Table of Contents

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 September 30, 2018

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 ☒

At October 31, 2018, 53,250,854 shares of the registrant's common stock ($0.001 par value) were outstanding.

Available on the web at www.svb.com

Table of Contents

TABLE OF CONTENTS

		Page
PART I - FINANCIAL INFORMATION		4
Item 1.	Interim Consolidated Financial Statements	4
	Interim Consolidated Balance Sheets as of September 30, 2018 and December 31, 2017 (Unaudited)	4
	Interim Consolidated Statements of Income for the three and nine months ended September 30, 2018 and 2017 (Unaudited)	5
	Interim Consolidated Statements of Comprehensive Income for the three and nine months ended September 30, 2018 and 2017 (Unaudited)	6
	Interim Consolidated Statements of Stockholders' Equity for the nine months ended September 30, 2018 and 2017 (Unaudited)	7
	Interim Consolidated Statements of Cash Flows for the nine months ended September 30, 2018 and 2017 (Unaudited)	8
	Notes to Interim Consolidated Financial Statements (Unaudited)	9
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	60
Item 3.	Quantitative and Qualitative Disclosures about Market Risk	103
Item 4.	Controls and Procedures	105
PART II - OTHER INFORMATION		106
Item 1.	Legal Proceedings	107
Item 1A.	Risk Factors	107
Item 2.	Unregistered Sales of Equity Securities and Use of Proceeds	107
Item 3.	Defaults Upon Senior Securities	107
Item 4.	Mine Safety Disclosures	107
Item 5.	Other Information	107
Item 6.	Exhibits	107
SIGNATURES		108

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)	September 30, 2018	December 31, 2017
Assets		
Cash and cash equivalents	$ 3,819,141	$ 2,923,075
Available-for-sale securities, at fair value (cost of $9,236,301 and $11,131,008, respectively)	9,087,609	11,120,664
Held-to-maturity securities, at cost (fair value of $15,372,238 and $12,548,280, respectively)	15,899,726	12,663,455
Non-marketable and other equity securities	896,249	651,053
Total investment securities	25,883,584	24,435,172
Loans, net of unearned income	27,494,915	23,106,316
Allowance for loan losses	(285,713)	(255,024)
Net loans	27,209,202	22,851,292
Premises and equipment, net of accumulated depreciation and amortization	121,890	128,682
Accrued interest receivable and other assets	1,105,917	876,246
Total assets	$ 58,139,734	$ 51,214,467
Liabilities and total equity		
Liabilities:		
Noninterest-bearing demand deposits	$ 40,473,774	$ 36,655,497
Interest-bearing deposits	8,122,337	7,598,578
Total deposits	48,596,111	44,254,075
Short-term borrowings	2,631,252	1,033,730
Other liabilities	1,146,109	911,755
Long-term debt	696,217	695,492
Total liabilities	53,069,689	46,895,052
Commitments and contingencies (Note 13 and Note 16)		
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; 53,250,255 shares and 52,835,188 shares outstanding, respectively	53	53
Additional paid-in capital	1,360,030	1,314,377
Retained earnings	3,672,696	2,866,837
Accumulated other comprehensive loss	(108,410)	(1,472)
Total SVBFG stockholders' equity	4,924,369	4,179,795
Noncontrolling interests	145,676	139,620
Total equity	5,070,045	4,319,415
Total liabilities and total equity	$ 58,139,734	$ 51,214,467

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

Table of Contents

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

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands, except per share amounts)	**2018**	**2017**	**2018**	**2017**
Interest income:				
Loans	$ 352,353	$ 268,445	$ 979,724	$ 745,983
Investment securities:				
Taxable	142,075	109,443	403,702	294,768
Non-taxable	10,748	1,172	23,506	2,703
Federal funds sold, securities purchased under agreements to resell and other short-term investment securities	8,137	6,211	20,080	16,670
Total interest income	513,313	385,271	1,427,012	1,060,124
Interest expense:				
Deposits	8,042	2,304	18,409	6,218
Borrowings	12,049	8,993	29,075	27,243
Total interest expense	20,091	11,297	47,484	33,461
Net interest income	493,222	373,974	1,379,528	1,026,663
Provision for credit losses	17,174	23,522	74,226	70,062
Net interest income after provision for credit losses	476,048	350,452	1,305,302	956,601
Noninterest income:				
Gains on investment securities, net	32,193	15,238	77,365	48,838
Gains on equity warrant assets, net	34,141	24,922	72,393	42,432
Foreign exchange fees	32,656	29,671	100,560	82,026
Credit card fees	24,121	20,270	68,739	56,099
Deposit service charges	19,588	14,508	56,081	43,046
Client investment fees	36,265	15,563	88,592	37,571
Lending related fees	10,675	15,404	30,938	32,874
Letters of credit and standby letters of credit fees	8,409	7,306	24,938	20,951
Other	12,022	15,896	38,671	41,128
Total noninterest income	210,070	158,778	558,277	404,965
Noninterest expense:				
Compensation and benefits	195,437	153,263	543,198	449,412
Professional services	36,542	32,987	112,080	86,331
Premises and equipment	19,858	18,937	57,576	53,753
Net occupancy	13,694	12,660	40,598	35,437
Business development and travel	12,712	10,329	35,998	30,913
FDIC and state assessments	9,550	8,359	29,306	26,354
Correspondent bank fees	3,513	3,162	10,200	9,770
Other	18,139	18,064	51,645	54,670
Total noninterest expense	309,445	257,761	880,601	746,640
Income before income tax expense	376,673	251,469	982,978	614,926
Income tax expense	95,308	97,351	246,561	220,412
Net income before noncontrolling interests	281,365	154,118	736,417	394,514
Net income attributable to noncontrolling interests	(6,548)	(5,498)	(28,841)	(21,218)
Net income available to common stockholders	$ 274,817	$ 148,620	$ 707,576	$ 373,296
Earnings per common share—basic	$ 5.16	$ 2.82	$ 13.33	$ 7.11
Earnings per common share—diluted	5.10	2.79	13.15	7.01

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 September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Net income before noncontrolling interests	$ 281,365	$ 154,118	$ 736,417	$ 394,514
Other comprehensive loss, net of tax:				
Change in foreign currency cumulative translation gains and losses:				
Foreign currency translation (losses) gains	(3,259)	1,928	(5,337)	4,463
Related tax benefit (expense)	905	(787)	1,482	(1,821)
Change in unrealized gains and losses on available-for-sale securities:				
Unrealized holding (losses) gains	(24,902)	925	(98,032)	(12,471)
Related tax benefit (expense)	6,994	(429)	27,269	5,207
Reclassification adjustment for losses (gains) included in net income (1)	—	101	—	(384)
Related tax (benefit) expense (1)	—	(41)	—	157
Reclassification of unrealized gains on equity securities to retained earnings for ASU 2016-01 (1)	—	—	(40,316)	—
Related tax expense (1)	—	—	11,145	—
Amortization of unrealized holding gains on securities transferred from available-for-sale to held-to-maturity	(1,777)	(1,594)	(3,915)	(4,931)
Related tax benefit	494	641	1,085	1,984
Reclassification of stranded tax effect to retained earnings for ASU 2018-02 (1)	—	—	(319)	—
Other comprehensive loss, net of tax	(21,545)	744	(106,938)	(7,796)
Comprehensive income	259,820	154,862	629,479	386,718
Comprehensive income attributable to noncontrolling interests	(6,548)	(5,498)	(28,841)	(21,218)
Comprehensive income attributable to SVBFG	$ 253,272	$ 149,364	$ 600,638	$ 365,500

(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 STOCKHOLDERS' EQUITY (UNAUDITED)

(Dollars in thousands)	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total SVBFG Stockholders' Equity	Noncontrolling Interests	Total Equity
Balance at December 31, 2016	**52,254,074**	**$ 52**	**$ 1,242,741**	**$ 2,376,331**	**$ 23,430**	**$ 3,642,554**	**$ 134,483**	**$ 3,777,037**
Common stock issued under employee benefit plans, net of restricted stock cancellations	458,742	1	14,191	—	—	14,192	—	14,192
Common stock issued under ESOP	10,838	—	2,094	—	—	2,094	—	2,094
Net income	—	—	—	373,296	—	373,296	21,218	394,514
Capital calls and distributions, net	—	—	—	—	—	—	(18,216)	(18,216)
Net change in unrealized gains and losses on AFS securities, net of tax	—	—	—	—	(7,491)	(7,491)	—	(7,491)
Amortization of unrealized holding gains on securities transferred from AFS to HTM, net of tax	—	—	—	—	(2,947)	(2,947)	—	(2,947)
Foreign currency translation adjustments, net of tax	—	—	—	—	2,642	2,642	—	2,642
Share-based compensation, net	—	—	35,473	—	—	35,473	—	35,473
Balance at September 30, 2017	**52,723,654**	**$ 53**	**$ 1,294,499**	**$ 2,749,627**	**$ 15,634**	**$ 4,059,813**	**$ 137,485**	**$ 4,197,298**
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 ASU 2014-09, net of tax (1)	—	—	—	(5,802)	—	(5,802)	—	(5,802)
Cumulative adjustment for ASU 2016-01, net of tax (1)	—	—	—	103,766	(29,171)	74,595	—	74,595
Reclassification of stranded tax effect for ASU 2018-02 (1)	—	—	—	319	(319)	—	—	—
Common stock issued under employee benefit plans, net of restricted stock cancellations	405,395	—	9,108	—	—	9,108	—	9,108
Common stock issued under ESOP	9,672	—	2,577	—	—	2,577	—	2,577
Net income	—	—	—	707,576	—	707,576	28,841	736,417
Capital calls and distributions, net	—	—	—	—	—	—	(22,785)	(22,785)
Net change in unrealized gains and losses on AFS securities, net of tax	—	—	—	—	(70,763)	(70,763)	—	(70,763)
Amortization of unrealized holding gains on securities transferred from AFS to HTM, net of tax	—	—	—	—	(2,830)	(2,830)	—	(2,830)
Foreign currency translation adjustments, net of tax	—	—	—	—	(3,855)	(3,855)	—	(3,855)
Share-based compensation, net	—	—	33,968	—	—	33,968	—	33,968
Balance at September 30, 2018	**53,250,255**	**$ 53**	**$ 1,360,030**	**$ 3,672,696**	**$ (108,410)**	**$ 4,924,369**	**$ 145,676**	**$ 5,070,045**

(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).

Table of Contents

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

(Dollars in thousands)	Nine months ended September 30, 2018	2017
Cash flows from operating activities:		
Net income before noncontrolling interests	$ 736,417	$ 394,514
Adjustments to reconcile net income to net cash provided by operating activities:		
Provision for credit losses	74,226	70,062
Changes in fair values of equity warrant assets, net of proceeds from exercises	(24,462)	(29,666)
Changes in fair values of derivatives, net	2,964	8,214
Gains on investment securities, net (1)	(77,365)	(31,032)
Distributions of earnings from non-marketable and other equity securities (1)	54,605	38,965
Depreciation and amortization	43,389	39,265
Amortization of premiums and discounts on investment securities, net	(252)	2,609
Amortization of share-based compensation	33,968	27,739
Amortization of deferred loan fees	(94,771)	(81,060)
Deferred income tax (benefit) expense	(16,532)	2,325
Excess tax benefit from exercise of stock options and vesting of restricted shares	(17,543)	(14,399)
Losses from the write-off of premises and equipment	7,117	—
Other gains	—	(6,150)
Changes in other assets and liabilities:		
Accrued interest receivable and payable, net	(51,521)	(26,092)
Accounts receivable and payable, net	1,697	4,120
Income tax receivable and payable, net	(12,962)	30,069
Accrued compensation	5,505	(11,731)
Foreign exchange spot contracts, net	86,298	86,911
Other, net	(46,874)	16,410
Net cash provided by operating activities	703,904	521,073
Cash flows from investing activities:		
Purchases of available-for-sale securities	(662,458)	(2,420,741)
Proceeds from sales of available-for-sale securities	—	7,311
Proceeds from maturities and paydowns of available-for-sale securities	2,529,666	2,434,039
Purchases of held-to-maturity securities	(4,726,595)	(3,812,782)
Proceeds from maturities and paydowns of held-to-maturity securities	1,482,204	1,283,764
Purchases of non-marketable and other securities	(56,435)	(18,766)
Proceeds from sales and distributions of capital of non-marketable and other securities (1)	83,020	35,821
Net increase in loans	(4,356,980)	(2,263,600)
Purchases of premises and equipment	(28,718)	(35,470)
Proceeds from sale of equity valuation services business	—	3,000
Net cash used for investing activities	(5,736,296)	(4,787,424)
Cash flows from financing activities:		
Net increase in deposits	4,342,036	5,832,165
Net increase (decrease) in short-term borrowings	1,597,522	(507,828)
Principal payments of long-term debt	—	(46,235)
(Distributions to noncontrolling interests), net of contributions from noncontrolling interests	(22,785)	(18,216)
Proceeds from issuance of common stock, ESPP and ESOP	11,685	16,286
Net cash provided by financing activities	5,928,458	5,276,172
Net increase in cash and cash equivalents	896,066	1,009,821
Cash and cash equivalents at beginning of period	2,923,075	2,545,750
Cash and cash equivalents at end of period	**$ 3,819,141**	**$ 3,555,571**
Supplemental disclosures:		
Cash paid during the period for:		
Interest	$ 54,681	$ 41,324
Income taxes	277,388	190,706
Noncash items during the period:		
Changes in unrealized gains and losses on available-for-sale securities, net of tax	$ (70,763)	$ (7,491)
Distributions of stock from investments	4,368	5,360

(1) During the first quarter of 2018 we adopted ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. This guidance was adopted on a retrospective basis and impacted the presentation between investing and operating activities related to distributions and net gains from our nonmarketable and other securities portfolio. See 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
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 variety 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 and nine months ended September 30, 2018 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, 2017 ("2017 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 2017 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) 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 May 2014, the FASB issued a new accounting standard update (ASU 2014-09, Revenue from Contracts with Customers (Topic 606)), which provides revenue recognition guidance that is intended to create greater consistency with respect to how and when revenue from contracts with customers is shown in the income statement. The guidance requires that revenue from contracts with customers be recognized when transfer of control over goods or services is passed to customers in the amount of consideration expected to be received. Subsequent Accounting Standard Updates have been issued clarifying the original pronouncement (ASU 2016-08, ASU 2016-10, ASU 2016-12 and ASU 2016-20).

On January 1, 2018, we adopted the new accounting standard ASU 2014-09, Revenue from Contracts with Customers and all the related amendments ("new revenue standard," "ASC 606" or "ASU 2014-09") using the modified retrospective method applied to those contracts which were not completed as of January 1, 2018. We elected to apply the practical expedient which allows us to expense costs related to obtaining contracts as incurred because the amortization period would have been one year or less. We recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods.

We completed a comprehensive scoping exercise to determine the revenue streams that are within the scope of this guidance. The scope of this guidance explicitly excludes net interest income, including interest income earned from our loan and fixed income securities portfolios, as well as certain other noninterest income earned from our lending-, investment- and derivative-related activities. Based on our completed assessment, we did not identify any material changes to the timing or the amounts of our revenue recognition, however, we identified a change in the timing of recognizing fund management fees in other noninterest income for a portion of our SVB Capital funds. Fund management fees for these certain SVB Capital funds will now be recognized at the time of distribution which typically occurs later in the life of the fund than had been previously recognized. The cumulative adjustment to retained earnings associated with this change was $5.8 million, net of tax, with an immaterial impact to our net income on an ongoing basis. The impacts to net income as a result of applying the new revenue standard were decreases of $0.5 million and $1.4 million for the three and nine months ended September 30, 2018, respectively.

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 and nine months ended September 30, 2018, changes in our contract assets, contract liabilities and receivables were not material. Additionally, revenues recognized during the three and nine months ended September 30, 2018 that were included in the corresponding contract liability balance at the beginning of the period were not material.

The cumulative effect of the changes to our consolidated balance sheets at January 1, 2018, for the adoption of the new revenue standard were as follows:

(Dollars in thousands)	Balance at December 31, 2017	Adjustments Due to Adoption of ASC 606	Balance at January 1, 2018
Accrued interest receivable and other assets:			
Accounts receivable	$ 55,946	$ (34,340)	$ 21,606
Other liabilities:			
Deferred revenue	27,057	(26,321)	736
Current taxes payable	4,675	(2,217)	2,458
Stockholders' Equity:			
Retained earnings	2,866,837	(5,802)	2,861,035

In accordance with the new revenue standard requirements, the disclosure of the impact of adoption on our consolidated balance sheets at September 30, 2018 and our statements of income for the three and nine months ended September 30, 2018, were as follows:

	September 30, 2018		
(Dollars in thousands)	As Reported	Balances Without Adoption of ASC 606	Effect of Change Higher/(Lower)
Accrued interest receivable and other assets:			
Accounts receivable	$ 61,090	$ 100,470	$ (39,380)
Other liabilities:			
Deferred fees	556	28,379	(27,823)
Current taxes payable (receivable)	2,002	(694)	2,696
Stockholders' Equity:			
Retained earnings	3,672,696	3,678,020	(5,324)

	Three months ended September 30, 2018		
(Dollars in thousands)	As Reported	Balances Without Adoption of ASC 606	Effect of Change Higher/(Lower)
Other noninterest income:			
Fund management fees	$ 5,479	$ 6,087	$ (608)
Income tax expense	95,308	95,463	(155)
Net Income available to common stockholders	274,817	275,270	(453)
Diluted earnings per share	5.10	5.11	(0.01)

	Nine months ended September 30, 2018		
(Dollars in thousands)	As Reported	Balances Without Adoption of ASC 606	Effect of Change Higher/(Lower)
Other noninterest income:			
Fund management fees	$ 17,144	$ 19,001	$ (1,857)
Income tax expense	246,561	247,040	(479)
Net Income available to common stockholders	707,576	708,954	(1,378)
Diluted earnings per share	13.15	13.18	(0.03)

In February 2018, the FASB issued a new accounting standard update (ASU 2018-02, Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income (ASU "2018-02")) to address certain stranded income tax effects in accumulated other comprehensive income ("AOCI") resulting from H.R.1, known as the Tax Cuts and Jobs Act (the "TCJ Act"). ASU 2018-02 changed current accounting whereby an entity may elect to reclassify the stranded tax effect from AOCI to retained earnings in each period in which the effect of the change in the U.S. federal corporate income tax rate in the TCJ Act (or portion thereof) is recorded. ASU 2018-02 is effective for periods beginning after December 15, 2018 and early adoption is permitted. We have elected to early adopt ASU 2018-02 and reclassified approximately $0.3 million from accumulated other comprehensive income to retained earnings within our consolidated statements of stockholders' equity in the first quarter of 2018.

On January 1, 2018, we adopted the new accounting standard update ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities (Topic 825), which addresses certain aspects of recognition, measurement, presentation and disclosure of financial instruments. This guidance requires equity investments (except those accounted for under the equity method of accounting) to be measured at fair value with changes in fair value recognized in net income. We adopted this guidance using the modified retrospective method and our equity investments carried at cost with readily determinable fair values were re-measured at fair value and the difference between cost and fair value was recorded as a cumulative-effect adjustment to opening retained earnings as of January 1, 2018. The adjustment to opening retained earnings for these investments was $74.6 million, net of tax, with subsequent changes in the fair value of these equity securities recorded as unrealized gains or losses in

our consolidated statements of income. Additionally, in accordance with this guidance, net unrealized gains of $29.2 million, net of tax, included in accumulated other comprehensive income on January 1, 2018, related to our previously reported available-for-sale equity securities, were reclassified as an adjustment to retained earnings. Subsequent changes in the fair value of these equity securities were recorded as unrealized gains or losses in our consolidated statements of income. Furthermore, for purposes of disclosing the fair value of loans carried at amortized cost, our valuation methodology was updated to conform to an "exit price" concept as required by the standard update, resulting in an immaterial change in the fair value.

In August 2016, the FASB issued a new accounting standard update (ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments), which clarifies the guidance on eight specific cash flow issues. We adopted the new accounting standard, specifically as it relates to distributions from our equity method investments, on January 1, 2018. We elected to adopt the nature of distribution approach and applied the guidance retrospectively. The new guidance had an immaterial impact on the presentation between investing and operating activities within our statements of cash flows related to distributions and net gains from our nonmarketable and other securities portfolio.

In November 2016, the FASB issued a new accounting standard update (ASU 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash), which requires that a statement of cash flows explains the change during the period in the total cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning of period and end of period total amounts shown on the statement of cash flows. Previous to the update, there had been some diversity in practice. Given that we had already classified restricted cash such as cash reserves at the Federal Reserve as part of cash and cash equivalents on the cash flow statement, the update had no impact on how we were already reporting and presenting our statement of cash flows.

Recent Accounting Pronouncements

In February 2016, the FASB issued a new accounting standard update (ASU 2016-02, Leases (Topic 842)), which will require for all operating leases the recognition of a right-of-use asset and a corresponding lease liability, in the statement of financial position. 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. This guidance will be effective on January 1, 2019, with early adoption permitted. We plan to adopt the lease accounting guidance on January 1, 2019, on a prospective basis. We intend to elect the transition "package of expedients" which will result in continuing to account for existing leases for which the commencement date is before January 1, 2019, in accordance with Leases (Topic 840) throughout the lease term, including periods after adoption of the new guidance. We expect the adoption of this standard to have an impact of less than one percent of total assets and liabilities on our consolidated balance sheets reflective of the recognition of right-of-use assets and related lease liabilities associated predominantly with noncancelable operating leases. In addition, we do not expect the adoption of this guidance to have a material impact on our consolidated statements of income.

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 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 2017, the FASB issued a new accounting standard update (ASU 2017-12, Targeted Improvements to Accounting for Hedging Activities (Topic 815)), which better aligns an entity's risk management activities and financial reporting for hedging relationships through changes to the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. The targeted improvements in the ASU will allow increased flexibility to structure hedges of fixed rate instruments and floating rate instruments. Application of the ASU is expected to reduce the amount of ineffectiveness as the revised accounting guidance will better reflect the economics of risk management activities and will also reduce the volatility associated with foreign currency hedging. The ASU requires the hedging instrument to be presented in the same line item as the hedged item and requires expanded disclosures. There were further amendments, with the issuance of ASU 2018-16, "Derivatives and Hedging (Topic 815)," which provides us with the option to use the Overnight Index Swap ("OIS") rate based on the Secured Overnight Financing Rate ("SOFR") as a U.S. benchmark interest rate for purposes of applying hedge accounting under Topic 815. This guidance will be effective January 1, 2019, with early adoption permitted. We plan to early adopt this

guidance in the fourth quarter of 2018, effective October 1, 2018. The accounting standard will not have a material impact on our consolidated financial position, results of operations or the disclosures in our Notes to the Consolidated Financial Statements.

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 the adoption of new accounting guidance, have been reclassified to conform to current period presentations.

2. 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 and nine months ended September 30, 2018 and 2017:

		Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	**Income Statement Location**	**2018**	**2017**	**2018**	**2017**
Reclassification adjustment for losses (gains) included in net income (1)	Gains on investment securities, net	$ —	$ 101	$ —	$ (384)
Related tax (benefit) expense (1)	Income tax expense	—	(41)	—	157
Total reclassification adjustment for losses (gains) included in net income, net of tax (1)		$ —	$ 60	$ —	$ (227)

(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.

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 units 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 and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars and shares in thousands, except per share amounts)	**2018**	**2017**	**2018**	**2017**
Numerator:				
Net income available to common stockholders	$ 274,817	$ 148,620	$ 707,576	$ 373,296
Denominator:				
Weighted average common shares outstanding—basic	53,235	52,705	53,062	52,530
Weighted average effect of dilutive securities:				
Stock options and ESPP	383	343	404	381
Restricted stock units	301	257	334	319
Weighted average common shares outstanding—diluted	53,919	53,305	53,800	53,230
Earnings per common share:				
Basic	$ 5.16	$ 2.82	$ 13.33	$ 7.11
Diluted	5.10	2.79	13.15	7.01

The following table summarizes the weighted-average common shares excluded from the diluted EPS calculation due to the antidilutive effect for the three and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,		Nine months ended September 30,	
(Shares in thousands)	**2018**	**2017**	**2018**	**2017**
Stock options	86	112	49	61
Restricted stock units	5	5	71	2
Total	91	117	120	63

Consolidated Statement of Changes in Equity

The following table summarizes the changes in our consolidated equity for the three months ended September 30, 2018 and 2017:

(Dollars in thousands)	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total SVBFG Stockholders' Equity	Noncontrolling Interests	Total Equity
Balance at June 30, 2017	**52,684,159**	**$ 53**	**$ 1,283,485**	**$ 2,601,007**	**$ 14,890**	**$ 3,899,435**	**$ 140,600**	**$ 4,040,035**
Common stock issued under employee benefit plans, net of restricted stock cancellations	39,495	—	2,370	—	—	2,370	—	2,370
Net income	—	—	—	148,620	—	148,620	5,498	154,118
Capital calls and distributions, net	—	—	—	—	—	—	(8,613)	(8,613)
Net change in unrealized gains and losses on AFS securities, net of tax	—	—	—	—	556	556	—	556
Amortization of unrealized holding gains on securities transferred from AFS to HTM, net of tax	—	—	—	—	(953)	(953)	—	(953)
Foreign currency translation adjustments, net of tax	—	—	—	—	1,141	1,141	—	1,141
Share-based compensation, net	—	—	8,644	—	—	8,644	—	8,644
Balance at September 30, 2017	**52,723,654**	**$ 53**	**$ 1,294,499**	**$ 2,749,627**	**$ 15,634**	**$ 4,059,813**	**$ 137,485**	**$ 4,197,298**
Balance at June 30, 2018	**53,210,627**	**$ 53**	**$ 1,346,586**	**$ 3,397,879**	**$ (86,865)**	**$ 4,657,653**	**$ 147,188**	**$ 4,804,841**
Common stock issued under employee benefit plans, net of restricted stock cancellations	39,628	—	1,943	—	—	1,943	—	1,943
Net income	—	—	—	274,817	—	274,817	6,548	281,365
Capital calls and distributions, net	—	—	—	—	—	—	(8,060)	(8,060)
Net change in unrealized gains and losses on AFS securities, net of tax	—	—	—	—	(17,908)	(17,908)	—	(17,908)
Amortization of unrealized holding gains on securities transferred from AFS to HTM, net of tax	—	—	—	—	(1,283)	(1,283)	—	(1,283)
Foreign currency translation adjustments, net of tax	—	—	—	—	(2,354)	(2,354)	—	(2,354)
Share-based compensation, net	—	—	11,501	—	—	11,501	—	11,501
Balance at September 30, 2018	**53,250,255**	**$ 53**	**$ 1,360,030**	**$ 3,672,696**	**$ (108,410)**	**$ 4,924,369**	**$ 145,676**	**$ 5,070,045**

3. Share-Based Compensation

For the three and nine months ended September 30, 2018 and 2017, we recorded share-based compensation and related tax benefits as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Share-based compensation expense	$ 11,501	$ 8,644	$ 33,968	$ 27,739
Income tax benefit related to share-based compensation expense	(2,895)	(3,154)	(7,955)	(9,518)

Unrecognized Compensation Expense

As of September 30, 2018, unrecognized share-based compensation expense was as follows:

(Dollars in thousands)	Unrecognized Expense	Weighted Average Expected Recognition Period - in Years
Stock options	$ 13,525	2.91
Restricted stock units	73,037	2.74
Total unrecognized share-based compensation expense	$ 86,562	

Share-Based Payment Award Activity

The table below provides stock option information related to the 2006 Equity Incentive Plan for the nine months ended September 30, 2018:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life - in Years	Aggregate Intrinsic Value of In-The-Money Options
Outstanding at December 31, 2017	808,049	$ 105.68		
Granted	89,616	305.71		
Exercised	(191,585)	83.37		
Forfeited	(9,498)	187.76		
Expired	(2,337)	60.37		
Outstanding at September 30, 2018	694,245	136.68	3.76	$ 120,932,288
Vested and expected to vest at September 30, 2018	673,674	134.25	3.70	118,982,041
Exercisable at September 30, 2018	415,993	99.63	2.66	87,856,349

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 $310.83 as of September 30, 2018. The total intrinsic value of options exercised during the three and nine months ended September 30, 2018 was $8.5 million and $39.5 million, respectively, compared to $3.8 million and $25.8 million for the comparable 2017 periods.

The table below provides information for restricted stock units under the 2006 Equity Incentive Plan for the nine months ended September 30, 2018:

	Shares	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2017	637,667	$ 135.86
Granted	193,405	302.53
Vested	(213,944)	130.20
Forfeited	(37,080)	170.97
Nonvested at September 30, 2018	580,048	191.28

4. 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 our investments in qualified affordable housing projects.

The following table presents the carrying amounts and classification of significant variable interests in consolidated and unconsolidated VIEs as of September 30, 2018 and December 31, 2017:

(Dollars in thousands)	Consolidated VIEs	Unconsolidated VIEs	Maximum Exposure to Loss in Unconsolidated VIEs
September 30, 2018:			
Assets:			
Cash and cash equivalents	$ 5,470	$ —	$ —
Non-marketable and other equity securities (1)	212,514	524,812	524,812
Accrued interest receivable and other assets	298	—	—
Total assets	$ 218,282	$ 524,812	$ 524,812
Liabilities:			
Other liabilities (1)	680	166,867	—
Total liabilities	$ 680	$ 166,867	$ —
December 31, 2017:			
Assets:			
Cash and cash equivalents	$ 6,674	$ —	$ —
Non-marketable and other equity securities (1)	190,562	346,097	346,097
Accrued interest receivable and other assets	365	—	—
Total assets	$ 197,601	$ 346,097	$ 346,097
Liabilities:			
Other liabilities (1)	990	100,891	—
Total liabilities	$ 990	$ 100,891	$ —

(1) Included in our unconsolidated non-marketable and other equity securities portfolio at September 30, 2018 and December 31, 2017 are investments in qualified affordable housing projects of $261.7 million and $174.2 million, respectively, and related other liabilities consisting of unfunded credit commitments of $166.9 million and $100.9 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 investments in 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 13—"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 6—"Investment Securities" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

As of September 30, 2018, our exposure to loss with respect to the consolidated VIEs is limited to our net assets of $217.6 million and our exposure to loss for our unconsolidated VIEs is equal to our investment in these assets of $524.8 million.

5. Cash and Cash Equivalents

The following table details our cash and cash equivalents at September 30, 2018 and December 31, 2017:

(Dollars in thousands)	September 30, 2018	December 31, 2017
Cash and due from banks (1)	$ 3,697,018	$ 2,672,290
Securities purchased under agreements to resell (2)	119,181	247,876
Other short-term investment securities	2,942	2,909
Total cash and cash equivalents	$ 3,819,141	$ 2,923,075

(1) At September 30, 2018 and December 31, 2017, $2.1 billion and $0.6 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 $1.1 billion at both September 30, 2018 and December 31, 2017.

(2) At September 30, 2018 and December 31, 2017, securities purchased under agreements to resell were collateralized by U.S. Treasury securities and U.S. agency securities with aggregate fair values of $124.5 million and $252.8 million, respectively. None of these securities were sold or repledged as of September 30, 2018 and December 31, 2017.

6. 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 components of our available-for-sale investment securities portfolio at September 30, 2018 and December 31, 2017 are as follows:

	September 30, 2018			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Carrying Value
Available-for-sale securities, at fair value:				
U.S. Treasury securities	$ 5,560,828	$ 117	$ (59,071)	$ 5,501,874
U.S. agency debentures	1,357,069	—	(10,397)	1,346,672
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	2,001,048	3	(80,510)	1,920,541
Agency-issued collateralized mortgage obligations—variable rate	317,356	1,297	(131)	318,522
Total available-for-sale securities	$ 9,236,301	$ 1,417	$ (150,109)	$ 9,087,609

	December 31, 2017			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Carrying Value
Available-for-sale securities, at fair value:				
U.S. Treasury securities	$ 6,865,068	$ 1,113	$ (25,679)	$ 6,840,502
U.S. agency debentures	1,569,195	3,569	(5,636)	1,567,128
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	2,292,311	258	(25,534)	2,267,035
Agency-issued collateralized mortgage obligations—variable rate	372,481	1,375	(126)	373,730

Equity securities	31,953	40,525	(209)	72,269
Total available-for-sale securities	$ 11,131,008	$ 46,840	$ (57,184)	$ 11,120,664

The following table summarizes sale activity of available-for-sale securities during the three and nine months ended September 30, 2018 and 2017 as recorded in the line item “Gains on investment securities, net," a component of noninterest income:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Sales proceeds	$ —	$ 2,287	$ —	$ 7,311
Net realized gains and losses:				
Gross realized gains	—	38	—	1,131
Gross realized losses	—	(139)	—	(747)
Net realized (losses) gains	$ —	$ (101)	$ —	$ 384

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 September 30, 2018 and December 31, 2017:

	September 30, 2018					
	Less than 12 months		12 months or longer		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	$ 3,915,282	$ (46,503)	$ 1,438,839	$ (12,568)	$ 5,354,121	$ (59,071)
U.S. agency debentures	838,609	(4,615)	508,062	(5,782)	1,346,671	(10,397)
Residential mortgage-backed securities:						
Agency-issued collateralized mortgage obligations—fixed rate	812,726	(30,350)	1,103,803	(50,160)	1,916,529	(80,510)
Agency-issued collateralized mortgage obligations—variable rate	14,076	(5)	49,729	(126)	63,805	(131)
Total temporarily impaired securities (1)	$ 5,580,693	$ (81,473)	$ 3,100,433	$ (68,636)	$ 8,681,126	$ (150,109)

(1) As of September 30, 2018, we identified a total of 265 investments that were in unrealized loss positions, of which 109 investments totaling $3.1 billion with unrealized losses of $68.6 million have been in an impaired position for a period of time greater than 12 months. As of September 30, 2018, 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 September 30, 2018, 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, 2017					
	Less than 12 months		12 months or longer		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	$ 5,968,914	$ (23,397)	$ 323,966	$ (2,282)	$ 6,292,880	$ (25,679)
U.S. agency debentures	736,541	(2,289)	336,196	(3,347)	1,072,737	(5,636)
Residential mortgage-backed securities:						
Agency-issued collateralized mortgage obligations—fixed rate	2,193,277	(25,534)	—	—	2,193,277	(25,534)
Agency-issued collateralized mortgage obligations—variable rate	13,843	(3)	53,186	(123)	67,029	(126)
Equity securities	624	(209)	—	—	624	(209)
Total temporarily impaired securities (1)	$ 8,913,199	$ (51,432)	$ 713,348	$ (5,752)	$ 9,626,547	$ (57,184)

(1) As of December 31, 2017, we identified a total of 268 investments that were in unrealized loss positions, of which 46 investments totaling $713.3 million with unrealized losses of $5.8 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 September 30, 2018 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.

	September 30, 2018				
(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	$ 5,501,874	$ 2,016,438	$ 3,047,620	$ 437,816	$ —
U.S. agency debentures	1,346,672	653,271	693,401	—	—
Residential mortgage-backed securities:					
Agency-issued collateralized mortgage obligations—fixed rate	1,920,541	—	—	29,113	1,891,428
Agency-issued collateralized mortgage obligations—variable rate	318,522	—	—	—	318,522
Total	$ 9,087,609	$ 2,669,709	$ 3,741,021	$ 466,929	$ 2,209,950

Held-to-Maturity Securities

The components of our held-to-maturity investment securities portfolio at September 30, 2018 and December 31, 2017 are as follows:

	September 30, 2018			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Held-to-maturity securities, at cost:				
U.S. agency debentures (1)	$ 641,134	$ 85	$ (18,482)	$ 622,737
Residential mortgage-backed securities:				
Agency-issued mortgage-backed securities	8,333,088	2	(276,748)	8,056,342
Agency-issued collateralized mortgage obligations—fixed rate	2,329,065	—	(98,559)	2,230,506
Agency-issued collateralized mortgage obligations—variable rate	223,374	667	(32)	224,009
Agency-issued commercial mortgage-backed securities	2,795,952	—	(78,688)	2,717,264
Municipal bonds and notes	1,577,113	161	(55,894)	1,521,380
Total held-to-maturity securities	$ 15,899,726	$ 915	$ (528,403)	$ 15,372,238

(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, 2017 Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Held-to-maturity securities, at cost:				
U.S. agency debentures (1)	$ 659,979	$ 3,167	$ (1,601)	$ 661,545
Residential mortgage-backed securities:				
Agency-issued mortgage-backed securities	6,304,969	4,854	(43,528)	6,266,295
Agency-issued collateralized mortgage obligations—fixed rate	2,829,979	23	(54,372)	2,775,630
Agency-issued collateralized mortgage obligations—variable rate	255,782	733	(34)	256,481
Agency-issued commercial mortgage-backed securities	1,868,985	694	(25,563)	1,844,116
Municipal bonds and notes	743,761	3,452	(3,000)	744,213
Total held-to-maturity securities	$ 12,663,455	$ 12,923	$ (128,098)	$ 12,548,280

(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 September 30, 2018 and December 31, 2017:

(Dollars in thousands)	September 30, 2018 Less than 12 months Fair Value of Investments	Less than 12 months Unrealized Losses	12 months or longer Fair Value of Investments	12 months or longer Unrealized Losses	Total Fair Value of Investments	Total Unrealized Losses
Held-to-maturity securities:						
U.S. agency debentures	$ 549,916	$ (14,744)	$ 61,635	$ (3,738)	$ 611,551	$ (18,482)
Residential mortgage-backed securities:						
Agency-issued mortgage-backed securities	5,514,402	(155,580)	2,541,848	(121,168)	8,056,250	(276,748)
Agency-issued collateralized mortgage obligations—fixed rate	77,011	(2,285)	2,153,494	(96,274)	2,230,505	(98,559)
Agency-issued collateralized mortgage obligations—variable rate	3,504	(1)	8,445	(31)	11,949	(32)
Agency-issued commercial mortgage-backed securities	1,595,146	(30,149)	1,122,118	(48,539)	2,717,264	(78,688)
Municipal bonds and notes	1,429,117	(51,806)	83,486	(4,088)	1,512,603	(55,894)
Total temporarily impaired securities (1)	$ 9,169,096	$ (254,565)	$ 5,971,026	$ (273,838)	$ 15,140,122	$ (528,403)

(1) As of September 30, 2018, we identified a total of 1,433 investments that were in unrealized loss positions, of which 454 investments totaling $6.0 billion with unrealized losses of $273.8 million have been in an impaired position for a period of time greater than 12 months. As of September 30, 2018, 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 September 30, 2018, 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.

(Dollars in thousands)	December 31, 2017					
	Less than 12 months		12 months or longer		Total	
	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	$ 104,688	$ (1,601)	$ —	$ —	$ 104,688	$ (1,601)
Residential mortgage-backed securities:						
Agency-issued mortgage-backed securities	4,270,377	(34,092)	408,913	(9,436)	4,679,290	(43,528)
Agency-issued collateralized mortgage obligations—fixed rate	1,011,709	(13,631)	1,741,614	(40,741)	2,753,323	(54,372)
Agency-issued collateralized mortgage obligations—variable rate	—	—	9,812	(34)	9,812	(34)
Agency-issued commercial mortgage-backed securities	979,361	(11,566)	773,712	(13,997)	1,753,073	(25,563)
Municipal bonds and notes	344,796	(2,103)	32,844	(897)	377,640	(3,000)
Total temporarily impaired securities (1)	$ 6,710,931	$ (62,993)	$ 2,966,895	$ (65,105)	$ 9,677,826	$ (128,098)

(1) As of December 31, 2017, we identified a total of 753 investments that were in unrealized loss positions, of which 237 investments totaling $3.0 billion with unrealized losses of $65.1 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 September 30, 2018. 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.

	September 30, 2018									
	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	$ 641,134	$ 622,737	$ —	$ —	$ 104,550	$ 102,498	$ 536,584	$ 520,239	$ —	$ —
Residential mortgage-backed securities:										
Agency-issued mortgage-backed securities	8,333,088	8,056,342	—	—	179,847	174,664	859,233	821,883	7,294,008	7,059,795
Agency-issued collateralized mortgage obligations—fixed rate	2,329,065	2,230,506	—	—	—	—	474,668	452,428	1,854,397	1,778,078
Agency-issued collateralized mortgage obligations—variable rate	223,374	224,009	—	—	—	—	—	—	223,374	224,009
Agency-issued commercial mortgage-backed securities	2,795,952	2,717,264	—	—	—	—	—	—	2,795,952	2,717,264
Municipal bonds and notes	1,577,113	1,521,380	8,376	8,373	74,518	73,331	256,453	245,277	1,237,766	1,194,399
Total	$15,899,726	$15,372,238	$ 8,376	$ 8,373	$ 358,915	$ 350,493	$2,126,938	$2,039,827	$13,405,497	$12,973,545

Non-marketable and Other Equity Securities

The components of our non-marketable and other equity securities portfolio at September 30, 2018 and December 31, 2017 are as follows:

(Dollars in thousands)	September 30, 2018	December 31, 2017
Non-marketable and other equity securities:		
Non-marketable securities (fair value accounting):		
Consolidated venture capital and private equity fund investments (1)	$ 126,467	$ 128,111
Unconsolidated venture capital and private equity fund investments (2)	208,953	98,548
Other investments without a readily determinable fair value (3)	25,253	27,680
Other equity securities in public companies (fair value accounting) (4)	30,460	310
Non-marketable securities (equity method accounting) (5):		
Venture capital and private equity fund investments	112,537	89,809
Debt funds	5,241	21,183
Other investments	125,632	111,198
Investments in qualified affordable housing projects, net (6)	261,706	174,214
Total non-marketable and other equity securities	$ 896,249	$ 651,053

(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 September 30, 2018 and December 31, 2017 (fair value accounting):

	September 30, 2018		December 31, 2017	
(Dollars in thousands)	Amount	Ownership %	Amount	Ownership %
Strategic Investors Fund, LP	$ 12,733	12.6%	$ 14,673	12.6%
Capital Preferred Return Fund, LP	56,453	20.0	54,147	20.0
Growth Partners, LP	56,280	33.0	58,372	33.0
CP I, LP	1,001	10.7	919	10.7
Total consolidated venture capital and private equity fund investments	$ 126,467		$ 128,111	

(2) The carrying value represents investments in 220 and 235 funds (primarily venture capital funds) at September 30, 2018 and December 31, 2017, 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. Effective January 1, 2018, we adopted ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities which eliminated the concept of cost method accounting. On a prospective basis, we will 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 June 30th, for our September 30th consolidated financial statements, adjusted for any contributions paid, distributions received from the investment, and significant fund transactions or market events during the reporting period. We recorded a cumulative adjustment to opening retained earnings on January 1, 2018 for the difference between fair value and cost for these fund investments. The estimated fair value and carrying value of these venture capital and private equity fund investments was $209.0 million as of September 30, 2018. As of December 31, 2017, these investments were carried at cost and had a carrying value of $98.5 million.

(3) Effective January 1, 2018, we adopted ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities which eliminated the concept of cost method accounting. On a prospective basis, we will report our other investments in the line item "Other investments without a readily determinable fair value". 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 nine months ended September 30, 2018:

(Dollars in thousands)	Nine months ended September 30, 2018
Carrying value as of January 1, 2018	$ 27,680
Upward carrying value adjustments	4,854
Downward carrying value adjustments	(1,729)
Additions	3,870
Sales and dispositions	(9,422)
Carrying value as of September 30, 2018	$ 25,253

(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. Effective January 1, 2018 we adopted ASU 2016-01 Recognition and Measurement of Financial Assets and Financial Liabilities which requires equity securities to be measured at fair value with changes in the fair value recognized through net income. Prior to January 1, 2018 we reported equity securities in public companies that we held as a result of exercising public equity warrant assets in available-for-sale securities. On a prospective basis, these equity securities will be reported in non-marketable and other equity securities.

(5) The following table shows the carrying value and our ownership percentage of each investment at September 30, 2018 and December 31, 2017 (equity method accounting):

	September 30, 2018		December 31, 2017	
(Dollars in thousands)	Amount	Ownership %	Amount	Ownership %
Venture capital and private equity fund investments:				
Strategic Investors Fund II, LP	$ 4,739	8.6%	$ 6,342	8.6%
Strategic Investors Fund III, LP	18,176	5.9	18,758	5.9
Strategic Investors Fund IV, LP	29,445	5.0	25,551	5.0
Strategic Investors Fund V funds	24,245	Various	16,856	Various
CP II, LP (i)	6,865	5.1	6,700	5.1
Other venture capital and private equity fund investments	29,067	Various	15,602	Various
Total venture capital and private equity fund investments	$ 112,537		$ 89,809	
Debt funds:				
Gold Hill Capital 2008, LP (ii)	$ 3,267	15.5%	$ 18,690	15.5%
Other debt funds	1,974	Various	2,493	Various
Total debt funds	$ 5,241		$ 21,183	
Other investments:				
SPD Silicon Valley Bank Co., Ltd.	$ 75,314	50.0%	$ 75,337	50.0%
Other investments	50,318	Various	35,861	Various
Total other investments	$ 125,632		$ 111,198	

(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 September 30, 2018 and December 31, 2017:

(Dollars in thousands)	September 30, 2018	December 31, 2017
Investments in qualified affordable housing projects, net	$ 261,706	$ 174,214
Other liabilities	166,867	100,891

The following table presents other information relating to our investments in qualified affordable housing projects for the three and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Tax credits and other tax benefits recognized	$ 6,283	$ 4,539	$ 16,912	$ 13,199
Amortization expense included in provision for income taxes (i)	4,773	3,533	14,269	10,154

(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 on non-marketable and other equity securities for the three and nine months ended September 30, 2018 and 2017 as recorded in the line item “Gains on investment securities, net," a component of noninterest income:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Net gains on non-marketable and other equity securities:				
Non-marketable securities (fair value accounting):				
Consolidated venture capital and private equity fund investments	$ 2,928	$ 4,473	$ 18,971	$ 20,649
Unconsolidated venture capital and private equity fund investments (1)	6,240	4,697	37,095	13,928
Other investments without a readily determinable fair value (1)	2,509	(49)	4,310	3,354
Other equity securities in public companies (fair value accounting) (1)	4,407	387	(17,786)	280
Non-marketable securities (equity method accounting):				
Venture capital and private equity fund investments	11,341	4,319	30,122	10,710
Debt funds	1,473	2,445	(100)	2,696
Other investments	3,295	(933)	4,753	(3,163)
Total net gains on non-marketable and other equity securities	$ 32,193	$ 15,339	$ 77,365	$ 48,454
Less: Net gains (losses) on non-marketable and other equity securities sold	357	(49)	(20,806)	3,355
Unrealized net gains on non-marketable and other equity securities still held	$ 31,836	$ 15,388	$ 98,171	$ 45,099

(1) Prior period amounts are not determined in a manner consistent with the current period presentation due to the adoption of accounting standard update (ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities (Topic 825)).

7. 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 $174 million and $148 million at September 30, 2018 and December 31, 2017, respectively, is presented in the following table:

(Dollars in thousands)	September 30, 2018	December 31, 2017
Commercial loans:		
Software/internet	$ 6,258,724	$ 6,172,531
Hardware	1,306,709	1,193,599
Private equity/venture capital	13,360,511	9,952,377
Life science/healthcare	2,302,453	1,808,827
Premium wine	227,498	204,105
Other	256,413	365,724
Total commercial loans	23,712,308	19,697,163
Real estate secured loans:		
Premium wine (1)	685,941	669,053
Consumer loans (2)	2,556,906	2,300,506
Other	40,879	42,068
Total real estate secured loans	3,283,726	3,011,627
Construction loans	81,163	68,546
Consumer loans	417,718	328,980
Total loans, net of unearned income (3)	$ 27,494,915	$ 23,106,316

(1) Included in our premium wine portfolio are gross construction loans of $92 million and $100 million at September 30, 2018 and December 31, 2017, respectively.
(2) Consumer loans secured by real estate at September 30, 2018 and December 31, 2017 were comprised of the following:

(Dollars in thousands)	September 30, 2018	December 31, 2017
Loans for personal residence	$ 2,196,948	$ 1,995,840
Loans to eligible employees	285,186	243,118
Home equity lines of credit	74,772	61,548
Consumer loans secured by real estate	$ 2,556,906	$ 2,300,506

(3) Included within our total loan portfolio are credit card loans of $342 million and $270 million at September 30, 2018 and December 31, 2017, respectively.

Credit Quality

The composition of loans, net of unearned income of $174 million and $148 million at September 30, 2018 and December 31, 2017, respectively, broken out by portfolio segment and class of financing receivable, is as follows:

(Dollars in thousands)	September 30, 2018	December 31, 2017
Commercial loans:		
Software/internet	$ 6,258,724	$ 6,172,531
Hardware	1,306,709	1,193,599
Private equity/venture capital	13,360,511	9,952,377
Life science/healthcare	2,302,453	1,808,827
Premium wine	913,439	873,158
Other	378,455	476,338
Total commercial loans	24,520,291	20,476,830
Consumer loans:		
Real estate secured loans	2,556,906	2,300,506
Other consumer loans	417,718	328,980
Total consumer loans	2,974,624	2,629,486
Total loans, net of unearned income	$ 27,494,915	$ 23,106,316

The following table summarizes the aging of our gross loans, broken out by portfolio segment and class of financing receivable as of September 30, 2018 and December 31, 2017:

(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
September 30, 2018:						
Commercial loans:						
Software/internet	$ 17,067	$ 4,842	$ 116	$ 22,025	$ 6,175,651	$ 116
Hardware	491	99	—	590	1,298,215	—
Private equity/venture capital	7,556	—	2	7,558	13,357,777	2
Life science/healthcare	9,620	897	45	10,562	2,330,483	45
Premium wine	1,594	—	—	1,594	910,356	—
Other	340	27	—	367	400,547	—
Total commercial loans	36,668	5,865	163	42,696	24,473,029	163
Consumer loans:						
Real estate secured loans	8,389	—	—	8,389	2,540,950	—
Other consumer loans	2,111	—	—	2,111	415,582	—
Total consumer loans	10,500	—	—	10,500	2,956,532	—
Total gross loans excluding impaired loans	47,168	5,865	163	53,196	27,429,561	163
Impaired loans	2,345	970	29,197	32,512	153,560	—
Total gross loans	$ 49,513	$ 6,835	$ 29,360	$ 85,708	$ 27,583,121	$ 163
December 31, 2017:						
Commercial loans:						
Software/internet	$ 14,257	$ 6,526	$ 141	$ 20,924	$ 6,101,147	$ 141
Hardware	1,145	77	50	1,272	1,163,278	50
Private equity/venture capital	86,566	38,580	—	125,146	9,835,317	—
Life science/healthcare	4,390	191	—	4,581	1,841,692	—
Premium wine	418	—	—	418	871,074	—
Other	445	—	—	445	490,292	—
Total commercial loans	107,221	45,374	191	152,786	20,302,800	191
Consumer loans:						
Real estate secured loans	2,164	532	—	2,696	2,292,980	—
Other consumer loans	796	—	—	796	327,234	—
Total consumer loans	2,960	532	—	3,492	2,620,214	—
Total gross loans excluding impaired loans	110,181	45,906	191	156,278	22,923,014	191
Impaired loans	1,344	11,902	30,403	43,649	131,212	—
Total gross loans	$ 111,525	$ 57,808	$ 30,594	$ 199,927	$ 23,054,226	$ 191

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 September 30, 2018 and December 31, 2017:

(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
September 30, 2018:				
Commercial loans:				
Software/internet	$ 64,197	$ 55,442	$ 119,639	$ 145,122
Hardware	2,431	17,249	19,680	31,804
Private equity/venture capital	—	3,700	3,700	3,700
Life science/healthcare	22,300	14,125	36,425	44,065
Premium wine	306	2,010	2,316	2,375
Other	—	—	—	—
Total commercial loans	89,234	92,526	181,760	227,066
Consumer loans:				
Real estate secured loans	3,990	322	4,312	5,996
Other consumer loans	—	—	—	—
Total consumer loans	3,990	322	4,312	5,996
Total	$ 93,224	$ 92,848	$ 186,072	$ 233,062
December 31, 2017:				
Commercial loans:				
Software/internet	$ 49,645	$ 61,009	$ 110,654	$ 129,006
Hardware	15,637	20,713	36,350	41,721
Private equity/venture capital	658	—	658	984
Life science/healthcare	20,521	1,166	21,687	26,360
Premium wine	—	2,877	2,877	2,911
Other	32	—	32	165
Total commercial loans	86,493	85,765	172,258	201,147
Consumer loans:				
Real estate secured loans	1,331	850	2,181	3,712
Other consumer loans	422	—	422	436
Total consumer loans	1,753	850	2,603	4,148
Total	$ 88,246	$ 86,615	$ 174,861	$ 205,295

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 and nine months ended September 30, 2018 and 2017:

Three months ended September 30,	Average impaired loans		Interest income recognized on impaired loans	
(Dollars in thousands)	2018	2017	2018	2017
Commercial loans:				
Software/internet	$ 118,840	$ 121,290	$ 607	$ 767
Hardware	27,922	35,932	410	419
Private equity/venture capital	1,233	644	—	3
Life science/healthcare	38,545	25,796	365	21
Premium wine	2,384	3,625	35	39
Other	—	348	—	—
Total commercial loans	188,924	187,635	1,417	1,249
Consumer loans:				
Real estate secured loans	4,330	1,306	4	24
Other consumer loans	—	1,966	—	—
Total consumer loans	4,330	3,272	4	24
Total average impaired loans	$ 193,254	$ 190,907	$ 1,421	$ 1,273

Nine months ended September 30,	Average impaired loans		Interest income recognized on impaired loans	
(Dollars in thousands)	2018	2017	2018	2017
Commercial loans:				
Software/internet	$ 112,576	$ 122,527	$ 991	$ 1,646
Hardware	34,469	33,271	499	518
Private equity/venture capital	536	443	—	8
Life science/healthcare	27,671	33,590	376	60
Premium wine	2,586	3,353	103	115
Other	130	706	—	—
Total commercial loans	177,968	193,890	1,969	2,347
Consumer loans:				
Real estate secured loans	3,953	1,385	12	24
Other consumer loans	477	1,931	—	—
Total consumer loans	4,430	3,316	12	24
Total average impaired loans	$ 182,398	$ 197,206	$ 1,981	$ 2,371

The following tables summarize the activity relating to our allowance for loan losses for the three and nine months ended September 30, 2018 and 2017, broken out by portfolio segment:

Three months ended September 30, 2018 (Dollars in thousands)	Beginning Balance June 30, 2018	Charge-offs	Recoveries	Provision for (Reduction of) Loan Losses	Foreign Currency Translation Adjustments	Ending Balance September 30, 2018
Commercial loans:						
Software/internet	$ 102,648	$ (6,304)	$ 841	$ 16,640	$ (335)	$ 113,490
Hardware	34,695	(12,697)	227	(1,763)	36	20,498
Private equity/venture capital	89,409	—	3	1,632	(33)	91,011
Life science/healthcare	35,064	(2,076)	189	2,322	(47)	35,452
Premium wine	3,438	—	—	125	(3)	3,560
Other	2,896	(1,128)	771	118	(2)	2,655
Total commercial loans	268,150	(22,205)	2,031	19,074	(384)	266,666
Total consumer loans	18,559	—	133	362	(7)	19,047
Total allowance for loan losses	$ 286,709	$ (22,205)	$ 2,164	$ 19,436	$ (391)	$ 285,713

Three months ended September 30, 2017 (Dollars in thousands)	Beginning Balance June 30, 2017	Charge-offs	Recoveries	Provision for (Reduction of) Loan Losses	Foreign Currency Translation Adjustments	Ending Balance September 30, 2017
Commercial loans:						
Software/internet	$ 92,937	$ (8,791)	$ 426	$ 7,241	$ 199	$ 92,012
Hardware	27,800	(2,453)	115	5,681	156	31,299
Private equity/venture capital	66,785	—	—	10,142	279	77,206
Life science/healthcare	27,730	(1,083)	63	(1,621)	(45)	25,044
Premium wine	3,133	—	—	362	10	3,505
Other	4,135	—	947	(931)	(26)	4,125
Total commercial loans	222,520	(12,327)	1,551	20,874	573	233,191
Total consumer loans	13,976	(11)	277	1,535	42	15,819
Total allowance for loan losses	$ 236,496	$ (12,338)	$ 1,828	$ 22,409	$ 615	$ 249,010

Nine months ended September 30, 2018 (Dollars in thousands)	Beginning Balance December 31, 2017	Charge-offs	Recoveries	Provision for (Reduction of) Loan Losses	Foreign Currency Translation Adjustments	Ending Balance September 30, 2018
Commercial loans:						
Software/internet	$ 96,104	$ (26,377)	$ 1,818	$ 42,620	$ (675)	$ 113,490
Hardware	27,614	(16,111)	1,458	7,788	(251)	20,498
Private equity/venture capital	82,468	(112)	13	8,200	442	91,011
Life science/healthcare	24,924	(2,940)	245	13,829	(606)	35,452
Premium wine	3,532	—	—	42	(14)	3,560
Other	3,941	(2,391)	1,874	(775)	6	2,655
Total commercial loans	238,583	(47,931)	5,408	71,704	(1,098)	266,666
Total consumer loans	16,441	(289)	470	2,384	41	19,047
Total allowance for loan losses	$ 255,024	$ (48,220)	$ 5,878	$ 74,088	$ (1,057)	$ 285,713

Nine months ended September 30, 2017 (Dollars in thousands)	Beginning Balance December 31, 2016	Charge-offs	Recoveries	Provision for (Reduction of) Loan Losses	Foreign Currency Translation Adjustments	Ending Balance September 30, 2017
Commercial loans:						
Software/internet	$ 97,388	$ (36,172)	$ 2,833	$ 27,487	$ 476	$ 92,012
Hardware	31,166	(6,726)	459	6,075	325	31,299
Private equity/venture capital	50,299	—	—	26,111	796	77,206
Life science/healthcare	25,446	(7,493)	107	6,906	78	25,044
Premium wine	4,115	—	—	(567)	(43)	3,505
Other	4,768	(1,047)	1,424	(1,005)	(15)	4,125
Total commercial loans	213,182	(51,438)	4,823	65,007	1,617	233,191
Total consumer loans	12,184	(11)	1,332	2,266	48	15,819
Total allowance for loan losses	$ 225,366	$ (51,449)	$ 6,155	$ 67,273	$ 1,665	$ 249,010

The following table summarizes the activity relating to our allowance for unfunded credit commitments for the three and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Allowance for unfunded credit commitments, beginning balance	$ 54,104	$ 47,000	$ 51,770	$ 45,265
(Reduction of) provision for unfunded credit commitments	(2,262)	1,113	138	2,789
Foreign currency translation adjustments	(34)	59	(100)	118
Allowance for unfunded credit commitments, ending balance (1)	$ 51,808	$ 48,172	$ 51,808	$ 48,172

(1) See Note 13—"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 September 30, 2018 and December 31, 2017, broken out by portfolio segment:

	September 30, 2018				December 31, 2017			
	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	$ 36,856	$ 119,639	$ 76,634	$ 6,139,085	$ 23,088	$ 110,654	$ 73,016	$ 6,061,877
Hardware	764	19,680	19,734	1,287,029	8,450	36,350	19,164	1,157,249
Private equity/venture capital	—	3,700	91,011	13,356,811	330	658	82,138	9,951,719
Life science/healthcare	11,951	36,425	23,501	2,266,028	9,315	21,687	15,609	1,787,140
Premium wine	3	2,316	3,557	911,123	—	2,877	3,532	870,281
Other	—	—	2,655	378,455	32	32	3,909	476,306
Total commercial loans	49,574	181,760	217,092	24,338,531	41,215	172,258	197,368	20,304,572
Total consumer loans	418	4,312	18,629	2,970,312	578	2,603	15,863	2,626,883
Total	$ 49,992	$ 186,072	$ 235,721	$ 27,308,843	$ 41,793	$ 174,861	$ 213,231	$ 22,931,455

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 2017 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 September 30, 2018 and December 31, 2017:

(Dollars in thousands)	Pass	Performing (Criticized)	Performing Impaired (Criticized)	Nonperforming Impaired (Nonaccrual)	Total
September 30, 2018:					
Commercial loans:					
Software/internet	$ 5,613,023	$ 584,653	$ 37,204	$ 82,435	$ 6,317,315
Hardware	1,245,532	53,273	17,249	2,431	1,318,485
Private equity/venture capital	13,362,294	3,041	—	3,700	13,369,035
Life science/healthcare	2,172,679	168,366	14,125	22,300	2,377,470
Premium wine	862,311	49,639	2,010	306	914,266
Other	398,263	2,651	—	—	400,914
Total commercial loans	23,654,102	861,623	70,588	111,172	24,697,485
Consumer loans:					
Real estate secured loans	2,529,708	19,631	322	3,990	2,553,651
Other consumer loans	417,344	349	—	—	417,693
Total consumer loans	2,947,052	19,980	322	3,990	2,971,344
Total gross loans	$ 26,601,154	$ 881,603	$ 70,910	$ 115,162	$ 27,668,829
December 31, 2017:					
Commercial loans:					
Software/internet	$ 5,655,739	$ 466,332	$ 31,794	$ 78,860	$ 6,232,725
Hardware	1,112,574	51,976	20,165	16,185	1,200,900
Private equity/venture capital	9,955,082	5,381	—	658	9,961,121
Life science/healthcare	1,720,613	125,660	1,167	20,520	1,867,960
Premium wine	834,537	36,955	2,476	401	874,369
Other	469,721	21,016	—	32	490,769
Total commercial loans	19,748,266	707,320	55,602	116,656	20,627,844
Consumer loans:					
Real estate secured loans	2,282,375	13,301	—	2,181	2,297,857
Other consumer loans	326,851	1,179	—	422	328,452
Total consumer loans	2,609,226	14,480	—	2,603	2,626,309
Total gross loans	$ 22,357,492	$ 721,800	$ 55,602	$ 119,259	$ 23,254,153

Troubled Debt Restructurings

As of September 30, 2018, we had 20 TDRs with a total carrying value of $85.8 million where concessions have been granted to borrowers experiencing financial difficulties, in an attempt to maximize collection. There were $0.8 million of unfunded commitments available for funding to the clients associated with these TDRs as of September 30, 2018.

The following table summarizes our loans modified in TDRs, broken out by portfolio segment and class of financing receivables at September 30, 2018 and December 31, 2017:

(Dollars in thousands)	September 30, 2018	December 31, 2017
Loans modified in TDRs:		
Commercial loans:		
Software/internet	$ 49,078	$ 73,455
Hardware	12,499	51,132
Private equity/venture capital	—	350
Life science/healthcare	20,942	19,235
Premium wine	2,964	3,198
Total commercial loans	85,483	147,370
Consumer loans:		
Other consumer loans	322	423
Total	$ 85,805	$ 147,793

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 and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Loans modified in TDRs during the period:				
Commercial loans:				
Software/internet	$ —	$ 10,876	$ 14,069	$ 26,034
Hardware	10,398	396	12,347	396
Life science/healthcare	—	—	5,909	—
Premium wine	—	—	—	185
Total commercial loans	10,398	11,272	32,325	26,615
Consumer loans:				
Other consumer loans	—	—	322	—
Total loans modified in TDRs during the period (1)	$ 10,398	$ 11,272	$ 32,647	$ 26,615

(1) There were $13.0 million and $21.5 million of partial charge-offs for the three and nine months ended September 30, 2018, respectively, and zero and $2.6 million of partial charge-offs during the three and nine months ended September 30, 2017, respectively.

During the three and nine months ended September 30, 2018, all new TDRs of $10.4 million and $32.6 million, respectively, were modified through payment deferrals granted to our clients. During the three and nine months ended September 30, 2017, all new TDRs of $11.3 million and $26.6 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 and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
TDRs modified within the previous 12 months that defaulted during the period:				
Commercial loans:				
Software/internet	$ 18,911	$ 1,234	$ 41,568	$ 1,234
Hardware	2,100	—	5,549	—
Life science/healthcare	5,909	—	7,139	—
Premium wine	—	186	—	186
Total TDRs modified within the previous 12 months that defaulted in the period	$ 26,920	$ 1,420	$ 54,256	$ 1,420

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 September 30, 2018.

8. Short-Term Borrowings and Long-Term Debt

The following table represents outstanding short-term borrowings and long-term debt at September 30, 2018 and December 31, 2017:

			Carrying Value	
(Dollars in thousands)	Maturity	Principal value at September 30, 2018	September 30, 2018	December 31, 2017
Short-term borrowings:				
Short-term FHLB advances	(1)	$ 2,250,000	$ 2,250,000	$ 700,000
Federal funds purchased		—	—	330,000
Securities sold under agreement to repurchase	(2)	371,539	371,539	—
Other short-term borrowings	(3)	9,713	9,713	3,730
Total short-term borrowings			$ 2,631,252	$ 1,033,730
Long-term debt:				
3.50% Senior Notes	January 29, 2025	$ 350,000	$ 347,554	$ 347,303
5.375% Senior Notes	September 15, 2020	350,000	348,663	348,189
Total long-term debt			$ 696,217	$ 695,492

(1) Represents advances from the FHLB at September 30, 2018 with maturity dates through November 26, 2018.
(2) Securities sold under repurchase agreements are effectively short-term collateralized borrowings. Gross repurchase agreements held at September 30, 2018 have maturity dates through October 17, 2018.
(3) 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 $12.0 million and $29.1 million for the three and nine months ended September 30,2018, respectively, and $9.0 million and $27.2 million for the three and nine months ended September 30, 2017, respectively. The weighted average interest rate associated with our short-term borrowings was 2.31 percent as of September 30, 2018 and 1.39 percent as of December 31, 2017.

Available Lines of Credit

We have certain facilities in place to enable us to access short-term borrowings on a secured (using loans and fixed income investment securities as collateral) and unsecured basis. These include repurchase agreements and federal funds lines with various financial institutions. As of September 30, 2018, we did not have any borrowings outstanding against our federal funds lines. We also pledge collateral to the FHLB of San Francisco (comprised primarily of loans and fixed income investment securities) and the discount window at the FRB (comprised primarily of fixed income investment securities) of which $2.0 billion and $1.0 billion, respectively, of our borrowing capacity, was unused and available to support additional borrowings at September 30, 2018.

9. 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.

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 2017 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 September 30, 2018 and December 31, 2017 were as follows:

	September 30, 2018			December 31, 2017		
	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 not designated as hedging instruments:						
Currency exchange risks:						
Foreign exchange forwards	$ 241,360	$ 2,842	$ —	$ 50,889	$ 414	$ —
Foreign exchange forwards	397,153	—	4,370	425,055	—	5,201
Other derivative instruments:						
Equity warrant assets	223,868	146,967	—	211,253	123,763	—
Client foreign exchange forwards	2,523,524	77,585	—	2,203,643	95,035	—
Client foreign exchange forwards	2,390,294	—	70,317	2,092,207	—	90,253
Client foreign currency options	91,125	1,476	—	102,678	1,187	—
Client foreign currency options	91,149	—	1,478	102,678	—	1,187
Client interest rate derivatives (2)	937,808	6,262	—	726,984	11,753	—
Client interest rate derivatives	1,335,830	—	15,156	782,586	—	11,940
Total Derivatives not designated as hedging instruments		$ 235,132	$ 91,321		$ 232,152	$ 108,581

(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 September 30, 2018 reflects rule changes implemented by two central clearing houses that allow entities to elect 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 at September 30, 2018, reflect reductions of approximately $8.7 million of derivative assets that previously would have been reported on a gross basis and approximately $302.4 million in related notional amounts for these derivative assets cleared through central clearing houses.

A summary of our derivative activity and the related impact on our consolidated statements of income for the three and nine months ended September 30, 2018 and 2017 is as follows:

		Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	**Statement of income location**	**2018**	**2017**	**2018**	**2017**
Derivatives designated as hedging instruments:					
Interest rate risks:					
Net cash benefit associated with interest rate swaps	Interest expense—borrowings	$ —	$ 62	$ —	$ 997
Changes in fair value of interest rate swaps	Other noninterest income	—	—	—	(7)
Net gains associated with interest rate risk derivatives		$ —	$ 62	$ —	$ 990
Derivatives not designated as hedging instruments:					
Currency exchange risks:					
Gains on revaluations of internal foreign currency instruments, net	Other noninterest income	$ 5,412	$ 10,561	$ 8,019	$ 29,265
(Losses) on internal foreign exchange forward contracts, net	Other noninterest income	(5,002)	(10,550)	(8,055)	(28,349)
Net gains (losses) associated with internal currency risk		$ 410	$ 11	$ (36)	$ 916
Other derivative instruments:					
(Losses) gains on revaluations of client foreign currency instruments, net	Other noninterest income	$ (1,187)	$ 3,760	$ 3,718	$ 8,889
Gains (losses) on client foreign exchange forward contracts, net	Other noninterest income	1,573	(3,871)	(2,697)	(8,350)
Net gains (losses) associated with client currency risk		$ 386	$ (111)	$ 1,021	$ 539
Net gains on equity warrant assets	Gains on equity warrant assets, net	$ 34,141	$ 24,922	$ 72,393	$ 42,432
Net gains (losses) on other derivatives	Other noninterest income	$ 222	$ (38)	$ 643	$ (524)

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 September 30, 2018 and December 31, 2017:

(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)	
September 30, 2018						
Derivative Assets:						
Foreign exchange forwards	$ 80,427	$ —	$ 80,427	$ (29,400)	$ (6,816)	$ 44,211
Foreign currency options	1,476	—	1,476	(811)	—	665
Client interest rate derivatives	6,262	—	6,262	(3,365)	(2,897)	—
Total derivative assets	88,165	—	88,165	(33,576)	(9,713)	44,876
Reverse repurchase, securities borrowing, and similar arrangements	119,181	—	119,181	(119,181)	—	—
Total	$ 207,346	$ —	$ 207,346	$ (152,757)	$ (9,713)	$ 44,876
December 31, 2017						
Derivative Assets:						
Foreign exchange forwards (2)	$ 95,449	$ —	$ 95,449	$ (14,570)	$ (3,616)	$ 77,263
Foreign currency options	1,187	—	1,187	(557)	—	630
Client interest rate derivatives (2)	11,753	—	11,753	(11,627)	(114)	12
Total derivative assets	108,389	—	108,389	(26,754)	(3,730)	77,905
Reverse repurchase, securities borrowing, and similar arrangements	247,876	—	247,876	(247,876)	—	—
Total	$ 356,265	$ —	$ 356,265	$ (274,630)	$ (3,730)	$ 77,905

(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.

(2) For the period ending December 31, 2017, previously reported amounts for our foreign exchange forwards and client interest rate derivatives were reclassified between "Financial Instruments" and "Cash Collateral Received" to properly reflect cash collateral received for these derivative assets subject to master netting arrangements, respectively. The correction of this immaterial error had no impact on the "Net Amount" of derivative assets subject to enforceable master netting arrangements.

The following table summarizes our liabilities subject to enforceable master netting arrangements as of September 30, 2018 and December 31, 2017:

(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)	
September 30, 2018						
Derivative Liabilities:						
Foreign exchange forwards	$ 74,687	$ —	$ 74,687	$ (22,038)	$ (20,036)	$ 32,613
Foreign currency options	1,478	—	1,478	(666)	—	812
Client interest rate derivatives	15,156	—	15,156	(4,882)	(10,180)	94
Total derivative liabilities	91,321	—	91,321	(27,586)	(30,216)	33,519
Repurchase, securities lending, and similar arrangements	371,539	—	371,539	(147,757)	(750)	223,032
Total	$ 462,860	$ —	$ 462,860	$ (175,343)	$ (30,966)	$ 256,551
December 31, 2017						
Derivative Liabilities:						
Foreign exchange forwards (2)	$ 95,454	$ —	$ 95,454	$ (10,997)	$ (69,110)	$ 15,347
Foreign currency options (2)	1,187	—	1,187	(501)	(130)	556
Client interest rate derivatives (2)	11,940	—	11,940	—	(11,924)	16
Total derivative liabilities (2)	108,581	—	108,581	(11,498)	(81,164)	15,919
Repurchase, securities lending, and similar arrangements	—	—	—	—	—	—
Total (2)	$ 108,581	$ —	$ 108,581	$ (11,498)	$ (81,164)	$ 15,919

(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.
(2) For the period ending December 31, 2017, previously reported amounts included in "Financial Instruments" were reclassified to "Cash Collateral Pledged" to properly reflect cash collateral pledged for these derivative liabilities subject to master netting arrangements. The correction of this immaterial error had no impact on the "Net Amount" of derivative liabilities subject to enforceable master netting arrangements.

10. Noninterest Income

On January 1, 2018, we adopted Topic 606 using the modified retrospective method applied to those contracts which were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018, are presented under Topic 606, while prior period amounts are not adjusted and continue to be reported in accordance with our previous accounting methodology under Topic 605. A summary of noninterest income for the three and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Noninterest income:				
Gains on investment securities, net	$ 32,193	$ 15,238	$ 77,365	$ 48,838
Gains on equity warrant assets, net	34,141	24,922	72,393	42,432
Foreign exchange fees	32,656	29,671	100,560	82,026
Credit card fees	24,121	20,270	68,739	56,099
Deposit service charges	19,588	14,508	56,081	43,046
Client investment fees	36,265	15,563	88,592	37,571
Lending related fees	10,675	15,404	30,938	32,874
Letters of credit and standby letters of credit fees	8,409	7,306	24,938	20,951
Other	12,022	15,896	38,671	41,128
Total noninterest income	$ 210,070	$ 158,778	$ 558,277	$ 404,965

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 and investments in 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, 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 (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 outside of the scope of the new revenue standard as it explicitly excludes noninterest income earned from our investment-related activities. A summary of gains and losses on investment securities for the three and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Gains on non-marketable and other equity securities, net	$ 32,193	$ 15,339	$ 77,365	$ 48,454
(Losses) gains on sales of available-for-sale securities, net	—	(101)	—	384
Total gains on investment securities, net	$ 32,193	$ 15,238	$ 77,365	$ 48,838

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 the new revenue standard as it explicitly excludes noninterest income earned from our derivative-related activities. A summary of net gains on equity warrant assets for the three and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Equity warrant assets:				
Gains on exercises, net	$ 18,287	$ 7,449	$ 42,808	$ 22,482
Cancellations and expirations	(1,432)	(757)	(3,158)	(3,614)
Changes in fair value, net	17,286	18,230	32,743	23,564
Total net gains on equity warrant assets	$ 34,141	$ 24,922	$ 72,393	$ 42,432

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 the new revenue standard 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 and nine months ended September 30, 2018 and 2017 is as follows:

(Dollars in thousands)	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Foreign exchange fees by instrument type:				
Spot contract commissions	$ 30,041	$ 27,700	$ 92,791	$ 73,707
Forward contract commissions	2,534	1,877	7,474	7,948
Option premium fees	81	94	295	371
Total foreign exchange fees	$ 32,656	$ 29,671	$ 100,560	$ 82,026

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 and nine months ended September 30, 2018 and 2017 is as follows:

(Dollars in thousands)	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Credit card fees by instrument type:				
Card interchange fees, net	$ 18,849	$ 16,179	$ 54,547	$ 44,182
Merchant service fees	3,679	2,930	10,010	8,553
Card service fees	1,593	1,161	4,182	3,364
Total credit card fees	$ 24,121	$ 20,270	$ 68,739	$ 56,099

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.

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 and nine months ended September 30, 2018 and 2017, is as follows:

(Dollars in thousands)	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Client investment fees by type:				
Sweep money market fees	$ 21,105	$ 7,968	$ 50,605	$ 18,838
Asset management fees (1)	6,358	4,177	17,447	11,666
Repurchase agreement fees	8,802	3,418	20,540	7,067
Total client investment fees (2)	$ 36,265	$ 15,563	$ 88,592	$ 37,571

(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 the new revenue standard as it explicitly excludes noninterest income earned from our lending-related activities. A summary of lending related fees by instrument type for the three and nine months ended September 30, 2018 and 2017 is as follows:

(Dollars in thousands)	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Lending related fees by instrument type:				
Unused commitment fees	$ 8,410	$ 12,334	$ 24,994	$ 25,923
Other	2,265	3,070	5,944	6,951
Total lending related fees	$ 10,675	$ 15,404	$ 30,938	$ 32,874

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 the new revenue standard as it explicitly excludes noninterest income earned from our lending related activities.

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 the new revenue standard.

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 and nine months ended September 30, 2018 and 2017 is as follows:

(Dollars in thousands)	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Other noninterest income by instrument type:				
Fund management fees	$ 5,479	$ 5,198	$ 17,144	$ 15,903
Net gains (losses) on revaluation of foreign currency instruments, net of foreign exchange forward contracts(1)	796	(100)	985	1,455
Other service revenue	5,747	10,798	20,542	23,770
Total other noninterest income	$ 12,022	$ 15,896	$ 38,671	$ 41,128

(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 and nine months ended September 30, 2018:

Three months ended September 30, 2018 (Dollars in thousands)	Global Commercial Bank	SVB Private Bank	SVB Capital	Other Income	Total
Revenue from contracts with customers:					
Spot contract commissions	$ 29,776	$ 184	$ —	$ 81	$ 30,041
Card interchange fees, gross	33,905	—	—	108	34,013
Merchant service fees	3,677	2	—	—	3,679
Deposit service charges	19,207	24	—	357	19,588
Client investment fees	14,740	420	—	21,105	36,265
Fund management fees	—	—	5,479	—	5,479
Correspondent bank rebates	1,372	—	—	—	1,372
Total revenue from contracts with customers	$ 102,677	$ 630	$ 5,479	$ 21,651	$ 130,437
Revenues outside the scope of ASC 606 (1)	11,446	(25)	18,944	49,268	79,633
Total noninterest income	$ 114,123	$ 605	$ 24,423	$ 70,919	$ 210,070

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

Nine months ended September 30, 2018 (Dollars in thousands)	Global Commercial Bank	SVB Private Bank	SVB Capital	Other Income	Total
Revenue from contracts with customers:					
Spot contract commissions	$ 92,098	$ 507	$ —	$ 186	$ 92,791
Card interchange fees, gross	95,088	—	—	311	95,399
Merchant service fees	10,008	2	—	—	10,010
Deposit service charges	54,633	83	—	1,365	56,081
Client investment fees	36,885	1,101	—	50,606	88,592
Fund management fees	—	—	17,144	—	17,144
Correspondent bank rebates	4,241	—	—	—	4,241
Total revenue from contracts with customers	$ 292,953	$ 1,693	$ 17,144	$ 52,468	$ 364,258
Revenues outside the scope of ASC 606 (1)	33,761	(16)	64,688	95,586	194,019
Total noninterest income	$ 326,714	$ 1,677	$ 81,832	$ 148,054	$ 558,277

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

11. Other Noninterest Expense

A summary of other noninterest expense for the three and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Lending and other client related processing costs	$ 5,698	$ 6,935	$ 16,301	$ 18,806
Data processing services	2,740	2,244	7,934	7,254
Telephone	2,269	2,518	7,025	7,892
Dues and publications	1,387	883	3,081	2,355
Postage and supplies	652	612	2,133	2,013
Other	5,393	4,872	15,171	16,350
Total other noninterest expense	$ 18,139	$ 18,064	$ 51,645	$ 54,670

12. Segment Reporting

We have three reportable segments for management reporting purposes: Global Commercial Bank, SVB Private Bank and SVB Capital. 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 loans funded. 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 three 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, global trade finance, and other services. It serves clients within the United States, 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.
  - Our **Wine** practice 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** 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, 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.

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 and nine months ended September 30, 2018 and 2017 is as follows:

(Dollars in thousands)	Global Commercial Bank (1)	SVB Private Bank	SVB Capital (1)	Other Items (2)	Total
Three months ended September 30, 2018					
Net interest income	$ 431,036	$ 14,919	$ 6	$ 47,261	$ 493,222
(Provision for) reduction of credit losses	(19,074)	(362)	—	2,262	(17,174)
Noninterest income	114,123	605	24,423	70,919	210,070
Noninterest expense (3)	(206,487)	(6,760)	(6,469)	(89,729)	(309,445)
Income before income tax expense (4)	$ 319,598	$ 8,402	$ 17,960	$ 30,713	$ 376,673
Total average loans, net of unearned income	$ 22,925,909	$ 2,928,576	$ —	$ 476,892	$ 26,331,377
Total average assets (5)	54,296,808	2,538,662	388,531	(758,964)	56,465,037
Total average deposits	47,037,693	1,505,746	—	548,801	49,092,240
Three months ended September 30, 2017					
Net interest income	$ 337,860	$ 14,600	$ 15	$ 21,499	$ 373,974
Provision for credit losses	(20,874)	(1,535)	—	(1,113)	(23,522)
Noninterest income	97,227	460	13,913	47,178	158,778
Noninterest expense (3)	(178,306)	(4,706)	(4,873)	(69,876)	(257,761)
Income (loss) before income tax expense (4)	$ 235,907	$ 8,819	$ 9,055	$ (2,312)	$ 251,469
Total average loans, net of unearned income	$ 18,807,616	$ 2,499,507	$ —	$ 277,769	$ 21,584,892
Total average assets (5)	47,809,890	2,538,400	323,417	(876,341)	49,795,366
Total average deposits	42,376,024	1,231,390	—	435,428	44,042,842
Nine months ended September 30, 2018					
Net interest income	$ 1,209,960	$ 46,811	$ 22	$ 122,735	$ 1,379,528
Provision for credit losses	(71,704)	(2,384)	—	(138)	(74,226)
Noninterest income	326,714	1,677	81,832	148,054	558,277
Noninterest expense (3)	(591,434)	(18,729)	(17,182)	(253,256)	(880,601)
Income before income tax expense (4)	$ 873,536	$ 27,375	$ 64,672	$ 17,395	$ 982,978
Total average loans, net of unearned income	$ 21,781,557	$ 2,791,910	$ —	$ 434,810	$ 25,008,277
Total average assets (5)	52,277,701	2,548,184	379,809	(773,042)	54,432,652
Total average deposits	45,701,317	1,519,200	—	513,845	47,734,362
Nine months ended September 30, 2017					
Net interest income	$ 924,789	$ 42,952	$ 41	$ 58,881	$ 1,026,663
Provision for credit losses	(65,007)	(2,266)	—	(2,789)	(70,062)
Noninterest income	260,650	1,715	45,707	96,893	404,965
Noninterest expense (3)	(528,807)	(12,675)	(14,537)	(190,621)	(746,640)
Income (loss) before income tax expense (4)	$ 591,625	$ 29,726	$ 31,211	$ (37,636)	$ 614,926
Total average loans, net of unearned income	$ 18,125,020	$ 2,371,027	$ —	$ 230,420	$ 20,726,467
Total average assets (5)	45,408,476	2,403,777	333,439	(580,641)	47,565,051
Total average deposits	40,398,413	1,289,990	—	373,232	42,061,635

(1) Global Commercial Bank's and SVB Capital'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 $5.5 million and $6.1 million for the three months ended September 30, 2018 and 2017, respectively, and $16.6 million and $19.4 million for the nine months ended September 30, 2018 and 2017, 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.

13. 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 September 30, 2018 and December 31, 2017:

(Dollars in thousands)	September 30, 2018	December 31, 2017
Loan commitments available for funding: (1)		
Fixed interest rate commitments	$ 1,768,904	$ 1,478,157
Variable interest rate commitments	14,698,357	14,034,169
Total loan commitments available for funding	16,467,261	15,512,326
Commercial and standby letters of credit (2)	2,072,253	1,950,211
Total unfunded credit commitments	$ 18,539,514	$ 17,462,537
Commitments unavailable for funding (3)	$ 2,458,846	$ 2,117,057
Allowance for unfunded credit commitments (4)	51,808	51,770

(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 September 30, 2018. 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	$ 1,906,562	$ 41,565	$ 1,948,127	$ 1,948,127
Performance standby letters of credit	84,402	15,666	100,068	100,068
Commercial letters of credit	23,707	351	24,058	24,058
Total	$ 2,014,671	$ 57,582	$ 2,072,253	$ 2,072,253

Deferred fees related to financial and performance standby letters of credit were $11.9 million at September 30, 2018 and $12.4 million at December 31, 2017. At September 30, 2018, collateral in the form of cash of $1.1 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 September 30, 2018:

(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
Shanghai Yangpu Venture Capital Fund (LP)	844	—	6.8
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
Capital Preferred Return Fund, LP	12,688	—	20.0
Growth Partners, LP	24,670	1,340	33.0
Debt funds (equity method accounting)	48,443	—	Various
Other fund investments (2)	298,168	8,366	Various
Total	$ 450,067	$ 15,607	

(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 223 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 2017 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 September 30, 2018:

(Dollars in thousands)	Unfunded Commitments
Strategic Investors Fund, LP	$ 1,338
Capital Preferred Return Fund, LP	2,658
Growth Partners, LP	1,779
Total	$ 5,775

14. 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 2013 and subsequent tax years remain open to full examination.

At September 30, 2018, our unrecognized tax benefit was $13.2 million, the recognition of which would reduce our income tax expense by $10.2 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 or nine months ended September 30, 2018.

15. 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, 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.

Interest rate derivative 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.

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.

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.

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 September 30, 2018:

(Dollars in thousands)	Level 1	Level 2	Level 3	Balance at September 30, 2018
Assets:				
Available-for-sale securities:				
U.S. Treasury securities	$ 5,501,874	$ —	$ —	$ 5,501,874
U.S. agency debentures	—	1,346,672	—	1,346,672
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	—	1,920,541	—	1,920,541
Agency-issued collateralized mortgage obligations—variable rate	—	318,522	—	318,522
Total available-for-sale securities	5,501,874	3,585,735	—	9,087,609
Non-marketable and other equity securities (fair value accounting):				
Non-marketable securities:				
Venture capital and private equity fund investments measured at net asset value	—	—	—	334,419
Venture capital and private equity fund investments not measured at net asset value (1)	—	—	1,001	1,001
Other equity securities in public companies	2,184	28,276	—	30,460
Total non-marketable and other equity securities (fair value accounting)	2,184	28,276	1,001	365,880
Other assets:				
Foreign exchange forward and option contracts	—	81,903	—	81,903
Equity warrant assets	—	6,478	140,489	146,967
Client interest rate derivatives	—	6,262	—	6,262
Total assets	$ 5,504,058	$ 3,708,654	$ 141,490	$ 9,688,621
Liabilities:				
Foreign exchange forward and option contracts	$ —	$ 76,165	$ —	$ 76,165
Client interest rate derivatives	—	15,156	—	15,156
Total liabilities	$ —	$ 91,321	$ —	$ 91,321

(1) Included in Level 3 assets is $0.9 million 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, 2017:

(Dollars in thousands)	Level 1	Level 2	Level 3	Balance at December 31, 2017
Assets:				
Available-for-sale securities:				
U.S. Treasury securities	$ 6,840,502	$ —	$ —	$ 6,840,502
U.S. agency debentures	—	1,567,128	—	1,567,128
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	—	2,267,035	—	2,267,035
Agency-issued collateralized mortgage obligations—variable rate	—	373,730	—	373,730
Equity securities	158	72,111	—	72,269
Total available-for-sale securities	6,840,660	4,280,004	—	11,120,664
Non-marketable and other equity securities (fair value accounting):				
Non-marketable securities:				
Venture capital and private equity fund investments measured at net asset value	—	—	—	127,192
Venture capital and private equity fund investments not measured at net asset value (1)	—	—	919	919
Other equity securities in public companies (1)	310	—	—	310
Total non-marketable and other equity securities (fair value accounting)	310	—	919	128,421
Other assets:				
Foreign exchange forward and option contracts	—	96,636	—	96,636
Equity warrant assets	—	2,432	121,331	123,763
Client interest rate derivatives	—	11,753	—	11,753
Total assets	$ 6,840,970	$ 4,390,825	$ 122,250	$ 11,481,237
Liabilities:				
Foreign exchange forward and option contracts	$ —	$ 96,641	$ —	$ 96,641
Client interest rate derivatives	—	11,940	—	11,940
Total liabilities	$ —	$ 108,581	$ —	$ 108,581

(1) Included in Level 1 and Level 3 assets are $0.2 million and $0.8 million, respectively, 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 and nine months ended September 30, 2018 and 2017:

(Dollars in thousands)	Beginning Balance	Total Realized and Unrealized Gains (Losses) Included in Income	Sales/Exits	Issuances	Distributions and Other Settlements	Transfers Out of Level 3	Ending Balance
Three months ended September 30, 2018							
Non-marketable and other securities (fair value accounting):							
Venture capital and private equity fund investments not measured at net asset value (1)	$ 1,001	$ —	$ —	$ —	$ —	$ —	$ 1,001
Other assets:							
Equity warrant assets (2)	137,753	32,237	(34,101)	4,809	—	(209)	140,489
Total assets	$ 138,754	$ 32,237	$ (34,101)	$ 4,809	$ —	$ (209)	$ 141,490
Three months ended September 30, 2017							
Non-marketable and other securities (fair value accounting):							
Venture capital and private equity fund investments not measured at net asset value (1)	$ 1,897	$ —	$ —	$ —	$ —	$ —	$ 1,897
Other assets:							
Equity warrant assets (2)	128,952	24,354	(17,412)	3,622	—	(441)	139,075
Total assets	$ 130,849	$ 24,354	$ (17,412)	$ 3,622	$ —	$ (441)	$ 140,972
Nine months ended September 30, 2018							
Non-marketable and other securities (fair value accounting):							
Other venture capital investments (1)	$ 919	$ 82	$ —	$ —	$ —	$ —	$ 1,001
Other assets:							
Equity warrant assets (2)	121,331	69,097	(61,464)	14,007	—	(2,482)	140,489
Total assets	$ 122,250	$ 69,179	$ (61,464)	$ 14,007	$ —	$ (2,482)	$ 141,490
Nine months ended September 30, 2017							
Non-marketable and other securities (fair value accounting):							
Other venture capital investments (1)	$ 2,040	$ (143)	$ —	$ —	$ —	$ —	$ 1,897
Other assets:							
Equity warrant assets (2)	128,813	41,549	(40,998)	11,071	—	(1,360)	139,075
Total assets	$ 130,853	$ 41,406	$ (40,998)	$ 11,071	$ —	$ (1,360)	$ 140,972

(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 September 30, 2018 and 2017:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Non-marketable and other securities (fair value accounting):				
Venture capital and private equity fund investments not measured at net asset value (1)	$ —	$ —	$ 82	$ (143)
Other assets:				
Equity warrant assets (2)	15,841	17,827	30,954	23,734
Total unrealized gains, net	$ 15,841	$ 17,827	$ 31,036	$ 23,591
Unrealized gains (losses) attributable to noncontrolling interests (1)	$ —	$ —	$ 73	$ (127)

(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 September 30, 2018 and December 31, 2017. 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
September 30, 2018:				
Venture capital and private equity fund investments (fair value accounting)	$ 1,001	Private company equity pricing	(1)	(1)
Equity warrant assets (public portfolio)	1,805	Black-Scholes option pricing model	Volatility	53.1%
			Risk-Free interest rate	3.0
			Sales restrictions discount (2)	14.1
Equity warrant assets (private portfolio)	138,684	Black-Scholes option pricing model	Volatility	38.2
			Risk-Free interest rate	2.8
			Marketability discount (3)	17.2
			Remaining life assumption (4)	45.0
December 31, 2017:				
Venture capital and private equity fund investments (fair value accounting)	$ 919	Private company equity pricing	(1)	(1)
Equity warrant assets (public portfolio)	1,936	Black-Scholes option pricing model	Volatility	47.9%
			Risk-Free interest rate	2.1
			Sales restrictions discount (2)	15.5
Equity warrant assets (private portfolio)	119,395	Black-Scholes option pricing model	Volatility	36.7
			Risk-Free interest rate	1.8
			Marketability discount (3)	16.4
			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 cancellations and exercises. At September 30, 2018, the weighted average contractual remaining term was 6.2 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 and nine months ended September 30, 2018 and 2017, 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 and nine months ended September 30, 2018 and 2017 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 September 30, 2018 and December 31, 2017:

		Estimated Fair Value			
(Dollars in thousands)	Carrying Amount	Total	Level 1	Level 2	Level 3
September 30, 2018:					
Financial assets:					
Cash and cash equivalents	$ 3,819,141	$ 3,819,141	$ 3,819,141	$ —	$ —
Held-to-maturity securities	15,899,726	15,372,238	—	15,372,238	—
Non-marketable securities not measured at net asset value	134,646	134,646	—	—	134,646
Non-marketable securities measured at net asset value	134,017	134,017	—	—	—
Net commercial loans	24,253,625	23,285,628	—	—	23,285,628
Net consumer loans	2,955,577	2,809,916	—	—	2,809,916
FHLB and Federal Reserve Bank stock	102,378	102,378	—	—	102,378
Financial liabilities:					
Short-term borrowings	2,631,252	2,631,252	—	2,631,252	—
Non-maturity deposits (1)	48,518,701	48,518,701	48,518,701	—	—
Time deposits	77,410	77,047	—	77,047	—
3.50% Senior Notes	347,554	338,370	—	338,370	—
5.375% Senior Notes	348,663	363,447	—	363,447	—
Off-balance sheet financial assets:					
Commitments to extend credit	—	22,857	—	—	22,857
December 31, 2017:					
Financial assets:					
Cash and cash equivalents	$ 2,923,075	$ 2,923,075	$ 2,923,075	$ —	$ —
Held-to-maturity securities	12,663,455	12,548,280	—	12,548,280	—
Non-marketable securities (cost and equity method accounting) not measured at net asset value	120,019	126,345	—	—	126,345
Non-marketable securities (cost and equity method accounting) measured at net asset value	228,399	331,496	—	—	—
Net commercial loans	20,238,247	20,520,623	—	—	20,520,623
Net consumer loans	2,613,045	2,593,538	—	—	2,593,538
FHLB and Federal Reserve Bank stock	60,020	60,020	—	—	60,020
Financial liabilities:					
Short-term borrowings	1,033,730	1,033,730	1,033,730	—	—
Non-maturity deposits (1)	44,206,929	44,206,929	44,206,929	—	—
Time deposits	47,146	46,885	—	46,885	—
3.50% Senior Notes	347,303	352,058	—	352,058	—
5.375% Senior Notes	348,189	374,483	—	374,483	—
Off-balance sheet financial assets:					
Commitments to extend credit	—	22,208	—	—	22,208

(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 June 30th, for our September 30th 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 September 30, 2018:

(Dollars in thousands)	Carrying Amount	Fair Value	Unfunded Commitments
Non-marketable securities (fair value accounting):			
Venture capital and private equity fund investments (1)	$ 334,419	$ 334,419	$ 13,255
Non-marketable securities (equity method accounting):			
Venture capital and private equity fund investments (2)	112,537	112,537	4,943
Debt funds (2)	5,241	5,241	—
Other investments (2)	16,239	16,239	886
Total	$ 468,436	$ 468,436	$ 19,084

(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 $93.0 million and $4.3 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.

16. 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.

17. 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 2017 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, including the impact of the Tax Cuts and Jobs Act;
- 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; and
- Other factors as discussed in "Risk Factors" under Part I, Item 1A in our 2017 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 2017 Form 10-K.

Reclassifications

Certain prior period amounts, primarily related to the adoption of new accounting guidance, have been reclassified to conform to current period presentations.

Management's Overview of Third Quarter 2018 Performance

Overall, we had an outstanding third quarter in 2018, which was marked by robust loan and client funds growth, a healthy increase in net interest income, strong warrant- and investment-related gains and solid core fee income increases. Additionally, we saw higher noninterest expense, primarily related to our total compensation and benefits as well as expenses incurred associated with increased investment in client experience and employee enablement. 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 September 30, 2018 (compared to the three months ended September 30, 2017, where applicable) is as follows:

BALANCE SHEET

Assets. $56.5 billion in average total assets (up 13.3%). $58.1 billion in period-end total assets (up 14.5%).

Loans. $26.3 billion in average total loan balances, net of unearned income (up 21.9%). $27.5 billion in period-end total loan balances, net of unearned income (up 23.9%).

Total Client Funds. (on-balance sheet deposits and off-balance sheet client investment funds). $128.7 billion in average total client fund balances (up 32.2%). $130.7 billion in period-end total client fund balances (up 31.9%).

Fixed Income Investments. $25.5 billion in average fixed income investment securities (up 10.2%). $25.0 billion in period-end fixed income investment securities (up 5.6%).

EARNINGS

EPS. Earnings per diluted share of $5.10 (up 82.7%).

Net Income. Consolidated net income available to common stockholders of $274.8 million (up 84.9%).

- Net interest income of $493.2 million (up 31.8%).
- Net interest margin of 3.62% (up 52 bps).
- Noninterest income of $210.1 million (up 32.3%), with non-GAAP core fee income+ of $131.7 million (up 28.2%).
- Noninterest expense of $309.4 million (up 20.0%).

ROE. Return on average equity (annualized) ("*ROE*") performance of 22.46%.

Operating Efficiency Ratio. Operating efficiency ratio of 44.00%.

CAPITAL

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

- CET 1 risk-based capital ratio of 13.28% and 11.98%.
- Tier 1 risk-based capital ratio of 13.45% and 11.98%.
- Total risk-based capital ratio of 14.34% and 12.91%.
- Tier 1 leverage ratio of 8.99% and 7.82%.

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 0.28% as a percentage of period-end total gross loans (annualized).
- Net loan charge-offs of 0.30% 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 metric. (See the non-GAAP reconciliation under "Results of Operations—Noninterest Income")

A summary of our performance for the three and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands, except per share data, employees and ratios)	2018	2017	% Change	2018	2017	% Change
Diluted earnings per common share	$ 5.10	$ 2.79	82.8 %	$ 13.15	$ 7.01	87.6 %
Net income available to common stockholders	274,817	148,620	84.9	707,576	373,296	89.5
Net interest income	493,222	373,974	31.9	1,379,528	1,026,663	34.4
Net interest margin	3.62%	3.10%	52 bps	3.53%	2.99%	54 bps
Provision for credit losses	$ 17,174	$ 23,522	(27.0) %	$ 74,226	$ 70,062	5.9 %
Noninterest income	210,070	158,778	32.3	558,277	404,965	37.9
Noninterest expense	309,445	257,761	20.1	880,601	746,640	17.9
Non-GAAP core fee income (1)	131,714	102,722	28.2	369,848	272,567	35.7
Non-GAAP noninterest income, net of noncontrolling interests (1)	203,378	153,164	32.8	529,116	383,256	38.1
Non-GAAP noninterest expense, net of noncontrolling interests(2)	309,291	257,636	20.0	880,252	746,123	18.0
Balance Sheet:						
Average available-for-sale securities	$ 9,589,917	$ 12,674,610	(24.3) %	$ 10,124,707	$ 12,539,773	(19.3) %
Average held-to-maturity securities	15,916,690	10,467,470	52.1	14,764,215	9,405,525	57.0
Average loans, net of unearned income	26,331,377	21,584,892	22.0	25,008,277	20,726,467	20.7
Average noninterest-bearing demand deposits	40,625,772	36,578,779	11.1	39,473,468	34,653,264	13.9
Average interest-bearing deposits	8,466,468	7,464,063	13.4	8,260,894	7,408,371	11.5
Average total deposits	49,092,240	44,042,842	11.5	47,734,362	42,061,635	13.5
Earnings Ratios:						
Return on average assets (annualized) (3)	1.93%	1.18%	63.6 %	1.74%	1.05%	65.7 %
Return on average SVBFG stockholders' equity (annualized) (4)	22.46	14.59	53.9	20.56	12.85	60.0
Asset Quality Ratios:						
Allowance for loan losses as a % of total period-end gross loans	1.03%	1.12%	(9) bps	1.03%	1.12%	(9) bps
Allowance for loan losses for performing loans as a % of total gross performing loans	0.86	0.92	(6)	0.86	0.92	(6)
Gross loan charge-offs as a % of average total gross loans (annualized)	0.33	0.23	10	0.26	0.33	(7)
Net loan charge-offs as a % of average total gross loans (annualized)	0.30	0.19	11	0.22	0.29	(7)
Capital Ratios:						
CET 1 risk-based capital ratio	13.28%	12.96%	32 bps	13.28%	12.96%	32 bps
Tier 1 risk-based capital ratio	13.45	13.32	13	13.45	13.32	13
Total risk-based capital ratio	14.34	14.29	5	14.34	14.29	5
Tier 1 leverage ratio	8.99	8.34	65	8.99	8.34	65
Tangible common equity to tangible assets (5)	8.47	8.00	47	8.47	8.00	47
Tangible common equity to risk-weighted assets (5)	13.00	13.01	(1)	13.00	13.01	(1)
Bank CET 1 risk-based capital ratio	11.98	12.41	(43)	11.98	12.41	(43)
Bank tier 1 risk-based capital ratio	11.98	12.41	(43)	11.98	12.41	(43)
Bank total risk-based capital ratio	12.91	13.40	(49)	12.91	13.40	(49)
Bank tier 1 leverage ratio	7.82	7.59	23	7.82	7.59	23
Bank tangible common equity to tangible assets (5)	7.44	7.47	(3)	7.44	7.47	(3)
Bank tangible common equity to risk-weighted assets (5)	11.70	12.44	(74)	11.70	12.44	(74)
Other Ratios:						
GAAP operating efficiency ratio (6)	44.00%	48.38%	(9.1) %	45.44%	52.15%	(12.9) %
Non-GAAP operating efficiency ratio (2)	44.22	48.82	(9.4)	45.97	52.87	(13.1)
Book value per common share (7)	$ 92.48	$ 77.00	20.1	$ 92.48	$ 77.00	20.1
Other Statistics:						
Average full-time equivalent employees	2,778	2,434	14.1 %	2,623	2,384	10.0 %
Period-end full-time equivalent employees	2,836	2,433	16.6	2,836	2,433	16.6

(1) See "Results of Operations–Noninterest Income" for a description and reconciliation of non-GAAP core fee income and noninterest income.

(2) See "Results of Operations–Noninterest Expense" for a description and reconciliation of non-GAAP noninterest expense and non-GAAP 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 taxable-equivalent 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 nine months ended September 30, 2018 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 2017 Form 10-K.

Results of Operations

Net Interest Income and Margin (Fully Taxable Equivalent Basis)

Net interest income is defined as the difference between interest earned on loans, fixed income investment portfolio (available-for-sale and held-to-maturity securities) and short-term investment securities and the interest paid on funding sources which consist primarily of interest-bearing deposits and borrowings. Net interest income is our principal source of revenue. Net interest margin is defined as the amount of annualized net interest income, on a fully taxable equivalent basis, expressed 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 and nine months ended September 30, 2018 and 35.0 percent for the three and nine months ended September 30, 2017.

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 composition 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)	2018 Compared to 2017 Three months ended September 30, increase (decrease) due to change in Volume	Rate	Total	2018 Compared to 2017 Nine months ended September 30, increase (decrease) due to change in Volume	Rate	Total
Interest income:						
Federal Reserve deposits, federal funds sold, securities purchased under agreements to resell, trade receivables purchased and other short-term investment securities	$ (2,374)	$ 4,299	$ 1,925	$ (5,542)	$ 8,952	$ 3,410
Fixed income investment portfolio (taxable)	12,205	20,428	32,633	54,852	54,082	108,934
Fixed income investment portfolio (non-taxable)	11,666	137	11,803	25,610	(13)	25,597
Loans, net of unearned income	63,515	20,393	83,908	167,744	65,997	233,741
Increase in interest income, net	85,012	45,257	130,269	242,664	129,018	371,682
Interest expense:						
Interest bearing checking and savings accounts	26	3	29	92	4	96
Money market deposits	1,080	4,623	5,703	2,121	9,993	12,114
Money market deposits in foreign offices	3	(2)	1	7	(5)	2
Time deposits	11	7	18	11	11	22
Sweep deposits in foreign offices	(10)	(3)	(13)	(32)	(11)	(43)
Total increase in deposits expense	1,110	4,628	5,738	2,199	9,992	12,191
Short-term borrowings	3,775	100	3,875	4,444	314	4,758
3.50% Senior Notes	3	—	3	9	—	9
5.375% Senior Notes	9	—	9	26	—	26
Junior Subordinated Debentures	(831)	—	(831)	(2,494)	—	(2,494)
6.05% Senior Notes	—	—	—	(467)	—	(467)
Total increase in borrowings expense	2,956	100	3,056	1,518	314	1,832
Increase in interest expense, net	4,066	4,728	8,794	3,717	10,306	14,023
Increase in net interest income	$ 80,946	$ 40,529	$ 121,475	$ 238,947	$ 118,712	$ 357,659

Net Interest Income (Fully Taxable Equivalent Basis)

Three months ended September 30, 2018 and 2017

Net interest income increased by $121.5 million to $496.1 million for the three months ended September 30, 2018, compared to $374.6 million for the comparable 2017 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 software/internet loan portfolios and rate increases subsequent to September 30, 2017. In addition, we saw an increase in interest earned 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.

The main factors affecting interest income for the three months ended September 30, 2018, compared to the comparable 2017 period are discussed below:

- *Interest income* for the three months ended September 30, 2018 increased by $130.3 million due primarily to:
  - An $83.9 million increase in interest income on loans to $352.4 million for the three months ended September 30, 2018, compared to $268.4 million for the comparable 2017 period. The increase was reflective of an increase in average loan balances of $4.7 billion and an increase in the overall loan yield of 38 basis points to 5.31 percent from 4.93 percent. Gross loan yields, excluding loan interest recoveries and loan fees, increased 51 basis points to 4.81 percent from 4.30 percent, reflective primarily of the benefit of interest rate increases. Loan fee yields were down 11 basis points to 50 basis points from 61 basis points for the three months ended September 30, 2018 reflective of lower loan repayments,
  - A $44.4 million increase in interest income on fixed income investment securities to $155.7 million for the three months ended September 30, 2018, compared to $111.2 million for the comparable 2017 period. The increase was reflective of an increase in average fixed income investments of $2.4 billion due to growth in average deposit balances and an increase in our fixed income investment securities yield of 51 basis points to

2.42 percent from 1.91 percent resulting primarily from higher reinvestment yields on maturing fixed income investments as well as higher yields on new purchases due to interest rate increases, and

- A $1.9 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 September 30, 2017, partially offset by a decrease of $0.7 billion in average interest-earning Federal Reserve cash balances.

- *Interest expense* for the three months ended September 30, 2018 increased by $8.8 million due primarily to:
  - A $5.7 million increase in interest expense on deposits due primarily to an increase in interest paid on our interest-bearing money market deposits as a result of market rate adjustments as well as growth in average money market deposits of $0.9 billion, and
  - A $3.1 million increase in interest expense on borrowings primarily due to a $0.7 billion increase in our average short-term borrowings during the three months ended September 30, 2018, to fund loan growth as a result of the timing of loan funding and deposit activities at the end of the third quarter of 2018.

The main factors affecting interest income and interest expense for the nine months ended September 30, 2018, compared to the comparable 2017 period are discussed below:

- *Interest income* for the nine months ended September 30, 2018 increased by $371.7 million due primarily to:
  - A $233.7 million increase in interest income on loans to $979.7 million for the nine months ended September 30, 2018, compared to $746.0 million for the comparable 2017 period. The increase was reflective of an increase in average loan balances of $4.3 billion and an increase in the overall loan yield of 43 basis points to 5.24 percent from 4.81 percent. Gross loan yields, excluding loan interest recoveries and loan fees, increased 52 basis points to 4.70 percent from 4.18 percent, reflective of the benefit of interest rate increases, partially offset by the strong growth of our lower yielding private equity/venture capital loan portfolio. Our private equity/venture capital loan portfolio represented 48.3 percent and 43.1 percent of our total gross loan portfolio at September 30, 2018 and 2017, respectively. Loan fee yields were down 6 basis points to 54 basis points from 60 basis points for the nine months ended September 30, 2018 reflective of lower loan repayments,
  - A $134.6 million increase in interest income on fixed income investment securities to $433.5 million for the nine months ended September 30, 2018, compared to $298.9 million for the comparable 2017 period. The increase was reflective of an increase in average fixed income investments of $2.9 billion due to growth in average deposit balances and an increase in our fixed income investment securities yield of 51 basis points to 2.33 percent from 1.82 percent resulting primarily from higher reinvestment yields on maturing fixed income investments as well as higher yields on new purchases due to interest rate increases, and
  - A $3.4 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 September 30, 2017, partially offset by a decrease of $0.7 billion in average interest-earning Federal Reserve cash balances.
- *Interest expense* for the nine months ended September 30, 2018 increased by $14.0 million primarily due to:
  - A $12.2 million increase in interest expense on deposits due primarily to an increase in interest paid on our interest-bearing money market deposits as a result of market rate adjustments as well as growth in average money market deposits of $0.8 billion, and
  - A $1.8 million increase in interest expense on borrowings primarily due to a $0.3 billion increase in our average short-term borrowings during the nine months ended September 30, 2018 to fund loan growth as well as to support the short-term liquidity needs of the Bank partially offset set by the repayment of our 6.05% Subordinated Notes and the redemption of our Junior Subordinated Debentures in 2017.

Net Interest Margin (Fully Taxable Equivalent Basis)

Three months ended September 30, 2018 and 2017

- Our net interest margin increased by 52 basis points to 3.62 percent for the three months ended September 30, 2018, compared to 3.10 percent for the comparable 2017 period. The higher margin during the third quarter of 2018 was reflective primarily of the increases in the Federal Funds target rate since September 30, 2017 as well as a shift in the mix of the growth in our interest-earning assets to higher-yielding loans from our interest earning cash and other

short-term investment securities. Average loans represented 48.4 percent of average interest earnings assets for the three months ended September 30, 2018, compared to 45.0 percent for the comparable 2017 period.

Nine months ended September 30, 2018 and 2017

- Our net interest margin increased by 54 basis points to 3.53 percent for the nine months ended September 30, 2018, compared to 2.99 percent for the comparable 2017 period. The higher margin for the nine months ended September 30, 2018, was reflective primarily of the increases in the Federal Funds target rate since September 30, 2017, as well as a shift in the mix of the growth in our interest-earning assets to higher-yielding loans from our interest earning cash and other short-term investment securities. Average loans represented 47.7 percent of the average interest earnings assets for the nine months ended September 30, 2018, compared to 45.2 percent for the comparable 2017 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 and nine months ended September 30, 2018 and 2017:

Table of Contents

Average Balances, Rates and Yields for the Three Months Ended September 30, 2018 and 2017

	Three months ended September 30,					
	2018			2017		
(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)	$ 2,548,271	$ 8,137	1.27%	$ 3,291,908	$ 6,211	0.75%
Investment securities: (2)						
Available-for-sale securities:						
Taxable	9,589,917	46,684	1.93	12,674,610	52,825	1.65
Held-to-maturity securities:						
Taxable	14,385,027	95,391	2.63	10,249,131	56,618	2.19
Non-taxable (3)	1,531,663	13,606	3.52	218,339	1,803	3.28
Total loans, net of unearned income (4) (5)	26,331,377	352,353	5.31	21,584,892	268,445	4.93
Total interest-earning assets	54,386,255	516,171	3.77	48,018,880	385,902	3.19
Cash and due from banks	553,132			371,373		
Allowance for loan losses	(296,177)			(246,210)		
Other assets (6)	1,821,827			1,651,323		
Total assets	$ 56,465,037			$ 49,795,366		
Funding sources:						
Interest-bearing liabilities:						
Interest bearing checking and savings accounts	$ 572,242	$ 116	0.08%	$ 442,518	$ 86	0.08%
Money market deposits	6,704,337	7,782	0.46	5,774,281	2,079	0.14
Money market deposits in foreign offices	218,734	22	0.04	187,183	21	0.04
Time deposits	74,597	35	0.19	51,406	17	0.13
Sweep deposits in foreign offices	896,558	87	0.04	1,008,675	101	0.04
Total interest-bearing deposits	8,466,468	8,042	0.38	7,464,063	2,304	0.12
Short-term borrowings	745,156	4,039	2.15	48,614	164	1.34
3.50% Senior Notes	347,499	3,147	3.59	347,168	3,144	3.59
5.375% Senior Notes	348,557	4,863	5.54	347,934	4,854	5.53
Junior Subordinated Debentures	—	—	—	54,391	831	6.06
Total interest-bearing liabilities	9,907,680	20,091	0.80	8,262,170	11,297	0.54
Portion of noninterest-bearing funding sources	44,478,575			39,756,710		
Total funding sources	54,386,255	20,091	0.15	48,018,880	11,297	0.09
Noninterest-bearing funding sources:						
Demand deposits	40,625,772			36,578,779		
Other liabilities	932,544			773,586		
SVBFG stockholders' equity	4,854,440			4,041,218		
Noncontrolling interests	144,601			139,613		
Portion used to fund interest-earning assets	(44,478,575)			(39,756,710)		
Total liabilities, noncontrolling interest, and SVBFG stockholders' equity	$ 56,465,037			$ 49,795,366		
Net interest income and margin		$ 496,080	3.62%		$ 374,605	3.10%
Total deposits	$ 49,092,240			$ 44,042,842		
Reconciliation to reported net interest income:						
Adjustments for taxable equivalent basis		(2,858)			(631)	
Net interest income, as reported		$ 493,222			$ 373,974	

(1) Includes average interest-earning deposits in other financial institutions of $0.7 billion and $1.3 billion for the three months ended September 30, 2018 and 2017, respectively. For the three months ended September 30, 2018 and 2017, balances also include $1.4 billion and $1.9 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 the three months ended September 30, 2018, and 35.0 percent for the three months ended September 30, 2017.
(4) Nonaccrual loans are reflected in the average balances of loans.
(5) Interest income includes loan fees of $33.1 million and $33.4 million for the three months ended September 30, 2018 and 2017, respectively.
(6) Average investment securities of $761 million and $692 million for the three months ended September 30, 2018 and 2017, respectively, were classified as other assets as they were noninterest-earning assets. These investments consisted primarily of non-marketable and other securities.

Table of Contents

Average Balances, Rates and Yields for the Nine Months Ended September 30, 2018 and 2017

	Nine months ended September 30,					
	2018			2017		
(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)	$ 2,535,749	$ 20,080	1.06%	$ 3,235,628	$ 16,670	0.69%
Investment securities: (2)						
Available-for-sale securities:						
Taxable	10,124,707	141,266	1.87	12,539,773	146,803	1.57
Held-to-maturity securities:						
Taxable	13,597,340	262,436	2.58	9,242,953	147,965	2.14
Non-taxable (3)	1,166,875	29,755	3.41	162,572	4,158	3.42
Total loans, net of unearned income (4) (5)	25,008,277	979,724	5.24	20,726,467	745,983	4.81
Total interest-earning assets	52,432,948	1,433,261	3.65	45,907,393	1,061,579	3.09
Cash and due from banks	496,658			361,041		
Allowance for loan losses	(280,102)			(243,594)		
Other assets (6)	1,783,148			1,540,211		
Total assets	$ 54,432,652			$ 47,565,051		
Funding sources:						
Interest-bearing liabilities:						
Interest bearing checking and savings accounts	$ 578,313	$ 338	0.08%	$ 420,680	$ 242	0.08%
Money market deposits	6,437,372	17,658	0.37	5,664,082	5,544	0.13
Money market deposits in foreign offices	206,924	61	0.04	183,040	59	0.04
Time deposits	59,561	71	0.16	50,855	49	0.13
Sweep deposits in foreign offices	978,724	281	0.04	1,089,714	324	0.04
Total interest-bearing deposits	8,260,894	18,409	0.30	7,408,371	6,218	0.11
Short-term borrowings	328,425	5,053	2.06	39,523	295	1.00
3.50% Senior Notes	347,416	9,438	3.63	347,088	9,429	3.63
5.375% Senior Notes	348,400	14,584	5.60	347,786	14,558	5.60
Junior Subordinated Debentures	—	—	—	54,434	2,494	6.13
6.05% Subordinated Notes	—	—	—	25,641	467	2.44
Total interest-bearing liabilities	9,285,135	47,484	0.68	8,222,843	33,461	0.54
Portion of noninterest-bearing funding sources	43,147,813			37,684,550		
Total funding sources	52,432,948	47,484	0.12	45,907,393	33,461	0.10
Noninterest-bearing funding sources:						
Demand deposits	39,473,468			34,653,264		
Other liabilities	930,985			668,417		
SVBFG stockholders' equity	4,602,027			3,883,876		
Noncontrolling interests	141,037			136,651		
Portion used to fund interest-earning assets	(43,147,813)			(37,684,550)		
Total liabilities, noncontrolling interest, and SVBFG stockholders' equity	$ 54,432,652			$ 47,565,051		
Net interest income and margin		$ 1,385,777	3.53%		$ 1,028,118	2.99%
Total deposits	$ 47,734,362			$ 42,061,635		
Reconciliation to reported net interest income:						
Adjustments for taxable equivalent basis		(6,249)			(1,455)	
Net interest income, as reported		$ 1,379,528			$ 1,026,663	

(1) Includes average interest-earning deposits in other financial institutions of $0.9 billion and $1.0 billion for the nine months ended September 30, 2018, and 2017, respectively. The balance also includes $1.4 billion and $2.1 billion deposited at the FRB, earning interest at the Federal Funds target rate for the nine months ended September 30, 2018, and 2017, respectively.

(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 available-for-sale securities is presented on a fully taxable-equivalent basis using the federal statutory income tax rate of 21.0 percent for the nine months ended September 30, 2018, and 35.0 percent for the nine months ended September 30, 2017.

(4) Nonaccrual loans are reflected in the average balances of loans.

(5) Interest income includes loan fees of $100.8 million and $93.5 million for the nine months ended September 30, 2018, and 2017, respectively.

(6) Average investment securities of $774 million and $674 million for the nine months ended September 30, 2018, and 2017, respectively, were classified as other assets as they were noninterest-earning assets. These investments consisted primarily of non-marketable 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 and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands, except ratios)	2018	2017	2018	2017
Allowance for loan losses, beginning balance	$ 286,709	$ 236,496	$ 255,024	$ 225,366
Provision for loan losses	19,436	22,409	74,088	67,273
Gross loan charge-offs	(22,205)	(12,338)	(48,220)	(51,449)
Loan recoveries	2,164	1,828	5,878	6,155
Foreign currency translation adjustments	(391)	615	(1,057)	1,665
Allowance for loan losses, ending balance	$ 285,713	$ 249,010	$ 285,713	$ 249,010
Allowance for unfunded credit commitments, beginning balance	54,104	47,000	51,770	45,265
(Reduction of) provision for unfunded credit commitments	(2,262)	1,113	138	2,789
Foreign currency translation adjustments	(34)	59	(100)	118
Allowance for unfunded credit commitments, ending balance (1)	$ 51,808	$ 48,172	$ 51,808	$ 48,172
Ratios and other information:				
Provision for loan losses as a percentage of period-end total gross loans (annualized)	0.28%	0.40%	0.36%	0.40%
Gross loan charge-offs as a percentage of average total gross loans (annualized)	0.33	0.23	0.26	0.33
Net loan charge-offs as a percentage of average total gross loans (annualized)	0.30	0.19	0.22	0.29
Allowance for loan losses as a percentage of period-end total gross loans	1.03	1.12	1.03	1.12
Provision for credit losses	$ 17,174	$ 23,522	$ 74,226	$ 70,062
Period-end total gross loans	27,668,829	22,329,829	27,668,829	22,329,829
Average total gross loans	26,497,171	21,712,866	25,165,486	20,850,468

(1) The “allowance for unfunded credit commitments” is included as a component of “other liabilities.”

Three months ended September 30, 2018 and 2017

Our provision for credit losses was $17.2 million for the three months ended September 30, 2018, consisting of a provision for loan losses of $19.4 million and a reduction of our allowance for unfunded credit commitments of $2.2 million. Our provision for credit losses was $23.5 million for the three months ended September 30, 2017, consisting of a provision for loan losses of $22.4 million and a provision for unfunded credit commitments of $1.1 million.

The provision for loan losses of $19.4 million for the three months ended September 30, 2018 reflects primarily an increase of $12.9 million in additional reserves for period-end loan growth, $9.2 million for charge-offs not specifically reserved for and $9.3 million in net new specific reserves for nonaccrual loans, partially offset by a decrease in the qualitative component of our performing loan reserves of $8.2 million reflective of the continued growth of larger, higher credit quality private equity/venture capital loans as a percentage of total gross loans.

The reduction of the allowance for unfunded credit commitments of $2.2 million was driven primarily by a decrease in reserves reflective primarily of the continued shift in the mix of our unfunded credit facilities consisting of large, higher credit quality private equity/venture capital loans mentioned above.

The provision for loan losses of $22.4 million for the three months ended September 30, 2017 primarily reflects $13.8 million in net new specific reserves for nonaccrual loans and a $10.9 million increase in reserves for period-end loan growth, partially offset by a benefit from the overall improved credit quality of our loan portfolio and the continued shift in our loan portfolio to private equity/venture capital loans, which tend to be of higher credit quality.

The provision for unfunded credit commitments of $1.1 million for three months ended September 30, 2017 was driven primarily by a change in the mix of our outstanding credit commitments.

Gross loan charge-offs were $22.2 million for the three months ended September 30, 2018, of which $9.2 million was not specifically reserved for at June 30, 2018. Gross loan charge-offs included $12.7 million from our hardware loan portfolio and consisted primarily of $11.1 million for one early-stage client and $6.3 million from our software/internet loan portfolio primarily attributable to one mid-stage client.

Gross loan charge-offs were $12.3 million for the three months ended September 30, 2017, of which $6.3 million was not specifically reserved for in prior quarters. Gross loan charge-offs were primarily from four clients consisting of $8.7 million from two clients in our software/internet loan portfolio, of which $5.9 million was a late-stage client loan, and two early-stage client loan charge-offs amounting to $3.5 million from our hardware and life science/healthcare portfolios.

Nine months ended September 30, 2018 and 2017

Our provision for credit losses was $74.2 million for the nine months ended September 30, 2018, consisting of a provision for loan losses of $74.1 million and a provision for unfunded credit commitments of $0.1 million. Our provision for credit losses was $70.1 million for the nine months ended September 30, 2017, consisting of a provision for loan losses of $67.3 million and a provision for unfunded credit commitments of $2.8 million.

The provision for loan losses of $74.1 million for the nine months ended September 30, 2018 was reflective primarily of $39.4 million from period-end loan growth, $34.0 million in net new specific reserves for nonaccrual loans and $24.0 million for charge-offs not specifically reserved for in prior quarters, partially offset by a decrease in reserves of $20.7 million for our performing loans from certain reserve methodology enhancements made to our qualitative reserve for large loan exposure as a result of growth within our higher credit quality private equity/venture capital loan portfolios.

The provision for loan losses of $67.3 million for the nine months ended September 30, 2017 was reflective primarily of $51.9 million in net new specific reserves for nonaccrual loans and $20.9 million from period-end loan growth, partially offset by a benefit from the overall improved credit quality of our loan portfolio and the continued shift in our loan portfolio to private equity/venture capital loans, which tend to be of higher credit quality.

The provision for unfunded credit commitments of $0.1 million for nine months ended September 30, 2018 was driven primarily by increased reserves of $4.5 million from growth in unfunded credit commitment balances, offset by a decrease in reserves reflective of the methodology enhancements mentioned above. Our provision for unfunded credit commitments was $2.8 million for the nine months ended September 30, 2017 driven primarily by qualitative allocations based on our loan portfolio being comprised of larger loans.

Gross loan charge-offs were $48.2 million for the nine months ended September 30, 2018, of which $24.0 million was not specifically reserved for in prior quarters. Gross loan charge-offs included $26.4 million from our software/internet loan portfolio and $16.1 million from our hardware loan portfolio and consisted primarily of $24.4 million from early-stage clients, $8.7 million for one sponsor-led buyout loan, $4.8 million from one mid-stage client and $3.2 million from one late-stage client. Gross loan charge-offs of $51.4 million for the nine months ended September 30, 2017, included $27.8 million from our early-stage portfolio and $13.0 million from two Corporate Finance client loans. These charge-offs were primarily from our software/internet loan portfolio.

See “Consolidated Financial Condition—Credit Quality and Allowance for Loan Losses” below and Note 7—“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 and nine months ended September 30, 2018, noninterest income was $210.1 million and $558.3 million, respectively, compared to $158.8 million and $405.0 million for the comparable 2017 periods. For the three and nine months ended September 30, 2018, non-GAAP noninterest income, net of noncontrolling interests was $203.4 million and $529.1 million, respectively, compared to $153.2 million and $383.3 million for the comparable 2017 periods. For the three and nine months

ended September 30, 2018, non-GAAP core fee income was $131.7 million and $369.8 million, respectively, compared to $102.7 million and $272.6 million for the comparable 2017 periods. (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 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, 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 standby letters of credit fees.

The following table provides a reconciliation of GAAP noninterest income to non-GAAP noninterest income, net of noncontrolling interests, for the three and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
GAAP noninterest income	$ 210,070	$ 158,778	32.3%	$ 558,277	$ 404,965	37.9%
Less: income attributable to noncontrolling interests, including carried interest allocation	6,692	5,614	19.2	29,161	21,709	34.3
Non-GAAP noninterest income, net of noncontrolling interests	$ 203,378	$ 153,164	32.8	$ 529,116	$ 383,256	38.1

The following table provides a reconciliation of GAAP noninterest income to non-GAAP core fee income for the three and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
GAAP noninterest income	$ 210,070	$ 158,778	32.3 %	$ 558,277	$ 404,965	37.9 %
Less: gains on investment securities, net	32,193	15,238	111.3	77,365	48,838	58.4
Less: gains on equity warrant assets, net	34,141	24,922	37.0	72,393	42,432	70.6
Less: other noninterest income	12,022	15,896	(24.4)	38,671	41,128	(6.0)
Non-GAAP core fee income (1)	$ 131,714	$ 102,722	28.2	$ 369,848	$ 272,567	35.7

(1) 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 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 and losses 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 investments in 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 (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.

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 September 30, 2018 and 2017

For the three months ended September 30, 2018, we had net gains on investment securities of $32.2 million, compared to $15.2 million for the comparable 2017 period. Non-GAAP net gains on investment securities, net of noncontrolling interests, were $25.6 million for the three months ended September 30, 2018, compared to $9.7 million for the comparable 2017 period.

Non-GAAP net gains on investment securities, net of noncontrolling interests, of $25.6 million for the three months ended September 30, 2018 were driven by the following:

- Gains of $11.5 million from our strategic and other investments portfolio, comprised primarily of net unrealized valuation increases in private company investments held in our strategic venture capital funds,
- Gains of $7.0 million from our managed funds of funds portfolio, related primarily to net unrealized valuation increases in private company investments held by the funds in the portfolio, and
- Gains of $4.4 million from our public equity securities portfolio primarily attributable to $5.2 million in unrealized gains related to our holdings of one company that had an IPO during the third quarter of 2018.

Nine months ended September 30, 2018 and 2017

For the nine months ended September 30, 2018, we had net gains on investment securities of $77.4 million, compared to $48.8 million for the comparable 2017 period. Non-GAAP net gains on investment securities, net of noncontrolling interests, were $48.1 million for the nine months ended September 30, 2018, compared to $27.4 million for the comparable 2017 period.

Non-GAAP net gains, net of noncontrolling interests, of $48.1 million for the nine months ended September 30, 2018 were driven primarily by the following:

- Gains of $42.3 million from our strategic and other investments portfolio, attributable primarily to net unrealized valuation increases in both private and public company investments held in our strategic venture capital funds,
- Gains of $21.6 million from our managed funds of funds portfolio, related primarily to net unrealized valuation increases in both private and public company investments held by the funds in the portfolio, and
- Losses of $17.8 million from our public equity securities portfolio primarily reflective of net losses on sales of shares of Roku, Inc. ("Roku"), from exercised warrants in 2017, which were sold in the first quarter of 2018.

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 and nine months ended September 30, 2018 and 2017:

(Dollars in thousands)	Managed Funds of Funds	Managed Direct Venture Funds	Public Equity Securities (1)	Debt Funds	Sales of AFS Securities (1)	Strategic and Other Investments	Total
Three months ended September 30, 2018							
Total gains on investment securities, net	$ 12,949	$ 1,863	$ 4,372	$ 1,473	$ —	$ 11,536	$ 32,193
Less: income attributable to noncontrolling interests, including carried interest allocation	5,914	727	—	—	—	—	6,641
Non-GAAP net gains on investment securities, net of noncontrolling interests	$ 7,035	$ 1,136	$ 4,372	$ 1,473	$ —	$ 11,536	$ 25,552
Nine months ended September 30, 2018							
Total gains (losses) on investment securities, net	$ 49,553	$ 3,377	$ (17,770)	$ (100)	$ —	$ 42,305	$ 77,365
Less: income attributable to noncontrolling interests, including carried interest allocation	27,904	1,314	—	—	—	—	29,218
Non-GAAP net gains (losses) on investment securities, net of noncontrolling interests	$ 21,649	$ 2,063	$ (17,770)	$ (100)	$ —	$ 42,305	$ 48,147

(1) Effective January 1, 2018, we adopted Accounting Standard update ("ASU") 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities, resulting in the reclassification of public equity securities out of our AFS securities portfolio into our non-marketable and other equity securities portfolio. This guidance was adopted using the modified retrospective method with a cumulative adjustment to opening retained earnings. As such, prior period amounts have not been restated.

(Dollars in thousands)	Managed Funds of Funds	Managed Direct Venture Funds	Debt Funds	Sales of AFS Securities	Strategic and Other Investments	Total
Three months ended September 30, 2017						
Total gains (losses) on investment securities, net	$ 8,446	$ 729	$ 2,445	$ (101)	$ 3,719	$ 15,238
Less: income attributable to noncontrolling interests, including carried interest allocation	5,335	161	—	—	—	5,496
Non-GAAP net gains (losses) on investment securities, net of noncontrolling interests	$ 3,111	$ 568	$ 2,445	$ (101)	$ 3,719	$ 9,742
Nine months ended September 30, 2017						
Total gains on investment securities, net	$ 30,624	$ 894	$ 2,696	$ 384	$ 14,240	$ 48,838
Less: income attributable to noncontrolling interests, including carried interest allocation	21,245	178	—	—	—	21,423
Non-GAAP net gains on investment securities, net of noncontrolling interests	$ 9,379	$ 716	$ 2,696	$ 384	$ 14,240	$ 27,415

Gains on Equity Warrant Assets, Net

Three months ended September 30, 2018 and 2017

Net gains on equity warrant assets were $34.1 million for the three months ended September 30, 2018, compared to net gains of $24.9 million for the comparable 2017 period. Net gains on equity warrant assets for the three months ended September 30, 2018 consisted of:

- Net gains of $18.3 million from the exercise of equity warrant assets compared to net gains of $7.4 million, primarily driven by increased IPO and M&A activity during the three months ended September 30, 2018, and
- Net gains of $17.3 million from changes in warrant valuation increases compared to net gains of $18.2 million, driven by valuation increases in our private company warrant portfolio during the three months ended September 30, 2018.

Nine months ended September 30, 2018 and 2017

Net gains on equity warrant assets were $72.4 million for the nine months ended September 30, 2018, compared to net gains of $42.4 million for the comparable 2017 period. Net gains on equity warrant assets for the nine months ended September 30, 2018 consisted of:

- Net gains of $42.8 million from the exercise of equity warrant assets compared to net gains of $22.5 million , reflective primarily of increased IPO and M&A activity during the nine months ended September 30, 2018, and
- Net gains of $32.7 million from changes in warrant valuation increases compared to net gains of $23.6 million, driven by our private company warrant portfolio and reflective of increased M&A activity during the nine months ended September 30, 2018.

A summary of gains on equity warrant assets, net, for the three and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
Equity warrant assets (1)						
Gains on exercises, net	$ 18,287	$ 7,449	145.5 %	$ 42,808	$ 22,482	90.4 %
Cancellations and expirations	(1,432)	(757)	89.2	(3,158)	(3,614)	(12.6)
Changes in fair value, net	17,286	18,230	(5.2)	32,743	23,564	39.0
Gains on equity warrant assets, net	$ 34,141	$ 24,922	37.0	$ 72,393	$ 42,432	70.6

(1) At September 30, 2018, we held warrants in 2,031 companies, compared to 1,842 companies at September 30, 2017. The total fair value of our warrant portfolio was $147.0 million at September 30, 2018 and $141.8 million at September 30, 2017. Warrants in 18 companies each had fair values greater than $1.0 million and collectively represented $42.8 million, or 29.1 percent, of the fair value of the total warrant portfolio at September 30, 2018. Warrants in 16 companies each had

fair values greater than $1.0 million and collectively represented $51.7 million, or 36.5 percent, of the fair value of the total warrant portfolio at September 30, 2017.

Non-GAAP Core Fee Income

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
Non-GAAP core fee income (1):						
Foreign exchange fees	$ 32,656	$ 29,671	10.1 %	$ 100,560	$ 82,026	22.6 %
Credit card fees	24,121	20,270	19.0	68,739	56,099	22.5
Deposit service charges	19,588	14,508	35.0	56,081	43,046	30.3
Client investment fees	36,265	15,563	133.0	88,592	37,571	135.8
Lending related fees	10,675	15,404	(30.7)	30,938	32,874	(5.9)
Letters of credit and standby letters of credit fees	8,409	7,306	15.1	24,938	20,951	19.0
Total non-GAAP core fee income (1)	$ 131,714	$ 102,722	28.2	$ 369,848	$ 272,567	35.7

(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.

Foreign Exchange Fees

Foreign exchange fees were $32.7 million and $100.6 million for the three and nine months ended September 30, 2018, respectively, compared to $29.7 million and $82.0 million for the comparable 2017 periods. The increases in foreign exchange fees were driven primarily by increases in spot contract commissions driven by increased volume of trades for the three and nine months ended September 30, 2018 compared to the 2017 periods. The volume of trades for spot contracts increased 32.1 percent and 32.8 percent for the three and nine months ended September 30, 2018, respectively, compared to the comparable 2017 periods 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 and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
Foreign exchange fees by instrument type:						
Spot contract commissions	$ 30,041	$ 27,700	8.5 %	$ 92,791	$ 73,707	25.9 %
Forward contract commissions	2,534	1,877	35.0	7,474	7,948	(6.0)
Option premium fees	81	94	(13.8)	295	371	(20.5)
Total foreign exchange fees	$ 32,656	$ 29,671	10.1	$ 100,560	$ 82,026	22.6

Credit Card Fees

Credit card fees were $24.1 million and $68.7 million for the three and nine months ended September 30, 2018, respectively, compared to $20.3 million and $56.1 million for the comparable 2017 periods. The increases were primarily due to higher gross interchange fee income driven by an increase in transaction volume reflective of higher spend 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 and nine months ended September 30, 2018. A summary of credit card fees by instrument type for the three and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
Credit card fees by instrument type:						
Card interchange fees, net	$ 18,849	$ 16,179	16.5%	$ 54,547	$ 44,182	23.5%
Merchant service fees	3,679	2,930	25.6	10,010	8,553	17.0
Card service fees	1,593	1,161	37.2	4,182	3,364	24.3
Total credit card fees	$ 24,121	$ 20,270	19.0	$ 68,739	$ 56,099	22.5

Deposit Service Charges

Deposit service charges were $19.6 million and $56.1 million for the three and nine months ended September 30, 2018, respectively, compared to $14.5 million and $43.0 million for the comparable 2017 periods. The increases were reflective of higher deposit client counts, as well as higher volumes of our transaction-based fee products, during the three and nine months ended September 30, 2018.

Client Investment Fees

Client investment fees were $36.3 million and $88.6 million for the three and nine months ended September 30, 2018, respectively, compared to $15.6 million and $37.6 million for the comparable 2017 periods. The increases were 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 and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
Client investment fees by type:						
Sweep money market fees	$ 21,105	$ 7,968	164.9%	$ 50,605	$ 18,838	168.6%
Asset management fees	6,358	4,177	52.2	17,447	11,666	49.6
Repurchase agreement fees	8,802	3,418	157.5	20,540	7,067	190.6
Total client investment fees	$ 36,265	$ 15,563	133.0	$ 88,592	$ 37,571	135.8

The following table summarizes average client investment funds for the three and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in millions)	2018	2017	% Change	2018	2017	% Change
Sweep money market funds	$ 34,556	$ 20,165	71.4%	$ 30,284	$ 18,783	61.2%
Client investment assets under management(1)	36,541	26,123	39.9	33,561	24,531	36.8
Repurchase agreements	8,464	6,985	21.2	7,905	6,190	27.7
Total average client investment funds (2)	$ 79,561	$ 53,273	49.3	$ 71,750	$ 49,504	44.9

(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 September 30, 2018 and December 31, 2017:

(Dollars in millions)	September 30, 2018	December 31, 2017	% Change
Sweep money market funds	$ 36,067	$ 23,911	50.8%
Client investment assets under management (1)	37,649	29,344	28.3
Repurchase agreements	8,369	7,074	18.3
Total period-end client investment funds (2)	$ 82,085	$ 60,329	36.1

(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 $10.7 million and $30.9 million for the three and nine months ended September 30, 2018, respectively, compared to $15.4 million and $32.9 million for the comparable 2017 periods. The decreases were due primarily to a one-time adjustment of $4.5 million during the three months ended September 30, 2017 related to fees earned in prior periods from unused lines of credit. A summary of lending related fees by instrument type for the three and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
Lending related fees by instrument type:						
Unused commitment fees	$ 8,410	$ 12,334	(31.8)%	$ 24,994	$ 25,923	(3.6)%
Other	2,265	3,070	(26.2)	5,944	6,951	(14.5)
Total lending related fees	$ 10,675	$ 15,404	(30.7)	$ 30,938	$ 32,874	(5.9)

Noninterest Expense

A summary of noninterest expense for the three and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
Compensation and benefits	$ 195,437	$ 153,263	27.5%	$ 543,198	$ 449,412	20.9 %
Professional services	36,542	32,987	10.8	112,080	86,331	29.8
Premises and equipment	19,858	18,937	4.9	57,576	53,753	7.1
Net occupancy	13,694	12,660	8.2	40,598	35,437	14.6
Business development and travel	12,712	10,329	23.1	35,998	30,913	16.4
FDIC and state assessments	9,550	8,359	14.2	29,306	26,354	11.2
Correspondent bank fees	3,513	3,162	11.1	10,200	9,770	4.4
Other	18,139	18,064	0.4	51,645	54,670	(5.5)
Total noninterest expense	$ 309,445	$ 257,761	20.1	$ 880,601	$ 746,640	17.9

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 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 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 operating efficiency ratio, both net of noncontrolling interests for the three and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands, except ratios)	2018	2017	% Change	2018	2017	% Change
GAAP noninterest expense	$ 309,445	$ 257,761	20.1 %	$ 880,601	$ 746,640	17.9 %
Less: amounts attributable to noncontrolling interests	154	125	23.2	349	517	(32.5)
Non-GAAP noninterest expense, net of noncontrolling interests	$ 309,291	$ 257,636	20.0	$ 880,252	$ 746,123	18.0
GAAP net interest income	$ 493,222	$ 373,974	31.9	$ 1,379,528	$ 1,026,663	34.4
Adjustments for taxable equivalent basis	2,858	631	NM	6,249	1,455	NM
Non-GAAP taxable equivalent net interest income	$ 496,080	$ 374,605	32.4	$ 1,385,777	$ 1,028,118	34.8
Less: income attributable to noncontrolling interests	10	9	11.1	29	26	11.5
Non-GAAP taxable equivalent net interest income, net of noncontrolling interests	$ 496,070	$ 374,596	32.4	$ 1,385,748	$ 1,028,092	34.8
GAAP noninterest income	$ 210,070	$ 158,778	32.3	$ 558,277	$ 404,965	37.9
Less: income attributable to noncontrolling interests	6,692	5,614	19.2	29,161	21,709	34.3
Non-GAAP noninterest income, net of noncontrolling interests	$ 203,378	$ 153,164	32.8	$ 529,116	$ 383,256	38.1
GAAP total revenue	$ 703,292	$ 532,752	32.0	$ 1,937,805	$ 1,431,628	35.4
Non-GAAP taxable equivalent revenue, net of noncontrolling interests	$ 699,448	$ 527,760	32.5	$ 1,914,864	$ 1,411,348	35.7
GAAP operating efficiency ratio	44.00%	48.38%	(9.1)	45.44%	52.15%	(12.9)
Non-GAAP operating efficiency ratio (1)	44.22	48.82	(9.4)	45.97	52.87	(13.1)

NM—Not meaningful

(1) The non-GAAP operating efficiency ratio is calculated by dividing non-GAAP noninterest expense, net of noncontrolling interests, by non-GAAP taxable-equivalent revenue, net of noncontrolling interests.

Compensation and Benefits Expense

The following table provides a summary of our compensation and benefits expense for the three and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands, except employees)	**2018**	**2017**	**% Change**	**2018**	**2017**	**% Change**
Compensation and benefits:						
Salaries and wages	$ 84,962	$ 72,799	16.7%	$ 234,832	$ 207,687	13.1%
Incentive compensation & ESOP	57,375	37,668	52.3	155,390	108,310	43.5
Other employee incentives and benefits (1)	53,100	42,796	24.1	152,976	133,415	14.7
Total compensation and benefits	$ 195,437	$ 153,263	27.5	$ 543,198	$ 449,412	20.9
Period-end full-time equivalent employees	2,836	2,433	16.6	2,836	2,433	16.6
Average full-time equivalent employees	2,778	2,434	14.1	2,623	2,384	10.0

(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 $195.4 million for the three months ended September 30, 2018, compared to $153.3 million for the comparable 2017 period. The key changes in factors affecting compensation and benefits expense were as follows:

- An increase of $19.7 million in incentive compensation and ESOP expense reflective primarily of our strong 2018 full-year expected performance as compared to 2017 as well as an increase in the number of average FTE since September 30, 2017,
- An increase of $12.2 million in salaries and wages reflective primarily of the increase in the number of average FTE by 344 to 2,778 for the third quarter of 2018 compared to the same period in 2017, as well as merit increases, and
- An increase of $10.3 million in other employee incentives and benefits primarily driven by an increase in employer group health insurance and payroll taxes of $2.5 million and $2.4 million, respectively, reflective of the increase in the number of average FTE since September 30, 2017, as well as an increase of $2.9 million in share-based compensation expense, primarily due to increased grants of restricted stock awards and at higher values at date of grant, reflective of the increase in our stock price, for the third quarter of 2018 as compared to the third quarter of 2017.

Compensation and benefits expense was $543.2 million for the nine months ended September 30, 2018, compared to $449.4 million for the comparable 2017 period. The key changes in factors affecting compensation and benefits expense were as follows:

- An increase of $47.1 million in incentive compensation and ESOP expense reflective primarily of our strong 2018 full-year expected performance as compared to 2017 as well as an increase in the number of average FTE since September 30, 2017,
- An increase of $27.1 million in salaries and wages reflective primarily of the increase in the number of average FTE by 239 to 2,623 for the nine months ended September 30, 2018, compared to the same period in 2017, as well as merit increases, and
- An increase of $19.6 million in other employee incentives and benefits primarily driven by an increase in employer payroll taxes of $6.3 million, reflective of the increase in the number of average FTE since the third quarter of 2017, as well as an increase of $6.2 million in share-based compensation expense, primarily due to increased grants of restricted stock awards and at higher values at date of grant, reflective of the increase in our stock price, for the nine months ended September 30, 2018 as compared to the nine months ended September 30, 2017. The remaining increase is related to other employee benefit expenses reflective of the increase in the number of average FTE as mentioned previously.

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 2017 Form 10-K). Total costs incurred under these plans were $67.3 million and $182.2 million for the three and nine months ended September 30, 2018, respectively, compared to $45.9 million and $133.3 million for the comparable 2017 periods. These amounts are included in total compensation and benefits expense discussed above.

Professional Services

Professional services expense was $36.5 million and $112.1 million for the three and nine months ended September 30, 2018, respectively, compared to $33.0 million and $86.3 million for the comparable 2017 periods. The increases were 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 investments made in projects, systems and technology to support our revenue growth and related initiatives and other operating costs. Professional services expense for the nine months ended September 30, 2018 included a $6.0 million write-off for capitalized costs in connection with the Economic Growth, Regulatory Relief and Consumer Protection Act, which includes regulatory reform of the threshold for which certain enhanced prudential standards apply from $50 billion to $250 billion.

Net Occupancy

Net occupancy expense was $13.7 million and $40.6 million for the three and nine months ended September 30, 2018, respectively, compared to $12.7 million and $35.4 million for the comparable 2017 periods. The increases were primarily due to lease renewals at higher costs, reflective of market conditions, and the expansion of certain offices to support our growth.

Business Development and Travel

Business development and travel expense was $12.7 million and $36.0 million for the three and nine months ended September 30, 2018, respectively, compared to $10.3 million and $30.9 million for the comparable 2017 period. The increases were to support expansion initiatives as we continue to grow both domestically and globally.

Other Noninterest Expense

Total other noninterest expense was $18.1 million and $51.6 million for the three and nine months ended September 30, 2018, respectively, compared to $18.1 million and $54.7 million for the comparable 2017 periods. The decrease for the nine months ended September 30, 2018 was driven primarily by certain reimbursement incentives received associated with a new vendor agreement signed during the first quarter of 2018.

A summary of other noninterest expense for the three and nine months ended September 30, 2018 and 2017 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
Lending and other client related processing costs	$ 5,698	$ 6,935	(17.8)%	$ 16,301	$ 18,806	(13.3)%
Data processing services	2,740	2,244	22.1	7,934	7,254	9.4
Telephone	2,269	2,518	(9.9)	7,025	7,892	(11.0)
Dues and publications	1,387	883	57.1	3,081	2,355	30.8
Postage and supplies	652	612	6.5	2,133	2,013	6.0
Other	5,393	4,872	10.7	15,171	16,350	(7.2)
Total other noninterest expense	$ 18,139	$ 18,064	0.4	$ 51,645	$ 54,670	(5.5)

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 funds’ general partners. A summary of net income attributable to noncontrolling interests for the three and nine months ended September 30, 2018 and 2017 is as follows:

(Dollars in thousands)	Three months ended September 30, 2018	Three months ended September 30, 2017	% Change	Nine months ended September 30, 2018	Nine months ended September 30, 2017	% Change
Net interest income (1)	$ (10)	$ (9)	11.1 %	$ (29)	$ (26)	11.5 %
Noninterest income (1)	(2,749)	(4,341)	(36.7)	(20,127)	(19,059)	5.6
Noninterest expense (1)	154	125	23.2	349	517	(32.5)
Carried interest allocation (2)	(3,943)	(1,273)	NM	(9,034)	(2,650)	NM
Net income attributable to noncontrolling interests	$ (6,548)	$ (5,498)	19.1	$ (28,841)	$ (21,218)	35.9

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 September 30, 2018 and 2017

Net income attributable to noncontrolling interests was $6.5 million for the three months ended September 30, 2018, compared to $5.5 million for the comparable 2017 period. Net income attributable to noncontrolling interests of $6.5 million for the three months ended September 30, 2018 was reflective of $6.6 million in net gains on investment securities (including carried interest allocation) primarily from our managed funds of funds in the portfolio related to net unrealized valuation increases in private company investments held by the funds during the third quarter of 2018. See "Results of Operations—Noninterest Income—Gains on Investment Securities, Net".

Nine months ended September 30, 2018 and 2017

Net income attributable to noncontrolling interests was $28.8 million for the nine months ended September 30, 2018, compared to $21.2 million for the comparable 2017 period. Net income attributable to noncontrolling interests of $28.8 million for the nine months ended September 30, 2018 was reflective of $29.2 million net gains on investment securities (including carried interest allocation) primarily from our managed funds of funds portfolio due to net unrealized valuation increases in both private and public company investments held by the funds in the portfolio during the nine months ended September 30, 2018. See "Results of Operations—Noninterest Income—Gains on Investment Securities, Net".

Income Taxes

On December 22, 2017, the TCJ Act was signed into law. The TCJ Act amends the Internal Revenue Code to, among other things, reduce tax rates, and make changes to credits and deductions for individuals and businesses. For businesses, the TCJ Act permanently lowers the Federal corporate tax rate to 21.0 percent from the prior maximum rate of 35.0 percent, effective for tax years including or commencing January 1, 2018.

The Company has also considered the provisions of the TCJ Act related to non-U.S. operations which would potentially impact the Company's income tax provision. Such provisions include the one-time transition tax ("TT") on foreign earnings and the new base erosion anti-avoidance tax ("BEAT"). Based on analyses performed by the Company as of September 30, 2018, the impact of both of these provisions continue to have an immaterial impact on the Company's income tax provision.

Our effective income tax expense rate was 25.8 percent for both the three and nine months ended September 30, 2018, compared to 39.6 percent and 37.1 percent for the comparable 2017 periods, respectively. 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 reductions in the effective tax rate for the three and nine months ended September 30, 2018 were primarily due to the lower Federal corporate tax rate as a result of the TCJ Act effective January 1, 2018.

The effective tax rate for the three and nine months ended September 30, 2018, included the recognition of tax benefits of $3.0 million and $17.5 million, respectively, compared to $1.3 million and $14.4 million for the comparable 2017 periods due to the adoption of ASU 2016-09 in the first quarter of 2017. The increase in the tax benefits for the three and nine months ended September 30, 2018 compared to the comparable 2017 periods were partially offset by the reduction in the Federal corporate tax rate.

The Company has considered the provisions of the TCJ Act and analyzed for potential impact to its income tax provision for the fiscal year ending December 31, 2018. Aside from the items noted above, the Company is not aware of any further items which could materially impact its financial statements for the three and nine months ended September 30, 2018.

Operating Segment Results

We have three segments for which we report our financial information: Global Commercial Bank, SVB Private Bank and SVB Capital.

We report segment information based on the "management" approach, which designates the internal reporting used by management for making decisions and assessing performance as the source of our reporting segments. Please refer to Note 12—"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 and nine months ended September 30, 2018 and 2017:

Global Commercial Bank

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
Net interest income	$ 431,036	$ 337,860	27.6 %	$ 1,209,960	$ 924,789	30.8%
Provision for credit losses	(19,074)	(20,874)	(8.6)	(71,704)	(65,007)	10.3
Noninterest income	114,123	97,227	17.4	326,714	260,650	25.3
Noninterest expense	(206,487)	(178,306)	15.8	(591,434)	(528,807)	11.8
Income before income tax expense	$ 319,598	$ 235,907	35.5	$ 873,536	$ 591,625	47.7
Total average loans, net of unearned income	$ 22,925,909	$ 18,807,616	21.9	$ 21,781,557	$ 18,125,020	20.2
Total average assets	54,296,808	47,809,890	13.6	52,277,701	45,408,476	15.1
Total average deposits	47,037,693	42,376,024	11.0	45,701,317	40,398,413	13.1

Three months ended September 30, 2018 and 2017

Income before income tax expense from our Global Commercial Bank ("GCB") increased to $319.6 million for the three months ended September 30, 2018, compared to $235.9 million for the comparable 2017 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 September 30, 2018 compared to the comparable 2017 period are discussed below.

Net interest income from GCB increased by $93.2 million for the three months ended September 30, 2018, 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 $19.1 million for the three months ended September 30, 2018, compared to $20.9 million for the comparable 2017 period. The provision of $19.1 million for the three months ended September 30, 2018 reflects primarily $12.9 million in additional reserves for period-end loan growth, $9.2 million for charge-offs not specifically reserved for and $9.3 million in net new specific reserves for nonaccrual loans, partially offset by a decrease in the qualitative component of our performing loan reserves of $8.2 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 $20.9 million for the three months ended September 30, 2017 primarily reflected $13.8 million in net new specific reserves for nonaccrual loans and a $10.9 million increase in reserves for period-end loan growth, partially offset by a benefit from improved credit quality from the continued shift in our loan portfolio to private equity/venture capital loans, which tend to be of higher credit quality.

Noninterest income increased by $16.9 million for the three months ended September 30, 2018, related primarily to an overall increase in our non-GAAP core fee income (higher client investment fees, deposit service charges and credit card fees). This increase was 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 $28.2 million for the three months ended September 30, 2018, due primarily to increased compensation and benefits. Compensation and benefits expense increased by $27.3 million primarily as a result of increased incentive compensation and ESOP expense, salaries and wages and other employee benefits. The $13.8 million in incentive compensation and ESOP expense is reflective primarily of our strong 2018 full-year expected performance as compared to 2017 as well as an increase in average FTE since the third quarter of 2017. The $12.6 million increase in GCB salaries and wages was due primarily to an increase in the average number of FTEs at GCB, which increased by 224 to 2,102 FTEs for the three months ended September 30, 2018, compared to 1,878 FTEs for the comparable 2017 period.

Nine months ended September 30, 2018 and 2017

Net interest income from our GCB increased by $285.2 million for the nine months ended September 30, 2018, 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 $71.7 million for the nine months ended September 30, 2018, compared to a provision of $65.0 million for the comparable 2017 period. The provision of $71.7 million for the nine months ended September 30, 2018 was reflective primarily of $39.4 million from period-end loan growth, $34.0 million in net new specific reserves for nonaccrual loans and $24.0 million for charge-offs not specifically reserved for, partially offset by a decrease in reserves of $20.7 million for our performing loans from certain reserve methodology enhancements made to our qualitative reserve for large loan exposure as a result of growth within our higher credit quality private equity/venture capital loan portfolios.

The provision of $65.0 million for the nine months ended September 30, 2017 was reflective primarily of $51.9 million in net new specific reserves for nonaccrual loans and $20.9 million from period-end loan growth, partially offset by a benefit from the overall improved credit quality of our loan portfolio and the continued shift in our loan portfolio to private equity/venture capital loans, which tend to be of higher credit quality.

Noninterest income increased by $66.1 million for the nine months ended September 30, 2018, related primarily to an overall increase in our non-GAAP core fee income (higher foreign exchange fees, client investment fees and credit card fees). This increase was 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 $62.6 million for the nine months ended September 30, 2018, due primarily to increased expenses for compensation and benefits. Compensation and benefits expense increased by $61.1 million primarily as a result of increased incentive compensation and ESOP expense, salaries and wages and other employee benefits. The $34.1 million increase in incentive compensation and ESOP expense is reflective primarily of our strong 2018 full-year expected performance as compared to 2017 as well as an increase in average FTE since the third quarter of 2017. The $23.1 million increase in GCB salaries and wages was due primarily to an increase in the average number of FTEs at GCB, which increased by 146 to 2,001 FTEs for the nine months ended September 30, 2018, compared to 1,855 FTEs for the comparable 2017 period. The increase in total other employee benefits was related to various expenses, particularly employer payroll taxes reflective of the increase in the number of average FTE.

SVB Private Bank

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
Net interest income	$ 14,919	$ 14,600	2.2 %	$ 46,811	$ 42,952	9.0 %
Provision for credit losses	(362)	(1,535)	(76.4)	(2,384)	(2,266)	5.2
Noninterest income	605	460	31.5	1,677	1,715	(2.2)
Noninterest expense	(6,760)	(4,706)	43.6	(18,729)	(12,675)	47.8
Income before income tax expense	$ 8,402	$ 8,819	(4.7)	$ 27,375	$ 29,726	(7.9)
Total average loans, net of unearned income	$ 2,928,576	$ 2,499,507	17.2	$ 2,791,910	$ 2,371,027	17.8
Total average assets	2,538,662	2,538,400	—	2,548,184	2,403,777	6.0
Total average deposits	1,505,746	1,231,390	22.3	1,519,200	1,289,990	17.8

Three months ended September 30, 2018 and 2017

Net interest income from our SVB Private Bank increased by $0.3 million for the three months ended September 30, 2018, reflective primarily of higher interest income due to loan growth, partially offset by a higher funding charge for loans funded.

Noninterest expense increased by $2.1 million for the three months ended September 30, 2018, 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 third quarter of 2017, and higher incentive compensation expenses, reflective primarily of our strong 2018 full-year expected performance as compared to 2017.

Nine months ended September 30, 2018 and 2017

Net interest income from our SVB Private Bank increased by $3.9 million for the nine months ended September 30, 2018, reflective primarily of higher interest income due to loan growth, partially offset by a higher funding charge for loans funded.

SVB Private Bank had a provision for credit losses of $2.4 million for the nine months ended September 30, 2018, compared to $2.3 million for the comparable 2017 period. The provisions for both the nine months ended September 30, 2018 and 2017 were due primarily to reserves for period-end loan growth.

Noninterest expense increased by $6.1 million for the nine months ended September 30, 2018, due primarily to increased compensation and benefits expense. Compensation and benefits expense increased as a result of increased salaries and wages, reflective primarily of the increase in the number of average FTE since the third quarter 2017, and higher incentive compensation expenses, reflective primarily of our strong 2018 full-year expected performance as compared to 2017.

SVB Capital

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2018	2017	% Change	2018	2017	% Change
Net interest income	$ 6	$ 15	(60.0)%	$ 22	$ 41	(46.3)%
Noninterest income	24,423	13,913	75.5	81,832	45,707	79.0
Noninterest expense	(6,469)	(4,873)	32.8	(17,182)	(14,537)	18.2
Income before income tax expense	$ 17,960	$ 9,055	98.3	$ 64,672	$ 31,211	107.2
Total average assets	$ 388,531	$ 323,417	20.1	$ 379,809	$ 333,439	13.9

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 and average assets 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 September 30, 2018 and 2017

SVB Capital had noninterest income of $24.4 million for the three months ended September 30, 2018, compared to $13.9 million for the comparable 2017 period. The increase in noninterest income was due primarily to higher net gains on investment securities compared to the comparable 2017 period. SVB Capital's components of noninterest income primarily include the following:

- Net gains on investment securities of $17.8 million for the three months ended September 30, 2018, compared to net gains of $8.1 million for the comparable 2017 period. The net gains on investment securities of $17.8 million were related to gains from our strategic venture capital fund investments reflective of net unrealized valuation increases in private company investments held in our strategic venture capital funds and net unrealized valuation increases in the private company investments held by our managed funds of funds, and
- Fund management fees of $5.5 million compared to $5.2 million for the comparable 2017 period.

Nine months ended September 30, 2018 and 2017

SVB Capital had noninterest income of $81.8 million for the nine months ended September 30, 2018, compared to $45.7 million for the comparable 2017 period. The increase in noninterest income was due primarily to higher net gains on investment securities compared to the comparable 2017 period. SVB Capital's components of noninterest income primarily include the following:

- Net gains on investment securities of $61.6 million for the nine months ended September 30, 2018, compared to net gains of $28.2 million for the comparable 2017 period. The net gains on investment securities of $61.6 million were related to gains from our strategic venture capital fund investments reflective of net unrealized valuation increases in both private and public company investments held in our strategic venture capital funds and net unrealized valuation increases in both private and public company investments held by our managed funds of funds, and
- Fund management fees of $17.1 million compared to $15.9 million for the comparable 2017 period.

Consolidated Financial Condition

Our total assets, and total liabilities and stockholders' equity, were $58.1 billion at September 30, 2018 compared to $51.2 billion at December 31, 2017, an increase of $6.9 billion, or 13.5 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 $3.8 billion at September 30, 2018, an increase of $0.9 billion, or 30.7 percent, compared to $2.9 billion at December 31, 2017. As of September 30, 2018, $2.1 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 $1.1 billion. As of December 31, 2017, $0.6 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 $1.1 billion.

Investment Securities

Investment securities totaled $25.9 billion at September 30, 2018, an increase of $1.5 billion, or 5.9 percent, compared to $24.4 billion at December 31, 2017. 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 $9.1 billion at September 30, 2018 compared to $11.1 billion at December 31, 2017, a decrease of $2.0 billion, or 18.3 percent. The $2.0 billion decrease in period-end AFS securities balances from December 31, 2017 to September 30, 2018, was due primarily to $2.5 billion in portfolio paydowns and maturities partially offset by purchases of $0.7 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. At September 30, 2018 the AFS portfolio had unrealized losses of $98.0 million ($70.8 million net of tax), primarily driven by increases in period-end 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 September 30, 2018. 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 and U.S. agency debentures, 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.

	September 30, 2018									
	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	$5,501,874	1.75%	$2,016,438	1.43%	$3,047,620	1.80%	$ 437,816	2.95%	$ —	—%
U.S. agency debentures	1,346,672	1.77	653,271	1.51	693,401	2.01	—	—	—	—
Residential mortgage-backed securities:										
Agency-issued collateralized mortgage obligations—fixed rate	1,920,541	2.59	—	—	—	—	29,113	2.63	1,891,428	2.58
Agency-issued collateralized mortgage obligations—variable rate	318,522	0.71	—	—	—	—	—		318,522	0.71
Total	$9,087,609	1.90	$2,669,709	1.45	$3,741,021	1.84	$ 466,929	2.93	$2,209,950	2.31

Held-to-Maturity Securities

Period-end held-to-maturity securities were $15.9 billion at September 30, 2018 compared to $12.7 billion at December 31, 2017, an increase of $3.2 billion, or 25.6 percent. The $3.2 billion increase in period-end HTM security balances from December 31, 2017 to September 30, 2018 was due to new purchases of $4.7 billion, with $3.9 billion of agency backed mortgage securities purchases and $0.8 billion of municipal bond purchases, partially offset by $1.5 billion in portfolio paydowns 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 September 30, 2018. 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.

	September 30, 2018									
	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	$ 641,134	2.65%	$ —	—%	$ 104,550	2.63%	$ 536,584	2.66%	$ —	—%
Residential mortgage-backed securities:										
Agency-issued mortgage-backed securities	8,333,088	2.88	—		179,847	2.07	859,233	2.48	7,294,008	2.94
Agency-issued collateralized mortgage obligations—fixed rate	2,329,065	1.78	—	—	—	—	474,668	1.56	1,854,397	1.84
Agency-issued collateralized mortgage obligations—variable rate	223,374	0.74	—	—	—	—	—	—	223,374	0.74
Agency-issued commercial mortgage-backed securities	2,795,952	2.98	—	—	—	—	—	—	2,795,952	2.98
Municipal bonds and notes	1,577,113	3.60	8,376	3.16	74,518	2.05	256,453	2.64	1,237,766	3.90
Total	$15,899,726	2.77	$ 8,376	3.16	$ 358,915	2.23	$2,126,938	2.34	$13,405,497	2.85

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. Our estimated fixed income investment securities portfolio weighted-average duration was 3.9 years and 3.0 years at September 30, 2018 and December 31, 2017, 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 investments in 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 securities compared to the amounts attributable to SVBFG.

Period-end non-marketable and other equity securities were $896.2 million at September 30, 2018 compared to $651.1 million at December 31, 2017, an increase of $245.1 million, or 37.7 percent. Non-marketable and other equity securities, net of noncontrolling interests were $765.3 million at September 30, 2018, compared to $530.6 million at December 31, 2017. The increase was mostly attributable to accounting changes related to the adoption of ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities, which requires equity investments (except those accounted for under the equity method of accounting) to be measured at fair value and eliminated the cost method of accounting. As part of this adoption, we recorded an adjustment to opening retained earnings for cost method investments measured at NAV and increased the carrying value of our unconsolidated venture capital and private equity fund investments. We also increased our investments in qualified affordable housing projects by $87.5 million for additional tax benefits as part of our strategy to reduce our effective tax rate. An additional increase in our other equity securities of $30.2 million was attributable to exercised equity warrant assets. The following table summarizes the carrying value (as reported) of non-marketable and other securities compared to the amounts attributable to SVBFG (which generally represents the carrying value times our ownership percentage) at September 30, 2018 and December 31, 2017:

	September 30, 2018		December 31, 2017	
(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 (fair value accounting):				
Consolidated venture capital and private equity fund investments (1)	$ 126,467	$ 32,609	$ 128,111	$ 33,044
Unconsolidated venture capital and private equity fund investments (2)	208,953	208,953	98,548	98,548
Other investments without a readily determinable fair value (3)	25,253	25,253	27,680	27,680
Other equity securities in public companies (4)	30,460	29,825	310	103
Non-marketable securities (equity method accounting) (5):				
Venture capital and private equity fund investments	112,537	76,035	89,809	64,675
Debt funds	5,241	5,241	21,183	21,183
Other investments	125,632	125,632	111,198	111,198
Investments in qualified affordable housing projects, net	261,706	261,706	174,214	174,214
Total non-marketable and other equity securities	$ 896,249	$ 765,254	$ 651,053	$ 530,645

(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 September 30, 2018 and December 31, 2017:

(Dollars in thousands)	September 30, 2018		December 31, 2017	
	Carrying value (as reported)	Amount attributable to SVBFG	Carrying value (as reported)	Amount attributable to SVBFG
Strategic Investors Fund, LP	$ 12,733	$ 1,599	$ 14,673	$ 1,843
Capital Preferred Return Fund, LP	56,453	12,167	54,147	11,670
Growth Partners, LP	56,280	18,736	58,372	19,432
CP I, LP	1,001	107	919	99
Total consolidated venture capital and private equity fund investments	$ 126,467	$ 32,609	$ 128,111	$ 33,044

(2) The carrying value represents investments in 220 and 235 funds (primarily venture capital funds) at September 30, 2018 and December 31, 2017, 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. Effective January 1, 2018, we adopted ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities which eliminated the concept of cost method accounting. On a prospective basis, we will 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 funds. We will 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, June 30th, for our September 30th consolidated financial statements, adjusted for any contributions paid, distributions received from the investment, and significant fund transactions or market events during the reporting period. We recorded a cumulative adjustment to opening retained earnings on January 1, 2018 for the difference between fair value and cost for these fund investments. The estimated fair value and carrying value of these venture capital and private equity fund investments was $209.0 million as of September 30, 2018. As of December 31, 2017, these investments were carried at cost and had a carrying value of $98.5 million.

(3) Effective January 1, 2018, we adopted ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities which eliminated the concept of cost method accounting. On a prospective basis, we will report our other investments in the line item "Other investments without a readily determinable fair value." 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. For further details on the carrying value of these investments refer to Note 6—"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. Effective January 1, 2018, we adopted ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities which requires equity securities to be measured at fair value with changes in the fair value recognized through net income. Prior to January 1, 2018, we reported equity securities in public companies that we held as a result of exercising public equity warrant assets in available-for-sale securities. On a prospective basis, these equity securities will be reported in non-marketable and other equity securities.

(5) The following table shows the carrying value and amount attributable to SVBFG of each investment at September 30, 2018 and December 31, 2017 (equity method accounting):

(Dollars in thousands)	September 30, 2018		December 31, 2017	
	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	$ 4,739	$ 4,436	$ 6,342	$ 5,971
Strategic Investors Fund III, LP	18,176	14,703	18,758	15,211
Strategic Investors Fund IV, LP	29,445	24,815	25,551	21,739
Strategic Investors Fund V, LP	24,245	12,729	16,856	8,849
CP II, LP (i)	6,865	4,153	6,700	4,056
Other venture capital and private equity fund investments	29,067	15,199	15,602	8,849
Total venture capital and private equity fund investments	$ 112,537	$ 76,035	$ 89,809	$ 64,675
Debt funds:				
Gold Hill Capital 2008, LP (ii)	$ 3,267	$ 3,267	$ 18,690	$ 18,690
Other debt funds	1,974	1,974	2,493	2,493
Total debt funds	$ 5,241	$ 5,241	$ 21,183	$ 21,183
Other investments:				
SPD Silicon Valley Bank Co., Ltd.	$ 75,314	$ 75,314	$ 75,337	$ 75,337
Other investments	50,318	50,318	35,861	35,861
Total other investments	$ 125,632	$ 125,632	$ 111,198	$ 111,198

(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 September 30, 2018, such prohibited investments had an estimated aggregate carrying value and fair value of approximately $244 million. (For more information about the Volcker Rule, see "Business—Supervision and Regulation" under Part 1, Item 1 of our 2017 Form 10-K.)

Loans

Loans, net of unearned income increased by $4.4 billion to $27.5 billion at September 30, 2018, compared to $23.1 billion at December 31, 2017. Unearned income was $174 million at September 30, 2018 and $148 million at December 31, 2017. Total gross loans were $27.7 billion at September 30, 2018, an increase of $4.4 billion, compared to $23.3 billion at December 31, 2017. Period-end loans increased compared to December 31, 2017, driven primarily by loan growth in our private equity/venture capital portfolio as well as from our life science/healthcare and private bank loan portfolios.

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

(Dollars in thousands)	September 30, 2018		December 31, 2017	
	Amount	Percentage	Amount	Percentage
Commercial loans:				
Software/internet	$ 6,317,315	22.8%	$ 6,232,725	26.8%
Hardware	1,318,485	4.8	1,200,900	5.2
Private equity/venture capital	13,369,035	48.3	9,961,121	42.8
Life science/healthcare	2,377,470	8.6	1,867,960	8.0
Premium wine	227,499	0.8	204,257	0.9
Other	277,935	1.0	379,431	1.6
Total commercial loans	23,887,739	86.3	19,846,394	85.3
Real estate secured loans:				
Premium wine	686,767	2.5	670,112	2.9
Consumer	2,553,651	9.2	2,297,857	9.9
Other	41,076	0.2	42,230	0.2
Total real estate secured loans	3,281,494	11.9	3,010,199	13.0
Construction loans	81,903	0.3	69,108	0.3
Consumer loans	417,693	1.5	328,452	1.4
Total gross loans	$ 27,668,829	100.0	$ 23,254,153	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 September 30, 2018:

(Dollars in thousands)	September 30, 2018					
	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	$ 1,549,823	$ 984,569	$ 1,445,166	$ 1,203,498	$ 1,134,259	$ 6,317,315
Hardware	277,212	137,525	231,975	336,541	335,232	1,318,485
Private equity/venture capital	862,227	886,378	2,091,534	1,736,999	7,791,897	13,369,035
Life science/healthcare	312,183	465,959	666,370	487,927	445,031	2,377,470
Premium wine	69,924	36,872	32,684	88,019	—	227,499
Other	157,784	33,854	30,311	21,340	34,646	277,935
Commercial loans	3,229,153	2,545,157	4,498,040	3,874,324	9,741,065	23,887,739
Real estate secured loans:						
Premium wine	175,242	166,931	238,458	106,136	—	686,767
Consumer	2,196,637	256,347	100,667	—	—	2,553,651
Other	7,571	—	33,505	—	—	41,076
Real estate secured loans	2,379,450	423,278	372,630	106,136	—	3,281,494
Construction loans	5,360	39,263	37,280	—	—	81,903
Consumer loans	145,207	42,191	23,279	133,596	73,420	417,693
Total gross loans	$ 5,759,170	$ 3,049,889	$ 4,931,229	$ 4,114,056	$ 9,814,485	$ 27,668,829

At September 30, 2018, gross loans equal to or greater than $20 million to any single client (individually or in the aggregate) totaled $13.9 billion, or 50.3 percent of our total gross loan portfolio. These loans represented 347 clients, and of these loans, $27.9 million were on nonaccrual status as of September 30, 2018.

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, 2017:

	December 31, 2017					
(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	$ 1,558,717	$ 974,959	$ 1,545,194	$ 1,190,247	$ 963,608	$ 6,232,725
Hardware	258,586	138,254	253,978	217,425	332,657	1,200,900
Private equity/venture capital	697,427	807,596	1,617,121	1,142,818	5,696,159	9,961,121
Life science/healthcare	321,738	450,445	576,926	313,656	205,195	1,867,960
Premium wine	60,663	37,845	64,062	32,423	9,264	204,257
Other	149,825	23,096	103,989	25,599	76,922	379,431
Commercial loans	3,046,956	2,432,195	4,161,270	2,922,168	7,283,805	19,846,394
Real estate secured loans:						
Premium wine	150,563	187,272	220,062	89,561	22,654	670,112
Consumer loans	1,989,973	224,825	83,059	—	—	2,297,857
Other	7,763	—	14,134	20,333	—	42,230
Real estate secured loans	2,148,299	412,097	317,255	109,894	22,654	3,010,199
Construction loans	12,178	34,029	—	22,901	—	69,108
Consumer loans	146,395	49,921	17,120	78,742	36,274	328,452
Total gross loans	$ 5,353,828	$ 2,928,242	$ 4,495,645	$ 3,133,705	$ 7,342,733	$ 23,254,153

At December 31, 2017, gross loans equal to or greater than $20 million to any single client (individually or in the aggregate) totaled $10.5 billion, or 45.1 percent of our total gross loan portfolio. These loans represented 277 clients, and of these loans, $52.1 million were on nonaccrual status as of December 31, 2017.

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 all 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 September 30, 2018 and December 31, 2017. 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 9 percent of total gross loans at September 30, 2018 compared to 10 percent at December 31, 2017. 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 three and one percent of total gross loans as of September 30, 2018, respectively, and both represented three percent of total gross loans at December 31, 2017. 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 17 percent of total gross loans at September 30, 2018, compared to 19 percent at December 31, 2017. 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 eight percent of total gross loans at September 30, 2018 compared to nine percent at December 31, 2017. 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 September 30, 2018, our lending to private equity/venture capital firms and funds represented 48 percent of total gross loans, compared to 43 percent of total gross loans at December 31, 2017. 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 September 30, 2018 and December 31, 2017. Many of these clients have mortgages, which represented 86 percent of this portfolio at September 30, 2018; 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 29 percent and 10 percent of our outstanding total gross loan balances as of September 30, 2018 were to borrowers based in California and New York, respectively, compared to 31 percent and 10 percent as of December 31, 2017. Additionally, as of September 30, 2018, borrowers in Massachusetts increased to 10 percent of our outstanding gross loan balances compared to 8 percent as of December 31, 2017. Other than California, New York and Massachusetts, 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 2017 Form 10-K.

Credit Quality Indicators

As of September 30, 2018 and December 31, 2017, 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 18 percent and 22 percent of our total criticized and impaired loan balances at September 30, 2018 and December 31, 2017, respectively. Loans to early-stage clients represent a relatively small percentage of our overall portfolio at six percent of total gross loans at September 30, 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)	September 30, 2018	December 31, 2017
Gross nonaccrual, past due, and restructured loans:		
Nonaccrual loans	$ 115,162	$ 119,259
Loans past due 90 days or more still accruing interest	163	191
Total nonperforming loans	115,325	119,450
OREO and other foreclosed assets	—	—
Total nonperforming assets	$ 115,325	$ 119,450
Performing TDRs	$ 15,397	$ 71,468
Nonperforming loans as a percentage of total gross loans	0.42%	0.51%
Nonperforming assets as a percentage of total assets	0.20	0.23
Allowance for loan losses	$ 285,713	$ 255,024
As a percentage of total gross loans	1.03%	1.10%
As a percentage of total gross nonperforming loans	247.75	213.50
Allowance for loan losses for nonaccrual loans	$ 49,992	$ 41,793
As a percentage of total gross loans	0.18%	0.18%
As a percentage of total gross nonperforming loans	43.35	34.99
Allowance for loan losses for total gross performing loans	$ 235,721	$ 213,231
As a percentage of total gross loans	0.85%	0.92%
As a percentage of total gross performing loans	0.86	0.92
Total gross loans	$ 27,668,829	$ 23,254,153
Total gross performing loans	27,553,504	23,134,703
Allowance for unfunded credit commitments (1)	51,808	51,770
As a percentage of total unfunded credit commitments	0.28%	0.30%
Total unfunded credit commitments (2)	$ 18,539,514	$ 17,462,537

(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 decreased 7 basis points to 1.03 percent at September 30, 2018, compared to 1.10 percent at December 31, 2017 reflective of a decrease in reserves for performing loans of 7 basis points.

Our allowance for loan losses for performing loans was $235.7 million at September 30, 2018, compared to $213.2 million at December 31, 2017. The $22.5 million increase in reserves for performing loans was reflective primarily of an increase in reserves of $39.4 million for period-end loan growth of $4.4 billion, partially offset by a decrease in reserves of $20.7 million for our performing loans from certain reserve methodology enhancements made to our qualitative reserve for large loan exposure as a result of growth within our higher credit quality private equity/venture capital loan portfolio.

Our allowance for loan losses for nonaccrual loans was $50.0 million at September 30, 2018, compared to $41.8 million at December 31, 2017. The $8.2 million increase in the allowance for nonaccrual loans included $50.4 million of new nonaccrual loan reserves, offset by $24.0 million of charge-offs and $18.2 million of reserve releases from paydowns. New nonaccrual loan reserves of $50.4 million were mostly attributable to our software/internet loan portfolio.

The following table presents a summary of changes in nonaccrual loans for the three and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Balance, beginning of period	$ 124,842	$ 120,172	$ 119,259	$ 118,979
Additions	18,346	29,650	69,202	85,990
Paydowns	(14,891)	(14,183)	(48,550)	(43,995)
Charge-offs	(13,135)	(10,967)	(24,714)	(36,299)
Other reductions	—	—	(35)	(3)
Balance, end of period	$ 115,162	$ 124,672	$ 115,162	$ 124,672

Our nonaccrual loans as of September 30, 2018 included $91.0 million from seven software/internet clients. 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, and the remaining four loans were added during 2018 from our early-stage, Growth and sponsored buyout practices. The total credit exposure for these seven largest nonaccrual loans was $91.2 million as of September 30, 2018, for which we have specifically reserved $38.9 million.

Average nonaccrual loans for the three and nine months ended September 30, 2018 were $122.9 million and $120.6 million, respectively, compared to $119.5 million and $124.6 million for the comparable 2017 periods. The $3.4 million increase in average nonaccrual loans for the three months ended September 30, 2018 compared to September 30, 2017 was primarily from our software/internet loan portfolio. If the nonaccrual loans had not been impaired, $1.8 million and $5.8 million in interest income would have been recorded for the three and nine months ended September 30, 2018, respectively, compared to $1.8 million and $5.6 million for the comparable 2017 periods.

Accrued Interest Receivable and Other Assets

A summary of accrued interest receivable and other assets at September 30, 2018 and December 31, 2017 is as follows:

(Dollars in thousands)	September 30, 2018	December 31, 2017	% Change
Foreign exchange spot contract assets, gross	$ 261,036	$ 208,738	25.1%
Derivative assets, gross (1)	235,132	232,152	1.3
Accrued interest receivable	186,097	141,773	31.3
FHLB and Federal Reserve Bank stock	102,378	60,020	70.6
Net deferred tax assets	81,618	63,845	27.8
Accounts receivable	61,090	55,946	9.2
Other assets	178,566	113,772	57.0
Total accrued interest receivable and other assets	$ 1,105,917	$ 876,246	26.2

(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 $52.3 million was due primarily to an overall increase in activity at period-end as compared to December 31, 2017.

Accrued Interest Receivable

The increase of $44.3 million in accrued interest receivable was primarily reflective of the strong growth of our loans. Period-end loan balances were $27.5 billion, an increase of $4.4 billion, or 19.0 percent, as compared to December 31, 2017.

FHLB and Federal Reserve Bank stock

The increase of $42.4 million in FHLB and Federal Reserve Bank stock is a result of an increase in the amount of stock required to be held by the Bank under the FHLB's membership guidelines.

Net Deferred Tax Assets

The increase of $17.8 million in net deferred tax assets was primarily due to the decrease in the fair value of AFS securities, an increase in the allowance for loan losses and the recognition of tax over book gains on warrant exercises. The increase in net deferred tax assets was partially offset by an increase in the deferred tax liability as a result of the change in book accounting following the adoption of ASU 2016-01.

Other Assets

Other assets includes various asset amounts for other operational transactions. The increase of $64.8 million was primarily due to a $30.0 million increase in current tax receivable due to the payment in excess of the current quarter's tax provision. Prepaid assets also increased $21.3 million primarily due to the annual timing of prepaid software agreement renewals.

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, net at September 30, 2018 and December 31, 2017:

(Dollars in thousands)	September 30, 2018	December 31, 2017	% Change
Assets:			
Equity warrant assets	$ 146,967	$ 123,763	18.7 %
Foreign exchange forward and option contracts	81,903	96,636	(15.2)
Client interest rate derivatives	6,262	11,753	(46.7)
Total derivative assets	$ 235,132	$ 232,152	1.3
Liabilities:			
Foreign exchange forward and option contracts	$ 76,165	$ 96,641	(21.2)
Client interest rate derivatives	15,156	11,940	26.9
Total derivative liabilities	$ 91,321	$ 108,581	(15.9)

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 September 30, 2018, we held warrants in 2,031 companies, compared to 1,868 companies at December 31, 2017. Warrants in 18 companies each had values greater than $1.0 million and collectively represented $42.8 million, or 29.1 percent, of the fair value of the total warrant portfolio at September 30, 2018. 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 and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2018	2017	2018	2017
Balance, beginning of period	$ 143,725	$ 131,750	$ 123,763	$ 131,123
New equity warrant assets	5,113	3,622	14,511	11,114
Non-cash changes in fair value, net	17,286	18,230	32,743	23,564
Exercised equity warrant assets	(17,725)	(11,060)	(20,892)	(20,402)
Terminated equity warrant assets	(1,432)	(757)	(3,158)	(3,614)
Balance, end of period	$ 146,967	$ 141,785	$ 146,967	$ 141,785

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 $19.0 million at September 30, 2018 and $65.6 million at December 31, 2017. For additional information on our foreign exchange forward contracts and foreign currency option contracts, see Note 9—"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 $8.3 million at September 30, 2018 and $11.7 million at December 31, 2017. For additional information on our client interest rate derivatives, see Note 9—"Derivative Financial Instruments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

Deposits

Deposits were $48.6 billion at September 30, 2018, an increase of $4.3 billion, or 9.8 percent, compared to $44.3 billion at December 31, 2017. The increase in deposits was driven primarily by a healthy equity funding environment across a majority of our market segments with robust activities in the IPO and secondary public offering markets as well as strong new client acquisition.

At September 30, 2018, the aggregate balance of time deposit accounts individually equal to or greater than $100,000 totaled $72 million, compared to $41 million at December 31, 2017. At September 30, 2018, all of 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 14 percent of our total deposits at September 30, 2018 and December 31, 2017, respectively, were from our clients in Asia.

Short-Term Borrowings

We had $2.6 billion in short-term borrowings at September 30, 2018, compared to $1.0 billion at December 31, 2017. As of September 30, 2018, short-term debt included $2.2 billion in advances from the FHLB and $0.4 billion in securities sold under an agreement to repurchase. For more information on our short-term debt, see Note 8—"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 $696.2 million at September 30, 2018 and $695.5 million at December 31, 2017. As of September 30, 2018, long-term debt included our 3.50% Senior Notes and 5.375% Senior Notes. For more information on our long-term debt, see Note 8—"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 September 30, 2018 and December 31, 2017 is as follows:

(Dollars in thousands)	September 30, 2018	December 31, 2017	% Change
Foreign exchange spot contract liabilities, gross	$ 341,403	$ 202,807	68.3
Accrued compensation	173,036	167,531	3.3
Allowance for unfunded credit commitments	51,808	51,770	0.1
Derivative liabilities, gross (1)	91,321	108,581	(15.9)
Other liabilities	488,541	381,066	28.2
Total other liabilities	$ 1,146,109	$ 911,755	25.7

(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 $138.6 million was due primarily to increased client trade activity at period-end as compared to December 31, 2017.

Other Liabilities

Other liabilities includes various accrued liability amounts for other operational transactions. The increase of $107.5 million was reflective primarily of a $66.0 million increase in new commitments for our qualified affordable tax credit funds and an increase in accrued accounts payable for $34.9 million at September 30, 2018 as compared to December 31, 2017.

Noncontrolling Interests

Noncontrolling interests totaled $145.7 million and $139.6 million at September 30, 2018 and December 31, 2017, respectively. The $6.1 million increase was due primarily to income attributable to noncontrolling interests of $28.8 million, partially offset by net distributions of $22.7 million to limited partners from various managed funds of funds for the nine months ended September 30, 2018.

Fair Value Measurements

The following table summarizes our financial assets and liabilities that are measured at fair value on a recurring basis as of September 30, 2018 and December 31, 2017:

	September 30, 2018		December 31, 2017	
(Dollars in thousands)	Total Balance	Level 3	Total Balance	Level 3
Assets carried at fair value	$ 9,688,621	$ 141,490	$ 11,481,237	$ 122,250
As a percentage of total assets	16.7%	0.2%	22.4%	0.2%
Liabilities carried at fair value	$ 91,321	$ —	$ 108,581	$ —
As a percentage of total liabilities	0.2%	—%	0.2%	—%
As a percentage of assets carried at fair value		1.5%		1.1%

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 15—"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 2017 Form 10-K.

During the three and nine months ended September 30, 2018, the Level 3 assets that are measured at fair value on a recurring basis experienced net realized and unrealized gains of $32.2 million and $69.2 million, respectively, primarily reflective of valuation increases from our public and private company warrant portfolios and net gains realized on exercised warrant assets due to IPO and M&A activity. During the three and nine months ended September 30, 2017, the Level 3 assets that are measured at fair value on a recurring basis experienced net realized and unrealized gains of $24.4 million and $41.4 million, respectively, primarily reflective of valuation increases from our public and private company warrant portfolios and net gains realized on exercised warrant assets due to IPO and M&A activity.

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. 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 $4.9 billion at September 30, 2018, an increase of $744.6 million, or 17.8 percent, compared to $4.2 billion at December 31, 2017. This increase was due primarily to net income of $707.6 million for the nine months ended September 30, 2018 and a net increase to equity of $68.8 million related to the adoption of new accounting guidance offset by a decrease in the fair value of our AFS securities portfolio of $70.8 million, net of tax, driven by increases in period-end market interest rates.

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 September 30, 2018 and December 31, 2017. 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	
	September 30, 2018	December 31, 2017	"Well Capitalized"	"Adequately Capitalized"
SVB Financial:				
CET 1 risk-based capital ratio	13.28%	12.78%	6.5%	4.5%
Tier 1 risk-based capital ratio	13.45	12.97	8.0	6.0
Total risk-based capital ratio	14.34	13.96	10.0	8.0
Tier 1 leverage ratio	8.99	8.34	N/A	4.0
Tangible common equity to tangible assets ratio (1)	8.47	8.16	N/A	N/A
Tangible common equity to risk-weighted assets ratio (1)	13.00	12.77	N/A	N/A
Bank:				
CET 1 risk-based capital ratio	11.98%	12.06%	6.5%	4.5%
Tier 1 risk-based capital ratio	11.98	12.06	8.0	6.0
Total risk-based capital ratio	12.91	13.04	10.0	8.0
Tier 1 leverage ratio	7.82	7.56	5.0	4.0
Tangible common equity to tangible assets ratio (1)	7.44	7.47	N/A	N/A
Tangible common equity to risk-weighted assets ratio (1)	11.70	11.98	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 increased as of September 30, 2018, compared to the same ratios as of December 31, 2017 primarily as a result of the adoption of new accounting guidance that resulted in a net increase in capital of $68.8 million. This increase in capital from the adoption of the new accounting guidance,

in addition to net income of $707.6 million, more than offset the increases in risk-weighted assets primarily attributable to our robust loan growth for 2018.

Risk-based capital ratios (CET 1, tier 1, and total risk-based capital) for the Bank decreased as of September 30, 2018, compared to the same ratios as of December 31, 2017. The decrease in the Bank's capital ratios reflected $95.0 million of cash dividends paid by the Bank to our bank holding company, SVB Financial, during the nine months ended September 30, 2018.

Both SVB Financial and the Bank's tier 1 leverage ratios increased as of September 30, 2018, compared to December 31, 2017, due to proportionally higher capital from net income to average assets growth during 2018. 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 September 30, 2018 and December 31, 2017:

	SVB Financial		Bank	
Non-GAAP tangible common equity and tangible assets (Dollars in thousands, except ratios)	**September 30, 2018**	**December 31, 2017**	**September 30, 2018**	**December 31, 2017**
GAAP SVBFG stockholders' equity	$ 4,924,369	$ 4,179,795	$ 4,260,685	$ 3,762,542
Tangible common equity	$ 4,924,369	$ 4,179,795	$ 4,260,685	$ 3,762,542
GAAP total assets	$ 58,139,734	$ 51,214,467	$ 57,245,029	$ 50,383,774
Tangible assets	$ 58,139,734	$ 51,214,467	$ 57,245,029	$ 50,383,774
Risk-weighted assets	$ 37,889,139	$ 32,736,959	$ 36,424,091	$ 31,403,489
Tangible common equity to tangible assets	8.47%	8.16%	7.44%	7.47%
Tangible common equity to risk-weighted assets	13.00	12.77	11.70	11.98

The tangible common equity to tangible assets ratio decreased for the Bank primarily as a result of the $95.0 million in cash dividends paid by the Bank to our bank holding company, SVB Financial Group, during the nine months ended September 30, 2018. 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 period-end loan growth and higher investment balances driven by increases in deposits.

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 13—"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 13—"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 September 30, 2018, our period-end total deposit balances were $48.6 billion, compared to $44.3 billion at December 31, 2017.

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 (using loans and fixed income investment securities as collateral) and unsecured basis. These include repurchase agreements and federal funds lines with various financial institutions. As of September 30, 2018, we did not have any borrowings outstanding against our federal funds lines. We also pledge collateral to the FHLB of San Francisco (comprised primarily of loans and fixed income investment securities) and the discount window at the FRB (comprised primarily of fixed income investment securities) of which $2.0 billion and $1.0 billion, respectively, of our borrowing capacity was unused and available to support additional borrowings at September 30, 2018.

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 and nine months ended September 30, 2018, the dividend amount paid was $40 million and $95 million, respectively. 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 2017 Form 10-K.

Consolidated Summary of Cash Flows

Below is a summary of our average cash position and statement of cash flows for the nine months ended September 30, 2018 and 2017. For further details, see our "Interim Consolidated Statements of Cash Flows (Unaudited)" under Part I, Item 1 of this report.

	Nine months ended September 30,	
(Dollars in thousands)	**2018**	**2017**
Average cash and cash equivalents	$ 3,032,407	$ 3,596,669
Percentage of total average assets	5.6%	7.6%
Net cash provided by operating activities	$ 703,904	$ 468,032
Net cash used for investing activities	(5,736,296)	(4,734,383)
Net cash provided by financing activities	5,928,458	5,276,172
Net increase in cash and cash equivalents	$ 896,066	$ 1,009,821

Average cash and cash equivalents decreased by $0.6 billion, or 15.7 percent, to $3.0 billion for the nine months ended September 30, 2018, compared to $3.6 billion for the comparable 2017 period.

Cash provided by operating activities was $703.9 million for the nine months ended September 30, 2018, reflective primarily of net income before noncontrolling interests of $736.4 million, partially offset by net decreases in adjustments to reconcile net income to net cash.

Cash used for investing activities of $5.7 billion for the nine months ended September 30, 2018 was driven by $5.4 billion in purchases of fixed income investment securities partially offset by $4.0 billion of proceeds from maturities and principal paydowns from our fixed income investment securities portfolio. Additionally, $4.4 billion in cash outflows were used to fund loan growth during the nine months ended September 30, 2018.

Cash provided by financing activities was $5.9 billion for the nine months ended September 30, 2018, reflective primarily of a net increase of $4.3 billion in deposits and an increase of $1.6 billion in our short-term overnight borrowings utilized primarily to fund loan growth as well as to support the short-term liquidity needs of the Bank.

Cash and cash equivalents were $3.8 billion and $3.6 billion, respectively, at September 30, 2018 and September 30, 2017.

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 35.0 percent, which means deposit repricing is assumed to be approximately 35.0 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 bps at September 30, 2018 and at December 31, 2017:

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
September 30, 2018:						
200	$ 9,132,126	$ 307,428	3.5 %	$ 2,551,418	$ 517,562	25.4 %
100	8,959,615	134,917	1.5	2,292,564	258,708	12.7
—	8,824,698	—	—	2,033,856	—	—
-100	8,648,275	(176,423)	(2.0)	1,770,999	(262,857)	(12.9)
-200	8,060,737	(763,961)	(8.7)	1,510,416	(523,440)	(25.7)
December 31, 2017:						
200	$ 8,091,107	$ 805,624	11.1 %	$ 1,885,885	$ 400,127	26.9 %
100	7,716,066	430,583	5.9	1,683,742	197,984	13.3
—	7,285,483	—	—	1,485,758	—	—
-100	6,637,588	(647,895)	(8.9)	1,252,063	(233,695)	(15.7)
-200	5,718,401	(1,567,082)	(21.5)	1,108,712	(377,046)	(25.4)

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 case EVE as of September 30, 2018 increased from December 31, 2017 by $1.5 billion, driven by changes in balance sheet composition as well as rising interest rates. At September 30, 2018, as compared to December 31, 2017, total loan balances increased by $4.4 billion, primarily in Prime and LIBOR indexed variable rate loans. Total fixed income securities also increased by $1.2 billion due to purchases of fixed rate long maturity instruments such as pass-through mortgage-backed securities and municipal debt securities combined with run-off of shorter maturity U.S. Treasury securities. Additionally, total deposits increased by $4.3 billion.

Higher LIBOR/swap rates contributed approximately $674 million of the $1.5 billion total change in base case EVE. Overall balance sheet growth contributed the remaining $865 million. Higher rates and continued investment in mortgage-backed securities and municipal securities resulted in a $296 million decrease in EVE sensitivity in the +100 bps rate shock scenario compared to December 31, 2017. EVE in the -100 and -200 bps rate shock scenarios increased $471 million and $803 million, respectively.

12-Month Net Interest Income Simulation

Our estimated 12-month NII forecast at September 30, 2018 increased compared to December 31, 2017 by $548 million. The increase is primarily the result of the growth of our loan portfolio, and the increases in market rates, particularly the Prime rate and LIBOR. A majority of our loans are indexed to the Prime rate and LIBOR. As rates rise, 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. In addition, 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 September 30, 2018, NII sensitivity was 12.7 percent in the +100 bps interest rate scenario, compared to 13.3 percent at December 31, 2017. Our NII sensitivity in the +200 bps interest rate shock scenario was 25.4 percent compared to 26.9 percent at December 31, 2017. The slight decrease in NII sensitivity is the result of an increase in the composition of longer duration securities in our fixed income securities portfolio, as well as wider implementation of rate floors in the loan portfolio. Most of the balance sheet growth for the nine months ended September 30, 2018 has been in floating rate loans coupled with a large proportion of non-interest bearing deposit balances. The relatively high percentages of non-interest bearing demand deposits and floating rate loans are the primary drivers of NII sensitivity in the balance sheet. NII sensitivity in the -100 bps scenario of negative 12.9 percent was lower at September 30, 2018 compared to a negative 15.7 percent at December 31, 2017. The -200 bps scenario currently indicates only a slightly higher percentage change in NII at September 30, 2018 compared to December 31, 2017.

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, 2018, we implemented ASC 606, Revenue from Contracts with Customers. Although the new revenue standard is expected to have an immaterial impact on our ongoing net income, we did implement changes to our processes related to revenue recognition and the control activities within them. These included the development of new policies based on the five-step model provided in the new revenue standard, new training, ongoing contract review requirements, and gathering of information provided for disclosures.

Table of Contents

PART II–OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Please refer to Note 16—"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 2017 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	
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: November 9, 2018 /s/ DANIEL BECK

Daniel Beck
Chief Financial Officer
(Principal Financial Officer)

SVB Financial Group

Date: November 9, 2018 /s/ KAMRAN HUSAIN

Kamran Husain
Chief Accounting Officer
(Principal Accounting Officer)

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: November 9, 2018

/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: November 9, 2018

/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 September 30, 2018, (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: November 9, 2018

/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 September 30, 2018, (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: November 9, 2018

/s/ DANIEL BECK

Daniel Beck

Chief Financial Officer

(Principal Financial Officer)