be significantly shorter and vary based upon structure and prepayments in lower interest rate environments.

	March 31, 2019									
	Total		One Year or Less		After One Year to Five Years		After Five Years to Ten Years		After Ten Years	
(Dollars in thousands)	Amortized Cost	Fair Value	Amortized Cost	Fair Value	Amortized Cost	Fair Value	Amortized Cost	Fair Value	Amortized Cost	Fair Value
U.S. agency debentures	$ 585,892	$ 585,800	$ —	$ —	$ 101,464	$ 101,854	$ 484,428	$ 483,946	$ —	$ —
Residential mortgage-backed securities:										
Agency-issued mortgage-backed securities	7,887,579	7,877,941	—	—	133,021	131,935	868,170	854,690	6,886,388	6,891,316
Agency-issued collateralized mortgage obligations—fixed rate	2,058,789	2,018,441	—	—	—	—	515,013	501,867	1,543,776	1,516,574
Agency-issued collateralized mortgage obligations—variable rate	206,421	205,808	—	—	—	—	—	—	206,421	205,808
Agency-issued commercial mortgage-backed securities	2,745,662	2,708,852	—	—	—	—	—	—	2,745,662	2,708,852
Municipal bonds and notes	1,570,912	1,599,666	13,230	13,231	80,710	80,824	318,981	322,914	1,157,991	1,182,697
Total	$15,055,255	$14,996,508	$ 13,230	$ 13,231	$ 315,195	$ 314,613	$2,186,592	$2,163,417	$12,540,238	$12,505,247

Non-marketable and Other Equity Securities

The major components of our non-marketable and other equity securities portfolio at March 31, 2019 and December 31, 2018 are as follows:

(Dollars in thousands)	March 31, 2019	December 31, 2018
Non-marketable and other equity securities:		
Non-marketable securities (fair value accounting):		
Consolidated venture capital and private equity fund investments (1)	$ 108,404	$ 118,333
Unconsolidated venture capital and private equity fund investments (2)	196,049	201,098
Other investments without a readily determinable fair value (3)	37,796	25,668
Other equity securities in public companies (fair value accounting) (4)	11,644	20,398
Non-marketable securities (equity method accounting) (5):		
Venture capital and private equity fund investments	148,096	129,485
Debt funds	5,826	5,826
Other investments	127,264	121,721
Investments in qualified affordable housing projects, net (6)	339,900	318,575
Total non-marketable and other equity securities	$ 974,979	$ 941,104

(1) The following table shows the amounts of venture capital and private equity fund investments held by the following consolidated funds and our ownership percentage of each fund at March 31, 2019 and December 31, 2018 (fair value accounting):

	March 31, 2019		December 31, 2018	
(Dollars in thousands)	Amount	Ownership %	Amount	Ownership %
Strategic Investors Fund, LP	$ 8,618	12.6%	$ 12,452	12.6%
Capital Preferred Return Fund, LP	51,219	20.0	53,957	20.0
Growth Partners, LP	47,532	33.0	50,845	33.0
CP I, LP	1,035	10.7	1,079	10.7
Total consolidated venture capital and private equity fund investments	$ 108,404		$ 118,333	

(2) The carrying value represents investments in 212 and 213 funds (primarily venture capital funds) at March 31, 2019 and December 31, 2018, respectively, where our ownership interest is typically less than 5% of the voting interests of each such fund and in which we do not have the ability to exercise significant influence over the partnerships operating activities and financial policies. We carry our unconsolidated venture capital and private equity fund investments at fair value based on the fund investments' net asset values per share as obtained from the general partners of the investments. For each fund investment, we adjust the net asset value per share for differences between our measurement date and the date of the fund investment's net asset value by using the most recently available financial information from the investee general partner, for example December 31st for our March 31st consolidated financial statements, adjusted for any contributions paid, distributions received from the investment, and significant fund transactions or market events during the reporting period.

(3) These investments include direct equity investments in private companies. The carrying value is based on the price at which the investment was acquired plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments. We consider a range of factors when adjusting the fair value of these investments, including, but not limited to, the term and nature of the investment, local market conditions, values for comparable securities, current and projected operating performance, exit strategies, financing transactions subsequent to the acquisition of the investment and a discount for certain investments that have lock-up restrictions or other features that indicate a discount to fair value is warranted.

The following table shows the changes to the carrying amount of other investments without a readily determinable fair value for the three months ended March 31, 2019:

(Dollars in thousands)	Three months ended March 31, 2019	Cumulative Adjustments
Measurement alternative:		
Carrying value at March 31, 2019	$ 37,796	
Carrying value adjustments:		
Impairment	$ —	$ —
Upward changes for observable prices	5,071	6,755
Downward changes for observable prices	121	625

(4) Investments classified as other equity securities (fair value accounting) represent shares held in public companies as a result of exercising public equity warrant assets and direct equity investments in public companies held by our consolidated funds. Changes in equity securities measured at fair value are recognized through net income.

(5) The following table shows the carrying value and our ownership percentage of each investment at March 31, 2019 and December 31, 2018 (equity method accounting):

	March 31, 2019		December 31, 2018	
(Dollars in thousands)	Amount	Ownership %	Amount	Ownership %
Venture capital and private equity fund investments:				
Strategic Investors Fund II, LP	$ 4,648	8.6%	$ 4,670	8.6%
Strategic Investors Fund III, LP	17,485	5.9	17,396	5.9
Strategic Investors Fund IV, LP	28,785	5.0	28,974	5.0
Strategic Investors Fund V funds	28,953	Various	28,189	Various
CP II, LP (i)	7,454	5.1	7,122	5.1
Other venture capital and private equity fund investments	60,771	Various	43,134	Various
Total venture capital and private equity fund investments	$ 148,096		$ 129,485	
Debt funds:				
Gold Hill Capital 2008, LP (ii)	$ 3,901	15.5%	$ 3,901	15.5%
Other debt funds	1,925	Various	1,925	Various
Total debt funds	$ 5,826		$ 5,826	
Other investments:				
SPD Silicon Valley Bank Co., Ltd.	$ 79,415	50.0%	$ 76,412	50.0%
Other investments	47,849	Various	45,309	Various
Total other investments	$ 127,264		$ 121,721	

(i) Our ownership includes direct ownership interest of 1.3 percent and indirect ownership interest of 3.8 percent through our investments in Strategic Investors Fund II, LP.
(ii) Our ownership includes direct ownership interest of 11.5 percent in the fund and an indirect interest in the fund through our investment in Gold Hill Capital 2008, LLC of 4.0 percent.

(6) The following table presents the balances of our investments in qualified affordable housing projects and related unfunded commitments included as a component of "Other liabilities" on our consolidated balance sheets at March 31, 2019 and December 31, 2018:

(Dollars in thousands)	March 31, 2019	December 31, 2018
Investments in qualified affordable housing projects, net	$ 339,900	318,575
Other liabilities	223,206	205,685

The following table presents other information relating to our investments in qualified affordable housing projects for the three months ended March 31, 2019 and 2018:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Tax credits and other tax benefits recognized	$ 9,257	$ 5,422
Amortization expense included in provision for income taxes (i)	7,636	4,792

(i) All investments are amortized using the proportional amortization method and amortization expense is included in the provision for income taxes.

The following table presents the net gains and losses on non-marketable and other equity securities for the three months ended March 31, 2019 and 2018 as recorded in the line item “Gains on investment securities, net," a component of noninterest income:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Net gains (losses) on non-marketable and other equity securities:		
Non-marketable securities (fair value accounting):		
Consolidated venture capital and private equity fund investments	$ 3,289	$ 11,647
Unconsolidated venture capital and private equity fund investments	8,006	11,719
Other investments without a readily determinable fair value	5,005	1,741
Other equity securities in public companies (fair value accounting)	11,803	(22,282)
Non-marketable securities (equity method accounting):		
Venture capital and private equity fund investments	2,789	9,569
Debt funds	—	(2,299)
Other investments	1,766	(1,037)
Total net gains on non-marketable and other equity securities	$ 32,658	$ 9,058
Less: realized net gains (losses) on sales of securities (1)	9,835	(22,490)
Net gains on non-marketable and other equity securities still held	$ 22,823	$ 31,548

(1) Realized gains and losses include sales of non-marketable and other equity securities. No OTTI was recorded during the three months ended March 31, 2019 and 2018.

8. Loans, Allowance for Loan Losses and Allowance for Unfunded Credit Commitments

We serve a variety of commercial clients in the technology, life science/healthcare, private equity/venture capital and premium wine industries. Our technology clients generally tend to be in the industries of hardware (semiconductors, communications, data, storage, and electronics), software/internet (such as infrastructure software, applications, software services, digital content and advertising technology), and energy and resource innovation (“ERI”). Because of the diverse nature of ERI products and services, for our loan-related reporting purposes, ERI-related loans are reported under our hardware, software/internet, life science/healthcare and other commercial loan categories, as applicable. Our life science/healthcare clients primarily tend to be in the industries of biotechnology, medical devices, healthcare information technology and healthcare services. Loans made to private equity/venture capital firm clients typically enable them to fund investments prior to their receipt of funds from capital calls. Loans to the premium wine industry focus on vineyards and wineries that produce grapes and wines of high quality.

In addition to commercial loans, we make consumer loans through SVB Private Bank and provide real estate secured loans to eligible employees through our EHOP. Our private banking clients are primarily private equity/venture capital professionals and executive leaders in the innovation companies they support. These products and services include real estate secured home equity lines of credit, which may be used to finance real estate investments and loans used to purchase, renovate or refinance personal residences. These products and services also include restricted stock purchase loans and capital call lines of credit.

We also provide community development loans made as part of our responsibilities under the Community Reinvestment Act. These loans are included within “Construction loans” below and are primarily secured by real estate.

The composition of loans, net of unearned income of $170 million and $173 million at March 31, 2019 and December 31, 2018, respectively, is presented in the following table:

(Dollars in thousands)	March 31, 2019	December 31, 2018
Commercial loans:		
Software/internet	$ 6,236,266	$ 6,154,755
Hardware	1,256,891	1,234,557
Private equity/venture capital	14,308,077	14,110,560
Life science/healthcare	2,522,731	2,385,612
Premium wine	256,021	249,266
Other	260,206	321,978
Total commercial loans	24,840,192	24,456,728
Real estate secured loans:		
Premium wine (1)	758,954	710,397
Consumer loans (2)	2,679,084	2,612,971
Other	40,037	40,435
Total real estate secured loans	3,478,075	3,363,803
Construction loans	111,854	97,077
Consumer loans	420,324	420,672
Total loans, net of unearned income (3)	$ 28,850,445	$ 28,338,280

(1) Included in our premium wine portfolio are gross construction loans of $96 million and $99 million at March 31, 2019 and December 31, 2018, respectively.
(2) Consumer loans secured by real estate at March 31, 2019 and December 31, 2018 were comprised of the following:

(Dollars in thousands)	March 31, 2019	December 31, 2018
Loans for personal residence	$ 2,311,701	$ 2,251,292
Loans to eligible employees	302,671	290,194
Home equity lines of credit	64,712	71,485
Consumer loans secured by real estate	$ 2,679,084	$ 2,612,971

(3) Included within our total loan portfolio are credit card loans of $375 million and $335 million at March 31, 2019 and December 31, 2018, respectively.

Credit Quality

The composition of loans, net of unearned income of $170 million and $173 million at March 31, 2019 and December 31, 2018, respectively, broken out by portfolio segment and class of financing receivable, is as follows:

(Dollars in thousands)	March 31, 2019	December 31, 2018
Commercial loans:		
Software/internet	$ 6,236,266	$ 6,154,755
Hardware	1,256,891	1,234,557
Private equity/venture capital	14,308,077	14,110,560
Life science/healthcare	2,522,731	2,385,612
Premium wine	1,014,975	959,663
Other	412,097	459,490
Total commercial loans	25,751,037	25,304,637
Consumer loans:		
Real estate secured loans	2,679,084	2,612,971
Other consumer loans	420,324	420,672
Total consumer loans	3,099,408	3,033,643
Total loans, net of unearned income	$ 28,850,445	$ 28,338,280

The following table summarizes the aging of our gross loans, broken out by portfolio segment and class of financing receivable as of March 31, 2019 and December 31, 2018:

(Dollars in thousands)	30 - 59 Days Past Due	60 - 89 Days Past Due	Equal to or Greater Than 90 Days Past Due	Total Past Due	Current	Loans Past Due 90 Days or More Still Accruing Interest
March 31, 2019:						
Commercial loans:						
Software/internet	$ 34,680	$ 4,042	$ 1,945	$ 40,667	$ 6,147,766	$ 1,945
Hardware	379	55	—	434	1,245,841	—
Private equity/venture capital	24,960	—	1	24,961	14,284,752	1
Life science/healthcare	2,711	640	201	3,552	2,522,991	201
Premium wine	2,981	—	—	2,981	1,011,487	—
Other	1	4	1	6	445,402	1
Total commercial loans	65,712	4,741	2,148	72,601	25,658,239	2,148
Consumer loans:						
Real estate secured loans	3,050	—	—	3,050	2,664,875	—
Other consumer loans	—	—	—	—	420,647	—
Total consumer loans	3,050	—	—	3,050	3,085,522	—
Total gross loans excluding impaired loans	68,762	4,741	2,148	75,651	28,743,761	2,148
Impaired loans	11,562	2,517	26,412	40,491	160,616	—
Total gross loans	$ 80,324	$ 7,258	$ 28,560	$ 116,142	$ 28,904,377	$ 2,148
December 31, 2018:						
Commercial loans:						
Software/internet	$ 28,134	$ 6,944	$ 378	$ 35,456	$ 6,059,672	$ 378
Hardware	300	34	4	338	1,233,956	4
Private equity/venture capital	59,481	11	—	59,492	14,054,940	—
Life science/healthcare	16,082	817	19	16,918	2,410,091	19
Premium wine	2,953	14	—	2,967	956,285	—
Other	7,391	163	1	7,555	477,442	1
Total commercial loans	114,341	7,983	402	122,726	25,192,386	402
Consumer loans:						
Real estate secured loans	3,598	1,750	1,562	6,910	2,598,496	1,562
Other consumer loans	361	—	—	361	420,359	—
Total consumer loans	3,959	1,750	1,562	7,271	3,018,855	1,562
Total gross loans excluding impaired loans	118,300	9,733	1,964	129,997	28,211,241	1,964
Impaired loans	2,843	1,181	25,092	29,116	140,958	—
Total gross loans	$ 121,143	$ 10,914	$ 27,056	$ 159,113	$ 28,352,199	$ 1,964

The following table summarizes our impaired loans as they relate to our allowance for loan losses, broken out by portfolio segment and class of financing receivable as of March 31, 2019 and December 31, 2018:

(Dollars in thousands)	Impaired loans for which there is a related allowance for loan losses	Impaired loans for which there is no related allowance for loan losses	Total carrying value of impaired loans	Total unpaid principal of impaired loans
March 31, 2019:				
Commercial loans:				
Software/internet	$ 45,908	$ 53,026	$ 98,934	$ 117,640
Hardware	8,054	11,753	19,807	20,482
Private equity/venture capital	2,247	3,700	5,947	5,947
Life science/healthcare	52,944	14,427	67,371	78,353
Premium wine	—	1,236	1,236	1,305
Other	4	—	4	4
Total commercial loans	109,157	84,142	193,299	223,731
Consumer loans:				
Real estate secured loans	1,827	5,967	7,794	9,691
Other consumer loans	14	—	14	15
Total consumer loans	1,841	5,967	7,808	9,706
Total	$ 110,998	$ 90,109	$ 201,107	$ 233,437
December 31, 2018:				
Commercial loans:				
Software/internet	$ 49,625	$ 65,225	$ 114,850	$ 131,858
Hardware	1,256	10,250	11,506	12,159
Private equity/venture capital	—	3,700	3,700	3,700
Life science/healthcare	17,791	16,276	34,067	44,446
Premium wine	—	1,301	1,301	1,365
Other	411	—	411	411
Total commercial loans	69,083	96,752	165,835	193,939
Consumer loans:				
Real estate secured loans	3,919	320	4,239	5,969
Other consumer loans	—	—	—	—
Total consumer loans	3,919	320	4,239	5,969
Total	$ 73,002	$ 97,072	$ 170,074	$ 199,908

The following tables summarize our average impaired loans and interest income recognized on impaired loans, broken out by portfolio segment and class of financing receivable for the three months ended March 31, 2019 and 2018:

Three months ended March 31,	Average impaired loans		Interest income recognized on impaired loans	
(Dollars in thousands)	2019	2018	2019	2018
Commercial loans:				
Software/internet	$ 104,312	$ 108,788	$ 603	$ 532
Hardware	16,815	38,426	252	363
Private equity/venture capital	5,198	302	—	—
Life science/healthcare	44,163	22,679	347	37
Premium wine	1,256	2,769	18	36
Other	140	11	—	—
Total commercial loans	171,884	172,975	1,220	968
Consumer loans:				
Real estate secured loans	9,613	3,063	54	—
Other consumer loans	5	739	—	5
Total consumer loans	9,618	3,802	54	5
Total average impaired loans	$ 181,502	$ 176,777	$ 1,274	$ 973

The following tables summarize the activity relating to our allowance for loan losses for the three months ended March 31, 2019 and 2018, broken out by portfolio segment:

Three months ended March 31, 2019 (Dollars in thousands)	Beginning Balance December 31, 2018	Charge-offs	Recoveries	Provision for (Reduction of) Loan Losses	Foreign Currency Translation Adjustments	Ending Balance March 31, 2019
Commercial loans:						
Software/internet	$ 103,567	$ (8,254)	$ 1,054	$ (658)	$ (26)	$ 95,683
Hardware	19,725	(253)	56	5,384	209	25,121
Private equity/venture capital	98,581	—	—	(1,079)	(42)	97,460
Life science/healthcare	32,180	(23)	105	22,672	880	55,814
Premium wine	3,355	—	—	427	17	3,799
Other	3,558	(411)	—	59	2	3,208
Total commercial loans	260,966	(8,941)	1,215	26,805	1,040	281,085
Total consumer loans	19,937	(59)	210	(984)	(38)	19,066
Total allowance for loan losses	$ 280,903	$ (9,000)	$ 1,425	$ 25,821	$ 1,002	$ 300,151

Three months ended March 31, 2018 (Dollars in thousands)	Beginning Balance December 31, 2017	Charge-offs	Recoveries	Provision for (Reduction of) Loan Losses	Foreign Currency Translation Adjustments	Ending Balance March 31, 2018
Commercial loans:						
Software/internet	$ 96,104	$ (6,671)	$ 573	$ 12,801	$ 488	$ 103,295
Hardware	27,614	(2,953)	588	3,104	119	28,472
Private equity/venture capital	82,468	—	10	8,805	335	91,618
Life science/healthcare	24,924	(864)	53	1,631	62	25,806
Premium wine	3,532	—	—	(161)	(6)	3,365
Other	3,941	(99)	537	(906)	9	3,482
Total commercial loans	238,583	(10,587)	1,761	25,274	1,007	256,038
Total consumer loans	16,441	—	27	1,722	66	18,256
Total allowance for loan losses	$ 255,024	$ (10,587)	$ 1,788	$ 26,996	$ 1,073	$ 274,294

The following table summarizes the activity relating to our allowance for unfunded credit commitments for the three months ended March 31, 2019 and 2018:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Allowance for unfunded credit commitments, beginning balance	$ 55,183	$ 51,770
Provision for unfunded credit commitments	2,730	976
Foreign currency translation adjustments	57	77
Allowance for unfunded credit commitments, ending balance (1)	$ 57,970	$ 52,823

(1) See Note 16—"Off-Balance Sheet Arrangements, Guarantees and Other Commitments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report for additional disclosures related to our commitments to extend credit.

The following table summarizes the allowance for loan losses individually and collectively evaluated for impairment as of March 31, 2019 and December 31, 2018, broken out by portfolio segment:

	March 31, 2019				December 31, 2018			
	Individually Evaluated for Impairment		Collectively Evaluated for Impairment		Individually Evaluated for Impairment		Collectively Evaluated for Impairment	
(Dollars in thousands)	Allowance for loan losses	Recorded investment in loans	Allowance for loan losses	Recorded investment in loans	Allowance for loan losses	Recorded investment in loans	Allowance for loan losses	Recorded investment in loans
Commercial loans:								
Software/internet	$ 22,770	$ 98,934	$ 72,913	$ 6,137,332	$ 28,527	$ 114,850	$ 75,040	$ 6,039,905
Hardware	5,311	19,807	19,810	1,237,084	1,253	11,506	18,472	1,223,051
Private equity/venture capital	2,247	5,947	95,213	14,302,130	—	3,700	98,581	14,106,860
Life science/healthcare	30,730	67,371	25,084	2,455,360	7,484	34,067	24,696	2,351,545
Premium wine	—	1,236	3,799	1,013,739	—	1,301	3,355	958,362
Other	4	4	3,204	412,093	411	411	3,147	459,079
Total commercial loans	61,062	193,299	220,023	25,557,738	37,675	165,835	223,291	25,138,802
Total consumer loans	163	7,808	18,903	3,091,600	266	4,239	19,671	3,029,404
Total	$ 61,225	$ 201,107	$ 238,926	$ 28,649,338	$ 37,941	$ 170,074	$ 242,962	$ 28,168,206

Credit Quality Indicators

For each individual client, we establish an internal credit risk rating for that loan, which is used for assessing and monitoring credit risk as well as performance of the loan and the overall portfolio. Our internal credit risk ratings are also used to summarize the risk of loss due to failure by an individual borrower to repay the loan. For our internal credit risk ratings, each individual loan is given a risk rating of 1 through 10. Loans risk-rated 1 through 4 are performing loans and translate to an internal rating of "Pass," with loans risk-rated 1 being cash secured. Loans risk-rated 5 through 7 are performing loans; however, we consider them as demonstrating higher risk, which requires more frequent review of the individual exposures; these translate to an internal rating of "Performing (Criticized)." When full repayment of a criticized loan has been deemed improbable under the original contractual terms but full repayment remains probable overall, the loan is considered to be a "Performing Impaired (Criticized)" loan. All of our nonaccrual loans are risk-rated 8 or 9 and are classified under the nonperforming impaired category. (For further description of nonaccrual loans, refer to Note 2—"Summary of Significant Accounting Policies" under Part II, Item 8 of our 2018 Form 10-K). Loans rated 10 are charged-off and are not included as part of our loan portfolio balance. We review our credit quality indicators for performance and appropriateness of risk ratings as part of our evaluation process for our allowance for loan losses.

The following table summarizes the credit quality indicators, broken out by portfolio segment and class of financing receivables as of March 31, 2019 and December 31, 2018:

(Dollars in thousands)	Pass	Performing (Criticized)	Performing Impaired (Criticized)	Nonperforming Impaired (Nonaccrual)	Total
March 31, 2019:					
Commercial loans:					
Software/internet	$ 5,619,634	$ 568,799	$ 36,336	$ 62,598	$ 6,287,367
Hardware	1,096,461	149,814	11,753	8,054	1,266,082
Private equity/venture capital	14,306,933	2,780	—	5,947	14,315,660
Life science/healthcare	2,422,438	104,105	14,427	52,944	2,593,914
Premium wine	945,712	68,756	968	268	1,015,704
Other	425,012	20,396	—	4	445,412
Total commercial loans	24,816,190	914,650	63,484	129,815	25,924,139
Consumer loans:					
Real estate secured loans	2,656,069	11,856	4,000	3,794	2,675,719
Other consumer loans	419,732	915	—	14	420,661
Total consumer loans	3,075,801	12,771	4,000	3,808	3,096,380
Total gross loans	$ 27,891,991	$ 927,421	$ 67,484	$ 133,623	$ 29,020,519
December 31, 2018:					
Commercial loans:					
Software/internet	$ 5,574,332	$ 520,796	$ 48,069	$ 66,781	$ 6,209,978
Hardware	1,146,985	87,309	10,250	1,256	1,245,800
Private equity/venture capital	14,098,281	16,151	—	3,700	14,118,132
Life science/healthcare	2,291,356	135,653	16,276	17,791	2,461,076
Premium wine	909,965	49,287	1,017	284	960,553
Other	467,653	17,344	—	411	485,408
Total commercial loans	24,488,572	826,540	75,612	90,223	25,480,947
Consumer loans:					
Real estate secured loans	2,584,261	21,145	320	3,919	2,609,645
Other consumer loans	419,771	949	—	—	420,720
Total consumer loans	3,004,032	22,094	320	3,919	3,030,365
Total gross loans	$ 27,492,604	$ 848,634	$ 75,932	$ 94,142	$ 28,511,312

Troubled Debt Restructurings

As of March 31, 2019, we had 19 TDRs with a total carrying value of $86.9 million where concessions have been granted to borrowers experiencing financial difficulties, in an attempt to maximize collection. There were $3.3 million of unfunded commitments available for funding to the clients associated with these TDRs as of March 31, 2019.

The following table summarizes our loans modified in TDRs, broken out by portfolio segment and class of financing receivables at March 31, 2019 and December 31, 2018:

(Dollars in thousands)	March 31, 2019	December 31, 2018
Loans modified in TDRs:		
Commercial loans:		
Software/internet	$ 55,493	$ 58,089
Hardware	11,759	9,665
Life science/healthcare	16,532	12,738
Premium wine	2,806	2,883
Total commercial loans	86,590	83,375
Consumer loans:		
Other consumer loans	318	320
Total loans modified in TDRs	$ 86,908	$ 83,695

The following table summarizes the recorded investment in loans modified in TDRs, broken out by portfolio segment and class of financing receivable, for modifications made during the three months ended March 31, 2019 and 2018:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Loans modified in TDRs during the period:		
Commercial loans:		
Software/internet	$ 677	$ 756
Hardware	—	1,559
Life science/healthcare	5,000	1,239
Total commercial loans	5,677	3,554
Consumer loans:		
Other consumer loans	—	326
Total loans modified in TDRs during the period (1)	$ 5,677	$ 3,880

(1) There were $2.2 million of partial charge-offs for the three months ended March 31, 2019 and no partial charge-offs during the three months ended March 31, 2018.

During the three months ended March 31, 2019 and 2018, all new TDRs of $5.7 million and $3.9 million, respectively, were modified through payment deferrals granted to our clients.

The related allowance for loan losses for the majority of our TDRs is determined on an individual basis by comparing the carrying value of the loan to the present value of the estimated future cash flows, discounted at the pre-modification contractual interest rate. For certain TDRs, the related allowance for loan losses is determined based on the fair value of the collateral if the loan is collateral dependent.

The following table summarizes the recorded investment in loans modified in TDRs within the previous 12 months that subsequently defaulted during the three months ended March 31, 2019 and 2018:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
TDRs modified within the previous 12 months that defaulted during the period:		
Commercial loans:		
Software/internet	$ —	$ 3,032
Life science/healthcare	5,000	—
Total TDRs modified within the previous 12 months that defaulted in the period	$ 5,000	$ 3,032

Charge-offs and defaults on previously restructured loans are evaluated to determine the impact to the allowance for loan losses, if any. The evaluation of these defaults may impact the assumptions used in calculating the reserve on other TDRs and impaired loans as well as management's overall outlook of macroeconomic factors that affect the reserve on the loan portfolio as a whole. After evaluating the charge-offs and defaults experienced on our TDRs we determined that no change to our reserving methodology for TDRs was necessary to determine the allowance for loan losses as of March 31, 2019.

9. Leases

We have operating leases for our corporate offices, data centers and certain equipment utilized at those properties. We are obligated under a number of noncancelable operating leases for premises and equipment that expire at various dates, through 2030, and in most instances, include options to renew or extend at market rates and terms. Such leases may provide for periodic adjustments of rentals during the term of the lease based on changes in various economic indicators.

At the inception of the lease, the lease is evaluated to determine whether the lease will be accounted for as an operating or a finance lease. There were no significant assumptions or judgments required upon applying the new lease standard. Operating lease ROU assets and operating lease liabilities are included in our consolidated balance sheets. We have no leases that meet the definition of a finance lease under ASC 842 and our lessor accounting treatment for subleases is not material. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods.

Total recorded balances for the lease assets and liabilities are as follows:

(Dollars in thousands)	March 31, 2019
Assets:	
Right-of-use assets - operating leases (1)	$ 164,659
Liabilities:	
Lease liabilities - operating leases (1)	205,167

(1) Included in these amounts are $24.4 million and $33.7 million of ROU assets and lease liabilities, respectively, attributable to the inclusion of SVB Leerink in our financial results at March 31, 2019.

The components of our lease cost and other information related to leases for the three months ended March 31, 2019 were as follows:

(Dollars in thousands)	Three months ended March 31, 2019
Operating lease cost	$ 9,518
Short-term lease cost	263
Variable lease cost	846
Less: sublease income	(1,108)
Total lease cost, net	$ 9,519
Other information:	
Weighted-average remaining term (in years) - operating leases	6.40
Weighted-average discount rate - operating leases (1)	3.18%
Supplemental cash flows information:	
Cash paid for operating leases	$ 10,354

(1) The incremental borrowing rate used to calculate the lease liability was determined based on the facts and circumstances of the economic environment and the Company's credit standing as of the effective date of ASC 842. Additionally, the total lease term and total lease payments were also considered in determining the rate. Based on these considerations the Company identified credit terms available under its existing credit lines which represent a collateralized borrowing rate that has varying credit terms that could be matched to total lease terms and total lease payments in ultimately determining the implied borrowing rate in each lease contract.

The following table presents our undiscounted future cash payments for our operating lease liabilities as of March 31, 2019:

(Dollars in thousands)	Operating Leases
2019 (excluding the three months ended March 31, 2019)	$ 32,717
2020	40,282
2021	37,458
2022	31,902
2023	30,440
2024 and thereafter	38,577
Total future lease payments (1)	$ 211,376
Less: imputed interest	(6,209)
Total lease liabilities	$ 205,167

(1) As of March 31, 2019, we have additional operating leases that have not yet commenced. We estimate that we will record additional operating lease liabilities of $27.1 million upon commencement. These operating leases will commence in 2019 with lease terms of one to ten years.

The following table presents minimum future payments under noncancelable operating leases under ASC 840, *Leases* as of December 31, 2018:

(Dollars in thousands)	Amount
2019	$ 38,609
2020	37,575
2021	35,854
2022	31,659
2023	30,904
2024 and thereafter	49,071
Total minimum future payments	$ 223,672

10. Goodwill and Other Intangible Assets

Goodwill

On January 4, 2019, we completed the acquisition of Leerink Holdings LLC, the Boston-based parent company of healthcare and life science investment bank Leerink Partners LLC, now SVB Leerink. We recognized provisional identifiable intangible assets of $60.9 million and goodwill of $135.2 million as a result of the acquisition. For additional information, refer to Note 2—"Business Combination" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report. The goodwill of $135.2 million includes revenue generating synergies expected from collaboration between SVB Leerink and the Company.

The changes in goodwill were as follows for the three months ended March 31, 2019:

(Dollars in thousands)	Goodwill
Beginning balance at December 31, 2018	$ —
Acquisitions (1)	135,190
Ending balance at March 31, 2019	$ 135,190

(1) All reported goodwill amounts have been allocated to the SVB Leerink reporting segment and are expected to be deductible for tax purposes. Refer to Note 15—"Segment Reporting" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report for additional information.

Other Intangible Assets

The components of net other intangible assets related to the acquisition of SVB Leerink were as follows:

	March 31, 2019		
(Dollars in thousands)	Gross Amount	Accumulated Amortization	Net Carrying Amount
Other intangible assets:			
Customer relationships	$ 42,000	$ 955	$ 41,045
Other	18,900	1,916	16,984
Total other intangible assets	$ 60,900	$ 2,871	$ 58,029

For the three months ended March 31, 2019, we recorded amortization expense of $2.9 million. Assuming no future impairments of other intangible assets or additional acquisitions or dispositions, the following table presents the Company's future expected amortization expense for other intangible assets that will continue to be amortized:

Years ended December 31, (Dollars in thousands)	Other Intangible Assets
2019 (excluding the three months ended March 31, 2019)	$ 8,612
2020	5,382
2021	4,732
2022	4,732
2023	4,732
2024 and thereafter	29,839
Total future amortization expense	$ 58,029

11. Short-Term Borrowings and Long-Term Debt

The following table represents outstanding short-term borrowings and long-term debt at March 31, 2019 and December 31, 2018:

			Carrying Value	
(Dollars in thousands)	Maturity	Principal value at March 31, 2019	March 31, 2019	December 31, 2018
Short-term borrowings:				
Short-term FHLB advances			$ —	$ 300,000
Securities sold under agreement to repurchase	(1)		—	319,414
Other short-term borrowings	(2)	$ 14,455	14,455	11,998
Total short-term borrowings			$ 14,455	$ 631,412
Long-term debt:				
3.50% Senior Notes	January 29, 2025	$ 350,000	$ 347,725	$ 347,639
5.375% Senior Notes	September 15, 2020	350,000	348,990	348,826
Total long-term debt			$ 696,715	$ 696,465

(1) Securities sold under repurchase agreements are effectively short-term borrowings collateralized by U.S. Treasury securities.
(2) Represents cash collateral received from certain counterparties in relation to market value exposures of derivative contracts in our favor.

Interest expense related to short-term borrowings and long-term debt was $10.2 million for the three months ended March 31, 2019 and $8.4 million for the three months ended March 31, 2018. The weighted average interest rate associated with our short-term borrowings was 2.62 percent as of December 31, 2018. There were no overnight short-term borrowings as of March 31, 2019.

Short-term Borrowings

We have certain facilities in place to enable us to access short-term borrowings on a secured and unsecured basis. Our secured facilities include collateral pledged to the FHLB of San Francisco and the discount window at the FRB (using both fixed income securities and loans as collateral). Our unsecured facility consists of our uncommitted federal funds lines. As of March 31, 2019, collateral pledged to the FHLB of San Francisco was comprised primarily of fixed income investment securities and loans and had a carrying value of $4.5 billion, of which $4.0 billion was available to support additional borrowings. As of March 31, 2019, collateral pledged to the discount window at the FRB was comprised of fixed income investment securities and had a carrying value of $0.9 billion, all of which was unused and available to support additional borrowings. Our total unused and available borrowing capacity for our uncommitted federal funds lines totaled $1.9 billion at March 31, 2019. Our total unused and available borrowing capacity under our master repurchase agreements with various financial institutions totaled $3.3 billion at March 31, 2019.

12. Derivative Financial Instruments

We primarily use derivative financial instruments to manage interest rate risk, currency exchange rate risk and to assist customers with their risk management objectives, which may include currency exchange rate risks and interest rate risks. Also, in connection with negotiating credit facilities and certain other services, we often obtain equity warrant assets giving us the right to acquire stock in private, venture-backed companies in the technology and life science/healthcare industries.

Interest Rate Risk

Interest rate risk is our primary market risk and can result from timing and volume differences in the repricing of our interest rate sensitive assets and liabilities and changes in market interest rates. To manage interest rate risk on our variable-interest rate loan portfolio, we enter into interest rate swap contracts to hedge against future changes in interest rates by using hedging instruments to lock in future cash inflows that would otherwise be impacted by movements in the market interest rates. We designate these interest rate swap contracts as cash flow hedges that qualify for hedge accounting under ASC 815, *Derivatives and Hedging* ("ASC 815"), and record them in other assets and other liabilities. For qualifying cash flow hedges, changes in the fair value of the derivative are recorded in accumulated other comprehensive income and recognized in earnings as the hedged item affects earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item in the line item "Loans" as part of interest income, a component of consolidated net income.

We assess hedge effectiveness under ASC 815 on a quarterly basis to ensure all hedges remain highly effective to ensure hedge accounting under ASC 815 can be applied. If the hedging relationship no longer exists or no longer qualifies as a hedge per ASC 815, any amounts remaining as gain or loss in accumulated other comprehensive income are reclassified into earnings in the line item "Loans" as part of interest income, a component of consolidated net income. As of March 31, 2019, no derivatives classified as hedges were terminated or were disqualified for hedge accounting. The maximum length of time over which the forecasted transactions are hedged is approximately five years.

Currency Exchange Risk

We enter into foreign exchange forward contracts to economically reduce our foreign exchange exposure risk associated with the net difference between foreign currency denominated assets and liabilities. We do not designate any foreign exchange forward contracts as derivative instruments that qualify for hedge accounting. Gains or losses from changes in currency rates on foreign currency denominated instruments are recorded in the line item “Other” as part of noninterest income, a component of consolidated net income. We may experience ineffectiveness in the economic hedging relationship, because the instruments are revalued based upon changes in the currency’s spot rate on the principal value, while the forwards are revalued on a discounted cash flow basis. We record forward agreements in gain positions in other assets and loss positions in other liabilities, while net changes in fair value are recorded in the line item “Other” as part of noninterest income, a component of consolidated net income.

Other Derivative Instruments

Also included in our derivative instruments are equity warrant assets and client forward and option contracts, and client interest rate contracts. For further description of these other derivative instruments, refer to Note 2-“Summary of Significant Accounting Policies" under Part II, Item 8 of our 2018 Form 10-K.

Counterparty Credit Risk

We are exposed to credit risk if counterparties to our derivative contracts do not perform as expected. We mitigate counterparty credit risk through credit approvals, limits, monitoring procedures and obtaining collateral, as appropriate. With respect to measuring counterparty credit risk for derivative instruments, we measure the fair value of a group of financial assets and financial liabilities on a net risk basis by counterparty portfolio.

The total notional or contractual amounts and fair value of our derivative financial instruments at March 31, 2019 and December 31, 2018 were as follows:

	March 31, 2019			December 31, 2018		
	Notional or Contractual Amount	Fair Value		Notional or Contractual Amount	Fair Value	
(Dollars in thousands)		Derivative Assets (1)	Derivative Liabilities (1)		Derivative Assets (1)	Derivative Liabilities (1)
Derivatives designated as hedging instruments:						
Interest rate risks:						
Interest rate swaps	$ 165,000	$ 1,408	$ —	$ —	$ —	$ —
Interest rate swaps	200,000	—	303	—	—	—
Derivatives not designated as hedging instruments:						
Currency exchange risks:						
Foreign exchange forwards	180,055	3,312	—	263,733	4,767	—
Foreign exchange forwards	184,353	—	2,845	178,310	—	1,094
Other derivative instruments:						
Equity warrant assets	226,734	162,215	—	223,532	149,238	—
Client foreign exchange forwards	2,907,771	87,716	—	2,759,878	93,876	—
Client foreign exchange forwards	2,779,090	—	78,287	2,568,085	—	85,706
Client foreign currency options	91,808	1,333	—	93,556	1,759	—
Client foreign currency options	91,908	—	1,336	93,579	—	1,759
Client interest rate derivatives (2)	1,198,257	11,763	—	1,020,416	8,499	—
Client interest rate derivatives (2)	1,274,564	—	8,841	1,337,328	—	9,491
Total derivatives not designated as hedging instruments		266,339	91,309		258,139	98,050
Total derivatives		$ 267,747	$ 91,612		$ 258,139	$ 98,050

(1) Derivative assets and liabilities are included in "Accrued interest receivable and other assets" and "Other liabilities", respectively, on our consolidated balance sheets.
(2) The amount reported for March 31, 2019 reflects rule changes implemented by two central clearing houses that require entities to treat derivative assets, liabilities and the related variation margin as settlement of the related derivative fair values for legal and accounting purposes, as opposed to presenting gross derivative assets and liabilities. As a result, client interest rate derivatives reflect reductions of approximately $3.9 million of derivative liabilities and approximately $0.4 million of derivative assets at March 31, 2019 and December 31, 2018, respectively.

A summary of our derivative activity and the related impact on our consolidated statements of income for the three months ended March 31, 2019 and 2018 is as follows:

		Three months ended March 31,	
(Dollars in thousands)	Statement of income location	2019	2018
Derivatives designated as hedging instruments:			
Interest rate risks:			
Amounts reclassified from accumulated other comprehensive income into income	Interest income—loans	$ (3)	$ —
Derivatives not designated as hedging instruments:			
Currency exchange risks:			
Gains on revaluations of internal foreign currency instruments, net	Other noninterest income	$ 1,050	$ 2,926
Losses on internal foreign exchange forward contracts, net	Other noninterest income	(469)	(3,512)
Net gains (losses) associated with internal currency risk		$ 581	$ (586)
Other derivative instruments:			
(Losses) gains on revaluations of client foreign currency instruments, net	Other noninterest income	$ (13,571)	$ 7,653
Gains (losses) on client foreign exchange forward contracts, net	Other noninterest income	12,654	(7,114)
Net (losses) gains associated with client currency risk		$ (917)	$ 539
Net gains on equity warrant assets	Gains on equity warrant assets, net	$ 21,305	$ 19,191
Net (losses) gains on other derivatives	Other noninterest income	$ (365)	$ 431

Balance Sheet Offsetting

Certain of our derivative and other financial instruments are subject to enforceable master netting arrangements with our counterparties. These agreements provide for the net settlement of multiple contracts with a single counterparty through a single payment, in a single currency, in the event of default on or termination of any one contract.

The following table summarizes our assets subject to enforceable master netting arrangements as of March 31, 2019 and December 31, 2018:

(Dollars in thousands)	Gross Amounts of Recognized Assets	Gross Amounts offset in the Statement of Financial Position	Net Amounts of Assets Presented in the Statement of Financial Position	Gross Amounts Not Offset in the Statement of Financial Position But Subject to Master Netting Arrangements		Net Amount
				Financial Instruments	Cash Collateral Received (1)	
March 31, 2019						
Derivative assets:						
Interest rate swaps	$ 1,408	$ —	$ 1,408	$ (1,408)	$ —	$ —
Foreign exchange forwards	91,028	—	91,028	(32,638)	(13,991)	44,399
Foreign currency options	1,333	—	1,333	(222)	(425)	686
Client interest rate derivatives	11,763	—	11,763	(11,724)	(39)	—
Total derivative assets	105,532	—	105,532	(45,992)	(14,455)	45,085
Reverse repurchase, securities borrowing, and similar arrangements	298,755	—	298,755	(298,755)	—	—
Total	$ 404,287	$ —	$ 404,287	$ (344,747)	$ (14,455)	$ 45,085
December 31, 2018						
Derivative assets:						
Foreign exchange forwards	$ 98,643	$ —	$ 98,643	$ (38,213)	$ (11,825)	$ 48,605
Foreign currency options	1,759	—	1,759	(613)	(90)	1,056
Client interest rate derivatives	8,499	—	8,499	(8,416)	(83)	—
Total derivative assets	108,901	—	108,901	(47,242)	(11,998)	49,661
Reverse repurchase, securities borrowing, and similar arrangements	123,611	—	123,611	(123,611)	—	—
Total	$ 232,512	$ —	$ 232,512	$ (170,853)	$ (11,998)	$ 49,661

(1) Cash collateral received from our counterparties in relation to market value exposures of derivative contracts in our favor is recorded as a component of "Short-term borrowings" on our consolidated balance sheets.

The following table summarizes our liabilities subject to enforceable master netting arrangements as of March 31, 2019 and December 31, 2018:

(Dollars in thousands)	Gross Amounts of Recognized Liabilities	Gross Amounts offset in the Statement of Financial Position	Net Amounts of Liabilities Presented in the Statement of Financial Position	Gross Amounts Not Offset in the Statement of Financial Position But Subject to Master Netting Arrangements		Net Amount
				Financial Instruments	Cash Collateral Pledged (1)	
March 31, 2019						
Derivative liabilities:						
Interest rate swaps	$ 303	$ —	$ 303	$ (303)	$ —	$ —
Foreign exchange forwards	81,132	—	81,132	(10,238)	(32,690)	38,204
Foreign currency options	1,336	—	1,336	(346)	(341)	649
Client interest rate derivatives	8,841	—	8,841	—	(8,680)	161
Total derivative liabilities	91,612	—	91,612	(10,887)	(41,711)	39,014
Repurchase, securities lending, and similar arrangements	—	—	—	—	—	—
Total	$ 91,612	$ —	$ 91,612	$ (10,887)	$ (41,711)	$ 39,014
December 31, 2018						
Derivative liabilities:						
Foreign exchange forwards	$ 86,800	$ —	$ 86,800	$ (24,778)	$ (20,732)	$ 41,290
Foreign currency options	1,759	—	1,759	(1,054)	—	705
Client interest rate derivatives	9,491	—	9,491	—	(9,207)	284
Total derivative liabilities	98,050	—	98,050	(25,832)	(29,939)	42,279
Repurchase, securities lending, and similar arrangements	319,414	—	319,414	—	—	319,414
Total	$ 417,464	$ —	$ 417,464	$ (25,832)	$ (29,939)	$ 361,693

(1) Cash collateral pledged to our counterparties in relation to market value exposures of derivative contracts in a liability position and repurchase agreements are recorded as a component of “Cash and cash equivalents” on our consolidated balance sheets.

13. Noninterest Income

On January 1, 2018, we adopted accounting standard ASU 2014-09, Revenue from Contracts with Customers and all the related amendments ("ASC 606" or "ASU 2014-09"). Included below is a summary of noninterest income, as well as the impact of such adoption, for the three months ended March 31, 2019 and 2018:

(Dollars in thousands)	Three months ended March 31, 2019	2018
Noninterest income:		
Gains on investment securities, net	$ 29,028	$ 9,058
Gains on equity warrant assets, net	21,305	19,191
Foreign exchange fees	38,048	33,827
Credit card fees	27,483	21,692
Deposit service charges	20,939	17,699
Client investment fees	44,482	22,875
Lending related fees	13,937	10,735
Letters of credit and standby letters of credit fees	9,354	8,182
Investment banking revenue	49,795	—
Commissions	14,108	—
Other	11,897	12,259
Total noninterest income	$ 280,376	$ 155,518

Gains on investment securities, net

Net gains on investment securities include both gains and losses from our non-marketable and other equity securities, which include public equity securities held as a result of exercised equity warrant assets, gains and losses from sales of our AFS debt securities portfolio, when applicable, and carried interest.

Our non-marketable and other equity securities portfolio primarily represents investments in venture capital and private equity funds, our China Joint Venture, debt funds, private and public portfolio companies, which include public equity securities held as a result of exercised equity warrant assets and qualified affordable housing projects. We experience variability in the performance of our non-marketable and other equity securities from period to period, which results in net gains or losses on investment securities (both realized and unrealized). This variability is due to a number of factors, including unrealized changes in the values of our investments, changes in the amount of realized gains from distributions, changes in liquidity events and general economic and market conditions. Unrealized gains from non-marketable and other equity securities for any single period are typically driven by valuation changes.

The extent to which any unrealized gains or losses will become realized is subject to a variety of factors, including, among other things, the expiration of certain sales restrictions to which these equity securities may be subject to (i.e., lock-up agreements), changes in prevailing market prices, market conditions, the actual sales or distributions of securities, and the timing of such actual sales or distributions, which, to the extent such securities are managed by our managed funds, are subject to our funds' separate discretionary sales/distributions and governance processes.

Carried interest is comprised of preferential allocations of profits recognizable when the return on assets of our individual managed fund of funds and direct venture funds exceeds certain performance targets and is payable to us, as the general partners of the managed funds. The carried interest we earn is often shared with employees, who are also members of the general partner entities. We record carried interest on a quarterly basis by measuring fund performance to date versus the performance target. For our unconsolidated managed funds, carried interest is recorded as gains on investment securities, net. For our consolidated managed funds, it is recorded as a component of net income attributable to noncontrolling interests. Carried interest allocated to others is recorded as a component of net income attributable to noncontrolling interests. Any carried interest paid to us (or our employees) may be subject to reversal to the extent fund performance declines to a level where inception to date carried interest is lower than actual payments made by the funds. The limited partnership agreements for our funds provide that carried interest is generally not paid to the general partners until the funds have provided a full return of contributed capital to the limited partners. Accrued, but unpaid carried interest may be subject to reversal to the extent that the fund performance declines to a level where inception-to-date carried interest is less than prior amounts recognized. Carried interest income is accounted for under an ownership model based on *ASC 323 — Equity Method of Accounting* and *ASC 810 — Consolidation.*

Our available-for-sale securities portfolio is a fixed income investment portfolio that is managed with the objective of earning an appropriate portfolio yield over the long-term while maintaining sufficient liquidity and credit diversification as well as addressing our asset/liability management objectives. Though infrequent, sales of debt securities in our AFS securities portfolio may result in net gains or losses and are conducted pursuant to the guidelines of our investment policy related to the management of our liquidity position and interest rate risk.

Gains on investment securities are recognized outside of the scope of ASC 606 as it explicitly excludes noninterest income earned from our investment-related activities. A summary of gains and losses on investment securities for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Gains on non-marketable and other equity securities, net	$ 32,658	$ 9,058
Losses on sales of available-for-sale securities, net	(3,630)	—
Total gains on investment securities, net	$ 29,028	$ 9,058

Gains on equity warrant assets, net

In connection with negotiating credit facilities and certain other services, we often obtain rights to acquire stock in the form of equity warrant assets in primarily private, venture-backed companies in the technology and life science/healthcare industries. Any changes in fair value from the grant date fair value of equity warrant assets will be recognized as increases or decreases to other assets on our balance sheet and as net gains or losses on equity warrant assets, in noninterest income, a component of consolidated net income. Gains on equity warrant assets are recognized outside of the scope of ASC 606 as it explicitly excludes noninterest income earned from our derivative-related activities. A summary of net gains on equity warrant assets for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Equity warrant assets:		
Gains on exercises, net	$ 5,482	$ 9,927
Terminations	(415)	(922)
Changes in fair value, net	16,238	10,186
Total net gains on equity warrant assets	$ 21,305	$ 19,191

Foreign exchange fees

Foreign exchange fees represent the income differential between purchases and sales of foreign currency on behalf of our clients, primarily from spot contracts. Foreign exchange spot contract fees are recognized upon the completion of the single performance obligation, the execution of a spot trade in exchange for a fee. In line with customary business practice, the legal right transfers to the client upon execution of a foreign exchange contract on the trade date, and as such, we currently recognize our fees based on the trade date and are typically settled within two business days.

Forward contract and option premium fees are recognized outside of the scope of ASC 606 as it explicitly excludes noninterest income earned from our derivative-related activities. A summary of foreign exchange fee income by instrument type for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Foreign exchange fees by instrument type:		
Spot contract commissions	$ 35,029	$ 31,202
Forward contract commissions	2,995	2,485
Option premium fees	24	140
Total foreign exchange fees	$ 38,048	$ 33,827

Credit card fees

Credit card fees include interchange income from credit and debit cards and fees earned from processing transactions for merchants. Interchange income is earned after satisfying our performance obligation of providing nightly settlement services to a payment network. Costs related to rewards programs are recorded when the rewards are earned by the customer and presented as a reduction to interchange fee income. Rewards programs continue to be accounted for under ASC 310 - *Receivables*. Our performance obligations for merchant service fees are to transmit data and funds between the merchant and the payment network. Credit card interchange and merchant service fees are earned daily upon completion of transaction settlement services.

Annual card service fees are recognized on a straight-line basis over a 12-month period and continue to be accounted for under ASC 310 - *Receivables*.

A summary of credit card fees by instrument type for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Credit card fees by instrument type:		
Card interchange fees, net	$ 21,393	$ 17,560
Merchant service fees	4,534	2,906
Card service fees	1,556	1,226
Total credit card fees	$ 27,483	$ 21,692

Deposit service charges

Deposit service charges include fees earned from performing cash management activities and other deposit account services. Deposit services include, but are not limited to, the following: receivables services, which include merchant services, remote capture, lockbox, electronic deposit capture, and fraud control services. Payment and cash management products and services include wire transfer and automated clearing house payment services to enable clients to transfer funds more quickly, as well as business bill pay, business credit and debit cards, account analysis, and disbursement services. Deposit service charges are recognized over the period in which the related performance obligation is provided, generally on a monthly basis, and are presented in the "*Disaggregation of revenue from contracts with customers*" table below.

Client investment fees

Client investment fees include fees earned from discretionary investment management services for substantially all clients, managing clients' portfolios based on their investment policies, strategies and objectives and investment advisory fees. Revenue is recognized on a monthly basis upon completion of our performance obligation and consideration is typically received in the subsequent month. Included in our sweep money market fees are Rule 12(b)-1 fees, revenue sharing and customer transactional-based fees. Rule 12(b)-1 fees and revenue sharing are recognized as earned based on client funds that are invested in the period, typically monthly. Transactional based fees are earned and recognized on fixed income securities when the transaction is executed on the clients' behalf. Amounts paid to third-party service providers are predominantly expensed, such that client investment fees are recorded gross of payments made to third parties. A summary of client investment fees by instrument type for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Client investment fees by type:		
Sweep money market fees	$ 26,544	$ 12,322
Asset management fees (1)	6,671	5,358
Repurchase agreement fees	11,267	5,195
Total client investment fees (2)	$ 44,482	$ 22,875

(1) Represents fees earned from investments in third-party money market mutual funds and fixed-income securities managed by SVB Asset Management.
(2) Represents fees earned on client investment funds which are maintained at third-party financial institutions and are not recorded on our balance sheet.

Lending related fees

Unused commitment fees, minimum finance fees and unused line fees are recognized as earned on a monthly basis. Fees that qualify for syndication treatment are recognized at the completion of the syndicated loan deal for which the fees were received. Lending related fees are recognized outside of the scope of ASC 606 as it explicitly excludes noninterest income earned from our lending-related activities. A summary of lending related fees by instrument type for the three months ended March 31, 2019 and 2018 is as follows:

(Dollars in thousands)	Three months ended March 31, 2019	2018
Lending related fees by instrument type:		
Unused commitment fees	$ 9,670	$ 8,757
Other	4,267	1,978
Total lending related fees	$ 13,937	$ 10,735

Letters of credit and standby letters of credit fees

Commercial and standby letters of credit represent conditional commitments issued by us on behalf of a client to guarantee the performance of the client to a third party when certain specified future events have occurred. Fees generated from letters of credit and standby letters of credit are deferred as a component of other liabilities and recognized in noninterest income over the commitment period using the straight-line method, based on the likelihood that the commitment being drawn down will be remote. Letters of credit and standby letters of credit fees are recognized outside of the scope of ASC 606 as it explicitly excludes noninterest income earned from our lending related activities.

Investment banking revenue

The Company earns investment banking revenue from clients for providing services related to securities underwriting, private placements and advisory services on strategic matters such as mergers and acquisitions. Underwriting fees are attributable to public and private offerings of equity and debt securities and are recognized at the point in time when the offering has been deemed to be completed by the lead manager of the underwriting group. Once the offering is completed, the performance obligation has been satisfied and the Company recognizes the applicable management fee as well the underwriting fee, net of consideration payable to customers. Estimated offering expenses are presented gross in our statements of income. The Company recognizes private placement fee revenue at the point in time when the private placement is completed, which is generally when the client accepts capital from the fund raise. Advisory fees from mergers and acquisitions engagements are generally recognized at the point in time when the related transaction is completed. Expenses are deferred only to the extent they are explicitly reimbursable by the client and the related revenue is recognized at a point in time. All other deal-related expenses are expensed as incurred. The Company has determined that it acts as principal in the majority of these transactions and therefore presents expenses gross within other operating expenses.

A summary of investment banking revenue by instrument type for the three months ended March 31, 2019 and 2018 is as follows:

(Dollars in thousands)	Three months ended March 31, 2019	2018
Investment banking revenue:		
Underwriting fees	$ 35,772	$ —
Advisory fees	12,273	—
Private placements and other	1,750	—
Total investment banking revenue	$ 49,795	$ —

Commissions

Commissions include commissions received from customers for the execution of agency-based brokerage transactions in listed and over-the-counter equities. The execution of each trade order represents a distinct performance obligation and the transaction price is fixed at the point in time or trade order execution. Trade execution is satisfied at the point in time that the customer has control of the asset and as such, fees are recorded on a trade date basis. Commissions for the three months ended March 31, 2019 were $14.1 million.

Other

Other noninterest income primarily includes income from fund management fees and service revenue. Fund management fees are comprised of fees charged directly to our managed funds of funds and direct venture funds. Fund management fees are based upon the contractual terms of the limited partnership agreements and are generally recognized as earned over the specified contract period, which is generally equal to the life of the individual fund. Fund management fees are calculated as a percentage of committed capital and collected in advance and are received quarterly. Fund management fees for certain of our limited partnership agreements are calculated as a percentage of distributions made by the funds and revenue is recorded only at the

time of a distribution event. As distribution events are not predetermined for these certain funds, management fees are considered variable and constrained under ASC 606.

Other service revenue primarily consists of dividend income on FHLB/FRB stock, correspondent bank rebate income, incentive fees related to carried interest and other fee income. We recognize revenue when our performance obligations are met and record revenues on a daily/monthly basis, quarterly, semi-annually or annual basis. For event driven revenue sources, we recognize revenue when: (i) persuasive evidence of an arrangement exists, (ii) we have performed the service, provided we have no other remaining obligations to the customer, (iii) the fee is fixed or determinable and (iv) collectability is probable.

A summary of other noninterest income by instrument type for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Other noninterest income by instrument type:		
Fund management fees	$ 8,041	$ 5,736
Net losses on revaluation of foreign currency instruments, net of foreign exchange forward contracts (1)	(336)	(47)
Other service revenue	4,192	6,570
Total other noninterest income	$ 11,897	$ 12,259

(1) Represents the net revaluation of client and internal foreign currency denominated financial instruments. We enter into foreign exchange forward contracts to economically reduce our foreign exchange exposure related to client and internal foreign currency denominated financial instruments.

Disaggregation of revenue from contracts with customers

The following tables present our revenues from contracts with customers disaggregated by revenue source and segment for the three months ended March 31, 2019 and 2018:

Three months ended March 31, 2019 (Dollars in thousands)	Global Commercial Bank	SVB Private Bank	SVB Capital	SVB Leerink	Other Income	Total
Revenue from contracts with customers:						
Spot contract commissions	$ 34,806	$ 122	$ —	$ —	$ 101	$ 35,029
Card interchange fees, gross	38,715	—	—	—	147	38,862
Merchant service fees	4,534	—	—	—	—	4,534
Deposit service charges	20,793	35	—	—	111	20,939
Client investment fees	17,558	380	—	—	26,544	44,482
Investment banking revenue	—	—	—	49,795	—	49,795
Commissions	—	—	—	14,108	—	14,108
Fund management fees	—	—	6,659	1,382	—	8,041
Correspondent bank rebates	1,467	—	—	—	—	1,467
Total revenue from contracts with customers	$ 117,873	$ 537	$ 6,659	$ 65,285	$ 26,903	$ 217,257
Revenues outside the scope of ASC 606 (1)	8,444	(27)	18,186	2,832	33,684	63,119
Total noninterest income	$ 126,317	$ 510	$ 24,845	$ 68,117	$ 60,587	$ 280,376

(1) Amounts are accounted for under separate guidance than ASC 606.

Three months ended March 31,2018 (Dollars in thousands)	Global Commercial Bank	SVB Private Bank	SVB Capital	Other Income	Total
Revenue from contracts with customers:					
Spot contract commissions	$ 30,972	$ 179	$ —	$ 51	$ 31,202
Card interchange fees, gross	29,449	—	—	99	29,548
Merchant service fees	2,906	—	—	—	2,906
Deposit service charges	17,040	28	—	631	17,699
Client investment fees	10,250	302	—	12,323	22,875
Fund management fees	—	—	5,736	—	5,736
Correspondent bank rebates	1,396	—	—	—	1,396
Total revenue from contracts with customers	$ 92,013	$ 509	$ 5,736	$ 13,104	$ 111,362
Revenues outside the scope of ASC 606 (1)	6,779	(2)	23,174	14,205	44,156
Total noninterest income	$ 98,792	$ 507	$ 28,910	$ 27,309	$ 155,518

(1) Amounts are accounted for under separate guidance than ASC 606.

The timing of revenue recognition may differ from the timing of cash settlements or invoicing to customers. We record a receivable when revenue is recognized prior to invoicing, and unearned revenue when revenue is recognized subsequent to receipt of consideration. These assets and liabilities are reported on the consolidated balance sheets on a contract-by-contract basis at the end of each reporting period. During the three months ended March 31, 2019 and 2018, changes in our contract assets, contract liabilities and receivables were not material. Additionally, revenues recognized during the three months ended March 31, 2019 and 2018 that were included in the corresponding contract liability balance at the beginning of the periods were not material.

14. Other Noninterest Expense

A summary of other noninterest expense for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Lending and other client related processing costs	$ 5,177	$ 3,201
Correspondent bank fees	3,744	3,410
Investment banking activities	4,185	—
Trade order execution costs	2,516	—
Data processing services	2,899	2,492
Telephone	2,741	2,377
Dues and publications	1,524	850
Postage and supplies	770	667
Other	9,980	5,107
Total other noninterest expense	$ 33,536	$ 18,104

15. Segment Reporting

We have four reportable segments for management reporting purposes: Global Commercial Bank, SVB Private Bank, SVB Capital and SVB Leerink. SVB Leerink is a new reportable segment and was created as a result of the acquisition of Leerink Holdings LLC effective January 4, 2019. The results of our operating segments are based on our internal management reporting process.

Our Global Commercial Bank and SVB Private Bank segments' primary source of revenue is from net interest income, which is primarily the difference between interest earned on loans, net of funds transfer pricing ("FTP"), and interest paid on deposits, net of FTP. Accordingly, these segments are reported using net interest income, net of FTP. FTP is an internal measurement framework designed to assess the financial impact of a financial institution's sources and uses of funds. It is the mechanism by which a funding credit is given for deposits raised, and a funding charge is made for funded loans. FTP is calculated at an instrument level based on account characteristics.

We also evaluate performance based on provision for credit losses, noninterest income and noninterest expense, which are presented as components of segment operating profit or loss. In calculating each operating segment's noninterest expense, we consider the direct costs incurred by the operating segment as well as certain allocated direct costs. As part of this review, we allocate certain corporate overhead costs to a corporate account. We do not allocate income tax expense or the provision for unfunded credit commitments (included in provision for credit losses) to our segments. Additionally, our management reporting model is predicated on average asset balances; therefore, period-end asset balances are not presented for segment reporting purposes. Changes in an individual client's primary relationship designation have resulted, and in the future may result, in the inclusion of certain clients in different segments in different periods.

Unlike financial reporting, which benefits from the comprehensive structure provided by GAAP, our internal management reporting process is highly subjective, as there is no comprehensive, authoritative guidance for management reporting. Our management reporting process measures the performance of our operating segments based on our internal operating structure, which is subject to change from time to time, and is not necessarily comparable with similar information for other financial services companies.

For reporting purposes, SVB Financial Group has four operating segments for which we report our financial information:

- **Global Commercial Bank** is comprised of results from the following:
  - Our **Commercial Bank** products and services are provided by the Bank and its subsidiaries to commercial clients in the technology, life science/healthcare and private equity/venture capital industries. The Bank provides solutions to the financial needs of commercial clients through credit, global treasury management, foreign exchange, trade finance, and other services. We broadly serve clients within the U.S., as well as non-U.S. clients in key international innovation markets. In addition, the Bank and its subsidiaries offer a variety of investment services and solutions to its clients that enable them to effectively manage their assets.
  - Our **Private Equity Division** provides banking products and services primarily to our private equity and venture capital clients.
  - **SVB Wine** provides banking products and services to our premium wine industry clients, including vineyard development loans.
  - **SVB Analytics** previously provided equity valuation services and currently provides research for investors and companies in the global innovation economy. In September 2017, SVB Analytics sold its equity valuation services business.
  - **Debt Fund Investments** is comprised of our investments in certain debt funds in which we are a strategic investor.
- **SVB Private Bank** is the private banking division of the Bank, which provides a range of personal financial solutions for consumers. Our clients are primarily private equity/venture capital professionals and executive leaders of the innovation companies they support. We offer a customized suite of private banking services, including mortgages, home equity lines of credit, restricted stock purchase loans, capital call lines of credit and other secured and unsecured lending products, as well as cash and wealth management services.
- **SVB Capital** is the funds management business of SVBFG, which focuses primarily on venture capital investments. SVB Capital manages funds (primarily venture capital funds) on behalf of third-party limited partners and, on a more limited basis, SVB Financial Group. The SVB Capital family of funds is comprised of direct venture funds that invest in companies and funds of funds that invest in other venture capital funds. SVB Capital generates income for the Company primarily from investment returns (including carried interest allocations) and management fees.
- **SVB Leerink** is an investment bank specializing in the equity and convertible capital markets, mergers and acquisitions, equity research and sales and trading for growth and innovation-minded healthcare and life science companies and operates as a wholly-owned subsidiary of SVB Financial. SVB Leerink provides investment banking services across all subsectors of healthcare including: biotechnology, pharmaceuticals, medical devices, diagnostic and life science tools, healthcare services and digital health. SVB Leerink focuses on two primary lines of business: (i) investment banking focused on providing companies with capital-raising services, financial advice on mergers and acquisitions, sales and trading services and equity research, and (ii) sponsorship of private investment funds.

The summary financial results of our operating segments are presented along with a reconciliation to our consolidated interim results.

Our segment information for the three months ended March 31, 2019 and 2018 is as follows:

(Dollars in thousands)	Global Commercial Bank (1)	SVB Private Bank	SVB Capital (1)	SVB Leerink (1)	Other Items (2)	Total
Three months ended March 31, 2019						
Net interest income	$ 445,876	$ 11,981	$ 6	$ 442	$ 54,581	$ 512,886
(Provision for) reduction of credit losses	(26,805)	984	—	—	(2,730)	(28,551)
Noninterest income	126,317	510	24,845	68,117	60,587	280,376
Noninterest expense (3)	(198,683)	(7,414)	(5,782)	(60,540)	(93,245)	(365,664)
Income before income tax expense (4)	$ 346,705	$ 6,061	$ 19,069	$ 8,019	$ 19,193	$ 399,047
Total average loans, net of unearned income	$ 24,798,197	$ 3,085,883	$ —	$ —	$ 503,992	$ 28,388,072
Total average assets (5) (6)	55,883,000	2,507,131	378,732	300,332	(1,540,758)	57,528,437
Total average deposits	47,596,868	1,491,234	—	—	626,107	49,714,209
Three months ended March 31, 2018						
Net interest income	$ 369,867	$ 16,247	$ 7	$ —	$ 33,742	$ 419,863
Provision for credit losses	(25,274)	(1,722)	—	—	(976)	(27,972)
Noninterest income	98,792	507	28,910	—	27,309	155,518
Noninterest expense (3)	(186,891)	(6,593)	(5,046)	—	(66,887)	(265,417)
Income (loss) before income tax expense (4)	$ 256,494	$ 8,439	$ 23,871	$ —	$ (6,812)	$ 281,992
Total average loans, net of unearned income	$ 20,679,202	$ 2,666,658	$ —	$ —	$ 461,352	$ 23,807,212
Total average assets (5)	49,953,396	2,590,476	373,322	—	(549,952)	52,367,242
Total average deposits	44,041,634	1,572,424	—	—	492,023	46,106,081

(1) Global Commercial Bank's, SVB Capital's and SVB Leerink's components of net interest income, noninterest income, noninterest expense and total average assets are shown net of noncontrolling interests for all periods presented. Noncontrolling interest is included within "Other Items."

(2) The "Other Items" column reflects the adjustments necessary to reconcile the results of the operating segments to the consolidated financial statements prepared in conformity with GAAP. Net interest income consists primarily of interest earned from our fixed income investment portfolio, net of FTP. Noninterest income consists primarily of gains on equity warrant assets and gains or losses on the sale of fixed income investments and equity securities from exercised warrant assets. Noninterest expense consists primarily of expenses associated with corporate support functions such as finance, human resources, marketing, legal and other expenses.

(3) The Global Commercial Bank segment includes direct depreciation and amortization of $4.9 million and $5.5 million for the three months ended March 31, 2019 and 2018, respectively.

(4) The internal reporting model used by management to assess segment performance does not calculate income tax expense by segment. Our effective tax rate is a reasonable approximation of the segment rates.

(5) Total average assets equal the greater of total average assets or the sum of total average liabilities and total average stockholders' equity for each segment to reconcile the results to the consolidated financial statements prepared in conformity with GAAP.

(6) Included in the total average assets for SVB Leerink is goodwill of $135.2 million for the three months ended March 31, 2019 related to the acquisition effective January 4, 2019.

16. Off-Balance Sheet Arrangements, Guarantees and Other Commitments

In the normal course of business, we use financial instruments with off-balance sheet risk to meet the financing needs of our customers. These financial instruments include commitments to extend credit, commercial and standby letters of credit and commitments to invest in venture capital and private equity fund investments. These instruments involve, to varying degrees, elements of credit risk. Credit risk is defined as the possibility of sustaining a loss because other parties to the financial instrument fail to perform in accordance with the terms of the contract.

Commitments to Extend Credit

The following table summarizes information related to our commitments to extend credit at March 31, 2019 and December 31, 2018:

(Dollars in thousands)	March 31, 2019	December 31, 2018
Loan commitments available for funding: (1)		
Fixed interest rate commitments	$ 1,848,611	$ 1,839,190
Variable interest rate commitments	16,153,959	14,821,815
Total loan commitments available for funding	18,002,570	16,661,005
Commercial and standby letters of credit (2)	2,264,959	2,252,016
Total unfunded credit commitments	$ 20,267,529	$ 18,913,021
Commitments unavailable for funding (3)	$ 2,746,202	$ 2,723,835
Allowance for unfunded credit commitments (4)	57,970	55,183

(1) Represents commitments which are available for funding, due to clients meeting all collateral, compliance and financial covenants required under loan commitment agreements.
(2) See below for additional information on our commercial and standby letters of credit.
(3) Represents commitments which are currently unavailable for funding due to clients failing to meet all collateral, compliance and financial covenants under loan commitment agreements.
(4) Our allowance for unfunded credit commitments includes an allowance for both our unfunded loan commitments and our letters of credit.

Commercial and Standby Letters of Credit

The table below summarizes our commercial and standby letters of credit at March 31, 2019. The maximum potential amount of future payments represents the amount that could be remitted under letters of credit if there were a total default by the guaranteed parties, without consideration of possible recoveries under recourse provisions or from the collateral held or pledged.

(Dollars in thousands)	Expires In One Year or Less	Expires After One Year	Total Amount Outstanding	Maximum Amount of Future Payments
Financial standby letters of credit	$ 2,063,334	$ 46,913	$ 2,110,247	$ 2,110,247
Performance standby letters of credit	116,759	8,946	125,705	125,705
Commercial letters of credit	25,297	3,710	29,007	29,007
Total	$ 2,205,390	$ 59,569	$ 2,264,959	$ 2,264,959

Deferred fees related to financial and performance standby letters of credit were $14.4 million at March 31, 2019 and $14.1 million at December 31, 2018. At March 31, 2019, collateral in the form of cash of $1.3 billion was available to us to reimburse losses, if any, under financial and performance standby letters of credit.

Commitments to Invest in Venture Capital and Private Equity Funds

Subject to applicable regulatory requirements, including the Volcker Rule, we make commitments to invest in venture capital and private equity funds, which generally makes investments in privately-held companies. Commitments to invest in these funds are generally made for a 10-year period from the inception of the fund. Although the limited partnership agreements governing these investments typically do not restrict the general partners from calling 100% of committed capital in one year, it is customary for these funds to call most of the capital commitments over 5 to 7 years, and in certain cases, the funds may not call 100% of committed capital. The actual timing of future cash requirements to fund these commitments is generally dependent upon the investment cycle, overall market conditions, and the nature and type of industry in which the privately held companies operate. The following table details our total capital commitments, unfunded capital commitments, and our ownership percentage in each fund at March 31, 2019:

(Dollars in thousands)	SVBFG Capital Commitments	SVBFG Unfunded Commitments	SVBFG Ownership of each Fund (3)
CP I, LP	$ 6,000	$ 270	10.7%
CP II, LP (1)	1,200	162	5.1
Capital Preferred Return Fund, LP	12,688	—	20.0
Growth Partners, LP	24,670	1,340	33.0
Strategic Investors Fund, LP	15,300	688	12.6
Strategic Investors Fund II, LP	15,000	1,050	8.6
Strategic Investors Fund III, LP	15,000	1,275	5.9
Strategic Investors Fund IV, LP	12,239	2,325	5.0
Strategic Investors Fund V funds	515	131	Various
Other venture capital and private equity fund investments (equity method accounting)	21,832	7,858	Various
Debt funds (equity method accounting)	58,493	—	Various
Other fund investments (2)	295,501	7,947	Various
Total	$ 478,438	$ 23,046	

(1) Our ownership includes direct ownership of 1.3 percent and indirect ownership interest of 3.8 percent through our investment in Strategic Investors Fund II, LP.
(2) Represents commitments to 215 funds (primarily venture capital funds) where our ownership interest is generally less than five percent of the voting interests of each such fund.
(3) We are subject to the Volcker Rule, which restricts or limits us from sponsoring or having ownership interests in "covered" funds including venture capital and private equity funds. See "Business - Supervision and Regulation" under Part 1, Item 1 of our 2018 Form 10-K.

The following table details the amounts of remaining unfunded commitments to venture capital and private equity funds by our consolidated managed funds of funds (including our interest and the noncontrolling interests) at March 31, 2019:

(Dollars in thousands)	Unfunded Commitments
Strategic Investors Fund, LP	$ 1,338
Capital Preferred Return Fund, LP	1,625
Growth Partners, LP	2,516
Total	$ 5,479

17. Income Taxes

We are subject to income tax in the U.S. federal jurisdiction and various state and foreign jurisdictions and have identified our federal tax and California tax returns as major tax filings. Our U.S. federal tax returns for 2015 and subsequent tax years remain open to full examination. Our California tax returns for 2015 and subsequent tax years remain open to full examination.

At March 31, 2019, our unrecognized tax benefit was $12.5 million, the recognition of which would reduce our income tax expense by $9.8 million. We do not expect that our unrecognized tax benefit will materially change in the next 12 months.

We recognize interest and penalties related to income tax matters as part of income before income taxes. Interest and penalties were not material for the three months ended March 31, 2019.

18. Fair Value of Financial Instruments

Fair Value Measurements

Our available-for-sale securities, derivative instruments and certain non-marketable and other equity securities are financial instruments recorded at fair value on a recurring basis. We make estimates regarding valuation of assets and liabilities measured at fair value in preparing our interim consolidated financial statements.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (the "exit price") in an orderly transaction between market participants at the measurement date. There is a three-level hierarchy for disclosure of assets and liabilities recorded at fair value. The classification of assets and liabilities within the hierarchy is based on whether the inputs to the valuation methodology used for measurement are observable or unobservable and on the significance of those inputs in the fair value measurement. Observable inputs reflect market-derived or market-based information obtained from independent sources, while unobservable inputs reflect our estimates about market data and views of market participants. The three levels for measuring fair value are based on the reliability of inputs and are as follows:

Level 1

Fair value measurements based on quoted prices in active markets for identical assets or liabilities that we have the ability to access. Since valuations are based on quoted prices that are readily and regularly available in an active market, valuation of these instruments does not entail a significant degree of judgment. Assets utilizing Level 1 inputs include U.S. Treasury securities, foreign government debt securities, exchange-traded equity securities and certain marketable securities accounted for under fair value accounting.

Level 2

Fair value measurements based on quoted prices in markets that are not active or for which all significant inputs are observable, directly or indirectly. Valuations for the available-for-sale securities are provided by independent pricing service providers who have experience in valuing these securities and by comparison to and/or average of quoted market prices obtained from independent brokers. We perform a monthly analysis on the values received from third parties to ensure that the prices represent a reasonable estimate of the fair value. The procedures include, but are not limited to, initial and ongoing review of third-party pricing methodologies, review of pricing trends and monitoring of trading volumes. Additional corroboration, such as obtaining a non-binding price from a broker, may be obtained depending on the frequency of trades of the security and the level of liquidity or depth of the market. We ensure prices received from independent brokers represent a reasonable estimate of the fair value through the use of observable market inputs including comparable trades, yield curve, spreads and, when available, market indices. As a result of this analysis, if the Company determines that there is a more appropriate fair value based upon the available market data, the price received from the third party is adjusted accordingly. Below is a summary of the significant inputs used for each class of Level 2 assets and liabilities:

U.S. agency debentures: Fair value measurements of U.S. agency debentures are based on the characteristics specific to bonds held, such as issuer name, coupon rate, maturity date and any applicable issuer call option features. Valuations are based on market spreads relative to similar term benchmark market interest rates, generally U.S. Treasury securities.

Agency-issued mortgage-backed securities: Agency-issued mortgage-backed securities are pools of individual conventional mortgage loans underwritten to U.S. agency standards with similar coupon rates, tenor, and other attributes such as geographic location, loan size and origination vintage. Fair value measurements of these securities are based on observable price adjustments relative to benchmark market interest rates taking into consideration estimated loan prepayment speeds.

Agency-issued collateralized mortgage obligations: Agency-issued collateralized mortgage obligations are structured into classes or tranches with defined cash flow characteristics and are collateralized by U.S. agency-issued mortgage pass-through securities. Fair value measurements of these securities incorporate similar characteristics of mortgage pass-through securities such as coupon rate, tenor, geographic location, loan size and origination vintage, in addition to incorporating the effect of estimated prepayment speeds on the cash flow structure of the class or tranche. These measurements incorporate observable market spreads over an estimated average life after considering the inputs listed above.

Agency-issued commercial mortgage-backed securities: Fair value measurements of these securities are based on spreads to benchmark market interest rates (usually U.S. Treasury rates or rates observable in the swaps market), prepayment speeds, loan default rate assumptions and loan loss severity assumptions on underlying loans.

Municipal bonds and notes: Bonds issued by municipal governments generally have stated coupon rates, final maturity dates and are subject to being called ahead of the final maturity date at the option of the issuer. Fair value measurements

of these securities are priced based on spreads to other municipal benchmark bonds with similar characteristics; or, relative to market rates on U.S. Treasury bonds of similar maturity.

Other equity securities: Fair value measurements of equity securities of public companies are priced based on quoted market prices less a discount if the securities are subject to certain sales restrictions. Certain sales restriction discounts generally range from 10 percent to 20 percent depending on the duration of the sale restrictions which typically range from three to six months.

Equity warrant assets (public portfolio): Fair value measurements of equity warrant assets of publicly-traded portfolio companies are valued based on the Black-Scholes option pricing model. The model uses the price of publicly-traded companies (underlying stock price), stated strike prices, warrant expiration dates, the risk-free interest rate and market-observable option volatility assumptions.

Foreign exchange forward and option contract assets and liabilities: Fair value measurements of these assets and liabilities are priced based on spot and forward foreign currency rates and option volatility assumptions.

Interest rate derivative and interest rate swap assets and liabilities: Fair value measurements of interest rate derivatives are priced considering the coupon rate of the fixed leg of the contract and the variable coupon on the floating leg of the contract. Valuation is based on both spot and forward rates on the swap yield curve and the credit worthiness of the contract counterparty.

Level 3

The fair value measurement is derived from valuation techniques that use significant assumptions not observable in the market. These unobservable assumptions reflect our own estimates of assumptions we believe market participants would use in pricing the asset. Below is a summary of the valuation techniques used for each class of Level 3 assets:

Venture capital and private equity fund investments not measured at net asset value: Fair value measurements are based on consideration of a range of factors including, but not limited to, the price at which the investment was acquired, the term and nature of the investment, local market conditions, values for comparable securities, and as it relates to the private company, the current and projected operating performance, exit strategies and financing transactions subsequent to the acquisition of the investment. The significant unobservable inputs used in the fair value measurement include the information about each portfolio company, including actual and forecasted results, cash position, recent or planned transactions and market comparable companies. Significant changes to any one of these inputs in isolation could result in a significant change in the fair value measurement; however, we generally consider all factors available through ongoing communication with the portfolio companies and venture capital fund managers to determine whether there are changes to the portfolio company or the environment that indicate a change in the fair value measurement.

Equity warrant assets (public portfolio): Fair value measurements of equity warrant assets of publicly-traded portfolio companies are valued based on the Black-Scholes option pricing model. The model uses the price of publicly-traded companies (underlying stock price), stated strike prices, warrant expiration dates, the risk-free interest rate and market-observable option volatility assumptions. Modeled asset values are further adjusted by applying a discount of up to 20 percent for certain warrants that have lock-up restrictions or other features that indicate a discount to fair value is warranted. As a lock-up term nears, and other sale restrictions are lifted, discounts are adjusted downward to zero percent once all restrictions expire or are removed.

Equity warrant assets (private portfolio): Fair value measurements of equity warrant assets of private portfolio companies are priced based on a Black-Scholes option pricing model to estimate the asset value by using stated strike prices, option expiration dates, risk-free interest rates and option volatility assumptions. Option volatility assumptions used in the model are based on public market indices whose members operate in similar industries as companies in our private company portfolio. Option expiration dates are modified to account for estimates to actual life relative to stated expiration. Overall model asset values are further adjusted for a general lack of liquidity due to the private nature of the associated underlying company. There is a direct correlation between changes in the volatility and remaining life assumptions in isolation and the fair value measurement while there is an inverse correlation between changes in the liquidity discount assumption and the fair value measurement.

It is our policy to maximize the use of observable inputs and minimize the use of unobservable inputs when developing fair value measurements. When available, we use quoted market prices to measure fair value. If market prices are not available, fair value measurement is based upon valuation techniques that use primarily market-based or independently-sourced market parameters, including interest rate yield curves, prepayment speeds, option volatilities and currency rates. Substantially all of our financial instruments use the foregoing methodologies, and are categorized as a Level 1 or Level 2 measurement in the fair value hierarchy. However, in certain cases, when market observable inputs for our valuation techniques may not be readily available, we are required to make judgments about assumptions we believe market participants would use in estimating the

fair value of the financial instrument, and based on the significance of those judgments, the measurement may be determined to be a Level 3 fair value measurement.

The degree of management judgment involved in determining the fair value of a financial instrument is dependent upon the availability of quoted market prices or observable market parameters. For financial instruments that trade actively and have quoted market prices or observable market parameters, there is minimal subjectivity involved in measuring fair value. When observable market prices and parameters are not fully available, management judgment is necessary to estimate fair value. For inactive markets, there is little information, if any, to evaluate if individual transactions are orderly. Accordingly, we are required to estimate, based upon all available facts and circumstances, the degree to which orderly transactions are occurring and provide more weighting to price quotes that are based upon orderly transactions. In addition, changes in the market conditions may reduce the availability of quoted prices or observable data. For example, reduced liquidity in the capital markets or changes in secondary market activities could result in observable market inputs becoming unavailable. Therefore, when market data is not available, we use valuation techniques requiring more management judgment to estimate the appropriate fair value measurement. Accordingly, the degree of judgment exercised by management in determining fair value is greater for financial assets and liabilities categorized as Level 3.

The following fair value hierarchy table presents information about our assets and liabilities that are measured at fair value on a recurring basis as of March 31, 2019:

(Dollars in thousands)	Level 1	Level 2	Level 3	Balance at March 31, 2019
Assets:				
Available-for-sale securities:				
U.S. Treasury securities	$ 3,767,410	$ —	$ —	$ 3,767,410
U.S. agency debentures	—	1,063,713	—	1,063,713
Foreign government debt securities	5,685	—	—	5,685
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	—	1,839,883	—	1,839,883
Agency-issued collateralized mortgage obligations—variable rate	—	78,403	—	78,403
Total available-for-sale securities	3,773,095	2,981,999	—	6,755,094
Non-marketable and other equity securities (fair value accounting):				
Non-marketable securities:				
Venture capital and private equity fund investments measured at net asset value	—	—	—	303,418
Venture capital and private equity fund investments not measured at net asset value (1)	—	—	1,035	1,035
Other equity securities in public companies	3,332	8,312	—	11,644
Total non-marketable and other equity securities (fair value accounting)	3,332	8,312	1,035	316,097
Other assets:				
Foreign exchange forward and option contracts	—	92,361	—	92,361
Equity warrant assets	—	5,466	156,749	162,215
Interest rate swaps	—	1,408	—	1,408
Client interest rate derivatives	—	11,763	—	11,763
Total assets	$ 3,776,427	$ 3,101,309	$ 157,784	$ 7,338,938
Liabilities:				
Foreign exchange forward and option contracts	$ —	$ 82,468	$ —	$ 82,468
Interest rate swaps	—	303	—	303
Client interest rate derivatives	—	8,841	—	8,841
Total liabilities	$ —	$ 91,612	$ —	$ 91,612

(1) Included in Level 3 assets is $925 thousand attributable to noncontrolling interests calculated based on the ownership percentages of the noncontrolling interests.

The following fair value hierarchy table presents information about our assets and liabilities that are measured at fair value on a recurring basis as of December 31, 2018:

(Dollars in thousands)	Level 1	Level 2	Level 3	Balance at December 31, 2018
Assets:				
Available-for-sale securities:				
U.S. Treasury securities	$ 4,738,258	$ —	$ —	$ 4,738,258
U.S. agency debentures	—	1,084,117	—	1,084,117
Foreign government debt securities	5,812	—	—	5,812
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	—	1,880,218	—	1,880,218
Agency-issued collateralized mortgage obligations—variable rate	—	81,638	—	81,638
Total available-for-sale securities	4,744,070	3,045,973	—	7,790,043
Non-marketable and other equity securities (fair value accounting):				
Non-marketable securities:				
Venture capital and private equity fund investments measured at net asset value	—	—	—	318,352
Venture capital and private equity fund investments not measured at net asset value (1)	—	—	1,079	1,079
Other equity securities in public companies	1,181	19,217	—	20,398
Total non-marketable and other equity securities (fair value accounting)	1,181	19,217	1,079	339,829
Other assets:				
Foreign exchange forward and option contracts	—	100,402	—	100,402
Equity warrant assets	—	4,039	145,199	149,238
Client interest rate derivatives	—	8,499	—	8,499
Total assets	$ 4,745,251	$ 3,178,130	$ 146,278	$ 8,388,011
Liabilities:				
Foreign exchange forward and option contracts	$ —	$ 88,559	$ —	$ 88,559
Client interest rate derivatives	—	9,491	—	9,491
Total liabilities	$ —	$ 98,050	$ —	$ 98,050

(1) Included in Level 3 assets is $964 thousand attributable to noncontrolling interests calculated based on the ownership percentages of the noncontrolling interests.

The following table presents additional information about Level 3 assets measured at fair value on a recurring basis for the three months ended March 31, 2019 and 2018:

(Dollars in thousands)	Beginning Balance	Total Realized and Unrealized Gains (Losses) Included in Income	Purchases	Sales/Exits	Issuances	Distributions and Other Settlements	Transfers Out of Level 3	Ending Balance
Three months ended March 31, 2019								
Non-marketable and other equity securities (fair value accounting):								
Venture capital and private equity fund investments not measured at net asset value (1)	$ 1,079	$ (47)	$ —	$ —	$ —	$ 3	$ —	$ 1,035
Other assets:								
Equity warrant assets (2)	145,199	19,165	575	(12,304)	4,543	—	(429)	156,749
Total assets	$ 146,278	$ 19,118	$ 575	$ (12,304)	$ 4,543	$ 3	$ (429)	$ 157,784
Three months ended March 31, 2018								
Non-marketable and other equity securities (fair value accounting):								
Venture capital and private equity fund investments not measured at net asset value (1)	$ 919	$ 82	$ —	$ —	$ —	$ —	$ —	$ 1,001
Other assets:								
Equity warrant assets (2)	121,331	18,611	—	(12,128)	4,899	—	(1,207)	131,506
Total assets	$ 122,250	$ 18,693	$ —	$ (12,128)	$ 4,899	$ —	$ (1,207)	$ 132,507

(1) Realized and unrealized gains (losses) are recorded in the line item “Gains on investment securities, net," a component of noninterest income.
(2) Realized and unrealized gains (losses) are recorded in the line item “Gains on equity warrant assets, net," a component of noninterest income.

The following table presents the amount of net unrealized gains and losses included in earnings (which is inclusive of noncontrolling interest) attributable to Level 3 assets still held at March 31, 2019 and 2018:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Non-marketable and other equity securities (fair value accounting):		
Venture capital and private equity fund investments not measured at net asset value (1)	$ (47)	$ 82
Other assets:		
Equity warrant assets (2)	14,772	9,573
Total unrealized gains, net	$ 14,725	$ 9,655
Unrealized (losses) gains attributable to noncontrolling interests (1)	$ (39)	$ 73

(1) Unrealized gains (losses) are recorded in the line item “Gains on investment securities, net," a component of noninterest income.
(2) Unrealized gains (losses) are recorded in the line item “Gains on equity warrant assets, net," a component of noninterest income.

The extent to which any unrealized gains or losses will become realized is subject to a variety of factors, including, among other things, the expiration of current sales restrictions to which these securities are subject, the actual sales of securities and the timing of such actual sales.

The following table presents quantitative information about the significant unobservable inputs used for certain of our Level 3 fair value measurements at March 31, 2019 and December 31, 2018. We have not included in this table our venture capital and private equity fund investments (fair value accounting) as we use net asset value per share (as obtained from the general partners of the investments) as a practical expedient to determine fair value.

(Dollars in thousands)	Fair value	Valuation Technique	Significant Unobservable Inputs	Weighted Average
March 31, 2019:				
Venture capital and private equity fund investments (fair value accounting)	$ 1,035	Private company equity pricing	(1)	(1)
Equity warrant assets (public portfolio)	6,505	Black-Scholes option pricing model	Volatility	54.2%
			Risk-Free interest rate	2.3
			Sales restrictions discount (2)	15.3
Equity warrant assets (private portfolio)	150,244	Black-Scholes option pricing model	Volatility	38.6
			Risk-Free interest rate	2.2
			Marketability discount (3)	17.7
			Remaining life assumption (4)	45.0
December 31, 2018:				
Venture capital and private equity fund investments (fair value accounting)	$ 1,079	Private company equity pricing	(1)	(1)
Equity warrant assets (public portfolio)	2,757	Black-Scholes option pricing model	Volatility	54.7%
			Risk-Free interest rate	2.6
			Sales restrictions discount (2)	18.5
Equity warrant assets (private portfolio)	142,442	Black-Scholes option pricing model	Volatility	38.5
			Risk-Free interest rate	2.5
			Marketability discount (3)	17.7
			Remaining life assumption (4)	45.0

(1) In determining the fair value of our venture capital and private equity fund investment portfolio (not measured at net asset value), we evaluate a variety of factors related to each underlying private portfolio company including, but not limited to, actual and forecasted results, cash position, recent or planned transactions and market comparable companies. Additionally, we have ongoing communication with the portfolio companies and venture capital fund managers, to determine whether there is a material change in fair value. We use company provided valuation reports, if available, to support our valuation assumptions. These factors are specific to each portfolio company and a weighted average or range of values of the unobservable inputs is not meaningful.

(2) We adjust quoted market prices of public companies, which are subject to certain sales restrictions. Sales restriction discounts generally range from 10 percent to 20 percent depending on the duration of the sales restrictions, which typically range from three to six months.
(3) Our marketability discount is applied to all private company warrants to account for a general lack of liquidity due to the private nature of the associated underlying company. The quantitative measure used is based upon various option-pricing models. On a quarterly basis, a sensitivity analysis is performed on our marketability discount.
(4) We adjust the contractual remaining term of private company warrants based on our estimate of the actual remaining life, which we determine by utilizing historical data on terminations and exercises. At March 31, 2019, the weighted average contractual remaining term was 6.1 years, compared to our estimated remaining life of 2.8 years. On a quarterly basis, a sensitivity analysis is performed on our remaining life assumption.

For the three months ended March 31, 2019 and 2018, we did not have any transfers between Level 2 and Level 1 or transfers between Level 3 and Level 1. All transfers from Level 3 to Level 2 for the three months ended March 31, 2019 and 2018 were due to the transfer of equity warrant assets from our private portfolio to our public portfolio (see our Level 3 reconciliation above). All amounts reported as transfers represent the fair value as of the date of the change in circumstances that caused the transfer.

Financial Instruments not Carried at Fair Value

FASB guidance over financial instruments requires that we disclose estimated fair values for our financial instruments not carried at fair value. The following fair value hierarchy table presents the estimated fair values of our financial instruments that are not carried at fair value at March 31, 2019 and December 31, 2018:

		Estimated Fair Value			
(Dollars in thousands)	Carrying Amount	Total	Level 1	Level 2	Level 3
March 31, 2019:					
Financial assets:					
Cash and cash equivalents	$ 7,066,883	$ 7,066,883	$ 7,066,883	$ —	$ —
Held-to-maturity securities	15,055,255	14,996,508	—	14,996,508	—
Non-marketable securities not measured at net asset value	149,679	149,679	—	—	149,679
Non-marketable securities measured at net asset value	169,303	169,303	—	—	—
Net commercial loans	25,469,952	25,925,308	—	—	25,925,308
Net consumer loans	3,080,342	3,135,149	—	—	3,135,149
FHLB and Federal Reserve Bank stock	59,508	59,508	—	—	59,508
Financial liabilities:					
Short-term borrowings	14,455	14,455	—	14,455	—
Non-maturity deposits (1)	52,278,463	52,278,463	52,278,463	—	—
Time deposits	48,734	48,418	—	48,418	—
3.50% Senior Notes	347,725	345,765	—	345,765	—
5.375% Senior Notes	348,990	362,096	—	362,096	—
Off-balance sheet financial assets:					
Commitments to extend credit	—	24,012	—	—	24,012
December 31, 2018:					
Financial assets:					
Cash and cash equivalents	$ 3,571,539	$ 3,571,539	$ 3,571,539	$ —	$ —
Held-to-maturity securities	15,487,442	15,188,236	—	15,188,236	—
Non-marketable securities not measured at net asset value	131,453	131,453	—	—	131,453
Non-marketable securities measured at net asset value	151,247	151,247	—	—	—
Net commercial loans	25,043,671	25,463,968	—	—	25,463,968
Net consumer loans	3,013,706	3,064,093	—	—	3,064,093
FHLB and Federal Reserve Bank stock	58,878	58,878	—	—	58,878
Financial liabilities:					
Short-term borrowings	631,412	631,412	—	631,412	—
Non-maturity deposits (1)	49,278,174	49,278,174	49,278,174	—	—
Time deposits	50,726	50,337	—	50,337	—
3.50% Senior Notes	347,639	336,088	—	336,088	—
5.375% Senior Notes	348,826	361,281	—	361,281	—
Off-balance sheet financial assets:					
Commitments to extend credit	—	22,930	—	—	22,930

(1) Includes noninterest-bearing demand deposits, interest-bearing checking accounts, money market accounts and interest-bearing sweep deposits.

Investments in Entities that Calculate Net Asset Value Per Share

FASB guidance over certain fund investments requires that we disclose the fair value of funds, significant investment strategies of the investees, redemption features of the investees, restrictions on the ability to sell investments, estimate of the period of time over which the underlying assets are expected to be liquidated by the investee, and unfunded commitments related to the investments.

Our investments in debt funds and venture capital and private equity fund investments generally cannot be redeemed. Alternatively, we expect distributions, if any, to be received primarily through IPO and M&A activity of the underlying assets of the fund. Subject to applicable requirements under the Volcker Rule, we do not have any plans to sell any of these fund investments. If we decide to sell these investments in the future, the investee fund's management must approve of the buyer before the sale of the investments can be completed. The fair values of the fund investments have been estimated using the net asset value per share of the investments, adjusted for any differences between our measurement date and the date of the fund investment's net asset value by using the most recently available financial information from the investee general partner, for example December 31st, for our March 31st consolidated financial statements, adjusted for any contributions paid, distributions received from the investment, and significant fund transactions or market events during the reporting period.

The following table is a summary of the estimated fair values of these investments and remaining unfunded commitments for each major category of these investments as of March 31, 2019:

(Dollars in thousands)	Carrying Amount	Fair Value	Unfunded Commitments
Non-marketable securities (fair value accounting):			
Venture capital and private equity fund investments (1)	$ 303,418	$ 303,418	$ 12,540
Non-marketable securities (equity method accounting):			
Venture capital and private equity fund investments (2)	148,096	148,096	12,801
Debt funds (2)	5,826	5,826	—
Other investments (2)	15,381	15,381	886
Total	$ 472,721	$ 472,721	$ 26,227

(1) Venture capital and private equity fund investments within non-marketable securities (fair value accounting) include investments made by our managed funds of funds and one of our direct venture funds (consolidated VIEs) and investments in venture capital and private equity fund investments (unconsolidated VIEs). Collectively, these investments in venture capital and private equity funds are primarily in U.S. and global technology and life science/healthcare companies. Included in the fair value and unfunded commitments of fund investments under fair value accounting are $79.4 million and $4.1 million, respectively, attributable to noncontrolling interests. It is estimated that we will receive distributions from the fund investments over the next 10 to 13 years, depending on the age of the funds and any potential extensions of terms of the funds.

(2) Venture capital and private equity fund investments, debt funds, and other fund investments within non-marketable securities (equity method accounting) include funds that invest in or lend money to primarily U.S. and global technology and life science/healthcare companies. It is estimated that we will receive distributions from the funds over the next 5 to 8 years, depending on the age of the funds and any potential extensions of the terms of the funds.

19. Legal Matters

Certain lawsuits and claims arising in the ordinary course of business have been filed or are pending against us and/or our affiliates, and we may from time to time be involved in other legal or regulatory proceedings. In accordance with applicable accounting guidance, we establish accruals for all such matters, including expected settlements, when we believe it is probable that a loss has been incurred and the amount of the loss is reasonably estimable. When a loss contingency is not both probable and estimable, we do not establish an accrual. Any such loss estimates are inherently uncertain, based on currently available information and are subject to management's judgment and various assumptions. Due to the inherent subjectivity of these estimates and unpredictability of outcomes of legal proceedings, any amounts accrued may not represent the ultimate resolution of such matters.

To the extent we believe any potential loss relating to such matters may have a material impact on our liquidity, consolidated financial position, results of operations, and/or our business as a whole and is reasonably possible but not probable, we aim to disclose information relating to such potential loss. We also aim to disclose information relating to any material potential loss that is probable but not reasonably estimable. In such cases, where reasonably practicable, we aim to provide an estimate of loss or range of potential loss. No disclosures are generally made for any loss contingencies that are deemed to be remote.

Based upon information available to us, our review of lawsuits and claims filed or pending against us to date and consultation with our outside legal counsel, we have not recognized a material accrual liability for any such matters, nor do we currently expect that these matters will result in a material liability to the Company. However, the outcome of litigation and other legal and regulatory matters is inherently uncertain, and it is possible that one or more of such matters currently pending or threatened could have an unanticipated material adverse effect on our liquidity, consolidated financial position, results of operations, and/or our business as a whole, in the future.

20. Related Parties

We have no material related party transactions requiring disclosure. In the ordinary course of business, the Bank may extend credit to related parties, including executive officers, directors, principal shareholders and their related interests. Additionally, we provide real estate secured loans to eligible employees through our EHOP. For additional details, see Note 17—"Employee Compensation and Benefit Plans" under Part II, Item 8 of our 2018 Form 10-K.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Forward-Looking Statements

This Quarterly Report on Form 10-Q, including in particular "Management's Discussion and Analysis of Financial Condition and Results of Operations" under Part I, Item 2 of this report, contains forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. In addition, management has in the past and might in the future make forward-looking statements orally to analysts, investors, the media and others. Forward-looking statements are statements that are not historical facts. Broadly speaking, forward-looking statements include, but are not limited to, the following:

- Financial projections, including with respect to our net interest income, noninterest income, earnings per share, noninterest expenses (including professional services, compliance, compensation and other costs), cash flows, balance sheet positions, capital expenditures, liquidity and capitalization or other financial items;
- Descriptions of our strategic initiatives, plans or objectives for future operations, including pending sales or acquisitions;
- Forecasts of private equity/venture capital funding and investment levels;
- Forecasts of future interest rates, economic performance, and income from investments;
- Forecasts of expected levels of provisions for loan losses, nonperforming loans, loan growth and client funds; and
- Descriptions of assumptions underlying or relating to any of the foregoing.

You can identify these and other forward-looking statements by the use of words such as "becoming," "may," "will," "should," "could," "would," "predict," "potential," "continue," "anticipate," "believe," "estimate," "assume," "seek," "expect," "plan," "intend," the negative of such words, or comparable terminology. Forward-looking statements are neither historical facts nor assurances of future performance. Although we believe that the expectations reflected in these forward-looking statements are reasonable, we have based these expectations on our current beliefs as well as our assumptions, and such expectations may prove to be incorrect. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results of operations and financial performance could differ significantly from those expressed in or implied by our management's forward-looking statements. Important factors that could cause our actual results and financial condition to differ from the expectations stated in the forward-looking statements include, among others:

- Market and economic conditions, including the interest rate environment, and the associated impact on us;
- The credit profile and credit quality of our loan portfolio and volatility of our levels of nonperforming assets and charge-offs;
- The adequacy of our allowance for loan losses and the need to make provisions for loan losses for any period;
- The borrowing needs of our clients;
- The sufficiency of our capital and liquidity positions;
- The levels of loans, deposits and client investment fund balances;
- The performance of our portfolio investments; the general condition of the public and private equity and mergers and acquisitions markets and their impact on our investments, including equity warrant assets, venture capital and private equity funds and direct equity investments;
- Our overall investment plans and strategies; the realization, timing, valuation and performance of our equity or other investments;
- The levels of public offerings, mergers and acquisitions and venture capital investment activity of our clients that may impact the borrowing needs of our clients;

- The occurrence of fraudulent activity, including breaches of our information security or cyber security-related incidents;
- Business disruptions and interruptions due to natural disasters and other external events;
- The impact on our reputation and business from our interactions with business partners, counterparties, service providers and other third parties;
- Expansion of our business internationally, and the impact of international market and economic events on us;
- The impact of governmental policy, legal requirements and regulations, including the Economic Growth, Regulatory Relief and Consumer Protection Act and the Dodd-Frank Act, promulgated by the Federal Reserve and other regulatory requirements;
- The impact of lawsuits and claims, as well as legal or regulatory proceedings;
- The impact of changes in accounting standards and tax laws;
- The levels of equity capital available to our client or portfolio companies;
- The effectiveness of our risk management framework and quantitative models;
- Our ability to maintain or increase our market share, including through successfully implementing our business strategy and undertaking new business initiatives, including through the integration of SVB Leerink; and
- Other factors as discussed in "Risk Factors" under Part I, Item 1A in our 2018 Form 10-K.

We urge investors to consider all of these factors carefully in evaluating the forward-looking statements contained in this Quarterly Report on Form 10-Q. All subsequent written or oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by these cautionary statements. The forward-looking statements included in this filing are made only as of the date of this filing. We assume no obligation and do not intend to revise or update any forward-looking statements contained in this Quarterly Report on Form 10-Q, except as required by law.

The following discussion and analysis of financial condition and results of operations should be read in conjunction with our unaudited interim consolidated financial statements and accompanying notes as presented in Part I, Item 1 of this report and in conjunction with our 2018 Form 10-K.

Reclassifications

Certain prior period amounts, primarily related to the adoption of new accounting guidance, presentation changes to our financial statement line items and immaterial changes to our reportable segments, have been reclassified to conform to current period presentations.

Management's Overview of First Quarter 2019 Performance

Overall, we delivered strong first quarter results in 2019, which was marked by healthy balance sheet growth, stable credit quality, robust core fee income and notable market gains. Noninterest income and noninterest expense increased primarily due to the inclusion of SVB Leerink in our financial results beginning on January 4, 2019. Our core business continued to perform well as a result of our ongoing focus on innovation companies and their investors and continued efforts to secure client relationships. We saw continued success in working with private equity/venture capital firms, our technology and life science/healthcare clients and clients in our private bank division.

A summary of our performance for the three months ended March 31, 2019 (compared to the three months ended March 31, 2018, where applicable) is as follows:

BALANCE SHEET

Assets. $57.5 billion in average total assets (up 9.9%). $60.2 billion in period-end total assets (up 12.4%).

Loans. $28.4 billion in average total loan balances, net of unearned income (up 19.2%). $28.9 billion in period-end total loan balances, net of unearned income (up 17.3%).

Total Client Funds. (on-balance sheet deposits and off-balance sheet client investment funds). $137.1 billion in average total client fund balances (up 24.1%). $140.5 billion in period-end total client fund balances (up 23.6%).

AFS/HTM Fixed Income Investments. $22.1 billion in average fixed income investment securities (down 7.9%). $21.8 billion in period-end fixed income investment securities (down 11.4%).

EARNINGS

EPS. Earnings per diluted share of $5.44 (up 49.9%).

Net Income. Consolidated net income available to common stockholders of $288.7 million (up 48.1%).

- Net interest income of $512.9 million (up 22.2%).
- Net interest margin of 3.81% (up 43 bps).
- Noninterest income of $280.4 million (up 80.3%), with non-GAAP core fee income+ of $154.2 million (up 34.1%).
- Noninterest expense of $365.7 million (up 37.8%).

ROE. Return on average equity (annualized) ("*ROE*") performance of 22.16%.

Operating Efficiency Ratio. Operating efficiency ratio of 46.10% with a non-GAAP core operating efficiency ratio of 44.71%++.

CAPITAL

Capital. Continued strong capital, with all capital ratios considered "well-capitalized" under banking regulations. SVBFG and SVB capital ratios, respectively, were:

- CET 1 risk-based capital ratio of 12.89% and 12.35%.
- Tier 1 risk-based capital ratio of 13.04% and 12.35%.
- Total risk-based capital ratio of 13.94% and 13.29%.
- Tier 1 leverage ratio of 9.10% and 8.38%.

CREDIT QUALITY

Credit Quality. Continued disciplined underwriting.

- Allowance for loan losses of 1.03% as a percentage of period-end total gross loans.
- Provision for loan losses of 0.36% as a percentage of period-end total gross loans (annualized).
- Net loan charge-offs of 0.11% as a percentage of average total gross loans (annualized).

+ Consists of fee income for deposit services, letters of credit and standby letters of credit, credit cards, client investments, foreign exchange and lending-related activities. This is a non-GAAP financial measure. (See the non-GAAP reconciliation under "Results of Operations—Noninterest Income")

++ This ratio excludes certain financial line items where performance is typically subject to market or other conditions beyond our control and excludes SVB Leerink revenue and expenses. It is calculated by dividing noninterest expense after adjusting for noninterest expense attributable to SVB Leerink by total revenue after adjusting for noninterest income attributable to SVB Leerink, net gains or losses on investment securities and equity warrant assets, investment banking revenue and commissions. This is a non-GAAP financial measure. (See the non-GAAP reconciliation under "Results of Operations-Noninterest Expense").

A summary of our performance for the three months ended March 31, 2019 and 2018 is as follows:

(Dollars in thousands, except per share data, employees and ratios)	Three months ended March 31, 2019	2018	% Change
Income Statement:			
Diluted earnings per share	$ 5.44	$ 3.63	49.9 %
Net income available to common stockholders	288,732	194,961	48.1
Net interest income	512,886	419,863	22.2
Net interest margin	3.81%	3.38%	43 bps
Provision for credit losses	$ 28,551	$ 27,972	2.1 %
Noninterest income	280,376	155,518	80.3
Noninterest expense	365,664	265,417	37.8
Non-GAAP core fee income (1)	154,243	115,010	34.1
Non-GAAP core fee income, including investment banking revenue and commissions (1)	218,146	115,010	89.7
Non-GAAP noninterest income, net of noncontrolling interests (1)	277,128	142,494	94.5
Non-GAAP noninterest expense, net of noncontrolling interests (2)	365,285	265,449	37.6
Balance Sheet:			
Average available-for-sale securities	$ 6,870,168	$ 10,748,512	(36.1) %
Average held-to-maturity securities	15,223,958	13,234,326	15.0
Average loans, net of unearned income	28,388,072	23,807,212	19.2
Average noninterest-bearing demand deposits	38,222,687	37,950,787	0.7
Average interest-bearing deposits	11,491,522	8,155,294	40.9
Average total deposits	49,714,209	46,106,081	7.8
Earnings Ratios:			
Return on average assets (annualized) (3)	2.04%	1.51%	35.1 %
Return on average SVBFG stockholders' equity (annualized) (4)	22.16	18.12	22.3
Asset Quality Ratios:			
Allowance for loan losses as a % of total period-end gross loans	1.03%	1.11%	(8) bps
Allowance for loan losses for performing loans as a % of total gross performing loans	0.83	0.93	(10)
Gross loan charge-offs as a % of average total gross loans (annualized)	0.13	0.18	(5)
Net loan charge-offs as a % of average total gross loans (annualized)	0.11	0.15	(4)
Capital Ratios:			
SVBFG CET 1 risk-based capital ratio	12.89%	12.87%	2 bps
SVBFG tier 1 risk-based capital ratio	13.04	13.06	(2)
SVBFG total risk-based capital ratio	13.94	13.99	(5)
SVBFG tier 1 leverage ratio	9.10	8.67	43
SVBFG tangible common equity to tangible assets (5)	8.59	8.25	34
SVBFG tangible common equity to risk-weighted assets (5)	12.86	12.65	21
Bank CET 1 risk-based capital ratio	12.35	11.90	45
Bank tier 1 risk-based capital ratio	12.35	11.90	45
Bank total risk-based capital ratio	13.29	12.88	41
Bank tier 1 leverage ratio	8.38	7.69	69
Bank tangible common equity to tangible assets (5)	7.99	7.41	58
Bank tangible common equity to risk-weighted assets (5)	12.32	11.68	64
Other Ratios:			
GAAP operating efficiency ratio (6)	46.10%	46.13%	(0.1) %
Non-GAAP core operating efficiency ratio (2)	44.71	48.41	(7.6)
Book value per common share (7)	$ 102.11	$ 83.43	22.4
Other Statistics:			
Average full-time equivalent employees	3,228	2,498	29.2 %
Period-end full-time equivalent employees	3,250	2,512	29.4

(1) See "Results of Operations–Noninterest Income" for a description and reconciliation of non-GAAP core fee income and non-GAAP core fee income including investment banking revenue and commissions.

(2) See "Results of Operations–Noninterest Expense" for a description and reconciliation of non-GAAP noninterest expense and non-GAAP core operating efficiency ratio.
(3) Ratio represents annualized consolidated net income available to common stockholders divided by quarterly average assets.
(4) Ratio represents annualized consolidated net income available to common stockholders divided by quarterly average SVBFG stockholders' equity.
(5) See "Capital Resources–Capital Ratios" for a reconciliation of non-GAAP tangible common equity to tangible assets and tangible common equity to risk-weighted assets.
(6) The operating efficiency ratio is calculated by dividing total noninterest expense by total net interest income plus noninterest income.
(7) Book value per common share is calculated by dividing total SVBFG stockholders' equity by total outstanding common shares at period-end.

For more information with respect to our capital ratios, please refer to "Capital Ratios" under "Consolidated Financial Condition-Capital Ratios" below.

Critical Accounting Policies and Estimates

The accompanying management's discussion and analysis of results of operations and financial condition is based upon our unaudited interim consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements in accordance with GAAP requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, expenses and related disclosure of contingent assets and liabilities. Management evaluates estimates and assumptions on an ongoing basis. Management bases its estimates on historical experiences and various other factors and assumptions that are believed to be reasonable under the circumstances. Actual results may differ materially from these estimates under different assumptions or conditions.

There have been no significant changes during the three months ended March 31, 2019 to the items that we disclosed as our critical accounting policies and estimates in "Management's Discussion and Analysis of Financial Condition and Results of Operations" under Part II, Item 7 of our 2018 Form 10-K.

Results of Operations

Net Interest Income and Margin (Fully Taxable Equivalent Basis)

Net interest income is defined as the difference between: (i) interest earned on loans, fixed income investment in our available-for-sale and held-to-maturity securities portfolios and short-term investment securities, (ii) interest paid on funding sources. Net interest margin is defined as annualized net interest income, on a fully taxable equivalent basis, as a percentage of average interest-earning assets. Net interest income and net interest margin are presented on a fully taxable equivalent basis to consistently reflect income from taxable loans and securities and tax-exempt securities based on the federal statutory tax rate of 21.0 percent for the three months ended March 31, 2019 and 2018.

Analysis of Net Interest Income Changes Due to Volume and Rate (Fully Taxable Equivalent Basis)

Net interest income is affected by changes in the amount and mix of interest-earning assets and interest-bearing liabilities, referred to as "volume change." Net interest income is also affected by changes in yields earned on interest-earning assets and rates paid on interest-bearing liabilities, referred to as "rate change." The following table sets forth changes in interest income for each major category of interest-earning assets and interest expense for each major category of interest-bearing liabilities. The table also reflects the amount of simultaneous changes attributable to both volume and rate changes for the periods indicated. For this table, changes that are not solely due to either volume or rate are allocated in proportion to the percentage changes in average volume and average rate.

(Dollars in thousands)	2019 Compared to 2018 Three months ended March 31, increase (decrease) due to change in Volume	Rate	Total
Interest income:			
Federal Reserve deposits, federal funds sold, securities purchased under agreements to resell and other short-term investment securities	$ 7,524	$ 5,936	$ 13,460
Fixed income investment portfolio (taxable)	(11,732)	13,972	2,240
Fixed income investment portfolio (non-taxable)	6,636	762	7,398
Loans, net of unearned income	63,601	33,470	97,071
Increase in interest income, net	66,029	54,140	120,169
Interest expense:			
Interest bearing checking and savings accounts	(14)	12	(2)
Money market deposits	6,582	11,394	17,976
Money market deposits in foreign offices	(3)	1	(2)
Time deposits	2	15	17
Sweep deposits in foreign offices	2,450	3,371	5,821
Total increase in deposits expense	9,017	14,793	23,810
Short-term borrowings	1,505	266	1,771
3.50% Senior Notes	3	—	3
5.375% Senior Notes	9	—	9
Total increase in borrowings expense	1,517	266	1,783
Increase in interest expense, net	10,534	15,059	25,593
Increase in net interest income	$ 55,495	$ 39,081	$ 94,576

Net Interest Income (Fully Taxable Equivalent Basis)

Three months ended March 31, 2019 and 2018

Net interest income increased by $94.6 million to $515.8 million for the three months ended March 31, 2019, compared to $421.2 million for the comparable 2018 period. Overall, our net interest income increased primarily from interest earned on loans, reflective of higher average loan balances driven by strong loan growth from our private equity/venture capital loan portfolio as well as increases from our life science/healthcare and private bank loan portfolios and rate increases subsequent to March 31, 2018. In addition, we saw an increase in interest yields on our fixed income investment securities portfolio reflective of higher average fixed income investment securities balances driven by higher average deposit balances as well as an increase in yield from rate increases. These increases were partially offset by an increase in interest paid on our interest-bearing deposits due to the increase in average interest-bearing deposits as well as market rate adjustments on our interest-bearing deposits.

The main factors affecting interest income for the three months ended March 31, 2019, compared to the comparable 2018 period are discussed below:

- *Interest income* for the three months ended March 31, 2019 increased by $120.2 million due primarily to:
  - A $97.1 million increase in interest income on loans to $394.1 million for the three months ended March 31, 2019, compared to $297.1 million for the comparable 2018 period. The increase was reflective of an increase in average loan balances of $4.6 billion and an increase in the overall loan yield of 57 basis points to 5.63 percent from 5.06 percent. Gross loan yields, excluding loan interest recoveries and loan fees, increased 56 basis points to 5.10 percent from 4.54 percent, reflective primarily of the benefit of interest rate increases. Loan fee yields were relatively flat, 52 basis points for the three months ended March 31, 2019, compared to 51 basis points for the comparable 2018 period,
  - A $9.6 million increase in interest income on fixed income investment securities to $140.6 million for the three months ended March 31, 2019, compared to $130.9 million for the comparable 2018 period. The increase was reflective of an increase in our fixed income investment securities yield of 37 basis points to 2.58 percent from 2.21 percent resulting primarily from higher reinvestment yields on maturing fixed income investments as well as sales and maturities of lower yielding securities during the quarter, and

- A $13.5 million increase in interest income from our interest-earning cash and short-term investment securities. The increase was due to the benefit from the impact of the increases in the Federal Funds target rate since March 31, 2018 as well as an increase of $1.7 billion in average interest-earning Federal Reserve cash balances.

- *Interest expense* for the three months ended March 31, 2019 increased by $25.6 million due primarily to:
  - A $23.8 million increase in interest expense on deposits due primarily to an increase in interest paid on our interest-bearing money market and foreign sweep deposits as a result of market rate adjustments as well as growth in average interest-bearing deposits of $3.3 billion, and
  - A $1.8 million increase in interest expense on borrowings primarily due to a $0.2 billion increase in our average short-term borrowings during the three months ended March 31, 2019 to fund loan growth as a result of the timing of loan funding and deposit activities.

Net Interest Margin (Fully Taxable Equivalent Basis)

Three months ended March 31, 2019 and 2018

- Our net interest margin increased by 43 basis points to 3.81 percent for the three months ended March 31, 2019, compared to 3.38 percent for the comparable 2018 period. The higher margin during the first quarter of 2019 was reflective primarily of the increases in the Federal Funds target rate since March 31, 2018 as well as a shift in the mix of the growth in our interest-earning assets to higher-yielding loans from our fixed income investment securities portfolio. Average loans represented 51.7 percent of average interest earnings assets for the three months ended March 31, 2019, compared to 47.1 percent for the comparable 2018 period.

Average Balances, Yields and Rates Paid (Fully Taxable Equivalent Basis)

The average yield earned on interest-earning assets is the amount of annualized fully taxable equivalent interest income expressed as a percentage of average interest-earning assets. The average rate paid on funding sources is the amount of annualized interest expense expressed as a percentage of average funding sources. The following tables set forth average assets, liabilities, noncontrolling interests and SVBFG stockholders' equity, interest income, interest expense, annualized yields and rates, and the composition of our annualized net interest margin for the three months ended March 31, 2019 and 2018:

Average Balances, Rates and Yields for the Three Months Ended March 31, 2019 and 2018

	Three months ended March 31,					
	2019			2018		
(Dollars in thousands)	Average Balance	Interest Income/ Expense	Yield/ Rate	Average Balance	Interest Income/ Expense	Yield/ Rate
Interest-earning assets:						
Federal Reserve deposits, federal funds sold, securities purchased under agreements to resell and other short-term investment securities (1)	$ 4,460,378	$ 19,216	1.75%	$ 2,713,976	$ 5,756	0.86%
Investment securities: (2)						
Available-for-sale securities:						
Taxable	6,870,168	35,422	2.09	10,748,512	47,976	1.81
Held-to-maturity securities:						
Taxable	13,651,311	91,295	2.71	12,415,508	76,501	2.50
Non-taxable (3)	1,572,647	13,844	3.57	818,818	6,446	3.19
Total loans, net of unearned income (4) (5)	28,388,072	394,144	5.63	23,807,212	297,073	5.06
Total interest-earning assets	54,942,576	553,921	4.09	50,504,026	433,752	3.48
Cash and due from banks	527,109			400,256		
Allowance for loan losses	(288,927)			(263,086)		
Other assets (6)	2,347,679			1,726,046		
Total assets	$ 57,528,437			$ 52,367,242		
Funding sources:						
Interest-bearing liabilities:						
Interest bearing checking and savings accounts	$ 545,238	$ 114	0.08%	$ 608,686	$ 116	0.08%
Money market deposits	9,073,622	21,831	0.98	6,337,944	3,855	0.25
Money market deposits in foreign offices	148,342	16	0.04	181,294	18	0.04
Time deposits	50,691	30	0.24	47,029	13	0.11
Sweep deposits in foreign offices	1,673,629	5,916	1.43	980,341	95	0.04
Total interest-bearing deposits	11,491,522	27,907	0.98	8,155,294	4,097	0.20
Short-term borrowings	353,389	2,205	2.53	112,063	434	1.57
3.50% Senior Notes	347,669	3,148	3.67	347,332	3,145	3.67
5.375% Senior Notes	348,882	4,868	5.66	348,242	4,859	5.66
Total interest-bearing liabilities	12,541,462	38,128	1.23	8,962,931	12,535	0.57
Portion of noninterest-bearing funding sources	42,401,114			41,541,095		
Total funding sources	54,942,576	38,128	0.28	50,504,026	12,535	0.10
Noninterest-bearing funding sources:						
Demand deposits	38,222,687			37,950,787		
Other liabilities	1,330,037			952,032		
SVBFG stockholders' equity	5,283,808			4,364,667		
Noncontrolling interests	150,443			136,825		
Portion used to fund interest-earning assets	(42,401,114)			(41,541,095)		
Total liabilities, noncontrolling interest, and SVBFG stockholders' equity	$ 57,528,437			$ 52,367,242		
Net interest income and margin		$ 515,793	3.81%		$ 421,217	3.38%
Total deposits	$ 49,714,209			$ 46,106,081		
Reconciliation to reported net interest income:						
Adjustments for taxable equivalent basis		(2,907)			(1,354)	
Net interest income, as reported		$ 512,886			$ 419,863	

(1) Includes average interest-earning deposits in other financial institutions of $0.8 billion and $1.2 billion for the three months ended March 31, 2019 and 2018, respectively. For the three months ended March 31, 2019 and 2018, balances also include $2.8 billion and $1.4 billion, respectively, deposited at the FRB, earning interest at the Federal Funds target rate.
(2) Yields on interest-earning investment securities do not give effect to changes in fair value that are reflected in other comprehensive income.
(3) Interest income on non-taxable investment securities is presented on a fully taxable equivalent basis using the federal statutory tax rate of 21.0 percent for all periods presented.
(4) Nonaccrual loans are reflected in the average balances of loans.
(5) Interest income includes loan fees of $36.7 million and $29.9 million for the three months ended March 31, 2019 and 2018, respectively.
(6) Average investment securities of $913 million and $787 million for the three months ended March 31, 2019 and 2018, respectively, were classified as other assets as they were noninterest-earning assets. These investments primarily consisted of non-marketable and other equity securities.

Provision for Credit Losses

The provision for credit losses is the combination of both the provision for loan losses and the provision for unfunded credit commitments. Our provision for loan losses is a function of our reserve methodology, which is used to determine an appropriate allowance for loan losses for the period. Our reserve methodology is based on our evaluation of the existing allowance for loan losses in relation to total gross loans using historical and other objective information, and on our qualitative assessment of the inherent and identified credit risk of the loan portfolio. Our provision for unfunded credit commitments is determined using a methodology that is similar to the methodology used for calculating the allowance for loan losses, adjusted for factors specific to binding commitments, including the probability of funding and exposure at funding. Our provision for credit losses equals our best estimate of probable credit losses that are inherent in the portfolios at the balance sheet date.

The following table summarizes our allowance for loan losses and the allowance for unfunded credit commitments for the three months ended March 31, 2019 and 2018:

	Three months ended March 31,	
(Dollars in thousands, except ratios)	**2019**	**2018**
Allowance for loan losses, beginning balance	$ 280,903	$ 255,024
Provision for loan losses	25,821	26,996
Gross loan charge-offs	(9,000)	(10,587)
Loan recoveries	1,425	1,788
Foreign currency translation adjustments	1,002	1,073
Allowance for loan losses, ending balance	$ 300,151	$ 274,294
Allowance for unfunded credit commitments, beginning balance	55,183	51,770
Provision for unfunded credit commitments	2,730	976
Foreign currency translation adjustments	57	77
Allowance for unfunded credit commitments, ending balance (1)	$ 57,970	$ 52,823
Ratios and other information:		
Provision for loan losses as a percentage of period-end total gross loans (annualized)	0.36%	0.44%
Gross loan charge-offs as a percentage of average total gross loans (annualized)	0.13	0.18
Net loan charge-offs as a percentage of average total gross loans (annualized)	0.11	0.15
Allowance for loan losses as a percentage of period-end total gross loans	1.03	1.11
Provision for credit losses	$ 28,551	$ 27,972
Period-end total gross loans	29,020,519	24,745,752
Average total gross loans	28,555,655	23,956,784

(1) The “allowance for unfunded credit commitments” is included as a component of “Other liabilities” on our consolidated balance sheets.

Three months ended March 31, 2019 and 2018

Our provision for credit losses was $28.6 million for the three months ended March 31, 2019, consisting of a provision for loan losses of $25.8 million and a provision for unfunded credit commitments of $2.7 million. Our provision for credit losses was $28.0 million for the three months ended March 31, 2018, consisting of a provision for loan losses of $27.0 million and a provision for unfunded credit commitments of $1.0 million.

The provision for loan losses of $25.8 million for the three months ended March 31, 2019 reflects primarily an increase of $27.4 million in net new specific reserves for nonaccrual loans, $4.1 million in additional reserves for period-end loan growth and $4.9 million for charge-offs not specifically reserved for, partially offset by a decrease of $8.2 million for our performing loans reserve.

The provision for unfunded credit commitments of $2.7 million was driven primarily by growth in unfunded credit commitments of $1.4 billion for three months ended March 31, 2019.

The provision for loan losses of $27.0 million for the three months ended March 31, 2018 primarily reflects a $14.0 million increase in reserves for period-end loan growth and $11.3 million in specific reserves for net new nonaccrual loans.

The provision for unfunded credit commitments of $1.0 million for three months ended March 31, 2018 was driven primarily by an increase in qualitative reserves for funded loans.

Gross loan charge-offs were $9.0 million for the three months ended March 31, 2019, of which $4.9 million was not specifically reserved for at December 31, 2018. Gross loan charge-offs were primarily due to $8.3 million from our software/internet loan portfolio driven by three mid-stage clients and one early-stage client.

Gross loan charge-offs were $10.6 million for the three months ended March 31, 2018, of which $3.4 million was not specifically reserved for at December 31, 2017. Gross loan charge-offs included $6.1 million from early-stage client loans, mostly in our software/internet and hardware portfolios of $3.2 million from a late-stage client loan in our software/internet portfolio.

See "Consolidated Financial Condition—Credit Quality and Allowance for Loan Losses" below and Note 8—"Loans, Allowance for Loan Losses and Allowance for Unfunded Credit Commitments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report for further details on our allowance for loan losses.

Noninterest Income

For the three months ended March 31, 2019, noninterest income was $280.4 million, compared to $155.5 million for the comparable 2018 period. For the three months ended March 31, 2019, non-GAAP noninterest income, net of noncontrolling interests was $277.1 million, compared to $142.5 million for the comparable 2018 period. For the three months ended March 31, 2019, non-GAAP core fee income including investment banking revenue and commissions was $218.1 million, compared to $115.0 million for the comparable 2018 period. For the three months ended March 31, 2019, non-GAAP core fee income was $154.2 million, compared to $115.0 million for the comparable 2018 period. (See reconciliations of non-GAAP measures used below under "Use of Non-GAAP Financial Measures".)

Use of Non-GAAP Financial Measures

To supplement our unaudited interim consolidated financial statements presented in accordance with GAAP, we use certain non-GAAP measures of financial performance (including, but not limited to, non-GAAP core fee income, non-GAAP core fee income including investment banking revenue and commissions, non-GAAP noninterest income, and non-GAAP net gains on investment securities). These supplemental performance measures may vary from, and may not be comparable to, similarly titled measures by other companies in our industry. Non-GAAP financial measures are not in accordance with, or an alternative for, GAAP. Generally, a non-GAAP financial measure is a numerical measure of a company's performance that either excludes or includes amounts that are not normally excluded or included in the most directly comparable measure calculated and presented in accordance with GAAP. A non-GAAP financial measure may also be a financial metric that is not required by GAAP or other applicable requirement.

We believe these non-GAAP financial measures, when taken together with the corresponding GAAP financial measures, provide meaningful supplemental information regarding our performance by excluding items that represent income attributable to investors other than us and our subsidiaries and certain other non-recurring items. Our management uses, and believes that investors benefit from referring to, these non-GAAP financial measures in assessing our operating results and when planning, forecasting and analyzing future periods. However, these non-GAAP financial measures should be considered in addition to, and not as a substitute for or preferable to, financial measures prepared in accordance with GAAP.

Included in net income is income and expense attributable to noncontrolling interests. We recognize, as part of our investment funds management business through SVB Capital, the entire income or loss from funds consolidated in accordance with ASC Topic 810 as discussed in Note 1—"Basis of Presentation" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report. We are required under GAAP to consolidate 100% of the results of these entities, even though we may own less than 100% of such entities. The relevant amounts attributable to investors other than us are reflected under "Net Income Attributable to Noncontrolling Interests" on our statements of income. Where applicable, the tables below for noninterest income and net gains on investment securities exclude noncontrolling interests.

Core fee income is a non-GAAP financial measure, which represents GAAP noninterest income, but excludes certain line items where performance is typically subject to market or other conditions beyond our control, primarily our net gains (losses) on investment securities and equity warrant assets. Core fee income includes foreign exchange fees, credit card fees, deposit service charges, lending related fees, client investment fees and letters of credit and letters of credit fees.

Core fee income including investment banking revenue and commissions is a non-GAAP measure, which represents GAAP noninterest income, but excludes certain line items where performance is typically subject to market or other conditions beyond our control.

The following table provides a reconciliation of GAAP noninterest income to non-GAAP noninterest income, net of noncontrolling interests, for the three months ended March 31, 2019 and 2018:

	Three months ended March 31,		
(Dollars in thousands)	2019	2018	% Change
GAAP noninterest income	$ 280,376	$ 155,518	80.3 %
Less: income attributable to noncontrolling interests, including carried interest allocation	3,248	13,024	(75.1)
Non-GAAP noninterest income, net of noncontrolling interests	$ 277,128	$ 142,494	94.5

The following table provides a reconciliation of GAAP noninterest income to non-GAAP core fee income for the three months ended March 31, 2019 and 2018:

	Three months ended March 31,		
(Dollars in thousands)	2019	2018	% Change
GAAP noninterest income	$ 280,376	$ 155,518	80.3 %
Less: gains on investment securities, net	29,028	9,058	NM
Less: gains on equity warrant assets, net	21,305	19,191	11.0
Less: other noninterest income	11,897	12,259	(3.0)
Non-GAAP core fee income including investment banking revenue and commissions (1)	$ 218,146	$ 115,010	89.7
Less: investment banking revenue	49,795	—	—
Less: commissions	14,108	—	—
Non-GAAP core fee income (2)	$ 154,243	$ 115,010	34.1

NM—Not meaningful

(1) Non-GAAP core fee income including investment banking revenue and commissions represents noninterest income, but excludes certain line items where performance is typically subject to market or other conditions beyond our control.

(2) Non-GAAP core fee income represents noninterest income, but excludes certain line items where performance is typically subject to market or other conditions beyond our control, as well as our investment banking revenue and commissions, and includes foreign exchange fees, credit card fees, deposit service charges, lending related fees, client investment fees and letters of credit and standby letters of credit fees.

Gains on Investment Securities, Net

Net gains on investment securities include gains and losses from our non-marketable and other equity securities, which include public equity securities held as a result of exercised equity warrant assets, as well as gains and losses from sales of our AFS debt securities portfolio, when applicable.

Our non-marketable and other equity securities portfolio primarily represents investments in venture capital and private equity funds, SPD Silicon Valley Bank Co., Ltd. (the Bank's joint venture bank in China ("SPD-SVB")), debt funds, private and public portfolio companies and qualified affordable housing projects. We experience variability in the performance of our non-marketable and other equity securities from period to period, which results in net gains or losses on investment securities (both realized and unrealized). This variability is due to a number of factors, including unrealized changes in the values of our investments, changes in the amount of realized gains and losses from distributions, changes in liquidity events and general economic and market conditions. Unrealized gains or losses from non-marketable and other equity securities for any single period are typically driven by valuation changes, and are therefore subject to potential increases or decreases in future periods. Such variability may lead to volatility in the gains or losses from investment securities. As such, our results for a particular period are not necessarily indicative of our expected performance in a future period.

The extent to which any unrealized gains or losses will become realized is subject to a variety of factors, including, among other things, the expiration of certain sales restrictions to which these equity securities may be subject to (e.g. lock-up agreements), changes in prevailing market prices, market conditions, the actual sales or distributions of securities, and the timing of such actual sales or distributions, which, to the extent such securities are managed by our managed funds, are subject to our funds' separate discretionary sales/distributions and governance processes.

Our AFS securities portfolio is a fixed income investment portfolio that is managed with the objective of earning an appropriate portfolio yield over the long-term while maintaining sufficient liquidity and credit diversification as well as addressing our asset/liability management objectives. Though infrequent, sales of debt securities in our AFS securities portfolio may result in net gains or losses and are conducted pursuant to the guidelines of our investment policy related to the management of our liquidity position and interest rate risk.

Three months ended March 31, 2019 and 2018

For the three months ended March 31, 2019, we had net gains on investment securities of $29.0 million, compared to $9.1 million for the comparable 2018 period. Non-GAAP net gains on investment securities, net of noncontrolling interests, were $25.6 million for the three months ended March 31, 2019, compared to non-GAAP net losses, net of controlling interest of $3.8 million for the comparable 2018 period.

Non-GAAP net gains on investment securities, net of noncontrolling interests, of $25.6 million for the three months ended March 31, 2019 were driven by the following:

- Gains of $15.0 million from our strategic and other investments portfolio, comprised primarily of net unrealized valuation increases in public companies held in our strategic venture capital funds and an unrealized valuation increase for one company in our direct equity portfolio due to M&A activity, and
- Gains of $9.6 million from our public equity securities portfolio primarily attributable to the sale of our shares from exercised warrants in one company which were sold as soon as practicable following the lock-up period expiration, partially offset by
- Losses of $3.6 million from our AFS securities portfolio due to realized losses on the sale of approximately $1.2 billion of U.S. Treasury securities.

The following tables provide a reconciliation of GAAP total gains (losses) on investment securities, net, to non-GAAP net gains (losses) on investment securities, net of noncontrolling interests, for the three months ended March 31, 2019 and 2018:

(Dollars in thousands)	Managed Funds of Funds	Managed Direct Venture Funds	Public Equity Securities	Debt Funds	Sales of AFS Securities	Strategic and Other Investments	SVB Leerink	Total
Three months ended March 31, 2019								
Total gains (losses) on investment securities, net	$ 6,229	$ (634)	$ 9,636	$ —	$ (3,630)	$ 15,002	$ 2,425	$ 29,028
Less: income (loss) attributable to noncontrolling interests, including carried interest allocation	3,745	(309)	—	—	—	—	—	3,436
Non-GAAP net gains (losses) on investment securities, net of noncontrolling interests	$ 2,484	$ (325)	$ 9,636	$ —	$ (3,630)	$ 15,002	$ 2,425	$ 25,592

(Dollars in thousands)	Managed Funds of Funds	Managed Direct Venture Funds	Public Equity Securities	Debt Funds	Sales of AFS Securities	Strategic and Other Investments	Total
Three months ended March 31, 2018							
Total gains (losses) on investment securities, net	$ 19,073	$ 1,919	$ (22,282)	$ (2,299)	$ —	$ 12,647	$ 9,058
Less: income attributable to noncontrolling interests, including carried interest allocation	12,197	708	—	—	—	—	12,905
Non-GAAP net gains (losses) on investment securities, net of noncontrolling interests	$ 6,876	$ 1,211	$ (22,282)	$ (2,299)	$ —	$ 12,647	$ (3,847)

Gains on Equity Warrant Assets, Net

Three months ended March 31, 2019 and 2018

Net gains on equity warrant assets were $21.3 million for the three months ended March 31, 2019, compared to net gains of $19.2 million for the comparable 2018 period. Net gains on equity warrant assets for the three months ended March 31, 2019 consisted of:

- Net gains of $16.2 million from increases in warrant valuations compared to net gains of $10.2 million, driven by valuation increases in our private company warrant portfolio during the three months ended March 31, 2019, and
- Net gains of $5.5 million from the exercise of equity warrant assets compared to net gains of $9.9 million, primarily driven by decreased IPO activity as a result of the government shutdown during the three months ended March 31, 2019

A summary of gains on equity warrant assets, net, for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,		
(Dollars in thousands)	2019	2018	% Change
Equity warrant assets (1):			
Gains on exercises, net	$ 5,482	$ 9,927	(44.8)%
Terminations	(415)	(922)	(55.0)
Changes in fair value, net	16,238	10,186	59.4
Total gains on equity warrant assets, net	$ 21,305	$ 19,191	11.0

(1) At March 31, 2019, we held warrants in 2,149 companies, compared to 1,929 companies at March 31, 2018. The total fair value of our warrant portfolio was $162.2 million at March 31, 2019 and $135.7 million at March 31, 2018. Warrants in 26 companies each had fair values greater than $1.0 million and collectively represented $56.8 million, or 35.0 percent, of the fair value of the total warrant portfolio at March 31, 2019. Warrants in 13 companies each had fair values greater than $1.0 million and collectively represented $31.0 million, or 22.8 percent, of the fair value of the total warrant portfolio at March 31, 2018.

Non-GAAP Core Fee Income

	Three months ended March 31,		
(Dollars in thousands)	2019	2018	% Change
Non-GAAP core fee income (1):			
Foreign exchange fees	$ 38,048	$ 33,827	12.5%
Credit card fees	27,483	21,692	26.7
Deposit service charges	20,939	17,699	18.3
Client investment fees	44,482	22,875	94.5
Lending related fees	13,937	10,735	29.8
Letters of credit and standby letters of credit fees	9,354	8,182	14.3
Total non-GAAP core fee income (1)	$ 154,243	$ 115,010	34.1
Investment banking revenue	49,795	—	—
Commissions	14,108	—	—
Total non-GAAP core fee income including investment banking revenue and commissions (2)	$ 218,146	$ 115,010	89.7

(1) This non-GAAP measure represents noninterest income, but excludes certain line items where performance is typically subject to market or other conditions beyond our control. See “Use of Non-GAAP Measures” above.

(2) This non-GAAP measure represents noninterest income, but excludes certain line items where performance is typically subject to market or other conditions beyond our control, as well as investment banking revenue and commissions. See “Use of Non-GAAP Measures” above.

Foreign Exchange Fees

Foreign exchange fees were $38.0 million for the three months ended March 31, 2019, compared to $33.8 million for the comparable 2018 period. The increase in foreign exchange fees were driven primarily by increases in spot contract commissions driven by increased volume of trades for the three months ended March 31, 2019 compared to the 2018 period. The volume of trades for spot contracts increased 10.6 percent for the three months ended March 31, 2019, respectively, compared to the comparable 2018 period reflective primarily of our global expansion initiative and increased client engagement efforts. A summary of foreign exchange fee income by instrument type for the three months ended March 31, 2019 and 2018 is as follows:

(Dollars in thousands)	Three months ended March 31, 2019	2018	% Change
Foreign exchange fees by instrument type:			
Spot contract commissions	$ 35,029	$ 31,202	12.3 %
Forward contract commissions	2,995	2,485	20.5
Option premium fees	24	140	(82.9)
Total foreign exchange fees	$ 38,048	$ 33,827	12.5

Credit Card Fees

Credit card fees were $27.5 million for the three months ended March 31, 2019, compared to $21.7 million for the comparable 2018 period. The increase was primarily due to higher gross interchange fee income driven by an increase in transaction volume reflective of higher spending by our commercial clients and our focus on our credit card business as a key area targeted for growth. The increase in gross interchange fee income was partially offset by an increase in rebates/rewards expense for the three months ended March 31, 2019. A summary of credit card fees by instrument type for the three months ended March 31, 2019 and 2018 is as follows:

(Dollars in thousands)	Three months ended March 31, 2019	2018	% Change
Credit card fees by instrument type:			
Card interchange fees, net	$ 21,393	$ 17,560	21.8%
Merchant service fees	4,534	2,906	56.0
Card service fees	1,556	1,226	26.9
Total credit card fees	$ 27,483	$ 21,692	26.7

Deposit Service Charges

Deposit service charges were $20.9 million for the three months ended March 31, 2019, compared to $17.7 million for the comparable 2018 period. The increase was reflective of higher deposit client counts, as well as higher volumes of our transaction-based fee products, during the three months ended March 31, 2019.

Client Investment Fees

Client investment fees were $44.5 million for the three months ended March 31, 2019, compared to $22.9 million for the comparable 2018 period. The increase was reflective of the large increase in average client investment funds driven by our clients' increased utilization of our off-balance sheet sweep money market funds and products managed by SVB Asset Management. Client investment fees also benefited from improved spreads on our client investment funds due to increases in general market rates and the reintroduction of fees that had been previously waived due to the low rate environment. A summary of client investment fees by instrument type for the three months ended March 31, 2019 and 2018 is as follows:

(Dollars in thousands)	Three months ended March 31, 2019	2018	% Change
Client investment fees by type:			
Sweep money market fees	$ 26,544	$ 12,322	115.4%
Asset management fees	6,671	5,358	24.5
Repurchase agreement fees	11,267	5,195	116.9
Total client investment fees	$ 44,482	$ 22,875	94.5

The following table summarizes average client investment funds for the three months ended March 31, 2019 and 2018:

(Dollars in millions)	Three months ended March 31, 2019	2018	% Change
Sweep money market funds	$ 39,805	$ 26,132	52.3%
Client investment assets under management (1)	39,247	30,699	27.8
Repurchase agreements	8,362	7,546	10.8
Total average client investment funds (2)	$ 87,414	$ 64,377	35.8

(1) These funds represent investments in third-party money market mutual funds and fixed-income securities managed by SVB Asset Management.
(2) Client investment funds are maintained at third-party financial institutions and are not recorded on our balance sheet.

The following table summarizes period-end client investment funds at March 31, 2019 and December 31, 2018:

(Dollars in millions)	March 31, 2019	December 31, 2018	% Change
Sweep money market funds	$ 40,686	$ 38,348	6.1 %
Client investment assets under management (1)	39,376	39,214	0.4
Repurchase agreements	8,120	8,422	(3.6)
Total period-end client investment funds (2)	$ 88,182	$ 85,984	2.6

(1) These funds represent investments in third-party money market mutual funds and fixed-income securities managed by SVB Asset Management.
(2) Client investment funds are maintained at third-party financial institutions and are not recorded on our balance sheet.

Lending Related Fees

Lending related fees were $13.9 million for the three months ended March 31, 2019, compared to $10.7 million for the comparable 2018 period. The increase was due to an increase in unused commitment fees and higher syndication fee income. A summary of lending related fees by instrument type for the three months ended March 31, 2019 and 2018 is as follows:

(Dollars in thousands)	Three months ended March 31, 2019	2018	% Change
Lending related fees by instrument type:			
Unused commitment fees	$ 9,670	$ 8,757	10.4%
Other	4,267	1,978	115.7
Total lending related fees	$ 13,937	$ 10,735	29.8

Letters of Credit and Standby Letters of Credit Fees

Letters of credit and standby letters of credit fees were $9.4 million for the three months ended March 31, 2019, compared to $8.2 million for the comparable 2018 period. The increase was primarily driven by increases in deferred fee income reflective of larger letter of credit issuances.

Investment banking revenue

The Company earns investment banking revenue from clients for providing services related to securities underwriting, private placements and advisory services on strategic matters such as mergers and acquisitions. Underwriting fees are attributable to public and private offerings of equity and debt securities and are recognized at the point in time when the offering has been deemed to be completed by the lead manager of the underwriting group. Once the offering is completed, the performance obligation has been satisfied and the Company recognizes the applicable management fee as well the underwriting fee, net of consideration payable to customers. Estimated offering expenses are presented gross in our statements of income. The Company recognizes private placement fee revenue at the point in time when the private placement is completed, which is generally when the client accepts capital from the fund raise. Advisory fees from mergers and acquisitions engagements are generally recognized at the point in time when the related transaction is completed. Expenses are deferred only to the extent they are explicitly reimbursable by the client and the related revenue is recognized at a point in time. All other deal-related expenses are expensed

as incurred. The Company has determined that it acts as principal in the majority of these transactions and therefore presents expenses gross within other operating expenses.

A summary of investment banking revenue by instrument type for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,		
(Dollars in thousands)	2019	2018	% Change
Investment banking revenue:			
Underwriting fees	$ 35,772	$ —	—
Advisory fees	12,273	—	—
Private placements and other	1,750	—	—
Total investment banking revenue	$ 49,795	$ —	—

Commissions

Commissions include commissions received from customers for the execution of agency-based brokerage transactions in listed and over-the-counter equities. The execution of each trade order represents a distinct performance obligation and the transaction price is fixed at the point in time or trade order execution. Trade execution is satisfied at the point in time that the customer has control of the asset and as such, fees are recorded on a trade date basis. Revenue is recognized for direct payments received by the Company equity research services at a point in time when access to research has been provided, the transaction price is determined, it is probable that a significant reversal of revenue will not occur and uncertainty related to variability is resolved. Commissions for the three months ended March 31, 2019 were $14.1 million.

Other Noninterest Income

Total other noninterest income was $11.9 million for the three months ended March 31, 2019, compared to $12.3 million for the comparable 2018 period. The decrease of $0.4 million was due primarily to a decrease in other service revenue partially offset by an increase in fund management fees due to the inclusion of SVB Leerink in our financial results as of January 4, 2019.

A summary of other noninterest income for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,		
(Dollars in thousands)	2019	2018	% Change
Other noninterest income by instrument type:			
Fund management fees	$ 8,041	$ 5,736	40.2 %
Net losses on revaluation of foreign currency instruments, net of foreign exchange forward contracts (1)	(336)	(47)	NM
Other service revenue (2)	4,192	6,570	(36.2)
Total other noninterest income	$ 11,897	$ 12,259	(3.0)

NM—Not meaningful

(1) Represents the net revaluation of client and internal foreign currency denominated financial instruments. We enter into foreign exchange forward contracts to economically reduce our foreign exchange exposure related to client and internal foreign currency denominated financial instruments.

(2) Includes dividends on FHLB/FRB stock, correspondent bank rebate income, incentive fees related to carried interest, valuation fee income and other fee income.

Noninterest Expense

A summary of noninterest expense for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,		
(Dollars in thousands)	**2019**	**2018**	**% Change**
Compensation and benefits	$ 238,061	$ 165,806	43.6 %
Professional services	36,986	28,725	28.8
Premises and equipment	21,700	18,545	17.0
Net occupancy	16,048	13,616	17.9
Business development and travel	15,354	11,191	37.2
FDIC and state assessments	3,979	9,430	(57.8)
Other	33,536	18,104	85.2
Total noninterest expense	$ 365,664	$ 265,417	37.8

Included in noninterest expense is expense attributable to noncontrolling interests. See below for a description and reconciliation of non-GAAP noninterest expense and non-GAAP core operating efficiency ratio, both of which exclude noncontrolling interests.

Non-GAAP Noninterest Expense

We use and report non-GAAP noninterest expense, non-GAAP taxable equivalent revenue and non-GAAP core operating efficiency ratio, which excludes noncontrolling interests. We believe these non-GAAP financial measures, when taken together with the corresponding GAAP financial measures, provide meaningful supplemental information regarding our performance by: (i) excluding certain items that represent expenses attributable to investors other than us and our subsidiaries, or certain items that do not occur every reporting period; or (ii) providing additional information used by management that is not otherwise required by GAAP or other applicable requirements. Our management uses, and believes that investors benefit from referring to, these non-GAAP financial measures in assessing our operating results and when planning, forecasting and analyzing future periods. However, these non-GAAP financial measures should be considered in addition to, not as a substitute for or preferable to, financial measures prepared in accordance with GAAP.

The table below provides a summary of non-GAAP noninterest expense and non-GAAP core operating efficiency ratio for the three months ended March 31, 2019 and 2018:

	Three months ended March 31,		
Non-GAAP core operating efficiency ratio (Dollars in thousands, except ratios)	**2019**	**2018**	**% Change**
GAAP noninterest expense	$ 365,664	$ 265,417	37.8 %
Less: expense attributable to noncontrolling interests	379	(32)	NM
Non-GAAP noninterest expense, net of noncontrolling interests	365,285	265,449	37.6
Less: expense attributable to SVB Leerink	60,540	—	—
Non-GAAP noninterest expense, net of noncontrolling interests and SVB Leerink	$ 304,745	$ 265,449	14.8
GAAP net interest income	$ 512,886	$ 419,863	22.2
Adjustments for taxable equivalent basis	2,907	1,354	114.7
Non-GAAP taxable equivalent net interest income	515,793	421,217	22.5
Less: income attributable to noncontrolling interests	11	9	22.2
Non-GAAP taxable equivalent net interest income, net of noncontrolling interests	515,782	421,208	22.5
Less: net interest income attributable to SVB Leerink	442	—	—
Non-GAAP taxable equivalent net interest income, net of noncontrolling interests and SVB Leerink	$ 515,340	$ 421,208	22.3
GAAP noninterest income	$ 280,376	$ 155,518	80.3
Less: income attributable to noncontrolling interests, including carried interest allocation	3,248	13,024	(75.1)
Non-GAAP noninterest income, net of noncontrolling interests	277,128	142,494	94.5
Less: Non-GAAP net gains (losses) on investment securities, net of noncontrolling interests	25,592	(3,847)	NM
Less: net gains on equity warrant assets	21,305	19,191	11.0
Less: investment banking revenue	49,795	—	—
Less: commissions	14,108	—	—
Non-GAAP noninterest income, net of noncontrolling interests and net of net gains on investment securities, net gains on equity warrant assets, investment banking revenue and commissions	$ 166,328	$ 127,150	30.8
GAAP total revenue	$ 793,262	$ 575,381	37.9
Non-GAAP taxable equivalent revenue, net of noncontrolling interests and SVB Leerink, net gains on investment securities, net gains on equity warrant assets, investment banking revenue and commissions	$ 681,668	$ 548,358	24.3
GAAP operating efficiency ratio	46.10%	46.13%	(0.1)
Non-GAAP core operating efficiency ratio (1)	44.71	48.41	(7.6)

NM—Not meaningful

(1) The non-GAAP core operating efficiency ratio is calculated by dividing noninterest expense after adjusting for noninterest expense attributable to SVB Leerink by total revenue after adjusting for net interest income attributable to SVB Leerink, net gains or losses on investment securities and equity warrant assets, investment banking revenue and commissions. Additionally, noninterest expense and total revenue are adjusted for income or losses and expenses attributable to noncontrolling interests and adjustments to net interest income for a taxable equivalent basis.

Compensation and Benefits Expense

The following table provides a summary of our compensation and benefits expense for the three months ended March 31, 2019 and 2018:

	Three months ended March 31,		
(Dollars in thousands, except employees)	**2019**	**2018**	**% Change**
Compensation and benefits:			
Salaries and wages	$ 101,200	$ 73,039	38.6%
Incentive compensation & ESOP	70,552	43,633	61.7
Other employee incentives and benefits (1)	66,309	49,134	35.0
Total compensation and benefits	$ 238,061	$ 165,806	43.6
Period-end full-time equivalent employees	3,250	2,512	29.4
Average full-time equivalent employees	3,228	2,498	29.2

(1) Other employee incentives and benefits includes employer payroll taxes, group health and life insurance, share-based compensation, 401(k), warrant and retention plans, agency fees and other employee-related expenses.

Compensation and benefits expense was $238.1 million for the three months ended March 31, 2019, compared to $165.8 million for the comparable 2018 period. The key changes in factors affecting compensation and benefits expense were as follows:

- An increase of $28.2 million in salaries and wages reflective primarily of the increase in the number of average FTE by 730 to 3,228 for the first quarter of 2019, of which 233 FTEs were attributable to the acquisition of SVB Leerink compared to the same period in 2018, as well as annual pay raises,
- An increase of $26.9 million in incentive compensation and ESOP expense reflective primarily of the inclusion of SVB Leerink in our financial results, accounting for $25.6 million of the increase, and
- An increase of $17.2 million in other employee incentives and benefits primarily driven by seasonal expenses relating to additional 401(k) matching contributions as a result of the 2018 annual incentive compensation plan payments and an increase in employer payroll taxes reflective of our increased headcount since the first quarter of 2018, driven by our continued growth initiatives as well as the inclusion of SVB Leerink FTEs mentioned above.

Our variable compensation plans consist primarily of our Incentive Compensation Plan, Direct Drive Incentive Compensation Plan, 401(k) and ESOP Plan, Retention Program and Warrant Incentive Plan (see descriptions in our 2018 Form 10-K). Total costs incurred under these plans were $87.7 million for the three months ended March 31, 2019, compared to $53.1 million for the comparable 2018 period. These amounts are included in total compensation and benefits expense discussed above.

Professional Services

Professional services expense was $37.0 million for the three months ended March 31, 2019, compared to $28.7 million for the comparable 2018 period. The increase was primarily related to enhancements in our regulatory, risk and compliance infrastructure to support our momentum as we continue to grow both domestically and globally as well as an increase in legal and consulting costs related to the acquisition of SVB Leerink.

Net Occupancy

Net occupancy expense was $16.0 million for the three months ended March 31, 2019, compared to $13.6 million for the comparable 2018 period. The increase was primarily due to lease renewals at higher costs, reflective of market conditions, and the expansion of certain offices to support our growth as well as a $1.8 million increase directly attributable to the inclusion of SVB Leerink in our financial results effective January 1, 2019.

FDIC and State Assessments

FDIC and state assessments expense was $4.0 million for the three months ended March 31, 2019, compared to $9.4 million for the comparable 2018 period. The decrease was due primarily to the elimination of the FDIC surcharge for banks effective October 1, 2018, reflective of the deposit insurance fund reserve ratio reaching its minimum funding requirements.

Business Development and Travel

Business development and travel expense was $15.4 million for the three months ended March 31, 2019, compared to $11.2 million for the comparable 2018 period. The increase was to support expansion initiatives as we continue to grow both domestically and globally.

Other Noninterest Expense

Total other noninterest expense was $33.5 million for the three months ended March 31, 2019, compared to $18.1 million for the comparable 2018 period. The $15.4 million increase in other noninterest expense for the three months ended March 31, 2019 was driven primarily by the inclusion of SVB Leerink in our financial results effective January 4, 2019, which contributed $9.6 million to the overall increase related to new expenses for investment banking and trade order execution costs as well as amortization of intangible assets recorded as part of the acquisition.

A summary of other noninterest expense for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,		
(Dollars in thousands)	2019	2018	% Change
Lending and other client related processing costs	$ 5,177	$ 3,201	61.7%
Correspondent bank fees	3,744	3,410	9.8
Investment banking activities	4,185	—	—
Trade order execution costs	2,516	—	—
Data processing services	2,899	2,492	16.3
Telephone	2,741	2,377	15.3
Dues and publications	1,524	850	79.3
Postage and supplies	770	667	15.4
Other	9,980	5,107	95.4
Total other noninterest expense	$ 33,536	$ 18,104	85.2

Net Income Attributable to Noncontrolling Interests

Included in net income is income and expense attributable to noncontrolling interests. The relevant amounts allocated to investors in our consolidated subsidiaries, other than us, are reflected under “net income attributable to noncontrolling interests” on our statements of income.

In the table below, noninterest income consists primarily of net investment gains and losses from our consolidated funds. Noninterest expense is primarily related to management fees paid by our managed funds to SVB Financial’s subsidiaries as the managed funds’ general partners. A summary of net income attributable to noncontrolling interests for the three months ended March 31, 2019 and 2018 is as follows:

	Three months ended March 31,		
(Dollars in thousands)	2019	2018	% Change
Net interest income (1)	$ (11)	$ (9)	22.2 %
Noninterest income (1)	(2,270)	(9,522)	(76.2)
Noninterest expense (1)	379	(32)	NM
Carried interest allocation (2)	(978)	(3,502)	(72.1)
Net income attributable to noncontrolling interests	$ (2,880)	$ (13,065)	(78.0)

NM—Not meaningful

(1) Represents noncontrolling interests’ share in net interest income, noninterest income or loss and noninterest expense.

(2) Represents the preferred allocation of income (or change in income) earned by us as the general partner of certain consolidated funds.

Three months ended March 31, 2019 and 2018

Net income attributable to noncontrolling interests was $2.9 million for the three months ended March 31, 2019, compared to $13.1 million for the comparable 2018 period. Net income attributable to noncontrolling interests of $2.9 million for the three months ended March 31, 2019 was primarily a result of net gains on investment securities (including carried interest allocation) from our managed funds of funds in the portfolio, related primarily to net unrealized valuation increases for public and private company investments held by the funds in the portfolio. See "Results of Operations—Noninterest Income—Gains on Investment Securities, Net".

Income Taxes

Our effective income tax expense rate was 27.1 percent for the three months ended March 31, 2019, compared to 27.5 percent for the comparable 2018 period. Our effective tax rate is calculated by dividing income tax expense by the sum of income before income tax expense and the net income attributable to noncontrolling interests.

The reduction in the effective tax rate for the three months ended March 31, 2019 was due primarily to a decrease in non-deductible FDIC premiums due to the elimination of the FDIC surcharge for banks effective October 1, 2018.

Operating Segment Results

We have four segments for which we report our financial information: Global Commercial Bank, SVB Private Bank, SVB Capital and SVB Leerink. SVB Leerink is a new reportable segment for 2019 as a result of the acquisition of SVB Leerink effective January 4, 2019.

We report segment information based on the "management" approach. The management approach designates the internal reporting used by management for making decisions and assessing performance as the source of our reporting segments. Please refer to Note 15—"Segment Reporting" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report for additional details.

The following is our reportable segment information for the three months ended March 31, 2019 and 2018:

Global Commercial Bank

	Three months ended March 31,		
(Dollars in thousands)	**2019**	**2018**	**% Change**
Net interest income	$ 445,876	$ 369,867	20.6%
Provision for credit losses	(26,805)	(25,274)	6.1
Noninterest income	126,317	98,792	27.9
Noninterest expense	(198,683)	(186,891)	6.3
Income before income tax expense	$ 346,705	$ 256,494	35.2
Total average loans, net of unearned income	$ 24,798,197	$ 20,679,202	19.9
Total average assets	55,883,000	49,953,396	11.9
Total average deposits	47,596,868	44,041,634	8.1

Three months ended March 31, 2019 and 2018

Income before income tax expense from our Global Commercial Bank ("GCB") increased to $346.7 million for the three months ended March 31, 2019, compared to $256.5 million for the comparable 2018 period, which reflected the continued acquisition of new clients and growth of our core commercial business. The key components of GCB's performance for the three months ended March 31, 2019 compared to the comparable 2018 period are discussed below.

Net interest income from GCB increased by $76.0 million for the three months ended March 31, 2019, due primarily to an increase in loan interest income resulting mainly from higher average loan balances, as well as from an increase in loan yields as a result of rate increases.

GCB had a provision for credit losses of $26.8 million for the three months ended March 31, 2019, compared to $25.3 million for the comparable 2018 period. The provision of $26.8 million for the three months ended March 31, 2019 reflects primarily $27.4 million in net new specific reserves for nonaccrual loans, $4.1 million in additional reserves for period-end loan

growth and $4.9 million for charge-offs not specifically reserved for, partially offset by a decrease in the qualitative component of our performing loan reserves of $5.3 million reflective of the continued growth of larger, higher credit quality private equity/venture capital loans as a percentage of total gross loans.

The provision of $25.3 million for the three months ended March 31, 2018 primarily reflected $11.3 million in net new specific reserves for nonaccrual loans and a $14.0 million increase in reserves for period-end loan growth.

Noninterest income increased by $27.5 million for the three months ended March 31, 2019 related primarily to an overall increase in our non-GAAP core fee income (higher client investment fees, credit card fees and foreign exchange fees). These increases were due primarily to the continued growth of our client base and work with larger global companies reflective of investments in our platform, capabilities and global reach.

Noninterest expense increased by $11.8 million for the three months ended March 31, 2019, due primarily to increased compensation and benefits expense. Compensation and benefits expense increased as a result of higher salaries and wages expenses and higher other employee compensation and benefits. The increase in GCB salaries and wages was due primarily to an increase in the average number of FTEs at GCB, which increased by 351 to 2,252 FTEs for the three months ended March 31, 2019, compared to 1,901 FTEs for the comparable 2018 period.

SVB Private Bank

	Three months ended March 31,		
(Dollars in thousands)	**2019**	**2018**	**% Change**
Net interest income	$ 11,981	$ 16,247	(26.3)%
Reduction of (provision for) credit losses	984	(1,722)	(157.1)
Noninterest income	510	507	0.6
Noninterest expense	(7,414)	(6,593)	12.5
Income before income tax expense	$ 6,061	$ 8,439	(28.2)
Total average loans, net of unearned income	$ 3,085,883	$ 2,666,658	15.7
Total average assets	2,507,131	2,590,476	(3.2)
Total average deposits	1,491,234	1,572,424	(5.2)

Three months ended March 31, 2019 and 2018

Net interest income from our SVB Private Bank decreased by $4.3 million for the three months ended March 31, 2019, due primarily to higher interest paid on interest-bearing deposits due to market rate adjustments for the three months ended March 31, 2019 as compared to the 2018 comparable period.

Noninterest expense increased by $0.8 million for the three months ended March 31, 2019, due primarily to increased compensation and benefits expense. Compensation and benefits expense increased as a result of increased salaries and wages, reflective of the increase in number of average FTE since the first quarter of 2018, and higher incentive compensation expenses, reflective primarily of our strong 2019 full-year expected performance as compared to 2018.

SVB Capital

	Three months ended March 31,		
(Dollars in thousands)	**2019**	**2018**	**% Change**
Net interest income	$ 6	$ 7	(14.3)%
Noninterest income	24,845	28,910	(14.1)
Noninterest expense	(5,782)	(5,046)	14.6
Income before income tax expense	$ 19,069	$ 23,871	(20.1)
Total average assets	$ 378,732	$ 373,322	1.4

SVB Capital's components of noninterest income primarily include net gains and losses on non-marketable and other equity securities, carried interest and fund management fees. All components of income before income tax expense discussed below are net of noncontrolling interests.

We experience variability in the performance of SVB Capital from quarter to quarter due to a number of factors, including changes in the values of our funds' underlying investments, changes in the amount of distributions and general economic and

market conditions. Such variability may lead to volatility in the gains and losses from investment securities and cause our results to differ from period to period.

Three months ended March 31, 2019 and 2018

SVB Capital had noninterest income of $24.8 million for the three months ended March 31, 2019, compared to $28.9 million for the comparable 2018 period. The decrease in noninterest income was due primarily to lower net gains on investment securities compared to the comparable 2018 period. SVB Capital's components of noninterest income primarily include the following:

- Net gains on investment securities of $15.9 million for the three months ended March 31, 2019, compared to net gains of $22.9 million for the comparable 2018 period. The net gains on investment securities of $15.9 million were related primarily to gains from our strategic venture capital fund investments reflective of net unrealized valuation increases in public company securities held in our strategic venture capital funds, and
- Fund management fees of $6.7 million for the three months ended March 31, 2019, compared to $5.7 million for the comparable 2018 period.

SVB Leerink

	Three months ended March 31,		
(Dollars in thousands)	2019	2018	% Change
Net interest income	$ 442	$ —	—%
Noninterest income	68,117	—	—
Noninterest expense	(60,540)	—	—
Income before income tax expense	$ 8,019	$ —	—
Total average assets	$ 300,332	$ —	—

SVB Leerink's components of noninterest income primarily include investment banking revenue, commissions and net gains and losses on non-marketable and other equity securities, carried interest and fund management fees. All components of income before income tax expense discussed below are net of noncontrolling interests.

Three months ended March 31, 2019

SVB Leerink had noninterest income of $68.1 million for the three months ended March 31, 2019, primarily driven by $49.8 million of investment banking revenue, $14.1 million of commissions and $1.4 million in fund management fees.

SVB Leerink had noninterest expense $60.5 million for the three months ended March 31, 2019, primarily driven by $42.9 million in compensation and benefits expense and $10.9 million in other noninterest expense, driven by investment banking and trade order execution costs as well as amortization of intangible assets recorded as part of the acquisition.

Consolidated Financial Condition

Our total assets, and total liabilities and stockholders' equity, were $60.2 billion at March 31, 2019 compared to $56.9 billion at December 31, 2018, an increase of $3.3 billion, or 5.7 percent. Refer below to a summary of the individual components driving the changes in total assets, total liabilities and stockholders' equity.

Cash and Cash Equivalents

Cash and cash equivalents totaled $7.1 billion at March 31, 2019, an increase of $3.5 billion, or 97.9 percent, compared to $3.6 billion at December 31, 2018. As of March 31, 2019, $4.7 billion of our cash and due from banks was deposited at the Federal Reserve Bank and was earning interest at the Federal Funds target rate, and interest-earning deposits in other financial institutions were $1.4 billion. As of December 31, 2018, $1.7 billion of our cash and due from banks was deposited at the Federal Reserve Bank and was earning interest at the Federal Funds target rate, and interest-earning deposits in other financial institutions were $1.2 billion.

Investment Securities

Investment securities totaled $22.8 billion at March 31, 2019, a decrease of $1.4 billion, or 5.9 percent, compared to $24.2 billion at December 31, 2018. Our investment securities portfolio is comprised of: (i) an available-for-sale securities portfolio and a held-to-maturity securities portfolio, both of which represent interest earning fixed income investment securities; and (ii) a non-marketable and other equity securities portfolio, which represents primarily investments managed as part of our funds management business as well as public equity securities held as a result of equity warrant assets exercised.

Available-for-Sale Securities

Period-end available-for-sale securities were $6.8 billion at March 31, 2019 compared to $7.8 billion at December 31, 2018, a decrease of $1.0 billion, or 13.3 percent. The $1.0 billion decrease in period-end AFS securities balances from December 31, 2018 to March 31, 2019, was due primarily to the sale of $1.2 billion of AFS securities comprised of U.S. Treasury notes, partially offset by purchases of $0.2 billion. Securities classified as available-for-sale are carried at fair value with changes in fair value recorded as unrealized gains or losses in a separate component of stockholders' equity. During the first quarter of 2019, the AFS portfolio had unrealized gains of $46.8 million ($33.8 million net of tax), driven primarily by decreases in market interest rates.

The following table summarizes the remaining contractual principal maturities and fully taxable equivalent yields on fixed income securities, carried at fair value, classified as available-for-sale as of March 31, 2019. The weighted average yield is computed using the amortized cost of fixed income investment securities, which are reported at fair value. For U.S. Treasury securities, U.S. agency debentures and foreign government debt securities, the expected maturity is the actual contractual maturity of the notes. Expected remaining maturities for certain U.S. agency debentures may occur earlier than their contractual maturities because the note issuers have the right to call outstanding amounts ahead of their contractual maturity. Expected maturities for mortgage-backed securities may differ significantly from their contractual maturities because mortgage borrowers have the right to prepay outstanding loan obligations with or without penalties. Mortgage-backed securities classified as available-for-sale typically have original contractual maturities from 10 to 30 years whereas expected average lives of these securities tend to be significantly shorter and vary based upon structure and prepayments in lower interest rate environments. The weighted average yield on mortgage-backed securities is based on prepayment assumptions at the purchase date. Actual yields earned may differ significantly based upon actual prepayments.

	March 31, 2019									
	Total		One Year or Less		After One Year to Five Years		After Five Years to Ten Years		After Ten Years	
(Dollars in thousands)	Carrying Value	Weighted Average Yield	Carrying Value	Weighted Average Yield	Carrying Value	Weighted Average Yield	Carrying Value	Weighted Average Yield	Carrying Value	Weighted Average Yield
U.S. Treasury securities	$3,767,410	1.95 %	$1,165,910	1.58%	$2,194,840	2.00 %	$ 406,660	2.81%	$ —	—%
U.S. agency debentures	1,063,713	1.84	643,279	1.50	420,434	2.36	—	—	—	—
Foreign government debt securities	5,685	(0.65)	—	—	5,685	(0.65)	—	—	—	—
Residential mortgage-backed securities:										
Agency-issued collateralized mortgage obligations—fixed rate	1,839,883	2.58	—	—	—	—	8,654	2.88	1,831,229	2.58
Agency-issued collateralized mortgage obligations—variable rate	78,403	0.73	—	—	—	—	—	—	78,403	0.73
Total	$6,755,094	2.09	$1,809,189	1.55	$2,620,959	2.05	$ 415,314	2.81	$1,909,632	2.51

Held-to-Maturity Securities

Period-end held-to-maturity securities were $15.1 billion at March 31, 2019 compared to $15.5 billion at December 31, 2018, a decrease of $0.4 billion, or 2.8 percent. The $0.4 billion decrease in period-end HTM security balances from December 31, 2018 to March 31, 2019 was due primarily to pay downs and maturities.

Securities classified as held-to-maturity are accounted for at cost with no adjustments for changes in fair value. For securities previously re-designated as held-to-maturity from available-for-sale, the net unrealized gains at the date of transfer will continue to be reported as a separate component of shareholders' equity and amortized over the life of the securities in a manner consistent with the amortization of a premium or discount.

The following table summarizes the remaining contractual principal maturities and fully taxable equivalent yields on fixed income investment securities classified as held-to-maturity as of March 31, 2019. Interest income on certain municipal bonds and notes (non-taxable investments) are presented on a fully taxable equivalent basis using the federal statutory tax rate of 21.0 percent. The weighted average yield is computed using the amortized cost of fixed income investment securities. For U.S. agency debentures, the expected maturity is the actual contractual maturity of the notes. Expected maturities for mortgage-backed securities may differ significantly from their contractual maturities because mortgage borrowers have the right to prepay outstanding loan obligations with or without penalties. Mortgage-backed securities classified as held-to-maturity typically have original contractual maturities from 10 to 30 years whereas expected average lives of these securities tend to be significantly shorter and vary based upon structure and prepayments in lower interest rate environments. The weighted average yield on mortgage-backed securities is based on prepayment assumptions at the purchase date. Actual yields earned may differ significantly based upon actual prepayments.

	March 31, 2019									
	Total		One Year or Less		After One Year to Five Years		After Five Years to Ten Years		After Ten Years	
(Dollars in thousands)	Amortized Cost	Weighted-Average Yield	Amortized Cost	Weighted-Average Yield	Amortized Cost	Weighted-Average Yield	Amortized Cost	Weighted-Average Yield	Amortized Cost	Weighted-Average Yield
U.S. agency debentures	$ 585,892	2.65%	$ —	—%	$ 101,464	2.70%	$ 484,428	2.63%	$ —	—%
Residential mortgage-backed securities:										
Agency-issued mortgage-backed securities	7,887,579	2.89	—	—	133,021	2.03	868,170	2.48	6,886,388	2.96
Agency-issued collateralized mortgage obligations—fixed rate	2,058,789	1.78	—	—	—	—	515,013	1.61	1,543,776	1.84
Agency-issued collateralized mortgage obligations—variable rate	206,421	0.74	—	—	—	—	—	—	206,421	0.74
Agency-issued commercial mortgage-backed securities	2,745,662	2.99	—	—	—	—	—	—	2,745,662	2.99
Municipal bonds and notes	1,570,912	3.61	13,230	2.52	80,710	2.12	318,981	2.78	1,157,991	3.95
Total	$15,055,255	2.79	$ 13,230	2.52	$ 315,195	2.27	$2,186,592	2.35	$12,540,238	2.88

Portfolio duration is a standard measure used to approximate changes in the market value of fixed income instruments due to a change in market interest rates. The measure is an estimate based on the level of current market interest rates, expectations for changes in the path of forward rates and the effect of forward rates on mortgage prepayment speed assumptions. As such, portfolio duration will fluctuate with changes in market interest rates. Changes in portfolio duration are also impacted by changes in the mix of longer versus shorter term-to-maturity securities. The estimated weighted-average duration of our fixed income investment securities portfolio was 3.7 years and 3.8 years at March 31, 2019 and December 31, 2018, respectively.

Non-Marketable and Other Equity Securities

Our non-marketable and other equity securities portfolio primarily represents investments in venture capital and private equity funds, SPD Silicon Valley Bank Co., Ltd. (the Bank's joint venture bank in China ("SPD-SVB")), debt funds, private and public portfolio companies, including public equity securities held as a result of equity warrant assets exercised, and qualified affordable housing projects. Included in our non-marketable and other equity securities carried under fair value accounting are amounts that are attributable to noncontrolling interests. We are required under GAAP to consolidate 100% of these investments that we are deemed to control, even though we may own less than 100% of such entities. See below for a summary of the carrying value (as reported) of non-marketable and other equity securities compared to the amounts attributable to SVBFG.

Period-end non-marketable and other equity securities were $975.0 million at March 31, 2019 compared to $941.1 million at December 31, 2018, an increase of $33.9 million, or 3.6 percent. Non-marketable and other equity securities, net of noncontrolling interests were $840.8 million at March 31, 2019, compared to $806.1 million at December 31, 2018. The increase was primarily attributable to $31.6 million in additional non-marketable and other equity securities reflective of the inclusion of SVB Leerink in our financial results beginning on January 4, 2019. The following table summarizes the carrying value (as reported) of non-marketable and other equity securities compared to the amounts attributable to SVBFG (which generally represents the carrying value times our ownership percentage) at March 31, 2019 and December 31, 2018:

	March 31, 2019		December 31, 2018	
(Dollars in thousands)	Carrying value (as reported)	Amount attributable to SVBFG	Carrying value (as reported)	Amount attributable to SVBFG
Non-marketable and other equity securities:				
Non-marketable securities (fair value accounting):				
Consolidated venture capital and private equity fund investments (1)	$ 108,404	$ 28,055	$ 118,333	$ 30,235
Unconsolidated venture capital and private equity fund investments (2)	196,049	196,049	201,098	201,098
Other investments without a readily determinable fair value (3)	37,796	37,796	25,668	25,668
Other equity securities in public companies (fair value accounting (4)	11,644	10,736	20,398	20,098
Non-marketable securities (equity method accounting) (5):				
Venture capital and private equity fund investments	148,096	95,223	129,485	82,921
Debt funds	5,826	5,826	5,826	5,826
Other investments	127,264	127,264	121,721	121,721
Investments in qualified affordable housing projects, net	339,900	339,900	318,575	318,575
Total non-marketable and other equity securities	$ 974,979	$ 840,849	$ 941,104	$ 806,142

(1) The following table shows the amounts of venture capital and private equity fund investments held by the following consolidated funds and amounts attributable to SVBFG for each fund at March 31, 2019 and December 31, 2018:

	March 31, 2019		December 31, 2018	
(Dollars in thousands)	Carrying value (as reported)	Amount attributable to SVBFG	Carrying value (as reported)	Amount attributable to SVBFG
Strategic Investors Fund, LP	$ 8,618	$ 1,082	$ 12,452	$ 1,564
Capital Preferred Return Fund, LP	51,219	11,039	53,957	11,629
Growth Partners, LP	47,532	15,823	50,845	16,927
CP I, LP	1,035	111	1,079	115
Total consolidated venture capital and private equity fund investments	$ 108,404	$ 28,055	$ 118,333	$ 30,235

(2) The carrying value represents investments in 212 and 213 funds (primarily venture capital funds) at March 31, 2019 and December 31, 2018, respectively, where our ownership interest is typically less than 5% of the voting interests of each such fund and in which we do not have the ability to exercise significant influence over the partnerships' operating activities and financial policies. Our unconsolidated venture capital and private equity fund investments are carried at fair value based on the fund investments' net asset values per share as obtained from the general partners of the funds. For each fund

investment, we adjust the net asset value per share for differences between our measurement date and the date of the fund investment's net asset value by using the most recently available financial information from the investee general partner, for example, December 31st, for our March 31st consolidated financial statements, adjusted for any contributions paid, distributions received from the investment, and significant fund transactions or market events during the reporting period.

(3) Investments classified as "Other investments without a readily determinable fair value" include direct equity investments in private companies. The carrying value is based on the price at which the investment was acquired plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments. We consider a range of factors when adjusting the fair value of these investments, including, but not limited to, the term and nature of the investment, local market conditions, values for comparable securities, current and projected operating performance, exit strategies, financing transactions subsequent to the acquisition of the investment and a discount for certain investments that have lock-up restrictions or other features that indicate a discount to fair value is warranted. For further details on the carrying value of these investments refer to Note 7—"Investment Securities" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

(4) Investments classified as other equity securities (fair value accounting) represent shares held in public companies as a result of exercising public equity warrant assets and direct equity investments in public companies held by our consolidated funds. Changes in the fair value recognized through net income.

(5) The following table shows the carrying value and our ownership percentage of each investment at March 31, 2019 and December 31, 2018 (equity method accounting):

	March 31, 2019		December 31, 2018	
(Dollars in thousands)	Carrying value (as reported)	Amount attributable to SVBFG	Carrying value (as reported)	Amount attributable to SVBFG
Venture capital and private equity fund investments:				
Strategic Investors Fund II, LP	$ 4,648	$ 4,344	$ 4,670	$ 4,366
Strategic Investors Fund III, LP	17,485	14,064	17,396	14,059
Strategic Investors Fund IV, LP	28,785	24,049	28,974	24,388
Strategic Investors Fund V, LP	28,953	15,200	28,189	14,799
CP II, LP (i)	7,454	4,509	7,122	4,308
Other venture capital and private equity fund investments	60,771	33,057	43,134	21,001
Total venture capital and private equity fund investments	$ 148,096	$ 95,223	$ 129,485	$ 82,921
Debt funds:				
Gold Hill Capital 2008, LP (ii)	$ 3,901	$ 3,901	$ 3,901	$ 3,901
Other debt funds	1,925	1,925	1,925	1,925
Total debt funds	$ 5,826	$ 5,826	$ 5,826	$ 5,826
Other investments:				
SPD Silicon Valley Bank Co., Ltd.	$ 79,415	$ 79,415	$ 76,412	$ 76,412
Other investments	47,849	47,849	45,309	45,309
Total other investments	$ 127,264	$ 127,264	$ 121,721	$ 121,721

(i) Our ownership includes direct ownership interest of 1.3 percent and indirect ownership interest of 3.8 percent through our investments in Strategic Investors Fund II, LP.

(ii) Our ownership includes direct ownership interest of 11.5 percent in the fund and an indirect interest in the fund through our investment in Gold Hill Capital 2008, LLC of 4.0 percent.

Volcker Rule

On June 6, 2017, we received notice that the Board of Governors of the Federal Reserve System approved the Company's application for an extension of the permitted conformance period for the Company's investments in "illiquid" covered funds. The approval extends the deadline by which the Company must sell, divest, restructure or otherwise conform such investments to the provisions of the Volcker Rule until the earlier of (i) July 21, 2022, or (ii) the date by which each fund matures by its terms or is otherwise conformed to the Volcker Rule.

As implemented under the Dodd-Frank Wall Street Reform and Consumer Protection Act, the Volcker Rule prohibits, subject to certain exceptions, a banking entity, such as the Company, from sponsoring or investing in covered funds, defined to include many venture capital and private equity funds. As noted above, the Company currently maintains certain investments deemed to be prohibited investments in "illiquid" covered funds, which are now covered under the approved extension. As of March 31, 2019, such prohibited investments had an estimated aggregate carrying value and fair value of approximately $224.7 million. (For more information about the Volcker Rule, see "Business—Supervision and Regulation" under Part 1, Item 1 of our 2018 Form 10-K.)

Loans

Loans, net of unearned income, increased by $0.5 billion to $28.9 billion at March 31, 2019, compared to $28.3 billion at December 31, 2018. Unearned income was $170 million at March 31, 2019 and $173 million at December 31, 2018. Total gross loans were $29.0 billion at March 31, 2019, an increase of $0.5 billion, compared to $28.5 billion at December 31, 2018. Period-end loans increased compared to December 31, 2018, driven primarily by loan growth in our private equity/venture capital portfolio as well as from our life science/healthcare, private bank and premium wine portfolios.

The breakdown of total gross loans and total loans as a percentage of total gross loans by industry sector is as follows:

	March 31, 2019		December 31, 2018	
(Dollars in thousands)	Amount	Percentage	Amount	Percentage
Commercial loans:				
Software/internet	$ 6,287,367	21.7%	$ 6,209,978	21.8%
Hardware	1,266,082	4.4	1,245,800	4.4
Private equity/venture capital	14,315,660	49.3	14,118,132	49.5
Life science/healthcare	2,593,914	8.9	2,461,076	8.6
Premium wine	256,084	0.9	249,316	0.9
Other	292,546	1.0	346,747	1.2
Commercial loans	25,011,653	86.2	24,631,049	86.4
Real estate secured loans:				
Premium wine	759,620	2.6	711,237	2.5
Consumer	2,675,719	9.2	2,609,645	9.2
Other	40,223	0.2	40,627	0.1
Real estate secured loans	3,475,562	12.0	3,361,509	11.8
Construction loans	112,643	0.4	98,034	0.3
Consumer loans	420,661	1.4	420,720	1.5
Total gross loans	$ 29,020,519	100.0	$ 28,511,312	100.0

Loan Concentration

The following table provides a summary of gross loans by size and category. The breakout of the categories is based on total client balances (individually or in the aggregate) as of March 31, 2019:

	March 31, 2019					
(Dollars in thousands)	Less than Five Million	Five to Ten Million	Ten to Twenty Million	Twenty to Thirty Million	Thirty Million or More	Total
Commercial loans:						
Software/internet	$ 1,611,511	$ 894,185	$ 1,567,580	$ 1,081,518	$ 1,132,573	$ 6,287,367
Hardware	311,431	125,100	229,399	347,827	252,325	1,266,082
Private equity/venture capital	907,485	1,143,496	1,911,640	1,822,316	8,530,723	14,315,660
Life science/healthcare	299,738	471,720	650,155	359,584	812,717	2,593,914
Premium wine	75,071	45,122	48,305	52,026	35,560	256,084
Other	211,819	18,471	10,972	51,284	—	292,546
Commercial loans	3,417,055	2,698,094	4,418,051	3,714,555	10,763,898	25,011,653
Real estate secured loans:						
Premium wine	173,085	176,862	275,228	95,975	38,470	759,620
Consumer	2,347,175	217,281	111,263	—	—	2,675,719
Other	7,442	—	32,781	—	—	40,223
Real estate secured loans	2,527,702	394,143	419,272	95,975	38,470	3,475,562
Construction loans	10,724	15,833	86,086	—	—	112,643
Consumer loans	163,865	37,202	63,706	91,226	64,662	420,661
Total gross loans	$ 6,119,346	$ 3,145,272	$ 4,987,115	$ 3,901,756	$ 10,867,030	$ 29,020,519

At March 31, 2019, gross loans equal to or greater than $20 million to any single client (individually or in the aggregate) totaled $14.8 billion, or 50.9 percent of our total gross loan portfolio. These loans represented 356 clients, and of these loans, $76.4 million were on nonaccrual status as of March 31, 2019.

The following table provides a summary of gross loans by size and category. The breakout of the categories is based on total client balances (individually or in the aggregate) as of December 31, 2018:

	December 31, 2018					
(Dollars in thousands)	Less than Five Million	Five to Ten Million	Ten to Twenty Million	Twenty to Thirty Million	Thirty Million or More	Total
Commercial loans:						
Software/internet	$ 1,515,096	$ 918,647	$ 1,520,634	$ 1,221,250	$ 1,034,351	$ 6,209,978
Hardware	292,022	152,061	196,763	386,288	218,666	1,245,800
Private equity/venture capital	836,894	1,012,605	2,120,918	2,135,279	8,012,436	14,118,132
Life science/healthcare	273,075	477,046	645,895	410,127	654,933	2,461,076
Premium wine	70,573	55,852	48,656	65,035	9,200	249,316
Other	246,011	18,921	10,911	70,904	—	346,747
Commercial loans	3,233,671	2,635,132	4,543,777	4,288,883	9,929,586	24,631,049
Real estate secured loans:						
Premium wine	168,130	173,882	263,093	83,945	22,187	711,237
Consumer loans	2,258,479	239,400	111,766	—	—	2,609,645
Other	7,506	—	33,121	—	—	40,627
Real estate secured loans	2,434,115	413,282	407,980	83,945	22,187	3,361,509
Construction loans	7,076	15,064	75,894	—	—	98,034
Consumer loans	148,391	55,401	51,409	93,690	71,829	420,720
Total gross loans	$ 5,823,253	$ 3,118,879	$ 5,079,060	$ 4,466,518	$ 10,023,602	$ 28,511,312

At December 31, 2018, gross loans equal to or greater than $20 million to any single client (individually or in the aggregate) totaled $14.5 billion, or 50.8 percent of our total gross loan portfolio. These loans represented 361 clients, and of these loans, $27.5 million were on nonaccrual status as of December 31, 2018.

The credit profile of our loan portfolio clients varies based on the nature of the lending we do for different market segments. Our three main market segments include (i) technology (software/internet and hardware) and life science/healthcare, (ii) private equity/venture capital, and (iii) SVB Private Bank.

(i) Technology and Life Science/Healthcare

Our technology and life science/healthcare loan portfolios include loans to clients at the various stages of their life cycles and represent the largest segments of our loan portfolio. The primary underwriting method for our technology and life science/healthcare portfolios are classified as investor dependent, balance sheet dependent or cash flow dependent.

Investor dependent loans represent a relatively small percentage of our overall portfolio at 11 percent of total gross loans at both March 31, 2019 and December 31, 2018. These loans are made to companies in both our Accelerator (early-stage) and Growth practices. Investor dependent loans typically have modest or negative cash flows and no established record of profitable operations. Repayment of these loans may be dependent upon receipt by borrowers of additional equity financing from venture capital firms or others, or in some cases, a successful sale to a third party or an IPO. Venture capital firms may provide financing selectively, at reduced amounts, or on less favorable terms, which may have an adverse effect on our borrowers' ability to repay their loans to us. When repayment is dependent upon the next round of venture investment and there is an indication that further investment is unlikely or will not occur, it is often likely that the company would need to be sold to repay the debt in full. If reasonable efforts have not yielded a likely buyer willing to repay all debt at the close of the sale or on commercially viable terms, the account will most likely be deemed to be impaired.

Balance sheet dependent loans, which includes asset-based loans, represented nine percent and eight percent of total gross loans at March 31, 2019 and December 31, 2018, respectively. Balance sheet dependent loans are structured to require constant current asset coverage (i.e., cash, cash equivalents, accounts receivable and, to a much lesser extent, inventory) in an amount that exceeds the outstanding debt. These loans are generally made to companies in our Growth and Corporate Finance practices. Our asset-based lending, which includes working capital lines and accounts receivable financing, represented two and one percent of total gross loans at both March 31, 2019 and December 31, 2018. The repayment of these arrangements is dependent on the financial condition, and payment ability, of third parties with whom our clients do business.

Cash flow dependent loans, which include sponsored buyout lending, represented 15 percent of total gross loans at March 31, 2019, compared to 16 percent at December 31, 2018. Cash flow dependent loans require the borrower to maintain cash flow from operations that is sufficient to service all debt. Borrowers must demonstrate normalized cash flow in excess

of all fixed charges associated with operating the business. Sponsored buyout loans represented seven percent of total gross loans at March 31, 2019 compared to eight percent at December 31, 2018. These loans are typically used to assist a select group of experienced private equity sponsors with the acquisition of businesses, are larger in size, and repayment is generally dependent upon the cash flows of the acquired company. The acquired companies are typically established, later-stage businesses of scale and characterized by reasonable levels of leverage and loan structures that include meaningful financial covenants. The sponsor's equity contribution is often 50 percent or more of the acquisition price.

(ii) Private Equity/Venture Capital

We also provide financial services to clients in the private equity/venture capital community. At March 31, 2019, our lending to private equity/venture capital firms and funds represented 49 percent of total gross loans, compared to 50 percent of total gross loans at December 31, 2018. The vast majority of this portfolio consists of capital call lines of credit, the repayment of which is dependent on the payment of capital calls by the underlying limited partner investors in the funds managed by these firms. These facilities are generally governed by meaningful financial covenants oriented towards ensuring that the funds' remaining callable capital is sufficient to repay the loan, and larger commitments (typically provided to larger private equity funds) are often secured by an assignment of the general partner's right to call capital from the fund's limited partner investors.

(iii) SVB Private Bank

Our SVB Private Bank clients are primarily private equity/venture capital professionals and executive leaders of the innovation companies they support. Our lending to SVB Private Bank clients represented 11 percent of total gross loans at both March 31, 2019 and December 31, 2018. Many of these clients have mortgages, which represented 86 percent of this portfolio at March 31, 2019; the balance of this portfolio consisted of home equity lines of credit, restricted stock purchase loans, capital call lines of credit, and other secured and unsecured lending.

State Concentrations

Approximately 28 percent and 11 percent of our outstanding total gross loan balances as of March 31, 2019 were to borrowers based in California and New York, respectively, compared to 28 percent and 10 percent as of December 31, 2018. Other than California and New York, there are no states with gross loan balances greater than or equal to 10 percent.

See generally “Risk Factors–Credit Risks” set forth under Part I, Item 1A in our 2018 Form 10-K.

Credit Quality Indicators

As of March 31, 2019 and December 31, 2018, our total criticized loans and impaired loans both represented four percent of our total gross loans. Criticized and impaired loans to early-stage clients represented 19 percent of our total criticized and impaired loan balances at both March 31, 2019 and December 31, 2018. Loans to early-stage clients represent a relatively small percentage of our overall portfolio at six percent of total gross loans at both March 31, 2019 and December 31, 2018. It is common for an early-stage client’s remaining liquidity to fall temporarily below the threshold for a pass-rated credit during its capital-raising period for a new round of funding. Based on our experience, for most early-stage clients, this situation typically lasts one to two quarters and generally resolves itself with a subsequent round of venture funding, though there are exceptions, from time to time. As a result, we expect that each of our early-stage clients will reside in our criticized portfolio during a portion of their life cycle.

Credit Quality and Allowance for Loan Losses

Nonperforming assets consist of loans on nonaccrual status, loans past due 90 days or more still accruing interest, and Other Real Estate Owned ("OREO") and other foreclosed assets. We measure all loans placed on nonaccrual status for impairment based on the fair value of the underlying collateral or the net present value of the expected cash flows. The table below sets forth certain data and ratios between nonperforming loans, nonperforming assets and the allowance for loan losses:

(Dollars in thousands)	March 31, 2019	December 31, 2018
Gross nonperforming, past due, and restructured loans:		
Nonaccrual loans	$ 133,623	$ 94,142
Loans past due 90 days or more still accruing interest	2,148	1,964
Total nonperforming loans	135,771	96,106
OREO and other foreclosed assets	—	—
Total nonperforming assets	$ 135,771	$ 96,106
Performing TDRs	$ 28,954	$ 31,639
Nonperforming loans as a percentage of total gross loans	0.47%	0.34%
Nonperforming assets as a percentage of total assets	0.23	0.17
Allowance for loan losses	$ 300,151	$ 280,903
As a percentage of total gross loans	1.03%	0.99%
As a percentage of total gross nonperforming loans	221.07	292.28
Allowance for loan losses for nonaccrual loans	$ 61,225	$ 37,941
As a percentage of total gross loans	0.21%	0.13%
As a percentage of total gross nonperforming loans	45.09	39.48
Allowance for loan losses for total gross performing loans	$ 238,926	$ 242,962
As a percentage of total gross loans	0.82%	0.85%
As a percentage of total gross performing loans	0.83	0.86
Total gross loans	$ 29,020,519	$ 28,511,312
Total gross performing loans	28,884,748	28,415,206
Allowance for unfunded credit commitments (1)	57,970	55,183
As a percentage of total unfunded credit commitments	0.29%	0.29%
Total unfunded credit commitments (2)	$ 20,267,529	$ 18,913,021

(1) The "allowance for unfunded credit commitments" is included as a component of other liabilities and any provision is included in the "provision for credit losses" in the statement of income. See "Provision for Credit Losses" for a discussion of the changes to the allowance.
(2) Includes unfunded loan commitments and letters of credit.

Our allowance for loan losses as a percentage of total gross loans increased 4 basis points to 1.03 percent at March 31, 2019, compared to 0.99 percent at December 31, 2018 reflective of an increase in reserves for nonaccrual loans of 8 basis points offset by a decrease in the reserves for gross performing loans of 4 basis points.

Our allowance for loan losses for performing loans was $238.9 million at March 31, 2019, compared to $243.0 million at December 31, 2018. The $4.1 million decrease in reserves for performing loans was driven primarily by an $8.2 million decrease reflective of the continued growth in our private equity/venture capital loans, which tend to be of higher credit quality, partially offset by $4.1 million in additional reserves for period-end loan growth.

Our allowance for loan losses for nonaccrual loans was $61.2 million at March 31, 2019, compared to $37.9 million at December 31, 2018. The $23.3 million increase in the reserves for nonaccrual loans was due to new nonaccrual loan reserves of $33.4 million driven primarily by two clients in our life science/healthcare loan portfolio, partially offset by $10.1 million of repayments and charge-offs.

The following table presents a summary of changes in nonaccrual loans for the three months ended March 31, 2019 and 2018:

(Dollars in thousands)	Three months ended March 31, 2019	2018
Balance, beginning of period	$ 94,142	$ 119,259
Additions	50,857	21,803
Paydowns	(6,430)	(17,248)
Charge-offs	(4,895)	(7,112)
Other reductions	(51)	(35)
Balance, end of period	$ 133,623	$ 116,667

Our nonaccrual loans as of March 31, 2019 included $102.6 million from six clients (three software/internet clients represented $54.6 million and three life science/healthcare clients represented $48.0 million). Two of these loans are sponsored buyout loans that were added to our nonaccrual portfolio in 2015, another is a Corporate Finance client that was added during 2016, one is a Growth client that was added during 2018 and two are new nonaccrual loans added during 2019 from our Growth practice. The total credit exposure for these six largest nonaccrual loans was $104.1 million as of March 31, 2019, for which we have specifically reserved $47.5 million.

Average nonaccrual loans for the three months ended March 31, 2019 were $106.4 million compared to $111.6 million for the comparable 2018 period. The $5.2 million decrease in average nonaccrual loans for the three months ended March 31, 2019 compared to March 31, 2018 was primarily from our software/internet and hardware loan portfolios partially offset by increases in the average nonaccrual loans in our life science/healthcare and private equity/venture capital loan portfolios. If the nonaccrual loans had not been nonperforming, $1.7 million in interest income would have been recorded for the three months ended March 31, 2019 compared to $1.9 million for the comparable 2018 period.

Accrued Interest Receivable and Other Assets

A summary of accrued interest receivable and other assets at March 31, 2019 and December 31, 2018 is as follows:

(Dollars in thousands)	March 31, 2019	December 31, 2018	% Change
Derivative assets (1)	$ 267,747	$ 258,139	3.7 %
Foreign exchange spot contract assets, gross	375,607	152,268	146.7
Accrued interest receivable	192,868	197,927	(2.6)
FHLB and Federal Reserve Bank stock	59,508	58,878	1.1
Net deferred tax assets	72,451	65,433	10.7
Accounts receivable	64,429	55,807	15.4
Other assets	228,289	162,809	40.2
Total accrued interest receivable and other assets	$ 1,260,899	$ 951,261	32.6

(1) See “Derivatives” section below.

Foreign Exchange Spot Contract Assets

Foreign exchange spot contract assets represent unsettled client trades at the end of the period. The increase of $223.3 million was primarily due to an overall increase in activity at period-end as compared to December 31, 2018.

Other Assets

Other assets includes various asset amounts for other operational transactions. The increase of $65.5 million was primarily due to $33.3 million in other assets attributable to the inclusion of SVB Leerink in our financial results beginning January 4, 2019. Prepaid assets increased $16.0 million primarily due to the annual timing of prepaid software agreement renewals and merchant card receivable increased $16.8 million due to the timing of settlement.

Derivatives

Derivative instruments are recorded as a component of other assets and other liabilities on the balance sheet. The following table provides a summary of derivative assets and liabilities at March 31, 2019 and December 31, 2018:

(Dollars in thousands)	March 31, 2019	December 31, 2018	% Change
Assets:			
Equity warrant assets	$ 162,215	$ 149,238	8.7 %
Foreign exchange forward and option contracts	92,361	100,402	(8.0)
Client interest rate derivatives	11,763	8,499	38.4
Interest rate swaps	1,408	—	—
Total derivative assets	$ 267,747	$ 258,139	3.7
Liabilities:			
Foreign exchange forward and option contracts	$ 82,468	$ 88,559	(6.9)
Client interest rate derivatives	8,841	9,491	(6.8)
Interest rate swaps	303	—	—
Total derivative liabilities	$ 91,612	$ 98,050	(6.6)

Equity Warrant Assets

In connection with negotiating credit facilities and certain other services, we often obtain rights to acquire stock in the form of equity warrant assets in primarily private, venture-backed companies in the technology and life science/healthcare industries. At March 31, 2019, we held warrants in 2,149 companies, compared to 2,095 companies at December 31, 2018. Warrants in 26 companies each had values greater than $1.0 million and collectively represented $56.8 million, or 35.0 percent, of the fair value of the total warrant portfolio at March 31, 2019. The change in fair value of equity warrant assets is recorded in "Gains on equity warrant assets, net" in noninterest income, a component of consolidated net income. The following table provides a summary of transactions and valuation changes for equity warrant assets for the three months ended March 31, 2019 and 2018:

	Three months ended March 31,	
(Dollars in thousands)	2019	2018
Balance, beginning of period	$ 149,238	$ 123,763
New equity warrant assets	4,471	5,099
Non-cash changes in fair value, net	16,238	10,186
Exercised equity warrant assets	(7,317)	(2,457)
Terminated equity warrant assets	(415)	(922)
Balance, end of period	$ 162,215	$ 135,669

Foreign Exchange Forward and Foreign Currency Option Contracts

We enter into foreign exchange forward contracts and foreign currency option contracts with clients involved in foreign activities, either as the purchaser or seller, depending upon the clients' needs. For each forward or option contract entered into with our clients, we enter into an opposite way forward or option contract with a correspondent bank, which mitigates the risk of fluctuations in currency rates. We also enter into forward contracts with correspondent banks to economically reduce our foreign exchange exposure related to certain foreign currency denominated instruments. Net gains and losses on the revaluation of foreign currency denominated instruments are recorded in the line item "Other" as part of noninterest income, a component of consolidated net income. We have not experienced nonperformance by any of our counterparties and therefore have not incurred any related losses. Further, we anticipate performance by all counterparties. Our net exposure for foreign exchange forward and foreign currency option contracts, net of cash collateral, was $28.5 million at March 31, 2019 and $20.7 million at December 31, 2018. For additional information on our foreign exchange forward contracts and foreign currency option contracts, see Note 12—"Derivative Financial Instruments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

Client Interest Rate Derivatives

We sell interest rate contracts to clients who wish to mitigate their interest rate exposure. We economically reduce the interest rate risk from this business by entering into opposite way contracts with correspondent banks. Our net exposure for client interest rate derivative contracts, net of cash collateral, was $11.6 million at March 31, 2019 and $8.7 million at December 31, 2018. For additional information on our client interest rate derivatives, see Note 12—"Derivative Financial Instruments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

Interest Rate Swaps

To manage interest rate risk on our variable-interest rate loan portfolio, we enter into interest rate swap contracts to hedge against future changes in interest rates by using hedging instruments to lock in future cash inflows that would otherwise be impacted by movements in the market interest rates. We designate these interest rate swap contracts as cash flow hedges that qualify for hedge accounting under ASC 815 and record them in other assets and other liabilities. For additional information on our interest rate swaps, see Note 12—"Derivative Financial Instruments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" and "Quantitative and Qualitative Disclosures about Market Risk" under Part I, Item 1 of this report.

Deposits

Deposits were $52.3 billion at March 31, 2019, an increase of $3.0 billion, or 6.1 percent, compared to $49.3 billion at December 31, 2018. The increase in deposits was driven primarily by growth across a majority of our portfolio segments. The leading contributors were our Technology and Life Science client portfolios, attributable primarily to a healthy equity funding environment, tempered growth in the IPO and secondary public offering markets as well as continued healthy new client acquisition.

At March 31, 2019, the aggregate balance of time deposit accounts individually equal to or greater than $100,000 totaled $44 million, compared to $46 million at December 31, 2018. At March 31, 2019, all the time deposit accounts individually equal to or greater than $100,000 were scheduled to mature within one year. No material portion of our deposits has been obtained from a single depositor and the loss of any one depositor would not materially affect our business. Approximately 15 percent and 16 percent of our total deposits at March 31, 2019 and December 31, 2018, respectively, were from our clients in Asia.

Short-Term Borrowings

As of March 31, 2019, we had no overnight borrowings and $14.5 million in other short-term borrowings consisting of cash collateral received from certain counterparties in relation to market value exposures of derivative contracts in our favor. As of December 31, 2018, we had $0.6 billion in short-term borrowings, consisting of $0.3 billion in advances from the FHLB and $0.3 billion in securities sold under an agreement to repurchase. For more information on our short-term debt, see Note 11—"Short-Term Borrowings and Long-Term Debt" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

Long-Term Debt

Our long-term debt was $696.7 million at March 31, 2019 and $696.5 million at December 31, 2018. As of March 31, 2019, long-term debt included our 3.50% Senior Notes and 5.375% Senior Notes. For more information on our long-term debt, see Note 11—"Short-Term Borrowings and Long-Term Debt" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

Other Liabilities

A summary of other liabilities at March 31, 2019 and December 31, 2018 is as follows:

(Dollars in thousands)	March 31, 2019	December 31, 2018	% Change
Foreign exchange spot contract liabilities, gross	$ 562,773	$ 170,355	NM
Accrued compensation	115,876	224,405	(48.4)
Allowance for unfunded credit commitments	57,970	55,183	5.1
Derivative liabilities (1)	91,612	98,050	(6.6)
Other liabilities	604,697	458,366	31.9
Total other liabilities	$ 1,432,928	$ 1,006,359	42.4

NM—Not meaningful

(1) See “Derivatives” section above.

Foreign Exchange Spot Contract Liabilities

Foreign exchange spot contract liabilities represent unsettled client trades at the end of the period. The increase of $392.4 million was due primarily to increased client trade activity at period-end as compared to December 31, 2018.

Accrued Compensation

Accrued compensation includes amounts for our Incentive Compensation Plan, Direct Drive Incentive Compensation Plan, Retention Program, Warrant Incentive Plan, ESOP and other compensation arrangements. The decrease of $108.5 million was primarily the result of the payout of our 2018 incentive compensation plans during the first quarter of 2019, partially offset by higher accruals for the three months ended March 31, 2019 primarily due to the increase in the number of average FTEs for the first quarter of 2019.

Other Liabilities

Other liabilities includes various accrued liability amounts for other operational transactions. The increase of $146.3 million was reflective primarily of a $64.3 million increase in current taxes payable, an increase in accrued accounts payable for $39.7 million and a $17.5 million increase in new commitments for our qualified affordable tax credit funds at March 31, 2019 as compared to December 31, 2018. In addition, an increase of $29.9 million in other liabilities was attributable to the inclusion of SVB Leerink in our financial results effective January 4, 2019.

Noncontrolling Interests

Noncontrolling interests totaled $141.1 million and $148.6 million at March 31, 2019 and December 31, 2018, respectively. The $7.5 million decrease was due primarily to net distributions of $15.7 million to limited partners from various managed funds of funds, offset by income attributable to noncontrolling interests of $2.9 million as well as an additional $5.3 million attributable to the inclusion of SVB Leerink in our financial results for the three months ended March 31, 2019.

Fair Value Measurements

The following table summarizes our financial assets and liabilities that are measured at fair value on a recurring basis as of March 31, 2019 and December 31, 2018:

	March 31, 2019		December 31, 2018	
(Dollars in thousands)	Total Balance	Level 3	Total Balance	Level 3
Assets carried at fair value	$ 7,338,938	$ 157,784	$ 8,388,011	$ 146,278
As a percentage of total assets	12.2%	0.3%	14.7%	0.3%
Liabilities carried at fair value	$ 91,612	$ —	$ 98,050	$ —
As a percentage of total liabilities	0.2%	—%	0.2%	—%
As a percentage of assets carried at fair value		2.1%		1.7%

Financial assets valued using Level 3 measurements consist of our non-marketable investment securities in shares of private company stock and equity warrant assets (rights to shares of private and public company capital stock). The valuation methodologies of our non-marketable securities carried under fair value accounting and equity warrant assets involve a significant degree of management judgment. Refer to Note 18—“Fair Value of Financial Instruments” of the “Notes to Interim Consolidated Financial Statements (unaudited)” under Part I, Item 1 of this report for a summary of the valuation techniques and significant inputs used for each class of Level 3 assets.

The inherent uncertainty in the process of valuing securities for which a ready market does not exist may cause our estimated values of these securities to differ significantly from the values that would have been derived had a ready market for the securities existed, and those differences could be material. The timing and amount of changes in fair value, if any, of these financial instruments depend upon factors beyond our control, including the performance of the underlying companies, fluctuations in the market prices of the preferred or common stock of the underlying companies, general volatility and interest rate market factors, and legal and contractual restrictions. The timing and amount of actual net proceeds, if any, from the disposition of these financial instruments depend upon factors beyond our control, including investor demand for IPOs, levels of M&A activity, legal and contractual restrictions on our ability to sell, and the perceived and actual performance of portfolio companies. All of these factors are difficult to predict and there can be no assurances that we will realize the full value of these securities, which could result in significant losses. See “Risk Factors” set forth in our 2018 Form 10-K.

During the three months ended March 31, 2019, the Level 3 assets that are measured at fair value on a recurring basis experienced net realized and unrealized gains of $19.1 million, primarily reflective of valuation increases from our private company warrant portfolio driven by healthy funding rounds and net gains realized on exercised warrant assets due to IPO activity. During the three months ended March 31, 2018, the Level 3 assets that are measured at fair value on a recurring basis experienced net realized and unrealized gains of $18.7 million, attributable primarily to net gains from exercises of equity warrant assets driven by M&A activity and valuation increases in our private company warrant portfolio.

Capital Resources

We maintain an adequate capital base to support anticipated asset growth, operating needs and credit and other business risks, and to provide for SVB Financial and the Bank to be in compliance with all regulatory capital guidelines, including the joint agency rules implementing the "Basel III" capital rules. Our primary sources of new capital include retained earnings and proceeds from the sale and issuance of our capital stock or other securities. In consultation with the Finance Committee of our Board of Directors, management engages in regular capital planning processes in an effort to optimize the use of capital available to us and to appropriately plan for our future capital needs. The capital plan considers capital needs for the foreseeable future and allocates capital to both existing and future business activities. Expected future use or activities for which capital may be set aside include balance sheet growth and associated relative increases in market or credit exposure, investment activity, potential product and business expansions, acquisitions and strategic or infrastructure investments. In addition, we conduct capital stress tests as part of our annual capital planning process. The capital stress tests allow us to assess the impact of adverse changes in the economy and interest rates on our capital adequacy position.

SVBFG Stockholders' Equity

SVBFG stockholders' equity totaled $5.3 billion at March 31, 2019, an increase of $226.6 million, or 4.4 percent, compared to $5.1 billion at December 31, 2018. This increase was due primarily to net income of $288.7 million and a decrease in accumulated other comprehensive loss reflective primarily of a $46.8 million ($33.8 million net of tax) increase in the fair value of our AFS securities portfolio driven by decreases in period-end market interest rates. The increases were partially offset by a $116.0 million decrease in SVBFG stockholders' equity related to the repurchase of our outstanding common stock.

Funds generated through retained earnings are a significant source of capital and liquidity and are expected to continue to be so in the future.

Capital Ratios

Both SVB Financial and the Bank are subject to various regulatory capital requirements administered by state and federal banking agencies.

Regulatory capital ratios for SVB Financial and the Bank exceeded minimum federal regulatory guidelines for a well-capitalized depository institution as of March 31, 2019 and December 31, 2018. Capital ratios for SVB Financial and the Bank, compared to the minimum regulatory ratios applicable to bank holding companies and banks to be considered "well capitalized" and "adequately capitalized," are set forth below:

			Minimum Ratios under Applicable Regulatory Capital Adequacy Requirements	
	March 31, 2019	December 31, 2018	"Well Capitalized"	"Adequately Capitalized"
SVB Financial:				
CET 1 risk-based capital ratio	12.89%	13.41%	6.5%	4.5%
Tier 1 risk-based capital ratio	13.04	13.58	8.0	6.0
Total risk-based capital ratio	13.94	14.45	10.0	8.0
Tier 1 leverage ratio	9.10	9.06	N/A	4.0
Tangible common equity to tangible assets ratio (1)	8.59	8.99	N/A	N/A
Tangible common equity to risk-weighted assets ratio (1)	12.86	13.28	N/A	N/A
Bank:				
CET 1 risk-based capital ratio	12.35%	12.41%	6.5%	4.5%
Tier 1 risk-based capital ratio	12.35	12.41	8.0	6.0
Total risk-based capital ratio	13.29	13.32	10.0	8.0
Tier 1 leverage ratio	8.38	8.10	5.0	4.0
Tangible common equity to tangible assets ratio (1)	7.99	8.13	N/A	N/A
Tangible common equity to risk-weighted assets ratio (1)	12.32	12.28	N/A	N/A

(1) See below for a reconciliation of non-GAAP tangible common equity to tangible assets and tangible common equity to risk-weighted assets.

Risk-based capital ratios (CET 1, tier 1, and total risk-based capital) for SVB Financial decreased as of March 31, 2019, compared to the same ratios as of December 31, 2018 as a result of an increase in risk-weighted assets, primarily driven by increases in funded loans and loan commitments.

Risk-based capital ratios (CET 1, tier 1, and total risk-based capital) for the Bank decreased as of March 31, 2019, compared to the same ratios as of December 31, 2018. The decrease in the Bank's capital ratios reflected $167.0 million of cash dividends paid by the Bank to our bank holding company, SVB Financial, during the three months ended March 31, 2019.

Both SVB Financial and the Bank's tier 1 leverage ratios increased as of March 31, 2019, compared to December 31, 2018, due to proportionally higher capital from net income as well as a decrease in average assets during the first quarter of 2019. All of our reported capital ratios remain above the levels considered to be "well capitalized" under applicable banking regulations.

The tangible common equity to tangible assets ratio and the tangible common equity to risk-weighted assets ratios are not required by GAAP or applicable bank regulatory requirements. However, we believe these ratios provide meaningful supplemental information regarding our capital levels. Our management uses, and believes that investors benefit from referring to, these ratios in evaluating the adequacy of the Company's capital levels; however, these financial measures should be considered in addition to, not as a substitute for or preferable to, comparable financial measures prepared in accordance with GAAP. These ratios are calculated by dividing total SVBFG stockholders' equity, by total period-end assets and risk-weighted assets, after reducing both amounts by acquired intangibles, if any. The manner in which this ratio is calculated varies among companies. Accordingly, our ratio is not necessarily comparable to similar measures of other companies.

The following table provides a reconciliation of non-GAAP financial measures with financial measures defined by GAAP for SVB Financial and the Bank for the periods ended March 31, 2019 and December 31, 2018:

	SVB Financial		Bank	
Non-GAAP tangible common equity and tangible assets (Dollars in thousands, except ratios)	**March 31, 2019**	**December 31, 2018**	**March 31, 2019**	**December 31, 2018**
GAAP SVBFG stockholders' equity	$ 5,342,773	$ 5,116,209	$ 4,696,564	$ 4,554,814
Less: intangible assets	193,219	—	—	—
Tangible common equity	$ 5,149,554	$ 5,116,209	$ 4,696,564	$ 4,554,814
GAAP total assets	$ 60,160,285	$ 56,927,979	$ 58,774,326	$ 56,047,134
Less: intangible assets	193,219	—	—	—
Tangible assets	$ 59,967,066	$ 56,927,979	$ 58,774,326	$ 56,047,134
Risk-weighted assets	$ 40,048,892	$ 38,527,853	$ 38,132,316	$ 37,104,080
Non-GAAP tangible common equity to tangible assets	8.59%	8.99%	7.99%	8.13%
Non-GAAP tangible common equity to risk-weighted assets	12.86	13.28	12.32	12.28

The tangible common equity to tangible assets ratio decreased for the Bank primarily as a result of the $167.0 million in cash dividends paid by the Bank to our bank holding company, SVB Financial Group, during the three months ended March 31, 2019. The tangible common equity to risk-weighted assets ratio decreased for the Bank as a result of the proportionally higher increase in risk-weighted assets relative to the increase in tangible common equity. The growth in period-end risk-weighted assets was primarily due to increases in cash and cash equivalents and period-end loan growth.

Off-Balance Sheet Arrangements

In the normal course of business, we use financial instruments with off-balance sheet risk to meet the financing needs of our customers. These financial instruments include commitments to extend credit, commercial and standby letters of credit and commitments to invest in venture capital and private equity fund investments. These instruments involve, to varying degrees, elements of credit risk. Credit risk is defined as the possibility of sustaining a loss because other parties to the financial instrument fail to perform in accordance with the terms of the contract. For details of our commitments to extend credit, and commercial and standby letters of credit, please refer to Note 16—"Off-Balance Sheet Arrangements, Guarantees and Other Commitments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

Commitments to Invest in Venture Capital and Private Equity Funds

Subject to applicable regulatory requirements, including the Volcker Rule, we make investments. We make commitments to invest in venture capital and private equity funds, which in turn make investments generally in, or in some cases make loans to, privately-held companies. Commitments to invest in these funds are generally made for a 10-year period from the inception of the fund. Although the limited partnership agreements governing these investments typically do not restrict the general partners from calling 100% of committed capital in one year, it is customary for these funds to generally call most of the capital commitments over 5 to 7 years; however in certain cases, the funds may not call 100% of committed capital over the life of the fund. The actual timing of future cash requirements to fund these commitments is generally dependent upon the investment cycle, overall market conditions, and the nature and type of industry in which the privately held companies operate.

For further details on our commitments to invest in venture capital and private equity funds, refer to Note 16—"Off-Balance Sheet Arrangements, Guarantees and Other Commitments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

Liquidity

The objective of liquidity management is to ensure that funds are available in a timely manner to meet our financial obligations, including, as necessary, paying creditors, meeting depositors' needs, accommodating loan demand and growth, funding investments, repurchasing securities and other operating or capital needs, without incurring undue cost or risk, or causing a disruption to normal operating conditions.

We regularly assess the amount and likelihood of projected funding requirements through a review of factors such as historical deposit volatility and funding patterns, present and forecasted market and economic conditions, individual client funding needs, and existing and planned business activities. Our Asset/Liability Committee ("ALCO"), which is a management committee, provides oversight to the liquidity management process and recommends policy guidelines for the approval of the Finance Committee of our Board of Directors, and courses of action to address our actual and projected liquidity needs. Additionally, we routinely conduct liquidity stress testing as part of our liquidity management practices.

Our deposit base is, and historically has been, our primary source of liquidity. Our deposit levels and cost of deposits may fluctuate from time to time due to a variety of factors, including market conditions, prevailing interest rates, changes in client deposit behaviors, availability of insurance protection, and our offering of deposit products. We may also offer more investment alternatives for our off-balance sheet products which may impact deposit levels. At March 31, 2019, our period-end total deposit balances were $52.3 billion, compared to $49.3 billion at December 31, 2018.

Our liquidity requirements can also be met through the use of our portfolio of liquid assets. Our definition of liquid assets includes cash and cash equivalents in excess of the minimum levels necessary to carry out normal business operations, short-term investment securities maturing within one year, available-for-sale securities eligible and available for financing or pledging purposes with a maturity in excess of one year and anticipated near-term cash flows from investments.

We have certain facilities in place to enable us to access short-term borrowings on a secured and unsecured basis. Our secured facilities include collateral pledged to the FHLB of San Francisco and the discount window at the FRB (using both fixed income securities and loans as collateral). Our unsecured facility consists of our uncommitted federal funds lines. As of March 31, 2019, collateral pledged to the FHLB of San Francisco was comprised primarily of fixed income investment securities and loans and had a carrying value of $4.5 billion, of which $4.0 billion was available to support additional borrowings. As of March 31, 2019, collateral pledged to the discount window at the FRB was comprised of fixed income investment securities and had a carrying value of $0.9 billion, all of which was unused and available to support additional borrowings. Our total unused and available borrowing capacity for our uncommitted federal funds lines totaled $1.9 billion at March 31, 2019. Our total unused and available borrowing capacity under our master repurchase agreements with various financial institutions totaled $3.3 billion at March 31, 2019.

On a stand-alone basis, SVB Financial's primary liquidity channels include dividends from the Bank, its portfolio of liquid assets, and its ability to raise debt and capital. Consistent with recent prior quarters, the Bank has paid a quarterly dividend to SVB Financial. For the three months ended March 31, 2019, the dividend amount paid was $167.0 million. The ability of the Bank to pay dividends is subject to certain regulations described in "Business—Supervision and Regulation—Restriction on Dividends" under Part I, Item 1 of our 2018 Form 10-K.

Consolidated Summary of Cash Flows

Below is a summary of our average cash position and statement of cash flows for the three months ended March 31, 2019 and 2018. For further details, see our "Interim Consolidated Statements of Cash Flows (Unaudited)" under Part I, Item 1 of this report.

(Dollars in thousands)	Three months ended March 31, 2019	2018
Average cash and cash equivalents	$ 4,987,487	$ 3,114,232
Percentage of total average assets	8.7%	5.9%
Net cash provided by operating activities	$ 340,750	$ 348,404
Net cash provided by (used for) investing activities	904,427	(2,396,653)
Net cash provided by financing activities	2,250,167	1,744,558
Net increase (decrease) in cash and cash equivalents	$ 3,495,344	$ (303,691)

Average cash and cash equivalents increased by $1.9 billion, or 60.2 percent, to $5.0 billion for the three months ended March 31, 2019, compared to $3.1 billion for the comparable 2018 period.

Cash provided by operating activities was $340.8 million for the three months ended March 31, 2019, reflective primarily of net income before noncontrolling interests of $291.6 million and $49.1 million net increase in adjustments to reconcile net income to net cash.

Cash provided by investing activities of $0.9 billion for the three months ended March 31, 2019 was driven by net cash flows of $1.5 billion driven by sales and maturities from our fixed income securities portfolio, partially offset by a $0.5 billion increase in loans and a net cash outflow, adjusted for cash acquired, of $100.0 million for the purchase of SVB Leerink.

Cash provided by financing activities was $2.3 billion for the three months ended March 31, 2019, reflective primarily of a net increase of $3.0 billion in deposits, partially offset by $0.6 billion in paydowns of our short-term overnight borrowings and a $0.1 billion outflow related to repurchases of our outstanding common stock.

Cash and cash equivalents were $7.1 billion and $2.6 billion, respectively, at March 31, 2019 and 2018.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk Management

Market risk is defined as the risk of adverse fluctuations in the market value of financial instruments due to changes in market interest rates. Interest rate risk is our primary market risk and can result from timing and volume differences in the repricing of our rate-sensitive assets and liabilities, widening or tightening of credit spreads, changes in the general level of market interest rates and changes in the shape and level of the benchmark LIBOR/SWAP yield curve. Additionally, changes in interest rates can influence the rate of principal prepayments on mortgage securities, which affects the rate of amortization of purchase premiums and discounts. Other market risks include foreign currency exchange risk, equity price risk, including the effect of competition on product pricing. While all of these risks are important considerations, all are inherently difficult to predict, and it is equally difficult to assess the impact of each on the overall simulation results. Consequently, simulations used to analyze sensitivity of net interest income to interest rate risk will differ from actual results due to differences in the timing, frequency, and magnitude of changes in market rates, the impact of competition, fluctuating business conditions, and the impact of strategies taken by management to mitigate these risks.

Interest rate risk is managed by our ALCO. ALCO reviews the sensitivity of the market valuation on earning assets and funding liabilities and 12-month forward looking net interest income from changes in interest rates, structural changes in investment and funding portfolios, loan and deposit activity and current market conditions. Adherence with relevant metrics included in our Interest Rate Risk Policy, which is approved by the Finance Committee of our Board of Directors, is monitored on an ongoing basis.

Management of interest rate risk is carried out primarily through strategies involving our fixed income securities portfolio, available funding channels and capital market activities. In addition, our policies permit the use of off-balance sheet derivatives to assist in managing interest rate risk.

We utilize a simulation model to perform sensitivity analysis on the economic value of our equity and our net interest income under a variety of interest rate scenarios, balance sheet forecasts and business strategies. The simulation model provides a dynamic assessment of interest rate sensitivity embedded within our balance sheet which measures the potential variability in economic value and net interest income relating solely to changes in market interest rates over time. We review our interest rate risk position and sensitivity to market rates on a quarterly basis at a minimum.

Model Simulation and Sensitivity Analysis

A specific application of our simulation model involves measurement of the impact of changes in market interest rates on our economic value of equity ("EVE"). EVE is defined as the market value of assets, less the market value of liabilities. Another application of the simulation model measures the impact of changes in market interest rates on our net interest income ("NII") assuming a static balance sheet as of the period-end reporting date. For the NII simulation, market rates as well as the size and composition of the balance sheet are held constant over the simulation horizon. Simulated cash flows during the scenario horizon are assumed to be replaced as they occur, which maintains the balance sheet at its current size and composition. Yield and spread assumptions on cash and investment balances reflect current market rates. Yield and spread assumptions on loans reflect recent market impacts on product pricing. Similarly, we make certain deposit decay rate assumptions on demand deposits and interest bearing deposits, which are replenished to hold the level and mix of funding liabilities constant. Changes in market interest rates that affect us are principally short-term interest rates and include the following benchmark indexes: (i) National Prime rates, (ii) 1-month and 3-month LIBOR, and (iii) the Federal Funds target rate. Changes in these short-term rates impact interest earned on our variable rate loans, variable rate investment securities and balances held as cash and cash equivalents. Additionally, simulated changes in deposit pricing relative to changes in market rates, commonly referred to as deposit beta, generally follow overall changes in short-term interest rates, although actual changes may lag in terms of timing and magnitude. Overall, the assumed weighted deposit beta on interest bearing deposits is approximately 35 percent, which means deposit repricing is assumed to be approximately 35 percent of a given change in short-term interest rates. This repricing is reflected as a change in interest expense on interest bearing deposit balances.

The following table presents our EVE and NII sensitivity exposure related to an instantaneous and sustained parallel shift in market interest rates of 100 and 200 basis points ("bps") at March 31, 2019 and December 31, 2018:

Change in interest rates (bps) (Dollars in thousands)	Estimated EVE	Estimated Increase/(Decrease) in EVE		Estimated NII	Estimated Increase/(Decrease) in NII	
		Amount	Percent		Amount	Percent
March 31, 2019:						
+200	$ 9,310,281	$ 477,553	5.4 %	$ 2,620,077	$ 583,537	28.7 %
+100	9,068,464	235,736	2.7	2,328,593	292,053	14.3
—	8,832,728	—	—	2,036,540	—	—
-100	8,411,081	(421,647)	(4.8)	1,744,096	(292,444)	(14.4)
-200	7,721,543	(1,111,185)	(12.6)	1,449,804	(586,736)	(28.8)
December 31, 2018:						
+200	$ 9,348,408	$ 504,405	5.7 %	$ 2,628,279	$ 543,959	26.1 %
+100	9,090,781	246,778	2.8	2,356,447	272,127	13.1
—	8,844,003	—	—	2,084,320	—	—
-100	8,470,501	(373,502)	(4.2)	1,807,559	(276,761)	(13.3)
-200	7,590,973	(1,253,030)	(14.2)	1,528,693	(555,627)	(26.7)

Economic Value of Equity

The estimated EVE in the preceding table is based on a combination of valuation methodologies including a discounted cash flow analysis and a multi-path lattice based valuation. Both methodologies use publicly available market interest rates to determine discounting factors on projected cash flows. The model simulations and calculations are highly assumption-dependent and will change regularly as the composition of earning assets and funding liabilities change (including the impact of changes in the value of interest rate derivatives, if any), as interest rate environments evolve, and as we change our assumptions in response to relevant market conditions, competition or business circumstances. These calculations do not reflect forecast changes in our balance sheet or changes we may make to reduce our EVE exposure as a part of our overall interest rate risk management strategy.

As with any method of measuring interest rate risk, certain limitations are inherent in the method of analysis presented in the preceding table. We are exposed to yield curve risk, prepayment risk, basis risk, and yield spread compression, which cannot be fully modeled and expressed using the above methodology. Accordingly, the results in the preceding table should not be relied upon as a precise indicator of actual results in the event of changing market interest rates. Additionally, the resulting EVE and NII estimates are not intended to represent, and should not be construed to represent our estimate of the underlying value of equity or forecast of NII.

Our base EVE as of March 31, 2019 decreased from December 31, 2018 by $11 million, driven by changes in balance sheet composition as well as changes in interest rates, including the shape of the yield curve, which was inverted from the 12-month point to the 10-year point relative to short-term rates. At March 31, 2019, as compared to December 31, 2018, total loan balances increased by $0.5 billion, primarily in Prime and LIBOR indexed variable rate loans. Total fixed income securities decreased by $1.5 billion due primarily to an increase in cash holdings driven by total deposit growth of approximately $3.0 billion during the three months ended March 31, 2019.

Overall balance sheet growth contributed to a $199 million increase in total base EVE, however, this was offset by a decrease of $210 million as a result of lower LIBOR/swap rates across the curve. Due to liquidity needs, approximately $1.2 billion of U.S. Treasury securities were sold during the first quarter of 2019. This caused a $142 million increase in EVE sensitivity in the -200 bps rate shock scenario because the remaining securities have greater prepayment exposure as rates move down. Changes to EVE sensitivity in the other scenarios were relatively small compared to December 31, 2018.

12-Month Net Interest Income Simulation

Our static 12-month NII forecast at March 31, 2019 decreased compared to December 31, 2018 by $48 million, primarily due to changes in our balance sheet composition. Specifically, interest bearing deposit balances increased by $2.8 billion during the three months ended March 31, 2019, resulting in an increase in the simulated 12-month base case interest expense of approximately $86 million. In addition, decreased fixed income securities, as previously mentioned above, combined with increased cash balances at March 31, 2019, translated into simulated 12-month interest income growth of approximately $24 million.

A majority of our loans are indexed to Prime and LIBOR. In the positive parallel simulated rate shock scenarios, interest income on assets that are tied to variable rate indexes, primarily our variable rate loans, are expected to benefit our base 12-month NII projections. The opposite is true for negative rate shock scenarios.

The 12-month NII simulations include repricing assumptions on our interest bearing deposit products which we set at our discretion based on client needs and our overall funding mix. Repricing of interest bearing deposits impacts estimated interest expense. As noted previously, repricing deposit rates are generally assumed to be less than one-half of the amount of simulated changes in short-term market interest rates.

NII sensitivity is measured as the percentage change in projected 12-month net interest income earned in +/- 100 and +/- 200 basis point interest rate shock scenarios compared to a base scenario where balances and interest rates are held constant over the forecast horizon. At March 31, 2019, NII sensitivity was 14.3 percent in the +100 bps interest rate scenario, compared to 13.1 percent at December 31, 2018. Our NII sensitivity in the +200 bps interest rate shock scenario was 28.7 percent compared to 26.1 percent at December 31, 2018. NII sensitivity in the -100 bps scenario of negative 14.4 percent was higher at March 31, 2019 compared to a negative 13.3 percent at December 31, 2018. The -200 bps scenario currently indicates a higher percentage change in NII of negative 28.8 percent at March 31, 2019 compared to negative 26.7 percent at December 31, 2018. At March 31, 2019, NII sensitivity percentages are inclusive of the income or expense associated with interest rate swaps that are part of our hedging initiatives which began during the three months ended March 31, 2019, in an effort to reduce the impact of potential decreasing rates on NII. The changes in NII sensitivity are primarily the result of the changes in balance sheet composition described previously.

The simulation model used in the above analysis incorporates embedded floors on loans, where present, in our interest rate scenarios, which prevent model benchmark rates from moving below zero percent in the down rate scenarios. The embedded floors are also a factor in the up rate scenarios to the extent a simulated increase in rates is needed before floored rates are cleared. In addition, we assume different deposit balance decay rates based on a historical deposit study of our clients. These assumptions may change in future periods based on changes in client behavior and at management's discretion. Actual changes in our deposit pricing strategies may differ from our current model assumptions and may have an impact on our actual sensitivity overall.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Disclosure controls and procedures are the controls and other procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms. Disclosure controls and procedures include, among other things, processes, controls and procedures designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

We carried out an evaluation, under the supervision and with the participation of management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of our most recently completed fiscal quarter, pursuant to Exchange Act Rule 13a-15(b). Based upon this evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of the period covered by this report, the Company's disclosure controls and procedures were effective.

Changes in Internal Control

Except as set forth below, there were no changes in our internal control over financial reporting identified in management's evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act during the period covered by this Quarterly Report on Form 10-Q that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Beginning January 1, 2019, we implemented ASC 842, Leases. Although the new lease standard had an immaterial impact on our consolidated financial statements, we did implement changes to our processes related to recognition and the control activities to properly identify and record them. These included the development of new policies, new controls, new training, ongoing contract review requirements, and gathering of information provided for disclosures.

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PART II–OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Please refer to Note 19—"Legal Matters" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

ITEM 1A. RISK FACTORS

There are no material changes to the risk factors set forth in our 2018 Annual Report on Form 10-K.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation					X
3.2	Amended and Restated Bylaws	8-K	000-15637	3.2	February 20, 2019	
31.1	Rule 13a-14(a) / 15(d)-14(a) Certification of Principal Executive Officer					X
31.2	Rule 13a-14(a) / 15(d)-14(a) Certification of Principal Financial Officer					X
32.1	Section 1350 Certifications					X
101.INS	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					X

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.

SVB Financial Group

Date: May 9, 2019

/s/ DANIEL BECK

Daniel Beck
Chief Financial Officer
(Principal Financial Officer)

SVB Financial Group

Date: May 9, 2019

/s/ KAMRAN HUSAIN

Kamran Husain
Chief Accounting Officer
(Principal Accounting Officer)

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF SVB FINANCIAL GROUP

SVB Financial Group, a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

1. The present name of the Corporation is SVB Financial Group. The name under which the Corporation originally incorporated was Silicon Valley Bancshares, Inc., and the Corporation's original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on March 22, 1999. The Corporation then filed a Certificate of Merger with the Secretary of State of the State of Delaware on April 23, 1999, pursuant to which the Corporation merged with Silicon Valley Bancshares, a California corporation, in accordance with Section 252 of the Delaware General Corporation, and the name of the merged corporation was Silicon Valley Bancshares. The Corporation also filed a Restated Certificate of Incorporation with the Secretary of State of the State of Delaware on May 25, 2005 and changed its name from Silicon Valley Bancshares to SVB Financial Group.

2. This Restated Certificate of Incorporation was duly adopted by the Corporation's Board of Directors and stockholders in accordance with Sections 242 and 245 of the Delaware General Corporation Law. The Restated Certificate of Incorporation restates, integrates and further amends the provisions of the Certificate of Incorporation of the Corporation.

3. The text of the Certificate of Corporation as heretofore amended is hereby further amended and restated in its entirety, to read in its entirely as follows:

FIRST: The name of this corporation is SVB FINANCIAL GROUP (the "Corporation").

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle. The name and address of the registered agent of the Corporation in the State of Delaware is The Corporation Trust Company, 1209 Orange, Street in the City of Wilmington, County of New Castle.

THIRD: The purpose of the Corporation is to engage in any lawful act or activity for which corporations may now or hereafter be organized under the General Corporation Law of Delaware.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is 170,000,000, consisting of 150,000,000 shares of Common Stock, $.001 par value per share ("Common Stock"), and 20,000,000 shares of Preferred Stock, $.001 par value per share. The Preferred Stock may be issued from time to time in one or more series. The Board of Directors is hereby authorized to fix or alter the voting rights, designations, powers, preferences and relative and other special rights, and the qualifications, limitations and restrictions of any wholly unissued series of Preferred Stock, and the number of shares constituting any such series, or any of them, and to increase or decrease the number of shares of any such series subsequent to the issue of shares of that series, but not the number of shares of such series then outstanding. In case the number of shares of any series shall be decreased, the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of that series.

FIFTH: The business and affairs of the Corporation shall be managed by and under the direction of the Board of Directors. The exact number of directors of the Corporation shall be fixed by the Board of Directors or in the manner provided in the bylaws of the Corporation (the "Bylaws"). In

furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized:

(a) to adopt, repeal, rescind, alter or amend in any respect the Bylaws, and to confer in the Bylaws powers and authorities upon the directors of the corporation in addition to the powers and authorities expressly, conferred upon them by statute;

(b) from time to time to set apart out of any funds or assets of the Corporation available for dividends an amount to be reserved as working capital or for any other lawful purpose and to abolish any reserve so created and to determine whether any, and, if any, what part, of the surplus of the Corporation or its net profits applicable to dividends shall be declared in dividends and paid to its stockholders, and all rights of the holders of stock of the Corporation in respect of dividends shall be subject to the power of the Board of Directors so to do;

(c) subject to the laws of the State of Delaware, from time to time to sell, lease or otherwise dispose of any part or parts of the properties of the Corporation and to cease to conduct the business connected therewith or again to resume the same, as it may deem best; and

(d) in addition to the powers and authorities hereinbefore and by the laws of the State of Delaware conferred upon the Board of Directors, to execute all such powers and to do all acts and things as may be exercised or done by the Corporation; subject, nevertheless, to the express provision of said laws of the Certificate of Incorporation of the Corporation and its Bylaws.

SIXTH: Any action required or permitted to be taken by the stockholders of the Corporation may be effected at a duly called annual or special meeting of stockholders of the Corporation or by any consent in writing by such stockholders, provided that all other requirements of applicable law and the Bylaws have been satisfied.

SEVENTH: Each director shall serve until his or her successor is elected and qualified or until his or her death, resignation or removal, and no decrease in the authorized number of directors shall shorten the term of any incumbent director.

EIGHTH: Meetings of stockholders of the Corporation may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision of applicable law) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws.

NINTH: A director of the Corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts of omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, as the same exists or hereafter may be amended, or (iv) for any transaction from which the director derived an improper personal benefit. If the Delaware General Corporation Law hereafter is amended to authorize the further elimination or limitation of the liability of directors, then the liability of a director of the Corporation, in addition to the limitation on personal liability provided herein, shall be limited to the fullest extent permitted by the amended Delaware General Corporation Law. No amendment to or repeal of this Article Tenth shall apply to or have an effect on the liability or alleged liability of any director of the Corporation for or with respect to any acts or omission of such director occurring prior to such amendment or repeal.

TENTH: The Corporation reserves the right to adopt, repeal, rescind, alter or amend in any respect any provision contained in the Certificate of Incorporation in the manner now or hereafter prescribed by applicable law, and all rights conferred on stockholders herein are granted subject to this reservation.

ELEVENTH: The Corporation shall not be subject to the provisions of Section 203 of the Delaware General Corporation Law.

4. The amendments to the Corporation's Restated Certificate of Incorporation, as amended to date, which are incorporated in this Amended and Restated Certificate of Incorporation have been duly adopted by the Corporation's Board of Directors in accordance with Section 242 of the General Corporation Law of the State of Delaware and by the stockholders of the Corporation at the Corporation's annual meeting of stockholders held on April 25, 2019, in accordance with Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of the Certificate of Incorporation of the Company as amended to date, has been duly executed and attested by the Secretary this April 25, 2019.

SVB FINANCIAL GROUP

By: /s/ Greg Becker
Name: Greg Becker
Title: President and Chief Executive Officer

Attest:

By: /s/ Michael Zuckert
Michael Zuckert
Secretary

EXHIBIT 31.1

RULE 13a-14(a)/15d-14(a) CERTIFICATION

I, Greg Becker, certify that:

1. I have reviewed this quarterly report on Form 10-Q of SVB Financial Group;
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 periods 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(s) 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 financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and 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(s) 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: May 9, 2019

/s/ GREG BECKER

Greg Becker

President and Chief Executive Officer

(Principal Executive Officer)

EXHIBIT 31.2

RULE 13a-14(a)/15d-14(a) CERTIFICATION

I, Daniel Beck, certify that:

1. I have reviewed this quarterly report on Form 10-Q of SVB Financial Group;
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 periods 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(s) 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 financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and 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(s) 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: May 9, 2019

/s/ DANIEL BECK

Daniel Beck

Chief Financial Officer

(Principal Financial Officer)

EXHIBIT 32.1

SECTION 1350 CERTIFICATIONS

I, Greg Becker, certify, pursuant to 18 U.S.C. Section 1350, that, to my knowledge, the quarterly report of SVB Financial Group on Form 10-Q for the quarterly period ended March 31, 2019, (i) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and (ii) that the information contained in such Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of SVB Financial Group.

Date: May 9, 2019

/s/ GREG BECKER

Greg Becker

President and Chief Executive Officer

(Principal Executive Officer)

I, Daniel Beck, certify, pursuant to 18 U.S.C. Section 1350, that, to my knowledge, the quarterly report of SVB Financial Group on Form 10-Q for the quarterly period ended March 31, 2019, (i) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and (ii) that the information contained in such Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of SVB Financial Group.

Date: May 9, 2019

/s/ DANIEL BECK

Daniel Beck

Chief Financial Officer

(Principal Financial Officer)