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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2017

OR

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

For the transition period from to .

Commission File Number: 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post 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 ☐ (Do not check if a smaller reporting company)

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, 2017, 52,740,729 shares of the registrant's common stock ($0.001 par value) were outstanding.

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Glossary of Acronyms that may be used in this Report

AFS— Available-for-Sale

APIC— Additional Paid-in Capital

ASC— Accounting Standards Codification

ASU— Accounting Standards Update

CET— Common Equity Tier

EHOP— Employee Home Ownership Program of the Company

EPS— Earnings Per Share

ERI— Energy and Resource Innovation

ESOP— Employee Stock Ownership Plan of the Company

ESPP— 1999 Employee Stock Purchase Plan of the Company

FASB— Financial Accounting Standards Board

FDIC— Federal Deposit Insurance Corporation

FHLB— Federal Home Loan Bank

FRB— Federal Reserve Bank

FTE— Full-Time Employee

FTP— Funds Transfer Pricing

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

HTM— Held-to-Maturity

IASB— International Accounting Standards Board

IPO— Initial Public Offering

IRS— Internal Revenue Service

IT— Information Technology

LIBOR— London Interbank Offered Rate

M&A— Merger and Acquisition

OTTI— Other Than Temporary Impairment

SEC— Securities and Exchange Commission

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

TDR— Troubled Debt Restructuring

UK— United Kingdom

VIE— Variable Interest Entity

PART I - FINANCIAL INFORMATION

ITEM 1. INTERIM CONSOLIDATED FINANCIAL STATEMENTS

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

(Dollars in thousands, except par value and share data)	September 30, 2017	December 31, 2016
Assets		
Cash and cash equivalents	$ 3,555,571	$ 2,545,750
Available-for-sale securities, at fair value (cost of $12,584,564 and $12,588,783, respectively)	12,603,337	12,620,411
Held-to-maturity securities, at cost (fair value of $11,023,415 and $8,376,138, respectively)	11,055,006	8,426,998
Non-marketable and other securities	627,469	622,552
Total investment securities	24,285,812	21,669,961
Loans, net of unearned income	22,189,327	19,899,944
Allowance for loan losses	(249,010)	(225,366)
Net loans	21,940,317	19,674,578
Premises and equipment, net of accumulated depreciation and amortization	122,826	120,683
Accrued interest receivable and other assets	849,761	672,688
Total assets	$ 50,754,287	$ 44,683,660
Liabilities and total equity		
Liabilities:		
Noninterest-bearing demand deposits	$ 36,862,021	$ 31,975,457
Interest-bearing deposits	7,950,012	7,004,411
Total deposits	44,812,033	38,979,868
Short-term borrowings	4,840	512,668
Other liabilities	990,498	618,383
Long-term debt	749,618	795,704
Total liabilities	46,556,989	40,906,623
Commitments and contingencies (Note 12 and Note 15)		
SVBFG stockholders' equity:		
Preferred stock, $0.001 par value, 20,000,000 shares authorized; no shares issued and outstanding	—	—
Common stock, $0.001 par value, 150,000,000 shares authorized; 52,723,654 shares and 52,254,074 shares outstanding, respectively	53	52
Additional paid-in capital	1,294,499	1,242,741
Retained earnings	2,749,627	2,376,331
Accumulated other comprehensive income	15,634	23,430
Total SVBFG stockholders' equity	4,059,813	3,642,554
Noncontrolling interests	137,485	134,483
Total equity	4,197,298	3,777,037
Total liabilities and total equity	$ 50,754,287	$ 44,683,660

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

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)	**2017**	**2016**	**2017**	**2016**
Interest income:				
Loans	$ 268,445	$ 214,227	$ 745,983	$ 617,456
Investment securities:				
Taxable	109,443	83,468	294,768	261,121
Non-taxable	1,172	522	2,703	1,693
Federal funds sold, securities purchased under agreements to resell and other short-term investment securities	6,211	2,196	16,670	5,793
Total interest income	385,271	300,413	1,060,124	886,063
Interest expense:				
Deposits	2,304	1,535	6,218	3,984
Borrowings	8,993	9,717	27,243	28,161
Total interest expense	11,297	11,252	33,461	32,145
Net interest income	373,974	289,161	1,026,663	853,918
Provision for credit losses (1)	23,522	20,004	70,062	90,225
Net interest income after provision for credit losses	350,452	269,157	956,601	763,693
Noninterest income:				
Gains on investment securities, net	15,238	23,178	48,838	41,764
Gains on equity warrant assets, net (2)	24,922	21,558	42,432	33,253
Foreign exchange fees	29,671	25,944	82,026	76,998
Credit card fees	20,270	18,295	56,099	49,226
Deposit service charges	14,508	13,356	43,046	39,142
Client investment fees	15,563	7,952	37,571	23,959
Lending related fees	15,404	8,168	32,874	23,783
Letters of credit and standby letters of credit fees	7,306	6,811	20,951	18,414
Other (2)	15,896	18,878	41,128	36,511
Total noninterest income	158,778	144,140	404,965	343,050
Noninterest expense:				
Compensation and benefits	153,263	136,568	449,412	374,410
Professional services	32,987	23,443	86,331	67,959
Premises and equipment	18,937	16,291	53,753	47,861
Net occupancy	12,660	9,525	35,437	28,919
Business development and travel	10,329	8,504	30,913	30,077
FDIC and state assessments	8,359	7,805	26,354	21,624
Correspondent bank fees	3,162	3,104	9,770	9,469
Other	18,064	15,533	54,670	44,292
Total noninterest expense (1)	257,761	220,773	746,640	624,611
Income before income tax expense	251,469	192,524	614,926	482,132
Income tax expense (3)	97,351	76,877	220,412	195,508
Net income before noncontrolling interests	154,118	115,647	394,514	286,624
Net income loss attributable to noncontrolling interests	(5,498)	(4,566)	(21,218)	(3,405)
Net income available to common stockholders (3)	$ 148,620	$ 111,081	$ 373,296	$ 283,219
Earnings per common share—basic (3)	$ 2.82	$ 2.13	$ 7.11	$ 5.46
Earnings per common share—diluted (3)	2.79	2.12	7.01	5.42

(1) Our consolidated statements of income for the three and nine months ended September 30, 2016 were modified from prior period's presentation to conform to the current period's presentation, which reflects our provision for loan losses and provision for unfunded credit commitments together as our "provision for credit losses". In prior periods, our provision for unfunded credit commitments were reported as a component of noninterest expense.

(2) Our consolidated statements of income for the three and nine months ended September 30, 2016 were modified from prior period's presentation to conform to the current period's presentation, which reflects a new line item to separately disclose net gains on equity warrant assets. In prior periods, net gains on equity warrant assets were reported as a component of gains on derivative instruments, net. We removed the line item gains on derivative instruments, net and reclassified all other gains on derivative instruments, net to other noninterest income.

(3) Included in income tax expense, net income available to common shareholders, earnings per common share-basic and earnings for common share-diluted, for the three and nine months ended September 30, 2017, are tax benefits recognized associated with the adoption of Accounting Standards Update ("ASU") 2016-09, Improvements to Employee Share-Based Payment Accounting in the first quarter of 2017. This guidance was adopted on a prospective basis with no change to prior period amounts.

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,		Nine months ended September 30,	
	2017	2016	2017	2016
Net income before noncontrolling interests	$ 154,118	$ 115,647	$ 394,514	$ 286,624
Other comprehensive income (loss), net of tax:				
Change in cumulative translation gains (losses):				
Foreign currency translation gains (losses)	1,928	(119)	4,463	(2,168)
Related tax (expense) benefit	(787)	50	(1,821)	885
Change in unrealized gains (losses) on available-for-sale securities:				
Unrealized holding gains (losses)	925	(54,204)	(12,471)	157,564
Related tax (expense) benefit	(429)	21,932	5,207	(64,357)
Reclassification adjustment for losses (gains) included in net income	101	15	(384)	(11,567)
Related tax (benefit) expense	(41)	(6)	157	4,707
Amortization of unrealized gains on securities transferred from available-for-sale to held-to-maturity	(1,594)	(1,690)	(4,931)	(6,507)
Related tax benefit	641	680	1,984	2,618
Other comprehensive income (loss), net of tax	744	(33,342)	(7,796)	81,175
Comprehensive income	154,862	82,305	386,718	367,799
Comprehensive income attributable to noncontrolling interests	(5,498)	(4,566)	(21,218)	(3,405)
Comprehensive income attributable to SVBFG	$ 149,364	$ 77,739	$ 365,500	$ 364,394

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	Total SVBFG Stockholders' Equity	Noncontrolling Interests	Total Equity
Balance at December 31, 2015	**51,610,226**	**$ 52**	**$ 1,189,032**	**$ 1,993,646**	**$ 15,404**	**$ 3,198,134**	**$ 135,097**	**$ 3,333,231**
Common stock issued under employee benefit plans, net of restricted stock cancellations	408,044	—	8,661	—	—	8,661	—	8,661
Common stock issued under ESOP	43,165	—	4,328	—	—	4,328	—	4,328
Income tax effect from stock options exercised, vesting of restricted stock and other (1)	—	—	(6,300)	—	—	(6,300)	—	(6,300)
Net income	—	—	—	283,219	—	283,219	3,405	286,624
Capital calls and distributions, net	—	—	—	—	—	—	(8,236)	(8,236)
Net change in unrealized gains and losses on AFS securities, net of tax	—	—	—	—	86,347	86,347	—	86,347
Amortization of unrealized gains on securities transferred from AFS to HTM, net of tax	—	—	—	—	(3,889)	(3,889)	—	(3,889)
Foreign currency translation adjustments, net of tax	—	—	—	—	(1,283)	(1,283)	—	(1,283)
Share-based compensation, net	—	—	23,834	—	—	23,834	—	23,834
Balance at September 30, 2016	**52,061,435**	**$ 52**	**$ 1,219,555**	**$ 2,276,865**	**$ 96,579**	**$ 3,593,051**	**$ 130,266**	**$ 3,723,317**
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
Income tax effect from stock options exercised, vesting of restricted stock and other (1)	—	—	—	—	—	—	—	—
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 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**

(1) During the first quarter of 2017 we adopted ASU 2016-09, Improvements to Employee Share-Based Payment Accounting. The amendments in this ASU require that all excess tax benefits and tax deficiencies associated with share-based compensation be recognized in income tax expense or benefit in the income statement. Previously, tax effects resulting from changes in the Company's share price subsequent to grant date of share-based compensation awards were recorded through additional paid-in-capital in stockholders' equity at the time of vesting and exercise. This guidance was adopted on a prospective basis with no change to prior period amounts. 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
INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

(Dollars in thousands)	Nine months ended September 30, 2017	2016
Cash flows from operating activities:		
Net income before noncontrolling interests	$ 394,514	$ 286,624
Adjustments to reconcile net income to net cash provided by operating activities:		
Provision for credit losses	70,062	90,225
Changes in fair values of equity warrant assets, net of proceeds from exercises	(29,666)	(20,505)
Changes in fair values of derivatives, net	8,214	(4,370)
Gains on investment securities, net	(48,838)	(41,764)
Depreciation and amortization	39,265	35,114
Amortization of premiums and discounts on investment securities, net	2,609	9,622
Amortization of share-based compensation	27,739	22,342
Amortization of deferred loan fees	(81,060)	(72,807)
Deferred income tax benefit	2,325	(6,839)
Gain from sale of equity valuation services business	(2,393)	—
Excess tax benefit from exercise of stock options and vesting of restricted shares (1)	(14,399)	—
Changes in other assets and liabilities:		
Accrued interest receivable and payable, net	(26,092)	1,169
Accounts receivable and payable, net	4,120	(12,872)
Income tax receivable and payable, net	30,069	13,181
Accrued compensation	(11,731)	(48,740)
Foreign exchange spot contracts, net	86,911	1,803
Other, net	16,383	20,821
Net cash provided by operating activities	468,032	273,004
Cash flows from investing activities:		
Purchases of available-for-sale securities	(2,420,741)	—
Proceeds from sales of available-for-sale securities	7,311	2,879,409
Proceeds from maturities and pay downs of available-for-sale securities	2,434,039	1,002,523
Purchases of held-to-maturity securities	(3,812,782)	(225,526)
Proceeds from maturities and pay downs of held-to-maturity securities	1,283,764	1,206,367
Purchases of non-marketable and other securities	(18,713)	(41,925)
Proceeds from sales and distributions of non-marketable and other securities	88,809	54,420
Net increase in loans	(2,263,600)	(2,365,640)
Purchases of premises and equipment	(35,470)	(37,184)
Proceeds from sale of equity valuation services business	3,000	—
Net cash (used for) provided by investing activities	(4,734,383)	2,472,444
Cash flows from financing activities:		
Net increase (decrease) in deposits	5,832,165	(953,360)
Net decrease in short-term borrowings	(507,828)	(772,479)
Principal payments of long-term debt	(46,235)	—
(Distributions to noncontrolling interests), net of contributions from noncontrolling interests	(18,216)	(8,236)
Tax effect from stock exercises (1)	—	(6,300)
Proceeds from issuance of common stock, ESPP and ESOP	16,286	12,989
Net cash provided by (used for) financing activities	5,276,172	(1,727,386)
Net increase in cash and cash equivalents	1,009,821	1,018,062
Cash and cash equivalents at beginning of period	2,545,750	1,503,257
Cash and cash equivalents at end of period	**$ 3,555,571**	**$ 2,521,319**
Supplemental disclosures:		
Cash paid during the period for:		
Interest	$ 41,324	$ 39,317
Income taxes	190,706	186,474
Noncash items during the period:		
Changes in unrealized gains and losses on available-for-sale securities, net of tax	$ (7,491)	$ 86,347
Distributions of stock from investments	5,360	750

(1) During the first quarter of 2017 we adopted ASU 2016-09, Improvements to Employee Share-Based Payment Accounting. This guidance was adopted on a prospective basis with no change to prior period amounts. 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, 2017 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, 2016 ("2016 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 2016 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 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 or our cost basis in the VIE, as appropriate, based on other accounting guidance within GAAP.

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 March 2016, the FASB issued a new accounting standard update (ASU 2016-09, Improvements to Employee Share-Based Payment Accounting (Topic 718)), which includes provisions intended to simplify various aspects related to how share-based payments are accounted for and presented in the financial statements, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. Under the ASU, an entity recognizes all excess tax benefits and tax deficiencies as income tax expense or benefit in the income statement in the period when the awards vest or are settled. The guidance also permits an entity to make an accounting policy election to either estimate the number of awards that are expected to vest or account for forfeitures when they occur. We adopted this guidance on January 1, 2017 and elected to estimate the number of awards that are expected to vest which, is consistent with the previous accounting guidance. In addition, we also elected to apply the amendments related to the presentation of excess tax benefits on the statement of cash flows using the prospective transition method.

Previously, tax effects resulting from changes in the Company's share price subsequent to grant date of share-based compensation awards were recorded through additional paid-in capital in stockholders' equity at the time of vesting and exercise. The adoption of the amended accounting guidance resulted in a $1.3 million and $14.4 million reduction of income tax expense (that previously would have been reflected as additional paid-in capital), or a benefit of $0.02 and $0.27 per diluted common share, for the three and nine months ended September 30, 2017, respectively. We expect the impact of this amendment will vary period to period depending on the volatility of the Company's stock price and the timing of vesting and/or settlement of awards.

Recent Accounting Pronouncements

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). The new standard and amendments will be effective January 1, 2018, either on a full retrospective approach or a modified retrospective approach. We plan to adopt the revenue guidance in the first quarter of 2018 using the modified retrospective transition approach applied to contracts which are not completed as of January 1, 2018. Upon adoption, we will recognize the cumulative-effect of adopting this guidance as an adjustment to opening retained earnings. We have conducted 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 contract assessments to-date, we have not identified any material changes to the timing or the amounts of our revenue recognition. We expect minor changes in the timing of recognizing fund management fees in noninterest income for a portion of our SVB Capital funds as the fees will be recognized at the time of distribution which typically occurs later in the fund life than had been previously recognized. Based on our preliminary analysis, we expect the cumulative adjustment to retained earnings associated with this change to be from $7 million to $10 million, with an immaterial impact to our net income on an ongoing basis. We continue to evaluate the effect the guidance has on our revenue and the presentation of certain costs associated with our credit card and merchant services and whether these costs are presented in noninterest expense or offset against credit card fees in noninterest income. We currently recognize payment networks costs associated with our credit card and merchant services in noninterest expense. If we determine that the adoption of the guidance results in a change in the presentation of these costs, we estimate that this will result in approximately $10 million to $15 million of annual expenses would be netted against credit card interchange fees and reported in noninterest income instead of other noninterest expense. This change would occur on a prospective basis starting January 1, 2018 and would reduce our non-GAAP core fee income within noninterest income and also reduce noninterest expense with no impact to net income. Furthermore, we continue to evaluate the disaggregation of our significant categories of revenue within the scope of this guidance and plan to expand our qualitative disclosures of our noninterest income within the Consolidated Financial Statements upon adoption in 2018.

In January 2016, the FASB issued a 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. The adoption of the new standard will result in the elimination of cost method accounting for equity investments and will impact our nonmarketable

and other equity securities that are currently carried at cost. This guidance will be effective on January 1, 2018, and our equity investments measured at cost will be measured at fair value and the difference between cost and fair value at adoption date will be recorded as a cumulative-effect adjustment to opening retained earnings of the fiscal year of adoption for our cost method venture capital and private equity fund investments with readily determinable fair values. The actual adjustment to opening retained earnings will depend upon the fair value of our investments at the adoption date but based on September 30, 2017 and historical values, we expect the transition adjustment to increase capital between $110 million and $120 million on a pre-tax basis. Any subsequent changes in the fair value will be recorded as unrealized gains or losses in our consolidated statements of income. Additionally, for purposes of disclosing the fair value of loans carried at amortized cost, we are evaluating our valuation methods to determine the necessary changes to conform to an "exit price" concept as required by the standard update. Accordingly, the fair value amounts disclosed for such loans may change upon adoption.

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. This guidance will be effective on January 1, 2019, on a modified retrospective basis, with early adoption permitted. We plan to adopt the lease accounting guidance in the first quarter of 2019 and are currently evaluating the impact this guidance will have on our consolidated financial statements by reviewing our existing lease contracts and service contracts that may include embedded leases. We expect to recognize right-of-use assets and related lease liabilities associated predominantly with noncancelable operating leases included in the table of minimum future payments in the amount of $217 million as disclosed in Note 18 of our 2016 Form 10-K.

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 working project team in place and subject matter experts to assist with our review of key interpretive issues and assist in the assessment of our existing credit loss forecasting models and processes against the new guidance to determine what modifications may be required. We are currently evaluating the impact this guidance will have on our financial position, results of operation and stockholders' equity.

In August 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. This guidance will be effective January 1, 2018 on a full retrospective approach, with early adoption permitted. Our preliminary evaluation has resulted in the expectation that this guidance will primarily impact 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. We are continuing to evaluate any further impact of this guidance to the presentation of our operating, investing and financing activities within our statements of cash flows.

Reclassifications

Certain prior period amounts, primarily related to the changes to our income statement presentation of net gains on derivative instruments and provision for unfunded credit commitments 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, 2017 and 2016:

		Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	Income Statement Location	2017	2016	2017	2016
Reclassification adjustment for losses (gains) included in net income	Gains on investment securities, net	$ 101	$ 15	$ (384)	$ (11,567)
Related tax (benefit) expense	Income tax expense	(41)	(6)	157	4,707
Total reclassification adjustment for losses (gains) included in net income, net of tax		$ 60	$ 9	$ (227)	$ (6,860)

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, 2017 and 2016:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars and shares in thousands, except per share amounts)	2017	2016	2017	2016
Numerator:				
Net income available to common stockholders	$ 148,620	$ 111,081	$ 373,296	$ 283,219
Denominator:				
Weighted average common shares outstanding—basic	52,705	52,046	52,530	51,842
Weighted average effect of dilutive securities:				
Stock options and ESPP	343	233	381	245
Restricted stock units	257	134	319	142
Weighted average common shares outstanding—diluted	53,305	52,413	53,230	52,229
Earnings per common share:				
Basic	$ 2.82	$ 2.13	$ 7.11	$ 5.46
Diluted	$ 2.79	$ 2.12	$ 7.01	$ 5.42

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, 2017 and 2016:

	Three months ended September 30,		Nine months ended September 30,	
(Shares in thousands)	2017	2016	2017	2016
Stock options	112	518	61	444
Restricted stock units	5	120	2	9
Total	117	638	63	453

3. Share-Based Compensation

For the three and nine months ended September 30, 2017 and 2016, we recorded share-based compensation and related tax benefits as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2017	2016	2017	2016
Share-based compensation expense	$ 8,644	$ 7,916	$ 27,739	$ 22,342
Income tax benefit related to share-based compensation expense	(3,154)	(2,881)	(9,518)	(7,461)

Unrecognized Compensation Expense

As of September 30, 2017, unrecognized share-based compensation expense was as follows:

(Dollars in thousands)	Unrecognized Expense	Weighted Average Expected Recognition Period - in Years
Stock options	$ 10,935	2.72
Restricted stock units	56,513	2.74
Total unrecognized share-based compensation expense	$ 67,448	

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, 2017:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life - in Years	Aggregate Intrinsic Value of In-The-Money Options
Outstanding at December 31, 2016	1,010,557	$ 87.24		
Granted	113,535	178.23		
Exercised	(232,370)	70.79		
Forfeited	(9,491)	111.48		
Outstanding at September 30, 2017	882,231	103.02	3.80	$ 74,172,891
Vested and expected to vest at September 30, 2017	857,176	101.94	3.74	72,987,562
Exercisable at September 30, 2017	533,847	83.46	2.73	55,323,524

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 $187.09 as of September 30, 2017. The total intrinsic value of options exercised during the three and nine months ended September 30, 2017 was $3.8 million and $25.8 million, compared to $1.5 million and $8.2 million for the comparable 2016 periods, respectively.

The table below provides information for restricted stock units under the 2006 Equity Incentive Plan for the nine months ended September 30, 2017:

	Shares	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2016	670,969	$ 106.64
Granted	239,847	180.05
Vested	(223,561)	102.00
Forfeited	(38,871)	122.77
Nonvested at September 30, 2017	648,384	134.43

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, 2017 and December 31, 2016:

(Dollars in thousands)	Consolidated VIEs	Unconsolidated VIEs	Maximum Exposure to Loss in Unconsolidated VIEs
September 30, 2017:			
Assets:			
Cash and cash equivalents	$ 7,555	$ —	$ —
Non-marketable and other securities (1)	190,129	323,284	323,284
Accrued interest receivable and other assets	169	—	—
Total assets	$ 197,853	$ 323,284	$ 323,284
Liabilities:			
Other liabilities (1)	445	90,974	—
Total liabilities	$ 445	$ 90,974	$ —
December 31, 2016:			
Assets:			
Cash and cash equivalents	$ 11,469	$ —	$ —
Non-marketable and other securities (1)	196,140	314,810	314,810
Accrued interest receivable and other assets	294	—	—
Total assets	$ 207,903	$ 314,810	$ 314,810
Liabilities:			
Other liabilities (1)	517	58,095	—
Total liabilities	$ 517	$ 58,095	$ —

(1) Included in our unconsolidated non-marketable and other securities portfolio at September 30, 2017 and December 31, 2016 are investments in qualified affordable housing projects of $148.0 million and $112.4 million, respectively, and related other liabilities consisting of unfunded credit commitments of $91.0 million and $58.1 million, respectively.

Non-marketable and other securities

Our non-marketable and other 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 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 12—"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, 2017, our exposure to loss with respect to the consolidated VIEs is limited to our net assets of $197.4 million and our exposure to loss for our unconsolidated VIEs is equal to our investment in these assets of $323.3 million.

5. Cash and Cash Equivalents

The following table details our cash and cash equivalents at September 30, 2017 and December 31, 2016:

(Dollars in thousands)	September 30, 2017	December 31, 2016
Cash and due from banks (1)	$ 3,490,005	$ 2,476,588
Securities purchased under agreements to resell (2)	62,664	64,028
Other short-term investment securities	2,902	5,134
Total cash and cash equivalents	$ 3,555,571	$ 2,545,750

(1) At September 30, 2017 and December 31, 2016, $1.6 billion and $1.1 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 $1.2 billion and $721 million, respectively.

(2) At September 30, 2017 and December 31, 2016, securities purchased under agreements to resell were collateralized by U.S. Treasury securities and U.S. agency securities with aggregate fair values of $64 million and $66 million, respectively. None of these securities were sold or repledged as of September 30, 2017 and December 31, 2016.

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 securities portfolio, which primarily represents investments managed as part of our funds management business.

Available-for-Sale Securities

The components of our available-for-sale investment securities portfolio at September 30, 2017 and December 31, 2016 are as follows:

	September 30, 2017			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Carrying Value
Available-for-sale securities, at fair value:				
U.S. Treasury securities	$ 7,488,126	$ 14,048	$ (3,834)	$ 7,498,340
U.S. agency debentures	1,668,403	9,759	(1,993)	1,676,169
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	3,024,649	4,998	(16,952)	3,012,695
Agency-issued collateralized mortgage obligations—variable rate	394,567	1,442	(129)	395,880
Equity securities	8,819	11,893	(459)	20,253
Total available-for-sale securities	$ 12,584,564	$ 42,140	$ (23,367)	$ 12,603,337

	December 31, 2016			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Carrying Value
Available-for-sale securities, at fair value:				
U.S. Treasury securities	$ 8,880,358	$ 30,323	$ (1,190)	$ 8,909,491
U.S. agency debentures	2,065,535	14,443	(1,603)	2,078,375
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	1,163,017	3,046	(13,398)	1,152,665
Agency-issued collateralized mortgage obligations—variable rate	474,238	685	(640)	474,283
Equity securities	5,635	748	(786)	5,597
Total available-for-sale securities	$ 12,588,783	$ 49,245	$ (17,617)	$ 12,620,411

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, 2017 and December 31, 2016:

	September 30, 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	$ 2,824,370	$ (3,834)	$ —	$ —	$ 2,824,370	$ (3,834)
U.S. agency debentures	562,392	(1,993)	—	—	562,392	(1,993)
Residential mortgage-backed securities:						
Agency-issued collateralized mortgage obligations—fixed rate	1,505,319	(7,389)	415,200	(9,563)	1,920,519	(16,952)
Agency-issued collateralized mortgage obligations—variable rate	6,651	(1)	62,508	(128)	69,159	(129)
Equity securities	1,787	(459)	—	—	1,787	(459)
Total temporarily impaired securities (1)	$ 4,900,519	$ (13,676)	$ 477,708	$ (9,691)	$ 5,378,227	$ (23,367)

(1) As of September 30, 2017, we identified a total of 202 investments that were in unrealized loss positions, of which 63 investments totaling $477.7 million with unrealized losses of $9.7 million have been in an impaired position for a period of time greater than 12 months. As of September 30, 2017, 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, 2017, 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, 2016					
	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	$ 879,255	$ (1,190)	$ —	$ —	$ 879,255	$ (1,190)
U.S. agency debentures	513,198	(1,603)	—	—	513,198	(1,603)
Residential mortgage-backed securities:						
Agency-issued collateralized mortgage obligations—fixed rate	635,566	(6,704)	227,480	(6,694)	863,046	(13,398)
Agency-issued collateralized mortgage obligations—variable rate	258,325	(613)	6,068	(27)	264,393	(640)
Equity securities	3,693	(786)	—	—	3,693	(786)
Total temporarily impaired securities (1)	$ 2,290,037	$ (10,896)	$ 233,548	$ (6,721)	$ 2,523,585	$ (17,617)

(1) As of December 31, 2016, we identified a total of 174 investments that were in unrealized loss positions, of which 20 investments totaling $233.5 million with unrealized losses of $6.7 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, 2017 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 rate environments.

	September 30, 2017				
(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	$ 7,498,340	$ 2,592,486	$ 4,905,854	$ —	$ —
U.S. agency debentures	1,676,169	314,852	1,361,317	—	—
Residential mortgage-backed securities:					
Agency-issued collateralized mortgage obligations—fixed rate	3,012,695	—	—	487,285	2,525,410
Agency-issued collateralized mortgage obligations—variable rate	395,880	—	—	—	395,880
Total	$ 12,583,084	$ 2,907,338	$ 6,267,171	$ 487,285	$ 2,921,290

Held-to-Maturity Securities

The components of our held-to-maturity investment securities portfolio at September 30, 2017 and December 31, 2016 are as follows:

	September 30, 2017			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Held-to-maturity securities, at cost:				
U.S. agency debentures (1)	$ 660,193	$ 6,775	$ (1,080)	$ 665,888
Residential mortgage-backed securities:				
Agency-issued mortgage-backed securities	5,164,701	15,764	(17,116)	5,163,349
Agency-issued collateralized mortgage obligations—fixed rate	3,025,421	707	(27,268)	2,998,860
Agency-issued collateralized mortgage obligations—variable rate	269,495	704	(37)	270,162
Agency-issued commercial mortgage-backed securities	1,554,220	2,025	(11,697)	1,544,548
Municipal bonds and notes	380,976	1,506	(1,874)	380,608
Total held-to-maturity securities	$ 11,055,006	$ 27,481	$ (59,072)	$ 11,023,415

(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.

	December 31, 2016			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Held-to-maturity securities, at cost:				
U.S. agency debentures (1)	$ 622,445	$ 7,840	$ (1,198)	$ 629,087
Residential mortgage-backed securities:				
Agency-issued mortgage-backed securities	2,896,179	6,919	(24,526)	2,878,572
Agency-issued collateralized mortgage obligations—fixed rate	3,362,598	788	(31,274)	3,332,112
Agency-issued collateralized mortgage obligations—variable rate	312,665	176	(1,339)	311,502
Agency-issued commercial mortgage-backed securities	1,151,363	1,237	(7,638)	1,144,962
Municipal bonds and notes	81,748	8	(1,853)	79,903
Total held-to-maturity securities	$ 8,426,998	$ 16,968	$ (67,828)	$ 8,376,138

(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, 2017 and December 31, 2016:

	September 30, 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
Held-to-maturity securities:						
U.S. agency debentures	$ 101,211	$ (1,080)	$ —	$ —	$ 101,211	$ (1,080)
Residential mortgage-backed securities:						
Agency-issued mortgage-backed securities	3,071,006	(16,251)	25,004	(865)	3,096,010	(17,116)
Agency-issued collateralized mortgage obligations—fixed rate	2,661,682	(21,842)	235,320	(5,426)	2,897,002	(27,268)
Agency-issued collateralized mortgage obligations—variable rate	—	—	10,321	(37)	10,321	(37)
Agency-issued commercial mortgage-backed securities	1,210,351	(10,615)	82,151	(1,082)	1,292,502	(11,697)
Municipal bonds and notes	111,207	(896)	29,606	(978)	140,813	(1,874)
Total temporarily impaired securities (1)	$ 7,155,457	$ (50,684)	$ 382,402	$ (8,388)	$ 7,537,859	$ (59,072)

(1) As of September 30, 2017, we identified a total of 547 investments that were in unrealized loss positions, of which 84 investments totaling $382.4 million with unrealized losses of $8.4 million have been in an impaired position for a period of time greater than 12 months. As of September 30, 2017, 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, 2017, we deem all impairments to be temporary. Market valuations and impairment analyses on assets in the held-to-maturity securities portfolio are reviewed and monitored on a quarterly basis.

	December 31, 2016					
	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
Held-to-maturity securities:						
U.S. agency debentures	$ 118,721	$ (1,198)	$ —	$ —	$ 118,721	$ (1,198)
Residential mortgage-backed securities:						
Agency-issued mortgage-backed securities	1,801,861	(23,558)	21,917	(968)	1,823,778	(24,526)
Agency-issued collateralized mortgage obligations—fixed rate	2,729,889	(25,723)	228,220	(5,551)	2,958,109	(31,274)
Agency-issued collateralized mortgage obligations—variable rate	251,012	(1,339)	—	—	251,012	(1,339)
Agency-issued commercial mortgage-backed securities	999,440	(7,494)	14,934	(144)	1,014,374	(7,638)
Municipal bonds and notes	42,267	(877)	30,586	(976)	72,853	(1,853)
Total temporarily impaired securities (1)	$ 5,943,190	$ (60,189)	$ 295,657	$ (7,639)	$ 6,238,847	$ (67,828)

(1) As of December 31, 2016, we identified a total of 462 investments that were in unrealized loss positions, of which 85 investments totaling $295.7 million with unrealized losses of $7.6 million have been in an impaired position for a period of time greater than 12 months.

The following table summarizes the remaining contractual principal maturities on fixed income investment securities classified as held-to-maturity as of September 30, 2017. 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 rate environments.

	September 30, 2017									
	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	$ 660,193	$ 665,888	$ —	$ —	$ 102,581	$ 103,398	$ 557,612	$ 562,490	$ —	$ —
Residential mortgage-backed securities:										
Agency-issued mortgage-backed securities	5,164,701	5,163,349	738	731	255,275	255,128	61,538	61,270	4,847,150	4,846,220
Agency-issued collateralized mortgage obligations—fixed rate	3,025,421	2,998,860	—	—	—	—	437,865	431,500	2,587,556	2,567,360
Agency-issued collateralized mortgage obligations—variable rate	269,495	270,162	—	—	—	—	—	—	269,495	270,162
Agency-issued commercial mortgage-backed securities	1,554,220	1,544,548	—	—	—	—	—	—	1,554,220	1,544,548
Municipal bonds and notes	380,976	380,608	7,560	7,540	71,631	71,529	159,509	159,377	142,276	142,162
Total	$11,055,006	$11,023,415	$ 8,298	$ 8,271	$ 429,487	$ 430,055	$1,216,524	$1,214,637	$9,400,697	$9,370,452

Non-marketable and Other Securities

The components of our non-marketable and other investment securities portfolio at September 30, 2017 and December 31, 2016 are as follows:

(Dollars in thousands)	September 30, 2017	December 31, 2016
Non-marketable and other securities:		
Non-marketable securities (fair value accounting):		
Venture capital and private equity fund investments (1)	$ 128,768	$ 141,649
Other venture capital investments (2)	1,897	2,040
Other securities (fair value accounting) (3)	392	753
Non-marketable securities (equity method accounting) (4):		
Venture capital and private equity fund investments	87,218	82,823
Debt funds	17,889	17,020
Other investments	113,478	123,514
Non-marketable securities (cost method accounting):		
Venture capital and private equity fund investments (5)	102,956	114,606
Other investments	26,835	27,700
Investments in qualified affordable housing projects, net (6)	148,036	112,447
Total non-marketable and other securities	$ 627,469	$ 622,552

(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, 2017 and December 31, 2016 (fair value accounting):

	September 30, 2017		December 31, 2016	
(Dollars in thousands)	Amount	Ownership %	Amount	Ownership %
Strategic Investors Fund, LP	$ 15,624	12.6%	$ 18,459	12.6%
Capital Preferred Return Fund, LP	55,685	20.0	57,627	20.0
Growth Partners, LP	57,459	33.0	59,718	33.0
Other private equity fund (i)	—	—	5,845	58.2
Total venture capital and private equity fund investments	$ 128,768		$ 141,649	

(i) At December 31, 2016, we had a direct ownership interest of 41.5 percent in the other private equity fund and an indirect ownership interest of 12.6 percent through our ownership interest of Growth Partners, LP and an indirect ownership interest of 4.1 percent through our ownership interest of Capital Preferred Return Fund, LP. On January 3, 2017, the other private equity fund was closed resulting in an immaterial impact on the Company's financial statements for the nine months ended September 30, 2017.

(2) The following table shows the amounts of other venture capital investments held by the following consolidated funds and our ownership percentage at September 30, 2017 and December 31, 2016 (fair value accounting):

	September 30, 2017		December 31, 2016	
(Dollars in thousands)	Amount	Ownership %	Amount	Ownership %
CP I, LP	$ 1,897	10.7%	$ 2,040	10.7%
Total other venture capital investments	$ 1,897		$ 2,040	

(3) Investments classified as other securities (fair value accounting) represent direct equity investments in public companies held by our consolidated funds.

(4) The following table shows the carrying value and our ownership percentage of each investment at September 30, 2017 and December 31, 2016 (equity method accounting):

	September 30, 2017		December 31, 2016	
(Dollars in thousands)	Amount	Ownership %	Amount	Ownership %
Venture capital and private equity fund investments:				
Strategic Investors Fund II, LP	$ 6,084	8.6%	$ 7,720	8.6%
Strategic Investors Fund III, LP	19,292	5.9	20,449	5.9
Strategic Investors Fund IV, LP	25,507	5.0	24,530	5.0
Strategic Investors Fund V funds	14,987	Various	12,029	Various
CP II, LP (i)	6,704	5.1	7,798	5.1
Other venture capital and private equity fund investments	14,644	Various	10,297	Various
Total venture capital and private equity fund investments	$ 87,218		$ 82,823	
Debt funds:				
Gold Hill Capital 2008, LP (ii)	$ 15,381	15.5%	$ 13,557	15.5%
Other debt funds	2,508	Various	3,463	Various
Total debt funds	$ 17,889		$ 17,020	
Other investments:				
SPD Silicon Valley Bank Co., Ltd.	$ 75,511	50.0%	$ 75,296	50.0%
Other investments	37,967	Various	48,218	Various
Total other investments	$ 113,478		$ 123,514	

(i) Our ownership includes direct ownership 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.

(5) Represents investments in 237 and 252 funds (primarily venture capital funds) at September 30, 2017 and December 31, 2016, 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. The carrying value, and estimated fair value, of these venture capital and private equity fund investments (cost method accounting) was $103.0 million and $206.5 million, respectively, as of September 30, 2017. The carrying value, and estimated fair value, of these venture capital and private equity fund investments (cost method accounting) was $114.6 million and $221.7 million, respectively, as of December 31, 2016.

(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, 2017 and December 31, 2016:

(Dollars in thousands)	September 30, 2017	December 31, 2016
Investments in qualified affordable housing projects, net	$ 148,036	$ 112,447
Other liabilities	90,974	58,095

The following table presents other information relating to our investments in qualified affordable housing projects for the three and nine months ended September 30, 2017 and 2016:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2017	2016	2017	2016
Tax credits and other tax benefits recognized	$ 4,539	$ 3,995	$ 13,199	$ 12,127
Amortization expense included in provision for income taxes (i)	3,533	2,556	10,154	9,746

(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 components of gains and losses (realized and unrealized) on investment securities for the three and nine months ended September 30, 2017 and 2016:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2017	2016	2017	2016
Gross gains on investment securities:				
Available-for-sale securities, at fair value (1)	$ 38	$ 84	$ 1,131	$ 14,238
Non-marketable securities (fair value accounting):				
Venture capital and private equity fund investments	5,308	6,030	24,788	16,377
Other venture capital investments	—	4	—	17
Other securities (fair value accounting)	569	271	841	639
Non-marketable securities (equity method accounting):				
Venture capital and private equity fund investments	4,542	5,679	11,245	9,351
Debt funds	4,222	295	5,388	1,259
Other investments	215	7,487	1,736	11,528
Non-marketable securities (cost method accounting):				
Venture capital and private equity fund investments	4,956	6,328	14,985	14,180
Other investments	2	150	3,611	163
Total gross gains on investment securities	19,852	26,328	63,725	67,752
Gross losses on investment securities:				
Available-for-sale securities, at fair value (1)	(139)	(99)	(747)	(2,671)
Non-marketable securities (fair value accounting):				
Venture capital and private equity fund investments	(835)	(2,122)	(4,139)	(15,958)
Other venture capital investments	—	—	(143)	(38)
Other securities (fair value accounting)	(182)	(100)	(561)	(507)
Non-marketable securities (equity method accounting):				
Venture capital and private equity fund investments	(223)	(444)	(535)	(4,465)
Debt funds	(1,777)	(129)	(2,692)	(458)
Other investments	(1,148)	(205)	(4,899)	(1,161)
Non-marketable securities (cost method accounting):				
Venture capital and private equity fund investments (2)	(259)	(51)	(914)	(492)
Other investments	(51)	—	(257)	(238)
Total gross losses on investment securities	(4,614)	(3,150)	(14,887)	(25,988)
Gains on investment securities, net	$ 15,238	$ 23,178	$ 48,838	$ 41,764

(1) Includes realized gains (losses) on sales of available-for-sale equity securities that are recognized in the income statement. Unrealized gains (losses) on available-for-sale fixed income and equity securities are recognized in other comprehensive income. The cost basis of available-for-sale securities sold is determined on a specific identification basis.

(2) For the three months ended September 30, 2017 and 2016, includes OTTI losses of $0.3 million from the declines in value for 8 of the 237 investments and $0.1 million from the declines in value for 5 of the 255 investments, respectively. For the nine months ended September 30, 2017 and 2016, includes OTTI losses of $0.9 million for the declines in value for 21 of the 237 investments and $0.5 million for the declines in value for 21 of the 255 investments. We concluded that any declines in value for the remaining investments were temporary, and as such, no OTTI was required to be recognized.

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 $141 million and $125 million at September 30, 2017 and December 31, 2016, respectively, is presented in the following table:

(Dollars in thousands)	September 30, 2017	December 31, 2016
Commercial loans:		
Software/internet	$ 5,793,637	$ 5,627,031
Hardware	1,113,509	1,180,398
Private equity/venture capital	9,623,824	7,691,148
Life science/healthcare	1,725,728	1,853,004
Premium wine	211,716	200,156
Other	384,039	393,551
Total commercial loans	18,852,453	16,945,288
Real estate secured loans:		
Premium wine (1)	712,400	678,166
Consumer loans (2)	2,206,501	1,926,968
Other	42,504	43,487
Total real estate secured loans	2,961,405	2,648,621
Construction loans	75,242	64,671
Consumer loans	300,227	241,364
Total loans, net of unearned income (3)	$ 22,189,327	$ 19,899,944

(1) Included in our premium wine portfolio are gross construction loans of $104 million and $110 million at September 30, 2017 and December 31, 2016, respectively.

(2) Consumer loans secured by real estate at September 30, 2017 and December 31, 2016 were comprised of the following:

(Dollars in thousands)	September 30, 2017	December 31, 2016
Loans for personal residence	$ 1,908,319	$ 1,655,349
Loans to eligible employees	232,707	199,291
Home equity lines of credit	65,475	72,328
Consumer loans secured by real estate	$ 2,206,501	$ 1,926,968

(3) Included within our total loan portfolio are credit card loans of $273 million and $224 million at September 30, 2017 and December 31, 2016, respectively.

Credit Quality

The composition of loans, net of unearned income of $141 million and $125 million at September 30, 2017 and December 31, 2016, respectively, broken out by portfolio segment and class of financing receivable, is as follows:

(Dollars in thousands)	September 30, 2017	December 31, 2016
Commercial loans:		
Software/internet	$ 5,793,637	$ 5,627,031
Hardware	1,113,509	1,180,398
Private equity/venture capital	9,623,824	7,691,148
Life science/healthcare	1,725,728	1,853,004
Premium wine	924,116	878,322
Other	501,785	501,709
Total commercial loans	19,682,599	17,731,612
Consumer loans:		
Real estate secured loans	2,206,501	1,926,968
Other consumer loans	300,227	241,364
Total consumer loans	2,506,728	2,168,332
Total loans, net of unearned income	$ 22,189,327	$ 19,899,944

The following table summarizes the aging of our gross loans, broken out by portfolio segment and class of financing receivable as of September 30, 2017 and December 31, 2016:

(Dollars in thousands)	30 - 59 Days Past Due	60 - 89 Days Past Due	Greater Than 90 Days Past Due	Total Past Due	Current	Loans Past Due 90 Days or More Still Accruing Interest
September 30, 2017:						
Commercial loans:						
Software/internet	$ 45,943	$ 3,725	$ 138	$ 49,806	$ 5,686,655	$ 138
Hardware	273	44	626	943	1,080,341	626
Private equity/venture capital	35,628	34,369	—	69,997	9,563,613	—
Life science/healthcare	20,956	—	—	20,956	1,729,909	—
Premium wine	3,521	640	—	4,161	916,451	—
Other	7	210	—	217	512,891	—
Total commercial loans	106,328	38,988	764	146,080	19,489,860	764
Consumer loans:						
Real estate secured loans	1,748	850	—	2,598	2,199,978	—
Other consumer loans	4,540	—	—	4,540	293,301	—
Total consumer loans	6,288	850	—	7,138	2,493,279	—
Total gross loans excluding impaired loans	112,616	39,838	764	153,218	21,983,139	764
Impaired loans	591	311	26,456	27,358	166,114	—
Total gross loans	$ 113,207	$ 40,149	$ 27,220	$ 180,576	$ 22,149,253	$ 764
December 31, 2016:						
Commercial loans:						
Software/internet	$ 37,087	$ 1,162	$ 6	$ 38,255	$ 5,507,575	$ 6
Hardware	5,591	36	27	5,654	1,118,065	27
Private equity/venture capital	689	—	—	689	7,747,222	—
Life science/healthcare	283	551	—	834	1,827,490	—
Premium wine	1,003	4	—	1,007	876,185	—
Other	34	300	—	334	504,021	—
Total commercial loans	44,687	2,053	33	46,773	17,580,558	33
Consumer loans:						
Real estate secured loans	850	—	—	850	1,923,266	—
Other consumer loans	1,402	—	—	1,402	237,353	—
Total consumer loans	2,252	—	—	2,252	2,160,619	—
Total gross loans excluding impaired loans	46,939	2,053	33	49,025	19,741,177	33
Impaired loans	34,636	3,451	11,180	49,267	185,193	—
Total gross loans	$ 81,575	$ 5,504	$ 11,213	$ 98,292	$ 19,926,370	$ 33

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, 2017 and December 31, 2016:

(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, 2017:				
Commercial loans:				
Software/internet	$ 92,584	$ 22,278	$ 114,862	$ 130,324
Hardware	39,728	1,012	40,740	48,061
Private equity/venture capital	1,318	—	1,318	1,321
Life science/healthcare	22,762	5,573	28,335	33,481
Premium wine	4,677	—	4,677	4,702
Other	298	—	298	487
Total commercial loans	161,367	28,863	190,230	218,376
Consumer loans:				
Real estate secured loans	—	1,301	1,301	1,379
Other consumer loans	1,941	—	1,941	2,036
Total consumer loans	1,941	1,301	3,242	3,415
Total	$ 163,308	$ 30,164	$ 193,472	$ 221,791
December 31, 2016:				
Commercial loans:				
Software/internet	$ 121,658	$ 1,090	$ 122,748	$ 129,648
Hardware	65,395	—	65,395	70,683
Private equity/venture capital	—	—	—	—
Life science/healthcare	38,361	—	38,361	41,130
Premium wine	3,187	—	3,187	3,187
Other	867	—	867	867
Total commercial loans	229,468	1,090	230,558	245,515
Consumer loans:				
Real estate secured loans	1,504	—	1,504	2,779
Other consumer loans	2,398	—	2,398	2,398
Total consumer loans	3,902	—	3,902	5,177
Total	$ 233,370	$ 1,090	$ 234,460	$ 250,692

The following tables summarize our average impaired loans and interest income on impaired loans, broken out by portfolio segment and class of financing receivable for the three and nine months ended September 30, 2017 and 2016:

Three months ended September 30,	Average impaired loans		Interest income on impaired loans	
(Dollars in thousands)	2017	2016	2017	2016
Commercial loans:				
Software/internet	$ 121,290	$ 61,481	$ 767	$ 70
Hardware	35,932	45,353	419	761
Private equity/venture capital	644	—	3	—
Life science/healthcare	25,796	55,558	21	128
Premium wine	3,625	1,291	39	19
Other	348	3,768	—	6
Total commercial loans	187,635	167,451	1,249	984
Consumer loans:				
Real estate secured loans	1,306	584	24	—
Other consumer loans	1,966	1,324	—	6
Total consumer loans	3,272	1,908	24	6
Total average impaired loans	$ 190,907	$ 169,359	$ 1,273	$ 990

Nine months ended September 30,	Average impaired loans		Interest income on impaired loans	
(Dollars in thousands)	2017	2016	2017	2016
Commercial loans:				
Software/internet	$ 122,527	$ 84,005	$ 1,646	$ 133
Hardware	33,271	31,000	518	1,467
Private equity/venture capital	443	—	8	—
Life science/healthcare	33,590	42,857	60	128
Premium wine	3,353	1,834	115	54
Other	706	4,369	—	21
Total commercial loans	193,890	164,065	2,347	1,803
Consumer loans:				
Real estate secured loans	1,385	282	24	—
Other consumer loans	1,931	715	—	17
Total consumer loans	3,316	997	24	17
Total average impaired loans	$ 197,206	$ 165,062	$ 2,371	$ 1,820

The following tables summarize the activity relating to our allowance for loan losses for the three and nine months ended September 30, 2017 and 2016, broken out by portfolio segment:

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

Three months ended September 30, 2016 (Dollars in thousands)	Beginning Balance June 30, 2016	Charge-offs	Recoveries	Provision for (Reduction of) Loan Losses	Foreign Currency Translation Adjustments	Ending Balance September 30, 2016
Commercial loans:						
Software/internet	$ 104,229	$ (16,526)	$ 305	$ 8,591	$ (261)	$ 96,338
Hardware	23,871	(3,058)	1,080	11,048	(336)	32,605
Private equity/venture capital	49,807	—	—	2,203	(67)	51,943
Life science/healthcare	41,852	(28)	361	(5,298)	161	37,048
Premium wine	4,810	—	—	288	(9)	5,089
Other	9,480	(5,004)	207	142	(4)	4,821
Total commercial loans	234,049	(24,616)	1,953	16,974	(516)	227,844
Total consumer loans	10,674	—	131	1,976	(60)	12,721
Total allowance for loan losses	$ 244,723	$ (24,616)	$ 2,084	$ 18,950	$ (576)	$ 240,565

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
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

Nine months ended September 30, 2016 (Dollars in thousands)	Beginning Balance December 31, 2015	Charge-offs	Recoveries	Provision for (Reduction of) Loan Losses	Foreign Currency Translation Adjustments	Ending Balance September 30, 2016
Commercial loans:						
Software/internet	$ 103,045	$ (56,742)	$ 4,525	$ 46,438	$ (928)	$ 96,338
Hardware	23,085	(6,559)	1,502	15,010	(433)	32,605
Private equity/venture capital	35,282	—	—	17,008	(347)	51,943
Life science/healthcare	36,576	(3,029)	1,037	3,252	(788)	37,048
Premium wine	5,205	—	—	(138)	22	5,089
Other	4,252	(5,034)	880	4,573	150	4,821
Total commercial loans	207,445	(71,364)	7,944	86,143	(2,324)	227,844
Consumer loans	10,168	(102)	214	2,481	(40)	12,721
Total allowance for loan losses	$ 217,613	$ (71,466)	$ 8,158	$ 88,624	$ (2,364)	$ 240,565

The following table summarizes the activity relating to our allowance for unfunded credit commitments for the three and nine months ended September 30, 2017 and 2016:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2017	2016	2017	2016
Beginning balance	$ 47,000	$ 34,889	$ 45,265	$ 34,415
Provision for unfunded credit commitments	1,113	1,054	2,789	1,601
Foreign currency translation adjustments	59	(19)	118	(92)
Ending balance (1)	$ 48,172	$ 35,924	$ 48,172	$ 35,924

(1) See Note 12—"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, 2017 and December 31, 2016, broken out by portfolio segment:

	September 30, 2017				December 31, 2016			
	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	$ 26,981	$ 114,862	$ 65,031	$ 5,678,775	$ 28,245	$ 122,748	$ 69,143	$ 5,504,283
Hardware	11,179	40,740	20,120	1,072,769	9,995	65,395	21,171	1,115,003
Private equity/venture capital	536	1,318	76,670	9,622,506	—	—	50,299	7,691,148
Life science/healthcare	9,843	28,335	15,201	1,697,393	8,709	38,361	16,737	1,814,643
Premium wine	456	4,677	3,049	919,439	520	3,187	3,595	875,135
Other	145	298	3,980	501,487	233	867	4,535	500,842
Total commercial loans	49,140	190,230	184,051	19,492,369	47,702	230,558	165,480	17,501,054
Total consumer loans	1,710	3,242	14,109	2,503,486	1,123	3,902	11,061	2,164,430
Total	$ 50,850	$ 193,472	$ 198,160	$ 21,995,855	$ 48,825	$ 234,460	$ 176,541	$ 19,665,484

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 a significant payment delay occurs on a criticized loan, the loan is impaired. The loan is also considered for nonaccrual status if full repayment is determined to be improbable. 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 2016 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, 2017 and December 31, 2016:

(Dollars in thousands)	Pass	Performing (Criticized)	Performing Impaired (Criticized)	Nonperforming Impaired (Nonaccrual)	Total
September 30, 2017:					
Commercial loans:					
Software/internet	$ 5,304,675	$ 431,786	$ 40,965	$ 73,897	$ 5,851,323
Hardware	1,015,947	65,337	21,886	18,854	1,122,024
Private equity/venture capital	9,633,609	1	308	1,010	9,634,928
Life science/healthcare	1,604,160	146,705	1,400	26,935	1,779,200
Premium wine	877,235	43,377	4,241	436	925,289
Other	493,856	19,252	—	298	513,406
Total commercial loans	18,929,482	706,458	68,800	121,430	19,826,170
Consumer loans:					
Real estate secured loans	2,188,397	14,179	—	1,301	2,203,877
Other consumer loans	297,388	453	—	1,941	299,782
Total consumer loans	2,485,785	14,632	—	3,242	2,503,659
Total gross loans	$ 21,415,267	$ 721,090	$ 68,800	$ 124,672	$ 22,329,829
December 31, 2016:					
Commercial loans:					
Software/internet	$ 4,924,923	$ 620,907	$ 46,143	$ 76,605	$ 5,668,578
Hardware	985,889	137,830	58,814	6,581	1,189,114
Private equity/venture capital	7,747,317	594	—	—	7,747,911
Life science/healthcare	1,707,499	120,825	6,578	31,783	1,866,685
Premium wine	865,354	11,838	2,696	491	880,379
Other	480,845	23,510	464	403	505,222
Total commercial loans	16,711,827	915,504	114,695	115,863	17,857,889
Consumer loans:					
Real estate secured loans	1,914,512	9,604	—	1,504	1,925,620
Other consumer loans	238,256	499	786	1,612	241,153
Total consumer loans	2,152,768	10,103	786	3,116	2,166,773
Total gross loans	$ 18,864,595	$ 925,607	$ 115,481	$ 118,979	$ 20,024,662

Troubled Debt Restructurings

As of September 30, 2017 we had 18 TDRs with a total carrying value of $87.4 million where concessions have been granted to borrowers experiencing financial difficulties, in an attempt to maximize collection. There were $1.2 million of unfunded commitments available for funding to the clients associated with these TDRs as of September 30, 2017.

The following table summarizes our loans modified in TDRs, broken out by portfolio segment and class of financing receivables at September 30, 2017 and December 31, 2016:

(Dollars in thousands)	September 30, 2017	December 31, 2016
Loans modified in TDRs:		
Commercial loans:		
Software/internet	$ 63,326	$ 52,646
Hardware	395	14,870
Life science/healthcare	20,015	24,176
Premium wine	3,265	3,194
Other	—	387
Total commercial loans	87,001	95,273
Consumer loans:		
Other consumer loans	437	786
Total	$ 87,438	$ 96,059

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, 2017 and 2016:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2017	2016	2017	2016
Loans modified in TDRs during the period:				
Commercial loans:				
Software/internet	$ 10,876	$ 78	$ 26,034	$ 4,569
Hardware	396	10,329	396	10,329
Life science/healthcare	—	1,714	—	1,714
Premium wine	—	—	185	495
Total commercial loans	11,272	12,121	26,615	17,107
Consumer loans:				
Other consumer loans	—	—	—	786
Total loans modified in TDRs during the period (1)	$ 11,272	$ 12,121	$ 26,615	$ 17,893

(1) There were zero and $2.6 million of partial charge-offs during the three and nine months ended September 30, 2017, respectively, and $0.7 million and $3.5 million of partial charge-offs during the three and nine months ended September 30, 2016, respectively.

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.

During the three months ended September 30, 2016, $12.0 million of new TDRs were modified through payment deferrals granted to our clients and $0.1 million were modified through partial forgiveness of principal. During the nine months ended September 30, 2016, $17.6 million of new TDRs were modified through payment deferrals granted to our clients and $0.3 million were modified through partial forgiveness of principal.

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, 2017 and September 30, 2016.

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2017	2016	2017	2016
TDRs modified within the previous 12 months that defaulted during the period:				
Commercial loans:				
Software/internet	$ 1,234	$ —	$ 1,234	$ 584
Premium wine	186	790	186	790
Total TDRs modified within the previous 12 months that defaulted in the period	$ 1,420	$ 790	$ 1,420	$ 1,374

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 was necessary to determine the allowance for loan losses as of September 30, 2017.

8. Short-Term Borrowings and Long-Term Debt

The following table represents outstanding short-term borrowings and long-term debt at September 30, 2017 and December 31, 2016:

			Carrying Value	
(Dollars in thousands)	Maturity	Principal value at September 30, 2017	September 30, 2017	December 31, 2016
Short-term borrowings:				
Short-term FHLB advances		$ —	$ —	$ 500,000
Other short-term borrowings	(1)	4,840	4,840	12,668
Total short-term borrowings			$ 4,840	$ 512,668
Long-term debt:				
3.50% Senior Notes	January 29, 2025	$ 350,000	$ 347,221	$ 346,979
5.375% Senior Notes	September 15, 2020	350,000	348,035	347,586
6.05% Subordinated Notes (2)	June 1, 2017	—	—	46,646
7.0% Junior Subordinated Debentures	October 15, 2033	50,000	54,362	54,493
Total long-term debt			$ 749,618	$ 795,704

(1) Represents cash collateral received from certain counterparties in relation to market value exposures of derivative contracts in our favor.
(2) Our 6.05% Subordinated Notes were repaid on June 1, 2017 and therefore, the interest rate swap agreement related to this issuance was terminated upon repayment of the 6.05% Subordinated Notes. At December 31, 2016, included in the carrying value of our 6.05% Subordinated Notes were $0.8 million related to hedge accounting associated with the notes.

Interest expense related to short-term borrowings and long-term debt was $9.0 million and $27.2 million for the three and nine months ended September 30, 2017, respectively, and $9.7 million and $28.2 million for the three and nine months ended September 30, 2016, respectively. Interest expense is net of the hedge accounting impact from our interest rate swap agreement related to our 6.05% Subordinated Notes through June 1, 2017. The weighted average interest rate associated with our short-term borrowings was 1.06 percent as of September 30, 2017 and 0.59 percent as of December 31, 2016.

Available Lines of Credit

We have certain facilities in place to enable us to access short-term borrowings on a secured (using high-quality fixed income securities as collateral) and an unsecured basis. These include repurchase agreements and uncommitted federal funds lines with various financial institutions. As of September 30, 2017, we did not have any borrowings outstanding against our uncommitted federal funds lines. We also pledge securities to the FHLB of San Francisco and the discount window at the Federal Reserve Bank. The fair value of collateral pledged to the FHLB of San Francisco (comprised primarily of U.S. Treasury securities) at September 30, 2017 totaled $1.9 billion, all of which was unused and available to support additional borrowings. The fair value of collateral pledged at the discount window of the Federal Reserve Bank at September 30, 2017 totaled $0.7 billion, all of which was unused and available to support additional borrowings.

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. Also, in connection with negotiating credit facilities and certain other services, we often obtain equity warrant assets giving us the right to acquire stock in private, venture-backed companies in the technology and life science/healthcare industries.

Interest Rate Risk

Interest rate risk is our primary market risk and can result from timing and volume differences in the repricing of our interest rate sensitive assets and liabilities and changes in market interest rates. To manage interest rate risk for our 6.05% Subordinated Notes, we entered into a fixed-for-floating interest rate swap agreement at the time of debt issuance based upon LIBOR with matched-terms. The net cash benefit associated with our interest rate swap is recorded as a reduction in “Interest expense—Borrowings,” a component of net interest income. The fair value of our interest rate swaps is calculated using a discounted cash flow method and adjusted for credit valuation associated with counterparty risk. Changes in fair value of the interest rate swaps are reflected in either other assets (for swaps in an asset position) or other liabilities (for swaps in a liability position). On June 1, 2017, our interest rate swap was terminated upon repayment of the 6.05% Subordinated Notes.

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 2016 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, fair value, collateral and net exposure of our derivative financial instruments at September 30, 2017 and December 31, 2016 were as follows:

		September 30, 2017				December 31, 2016			
(Dollars in thousands)	Balance Sheet Location	Notional or Contractual Amount	Fair Value	Collateral (1)	Net Exposure (2)	Notional or Contractual Amount	Fair Value	Collateral (1)	Net Exposure (2)
Derivatives designated as hedging instruments:									
Interest rate risks:									
Interest rate swaps	Other assets	$ —	$ —	$ —	$ —	$ 45,964	$ 810	$ 89	$ 721
Derivatives not designated as hedging instruments:									
Currency exchange risks:									
Foreign exchange forwards	Other assets	286,378	3,166	—	3,166	219,950	3,057	—	3,057
Foreign exchange forwards	Other liabilities	84,618	(1,244)	—	(1,244)	54,338	(968)	—	(968)
Net exposure			1,922	—	1,922		2,089	—	2,089
Other derivative instruments:									
Equity warrant assets	Other assets	211,018	141,785	—	141,785	211,434	131,123	—	131,123
Other derivatives:									
Client foreign exchange forwards	Other assets	1,925,726	90,691	4,840	85,851	1,251,308	54,587	12,579	42,008
Client foreign exchange forwards	Other liabilities	1,838,439	(86,627)	—	(86,627)	1,068,991	(43,317)	—	(43,317)
Client foreign currency options	Other assets	101,544	1,090	—	1,090	775,000	10,383	—	10,383
Client foreign currency options	Other liabilities	101,544	(1,090)	—	(1,090)	775,000	(10,383)	—	(10,383)
Client interest rate derivatives	Other assets	676,148	11,824	—	11,824	583,511	10,110	—	10,110
Client interest rate derivatives	Other liabilities	711,969	(11,955)	—	(11,955)	627,639	(9,770)	—	(9,770)
Net exposure			3,933	4,840	(907)		11,610	12,579	(969)
Net			$ 147,640	$ 4,840	$ 142,800		$ 145,632	$ 12,668	$ 132,964

(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) Net exposure for contracts in a gain position reflects the replacement cost in the event of nonperformance by all such counterparties. The credit ratings of our institutional counterparties as of September 30, 2017 remain at investment grade or higher and there were no material changes in their credit ratings during the three and nine months ended September 30, 2017.

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, 2017 and 2016 is as follows:

		Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	Statement of income location	2017	2016	2017	2016
Derivatives designated as hedging instruments:					
Interest rate risks:					
Net cash benefit associated with interest rate swaps	Interest expense—borrowings	$ 62	$ 580	$ 997	$ 1,778
Changes in fair value of interest rate swaps	Other noninterest income	—	(3)	(7)	(33)
Net gains associated with interest rate risk derivatives		$ 62	$ 577	$ 990	$ 1,745
Derivatives not designated as hedging instruments:					
Currency exchange risks:					
Gains (losses) on revaluations of internal foreign currency instruments, net	Other noninterest income	$ 10,561	$ (1,406)	$ 29,265	$ (4,222)
(Losses) gains on internal foreign exchange forward contracts, net	Other noninterest income	(10,550)	1,352	(28,349)	3,067
Net gains (losses) associated with internal currency risk		$ 11	$ (54)	$ 916	$ (1,155)
Other derivative instruments:					
Gains on revaluations of client foreign currency instruments, net	Other noninterest income	$ 3,760	$ 3,488	$ 8,889	$ 7,009
Losses on client foreign exchange forward contracts, net	Other noninterest income	(3,871)	(3,194)	(8,350)	(8,780)
Net (losses) gains associated with client currency risk		$ (111)	$ 294	$ 539	$ (1,771)
Net gains on equity warrant assets	Gains on equity warrant assets, net	$ 24,922	$ 21,558	$ 42,432	$ 33,252
Net (losses) gains on other derivatives	Other noninterest income	$ (38)	$ 31	$ (524)	$ (659)

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, 2017 and December 31, 2016:

(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	
September 30, 2017						
Derivative Assets:						
Interest rate swaps	$ —	$ —	$ —	$ —	$ —	$ —
Foreign exchange forwards	93,857	—	93,857	(21,154)	(4,840)	67,863
Foreign currency options	1,090	—	1,090	(331)	—	759
Client interest rate derivatives	11,824	—	11,824	(11,808)	—	16
Total derivative assets	106,771	—	106,771	(33,293)	(4,840)	68,638
Reverse repurchase, securities borrowing, and similar arrangements	62,664	—	62,664	(62,664)	—	—
Total	$ 169,435	$ —	$ 169,435	$ (95,957)	$ (4,840)	$ 68,638
December 31, 2016						
Derivative Assets:						
Interest rate swaps	$ 810	$ —	$ 810	$ (721)	$ (89)	$ —
Foreign exchange forwards	57,644	—	57,644	(22,738)	(12,579)	22,327
Foreign currency options	10,383	—	10,383	(8,806)	—	1,577
Client interest rate derivatives	10,110	—	10,110	(10,091)	—	19
Total derivative assets	78,947	—	78,947	(42,356)	(12,668)	23,923
Reverse repurchase, securities borrowing, and similar arrangements	64,028	—	64,028	(64,028)	—	—
Total	$ 142,975	$ —	$ 142,975	$ (106,384)	$ (12,668)	$ 23,923

The following table summarizes our liabilities subject to enforceable master netting arrangements as of September 30, 2017 and December 31, 2016:

(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	
September 30, 2017						
Derivative Liabilities:						
Foreign exchange forwards	$ 87,871	$ —	$ 87,871	$ (68,852)	$ —	$ 19,019
Foreign currency options	1,090	—	1,090	(759)	—	331
Client interest rate derivatives	11,955	—	11,955	(11,936)	—	19
Total derivative liabilities	100,916	—	100,916	(81,547)	—	19,369
Repurchase, securities lending, and similar arrangements	—	—	—	—	—	—
Total	$ 100,916	$ —	$ 100,916	$ (81,547)	$ —	$ 19,369
December 31, 2016						
Derivative Liabilities:						
Foreign exchange forwards	$ 44,285	$ —	$ 44,285	$ (17,964)	$ —	$ 26,321
Foreign currency options	10,383	—	10,383	(1,585)	—	8,798
Client interest rate derivatives	9,770	—	9,770	(9,770)	—	—
Total derivative liabilities	64,438	—	64,438	(29,319)	—	35,119
Repurchase, securities lending, and similar arrangements	—	—	—	—	—	—
Total	$ 64,438	$ —	$ 64,438	$ (29,319)	$ —	$ 35,119

10. Other Noninterest Income and Other Noninterest Expense

A summary of other noninterest income for the three and nine months ended September 30, 2017 and 2016 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2017	2016	2017	2016
Fund management fees	$ 5,198	$ 5,231	$ 15,903	$ 14,149
Service-based fee income	469	2,029	3,860	6,270
Gains on revaluation of client foreign currency instruments, net (1)	3,760	3,488	8,889	7,009
Losses on client foreign exchange forward contracts, net (1)	(3,871)	(3,194)	(8,350)	(8,780)
Gains (losses) on revaluation of internal foreign currency instruments, net (2)	10,561	(1,406)	29,265	(4,222)
(Losses) gains on internal foreign exchange forward contracts, net (2)	(10,550)	1,352	(28,349)	3,067
Other (3)	10,329	11,378	19,910	19,018
Total other noninterest income	$ 15,896	$ 18,878	$ 41,128	$ 36,511

(1) Represents the net revaluation of client foreign currency denominated financial instruments. We enter into client foreign exchange forward contracts to economically reduce our foreign exchange exposure related to client foreign currency denominated financial instruments.
(2) Represents the net revaluation of foreign currency denominated financial instruments issued and held by us, primarily loans, deposits and cash. We enter into internal foreign exchange forward contracts to economically reduce our foreign exchange exposure related to these foreign currency denominated financial instruments issued and held by us.
(3) Includes dividends on FHLB/FRB stock, correspondent bank rebate income, incentive fees related to carried interest and other fee income.

A summary of other noninterest expense for the three and nine months ended September 30, 2017 and 2016 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2017	2016	2017	2016
Lending and other client related processing costs	$ 6,935	$ 5,885	$ 18,806	$ 13,721
Telephone	2,518	2,460	7,892	7,109
Data processing services	2,244	2,137	7,254	6,353
Dues and publications	883	809	2,355	2,258
Postage and supplies	612	598	2,013	2,172
Other	4,872	3,644	16,350	12,679
Total other noninterest expense	$ 18,064	$ 15,533	$ 54,670	$ 44,292

11. 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 taxes 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** is comprised of our investments in certain debt funds in which we are a strategic investor.
- **SVB Private Bank** is the private banking division of the Bank, which provides a range of personal financial solutions for consumers. Our clients are primarily private equity/venture capital professionals and executive leaders of the innovation companies they support. We offer a customized suite of private banking services, including mortgages, home equity lines of credit, restricted stock purchase loans, capital call lines of credit and other secured and unsecured lending, 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, 2017 and 2016 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, 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)	(176,964)	(4,706)	(4,873)	(71,218)	(257,761)
Income (loss) before income tax expense (4)	$ 237,249	$ 8,819	$ 9,055	$ (3,654)	$ 251,469
Total average loans, net of unearned income	$ 18,807,616	$ 2,499,507	$ —	$ 277,769	$ 21,584,892
Total average assets (5)	47,817,114	2,538,400	323,417	(883,565)	49,795,366
Total average deposits	42,376,024	1,231,390	—	435,428	44,042,842
Three months ended September 30, 2016					
Net interest income	$ 262,484	$ 13,298	$ 1	$ 13,378	$ 289,161
Provision for credit losses	(16,974)	(1,976)	—	(1,054)	(20,004)
Noninterest income	79,226	664	30,619	33,631	144,140
Noninterest expense (3)	(159,479)	(3,122)	(3,924)	(54,248)	(220,773)
Income (loss) before income tax expense (4)	$ 165,257	$ 8,864	$ 26,696	$ (8,293)	$ 192,524
Total average loans, net of unearned income	$ 16,357,099	$ 2,074,982	$ —	$ 215,113	$ 18,647,194
Total average assets (5)	40,828,549	2,096,237	325,321	201,222	43,451,329
Total average deposits	36,484,125	1,115,446	—	310,183	37,909,754
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)	(525,043)	(12,675)	(14,537)	(194,385)	(746,640)
Income (loss) before income tax expense (4)	$ 595,389	$ 29,726	$ 31,211	$ (41,400)	$ 614,926
Total average loans, net of unearned income	$ 18,125,020	$ 2,371,027	$ —	$ 230,420	$ 20,726,467
Total average assets (5)	45,414,432	2,403,777	333,439	(586,597)	47,565,051
Total average deposits	40,398,413	1,289,990	—	373,232	42,061,635
Nine months ended September 30, 2016					
Net interest income (expense)	$ 773,342	$ 40,508	$ (51)	$ 40,119	$ 853,918
Provision for credit losses	(86,143)	(2,481)	—	(1,601)	(90,225)
Noninterest income	231,295	2,052	44,492	65,211	343,050
Noninterest expense (3)	(462,234)	(9,481)	(11,521)	(141,375)	(624,611)
Income (loss) before income tax expense (4)	$ 456,260	$ 30,598	$ 32,920	$ (37,646)	$ 482,132
Total average loans, net of unearned income	$ 15,769,964	$ 1,978,175	$ —	$ 207,358	$ 17,955,497
Total average assets (5)	41,020,808	1,999,455	334,328	315,125	43,669,716
Total average deposits	37,002,027	1,120,575	—	321,388	38,443,990

(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 on the sale of fixed income securities. 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 $5.9 million and $6.4 million for the three months ended September 30, 2017 and 2016, respectively, and $19.1 million and $18.3 million for the nine months ended September 30, 2017 and 2016, 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.

12. 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, 2017 and December 31, 2016:

(Dollars in thousands)	September 30, 2017	December 31, 2016
Loan commitments available for funding: (1)		
Fixed interest rate commitments	$ 1,462,728	$ 1,475,179
Variable interest rate commitments	13,037,817	13,572,161
Total loan commitments available for funding	14,500,545	15,047,340
Commercial and standby letters of credit (2)	1,841,385	1,695,856
Total unfunded credit commitments	$ 16,341,930	$ 16,743,196
Commitments unavailable for funding (3)	$ 2,209,680	$ 1,719,524
Allowance for unfunded credit commitments (4)	48,172	45,265

(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, 2017. 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	$ 1,666,751	$ 54,244	$ 1,720,995	$ 1,720,995
Performance standby letters of credit	85,220	7,042	92,262	92,262
Commercial letters of credit	28,128	—	28,128	28,128
Total	$ 1,780,099	$ 61,286	$ 1,841,385	$ 1,841,385

Deferred fees related to financial and performance standby letters of credit were $10 million at both September 30, 2017 and December 31, 2016. At September 30, 2017, collateral in the form of cash of $926 million 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, 2017:

(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)	872	—	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)	58,493	—	Various
Other fund investments (2)	302,867	11,360	Various
Total	$ 464,844	$ 18,601	

(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 243 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 Item 1 of Part I of our 2016 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, 2017:

(Dollars in thousands)	Unfunded Commitments
Strategic Investors Fund, LP	$ 1,338
Capital Preferred Return Fund, LP	2,197
Growth Partners, LP	2,936
Total	$ 6,471

13. 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 return and California tax returns as major tax filings. Our U.S. federal tax returns for 2014 and subsequent years remain open to full examination. Our California tax returns for 2013 and subsequent years remain open to full examination.

At September 30, 2017, our unrecognized tax benefit was $6.3 million, the recognition of which would reduce our income tax expense by $3.8 million. We do not expect that our unrecognized tax benefit will materially change in the next 12 months.

We recognize interest and penalties related to income tax matters as part of income before income taxes. Interest and penalties were not material for the three and nine months ended September 30, 2017.

14. Fair Value of Financial Instruments

Fair Value Measurements

Our available-for-sale securities, derivative instruments and certain non-marketable and other 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 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:

Other venture capital investments: 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.

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

Equity warrant assets (public portfolio): Fair value measurements of equity warrant assets of publicly-traded portfolio companies are valued based on the Black-Scholes option pricing model. The model uses the price of publicly-traded companies (underlying stock price), stated strike prices, warrant expiration dates, the risk-free interest rate and market-observable option volatility assumptions. 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, 2017:

(Dollars in thousands)	Level 1	Level 2	Level 3	Balance at September 30, 2017
Assets:				
Available-for-sale securities:				
U.S. Treasury securities	$ 7,498,340	$ —	$ —	$ 7,498,340
U.S. agency debentures	—	1,676,169	—	1,676,169
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	—	3,012,695	—	3,012,695
Agency-issued collateralized mortgage obligations—variable rate	—	395,880	—	395,880
Equity securities	802	19,451	—	20,253
Total available-for-sale securities	7,499,142	5,104,195	—	12,603,337
Non-marketable and other securities (fair value accounting):				
Non-marketable securities:				
Venture capital and private equity fund investments measured at net asset value	—	—	—	128,768
Other venture capital investments (1)	—	—	1,897	1,897
Other securities (1)	392	—	—	392
Total non-marketable and other securities (fair value accounting)	392	—	1,897	131,057
Other assets:				
Foreign exchange forward and option contracts	—	94,947	—	94,947
Equity warrant assets	—	2,710	139,075	141,785
Client interest rate derivatives	—	11,824	—	11,824
Total assets	$ 7,499,534	$ 5,213,676	$ 140,972	$ 12,982,950
Liabilities:				
Foreign exchange forward and option contracts	$ —	$ 88,961	$ —	$ 88,961
Client interest rate derivatives	—	11,955	—	11,955
Total liabilities	$ —	$ 100,916	$ —	$ 100,916

(1) Included in Level 1 and Level 3 assets are $0.3 million and $1.7 million, respectively, 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, 2016:

(Dollars in thousands)	Level 1	Level 2	Level 3	Balance at December 31, 2016
Assets:				
Available-for-sale securities:				
U.S. Treasury securities	$ 8,909,491	$ —	$ —	$ 8,909,491
U.S. agency debentures	—	2,078,375	—	2,078,375
Residential mortgage-backed securities:				
Agency-issued collateralized mortgage obligations—fixed rate	—	1,152,665	—	1,152,665
Agency-issued collateralized mortgage obligations—variable rate	—	474,283	—	474,283
Equity securities	175	5,422	—	5,597
Total available-for-sale securities	8,909,666	3,710,745	—	12,620,411
Non-marketable and other securities (fair value accounting):				
Non-marketable securities:				
Venture capital and private equity fund investments measured at net asset value	—	—	—	141,649
Other venture capital investments (1)	—	—	2,040	2,040
Other securities (1)	753	—	—	753
Total non-marketable and other securities (fair value accounting)	753	—	2,040	144,442
Other assets:				
Interest rate swaps	—	810	—	810
Foreign exchange forward and option contracts	—	68,027	—	68,027
Equity warrant assets	—	2,310	128,813	131,123
Client interest rate derivatives	—	10,110	—	10,110
Total assets	$ 8,910,419	$ 3,792,002	$ 130,853	$ 12,974,923
Liabilities:				
Foreign exchange forward and option contracts	$ —	$ 54,668	$ —	$ 54,668
Client interest rate derivatives	—	9,770	—	9,770
Total liabilities	$ —	$ 64,438	$ —	$ 64,438

(1) Included in Level 1 and Level 3 assets are $0.6 million and $1.8 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, 2017 and 2016:

(Dollars in thousands)	Beginning Balance	Total Realized and Unrealized Gains (Losses) Included in Income	Sales	Issuances	Distributions and Other Settlements	Transfers Out of Level 3	Ending Balance
Three months ended September 30, 2017							
Non-marketable and other securities (fair value accounting):							
Other venture capital investments (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
Three months ended September 30, 2016							
Non-marketable and other securities (fair value accounting):							
Other venture capital investments (1)	$ 2,040	$ 4	$ (4)	$ —	$ —	$ —	$ 2,040
Other assets:							
Equity warrant assets (2)	127,811	21,092	(10,682)	5,251	—	(252)	143,220
Total assets	$ 129,851	$ 21,096	$ (10,686)	$ 5,251	$ —	$ (252)	$ 145,260
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
Nine months ended September 30, 2016							
Non-marketable and other securities (fair value accounting):							
Other venture capital investments (1)	$ 2,040	$ (21)	$ (4)	$ —	$ 25	$ —	$ 2,040
Other assets:							
Equity warrant assets (2)	135,168	33,115	(34,276)	9,842	—	(629)	143,220
Total assets	$ 137,208	$ 33,094	$ (34,280)	$ 9,842	$ 25	$ (629)	$ 145,260

(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, 2017 and 2016:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2017	2016	2017	2016
Non-marketable and other securities (fair value accounting):				
Other venture capital investments (1)	$ —	$ —	$ (143)	$ —
Other assets:				
Equity warrant assets (2)	17,827	15,785	23,734	23,144
Total unrealized gains, net	$ 17,827	$ 15,785	$ 23,591	$ 23,144
Unrealized losses attributable to noncontrolling interests	$ —	$ —	$ (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, 2017 and December 31, 2016. 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, 2017:				
Other venture capital investments (fair value accounting)	$ 1,897	Private company equity pricing	(1)	(1)
Equity warrant assets (public portfolio)	21,660	Black-Scholes option pricing model	Volatility	37.5%
			Risk-Free interest rate	1.8
			Sales restrictions discount (2)	19.9
Equity warrant assets (private portfolio)	117,415	Black-Scholes option pricing model	Volatility	36.7
			Risk-Free interest rate	1.5
			Marketability discount (3)	16.6
			Remaining life assumption (4)	45.0
December 31, 2016:				
Other venture capital investments (fair value accounting)	$ 2,040	Private company equity pricing	(1)	(1)
Equity warrant assets (public portfolio)	764	Black-Scholes option pricing model	Volatility	46.6%
			Risk-Free interest rate	2.1
			Sales restrictions discount (2)	17.7
Equity warrant assets (private portfolio)	128,049	Black-Scholes option pricing model	Volatility	36.9
			Risk-Free interest rate	1.3
			Marketability discount (3)	17.1
			Remaining life assumption (4)	45.0

(1) In determining the fair value of our other venture capital investment portfolio, 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, 2017, the weighted average contractual remaining term was 5.9 years, compared to our estimated remaining life of 2.7 years. On a quarterly basis, a sensitivity analysis is performed on our remaining life assumption.

For the three and nine months ended September 30, 2017 and 2016, 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, 2017 and 2016 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. Fair value estimates, methods and assumptions, set forth below for our financial instruments, are made solely to comply with these requirements.

Fair values are based on estimates or calculations at the transaction level using present value techniques in instances where quoted market prices are not available. As broadly traded markets do not exist for many of our financial instruments, the fair value calculations attempt to incorporate the effect of current market conditions at a specific time. The aggregation of the fair value calculations presented herein does not represent, and should not be construed to represent, the underlying value of the Company.

The following describes the methods and assumptions used in estimating the fair values of financial instruments for which carrying value approximates fair value and estimated fair values of financial instruments not recorded at fair value on a recurring basis and excludes financial instruments and assets and liabilities already recorded at fair value as described above.

Financial Instruments for which Carrying Value Approximates Fair Value

Certain financial instruments that are not carried at fair value on the Consolidated Balance Sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and cash equivalents; FHLB and FRB stock; accrued interest receivable; short-term borrowings; short-term time deposits; and accrued interest payable. In addition, U.S. GAAP requires that the fair value of deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

Estimated Fair Values of Financial Instruments Not Recorded at Fair Value on a Recurring Basis

Held-to-Maturity Securities

Held-to-maturity securities include similar investments held in our available-for-sale securities portfolio and are valued using the same methodologies. All securities included in our held-to-maturity securities portfolio are valued using Level 2 inputs. Refer to Level 2 fair value measurements above for significant inputs used in the valuation of our held-to-maturity investment securities.

Non-Marketable Securities (Cost and Equity Method Accounting)

Non-marketable securities includes other investments (equity method accounting), venture capital and private equity fund investments (cost method accounting), and other venture capital investments (cost method accounting). Other investments (equity method accounting) includes our investment in SPD-SVB, our joint venture bank in China. At this time, the carrying value of our investment in SPD-SVB is a reasonable estimate of fair value. The fair value of the remaining other investments (equity method accounting) and the fair value of venture capital and private equity fund investments (cost method accounting) and other venture capital investments (cost method accounting) is based on financial information obtained from the fund investments' or debt fund investments' respective general partners. For private company investments, estimated fair value is 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, current and projected operating performance, exit strategies, and financing transactions subsequent to the acquisition of the investment. For our fund investments, we utilize the net asset value per share as obtained from the general partners of the investments. 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.

Loans

The fair value of fixed and variable rate loans is estimated by discounting contractual cash flows using rates that reflect current pricing for similar loans and the projected forward yield curve. This method is not based on the exit price concept of fair value required under ASC 820, *Fair Value Measurements and Disclosures*.

Long-Term Deposits

The fair value of long-term time deposits is estimated by discounting the cash flows using our cost of borrowings and the projected forward yield curve over their remaining contractual term.

Long-Term Debt

The fair value of long-term debt is generally based on quoted market prices, when available, or is estimated based on calculations utilizing third-party pricing services and current market spread, price indications from reputable dealers or observable market prices of the underlying instrument(s), whichever is deemed more reliable. Also included in the estimated fair value of our 6.05% Subordinated Notes are amounts related to hedge accounting associated with the notes.

Off-Balance Sheet Financial Instruments

The fair value of net available commitments to extend credit is estimated based on the average amount we would receive or pay to execute a new agreement with identical terms and pricing, while taking into account the counterparties' credit standing.

Letters of credit are carried at their fair value, which was equivalent to the residual premium or fee at September 30, 2017 and December 31, 2016. Commitments to extend credit and letters of credit typically result in loans with a market interest rate if funded.

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, 2017 and December 31, 2016:

(Dollars in thousands)	Carrying Amount	Estimated Fair Value			
		Total	Level 1	Level 2	Level 3
September 30, 2017:					
Financial assets:					
Cash and cash equivalents	$ 3,555,571	$ 3,555,571	$ 3,555,571	$ —	$ —
Held-to-maturity securities	11,055,006	11,023,415	—	11,023,415	—
Non-marketable securities (cost and equity method accounting) not measured at net asset value	122,493	127,338	—	—	127,338
Non-marketable securities (cost and equity method accounting) measured at net asset value	225,883	329,468	—	—	—
Net commercial loans	19,449,408	19,878,367	—	—	19,878,367
Net consumer loans	2,490,909	2,457,138	—	—	2,457,138
FHLB and Federal Reserve Bank stock	58,012	58,012	—	—	58,012
Accrued interest receivable	129,451	129,451	—	129,451	—
Financial liabilities:					
Other short-term borrowings	4,840	4,840	4,840	—	—
Non-maturity deposits (1)	44,766,988	44,766,988	44,766,988	—	—
Time deposits	45,045	44,895	—	44,895	—
3.50% Senior Notes	347,221	350,864	—	350,864	—
5.375% Senior Notes	348,035	383,439	—	383,439	—
7.0% Junior Subordinated Debentures	54,362	54,977	—	54,977	—
Accrued interest payable	4,150	4,150	—	4,150	—
Off-balance sheet financial assets:					
Commitments to extend credit	—	20,751	—	—	20,751
December 31, 2016:					
Financial assets:					
Cash and cash equivalents	$ 2,545,750	$ 2,545,750	$ 2,545,750	$ —	$ —
Held-to-maturity securities	8,426,998	8,376,138	—	8,376,138	—
Non-marketable securities (cost and equity method accounting) not measured at net asset value	120,037	127,343	—	—	127,343
Non-marketable securities (cost and equity method accounting) measured at net asset value	245,626	353,870	—	—	—
Net commercial loans	17,518,430	17,811,356	—	—	17,811,356
Net consumer loans	2,156,148	2,199,501	—	—	2,199,501
FHLB and Federal Reserve Bank stock	57,592	57,592	—	—	57,592
Accrued interest receivable	111,222	111,222	—	111,222	—
Financial liabilities:					
Short-term FHLB advances	500,000	500,000	500,000	—	—
Other short-term borrowings	12,668	12,668	12,668	—	—
Non-maturity deposits (1)	38,923,750	38,923,750	38,923,750	—	—
Time deposits	56,118	55,949	—	55,949	—
3.50% Senior Notes	346,979	337,600	—	337,600	—
5.375% Senior Notes	347,586	378,777	—	378,777	—
6.05% Subordinated Notes (2)	46,646	47,489	—	47,489	—
7.0% Junior Subordinated Debentures	54,493	53,140	—	53,140	—
Accrued interest payable	12,013	12,013	—	12,013	—
Off-balance sheet financial assets:					
Commitments to extend credit	—	22,074	—	—	22,074

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

(2) At December 31, 2016, included in the carrying value and estimated fair value of our 6.05% Subordinated Notes was an interest rate swap valued at $0.8 million related to hedge accounting associated with the notes.

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, 2017:

(Dollars in thousands)	Carrying Amount	Fair Value	Unfunded Commitments
Non-marketable securities (fair value accounting):			
Venture capital and private equity fund investments (1)	$ 128,768	$ 128,768	$ 6,471
Non-marketable securities (equity method accounting):			
Venture capital and private equity fund investments (2)	87,218	87,218	4,943
Debt funds (2)	17,889	17,889	—
Other investments (2)	17,820	17,820	886
Non-marketable securities (cost method accounting):			
Venture capital and private equity fund investments (2)	102,956	206,541	10,474
Total	$ 354,651	$ 458,236	$ 22,774

(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. These investments represent investments in venture capital and private equity funds that invest 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 $95.7 million and $4.9 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 and cost 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.

15. 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.

16. 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 16—"Employee Compensation and Benefit Plans" under Part II, Item 8 of our 2016 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 Dodd-Frank Act, 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 any tax reform, such as the proposed 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;
- The sale of impaired assets;
- 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 2016 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 2016 Form 10-K.

Reclassifications

Certain prior period amounts, primarily related to the changes to our income statement presentation of gains on derivative instruments, net and provision for unfunded credit commitments have been reclassified to conform to current period presentations.

Management’s Overview of Third Quarter 2017 Performance

Overall, we had an outstanding third quarter in 2017, which was marked by higher net interest and core fee income, increased warrant gains, strong total client funds growth, healthy loan growth and stable credit quality. Additionally, we saw higher noninterest expense, primarily from increased compensation and benefits expenses as well as professional services expenses reflective of increased expenses to support our increasing regulatory, risk and compliance initiatives to support our domestic and global expansion as well as investments made in projects, systems and technology to support our revenue growth and related initiatives and other operating costs. 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 and technology clients as well as clients in our private banking division.

A summary of our performance for the three months ended September 30, 2017 (compared to the three months ended September 30, 2016, where applicable) is as follows:

BALANCE SHEET

Assets. $49.8 billion in average total assets (up 14.6%). $50.8 billion in period-end total assets (up 17.3%).

Loans. $21.6 billion in average total loan balances, net of unearned income (up 15.8%). $22.2 billion in period-end total loan balances, net of unearned income (up 16.1%).

Total Client Funds (on-balance sheet deposits and off-balance sheet client investment funds). $97.3 billion in average total client fund balances (up 20.1%). $99.0 billion in period-end total client fund balances (up 21.5%).

Fixed Income Investments. $23.1 billion in average fixed income investment securities (up 11.5%). $23.7 billion in period-end fixed income investment securities (up 15.6%).

EARNINGS

EPS. Earnings per diluted share of $2.79 (up 31.6%).

Net Income. Consolidated net income available to common stockholders of $148.6 million (up 33.8%).

- Net interest income of $374.0 million (up 29.3%).
- Net interest margin of 3.10% (up 35 bps).
- Noninterest income of $158.8 million (up 10.2%), with non-GAAP core fee income+ of $102.7 million (up 27.6%).
- Noninterest expense of $257.8 million (up 16.8%).

ROE. Return on average equity (annualized) ("*ROE*") performance of 14.59%.

Operating Efficiency Ratio. Operating efficiency ratio of 48.38%.

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 12.96% and 12.41%.
- Tier 1 risk-based capital ratio of 13.32% and 12.41%.
- Total risk-based capital ratio of 14.29% and 13.40%.
- Tier 1 leverage ratio of 8.34% and 7.59%.

CREDIT QUALITY

Credit Quality. Continued disciplined underwriting.

- Allowance for loan losses of 1.12% as a percentage of period-end total gross loans.
- Provision for loan losses of 0.40% as a percentage of period-end total gross loans (annualized).
- Net loan charge-offs of 0.19% as a percentage of average total gross loans (annualized).

+ Consists of fee income for deposit services, 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, 2017 and 2016 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands, except per share data, employees and ratios)	2017	2016	% Change	2017	2016	% Change
Diluted earnings per common share	$ 2.79	$ 2.12	31.6 %	$ 7.01	$ 5.42	29.3 %
Net income available to common stockholders	148,620	111,081	33.8	373,296	283,219	31.8
Net interest income	373,974	289,161	29.3	1,026,663	853,918	20.2
Net interest margin	3.10%	2.75%	35 bps	2.99%	2.72%	27 bps
Provision for credit losses	$ 23,522	$ 20,004	17.6 %	$ 70,062	$ 90,225	(22.3) %
Noninterest income	158,778	144,140	10.2	404,965	343,050	18.0
Noninterest expense	257,761	220,773	16.8	746,640	624,611	19.5
Non-GAAP core fee income (1)	102,722	80,526	27.6	272,567	231,522	17.7
Non-GAAP noninterest income, net of noncontrolling interests (1)	153,164	139,461	9.8	383,256	339,423	12.9
Non-GAAP noninterest expense, net of noncontrolling interests(2)	257,636	220,656	16.8	746,123	624,327	19.5
Balance Sheet:						
Average available-for-sale securities	$ 12,674,610	$ 12,743,715	(0.5) %	$ 12,539,773	$ 13,608,722	(7.9) %
Average held-to-maturity securities	10,467,470	8,003,825	30.8	9,405,525	8,347,190	12.7
Average loans, net of unearned income	21,584,892	18,647,194	15.8	20,726,467	17,955,497	15.4
Average noninterest-bearing demand deposits	36,578,779	30,522,314	19.8	34,653,264	30,694,119	12.9
Average interest-bearing deposits	7,464,063	7,387,440	1.0	7,408,371	7,749,871	(4.4)
Average total deposits	44,042,842	37,909,754	16.2	42,061,635	38,443,990	9.4
Earnings Ratios:						
Return on average assets (annualized) (3)	1.18%	1.02%	15.7 %	1.05%	0.87%	20.7 %
Return on average SVBFG stockholders' equity (annualized) (4)	14.59	12.32	18.4	12.85	10.95	17.4
Asset Quality Ratios:						
Allowance for loan losses as a % of total period-end gross loans	1.12%	1.25%	(13) bps	1.12%	1.25%	(13) bps
Allowance for loan losses for performing loans as a % of total gross performing loans	0.92	1.03	(11)	0.92	1.03	(11)
Gross loan charge-offs as a % of average total gross loans (annualized)	0.23	0.52	(29)	0.33	0.53	(20)
Net loan charge-offs as a % of average total gross loans (annualized)	0.19	0.48	(29)	0.29	0.47	(18)
Capital Ratios:						
CET 1 risk-based capital ratio	12.96%	12.75%	21 bps	12.96%	12.75%	21 bps
Tier 1 risk-based capital ratio	13.32	13.21	11	13.32	13.21	11
Total risk-based capital ratio	14.29	14.22	7	14.29	14.22	7
Tier 1 leverage ratio	8.34	8.35	(1)	8.34	8.35	(1)
Tangible common equity to tangible assets (5)	8.00	8.30	(30)	8.00	8.30	(30)
Tangible common equity to risk-weighted assets (5)	13.01	13.11	(10)	13.01	13.11	(10)
Bank CET 1 risk-based capital ratio	12.41	12.77	(36)	12.41	12.77	(36)
Bank tier 1 risk-based capital ratio	12.41	12.77	(36)	12.41	12.77	(36)
Bank total risk-based capital ratio	13.40	13.83	(43)	13.40	13.83	(43)
Bank tier 1 leverage ratio	7.59	7.74	(15)	7.59	7.74	(15)
Bank tangible common equity to tangible assets (5)	7.47	7.98	(51)	7.47	7.98	(51)
Bank tangible common equity to risk-weighted assets (5)	12.44	13.14	(70)	12.44	13.14	(70)
Other Ratios:						
GAAP operating efficiency ratio (6)	48.38%	50.95%	(5.0) %	52.15%	52.18%	(0.1) %
Non-GAAP operating efficiency ratio (2)	48.82	51.45	(5.1)	52.87	52.28	1.1
Book value per common share (7)	$ 77.00	$ 69.02	11.6	$ 77.00	$ 69.02	11.6
Other Statistics:						
Average full-time equivalent employees	2,434	2,255	7.9 %	2,384	2,199	8.4 %
Period-end full-time equivalent employees	2,433	2,280	6.7	2,433	2,280	6.7

(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 and year-to-date average assets.
(4) Ratio represents annualized consolidated net income available to common stockholders divided by quarterly and year-to-date 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, 2017 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 2016 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), short-term investment securities and interest paid on funding sources. 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 35 percent.

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)	2017 Compared to 2016 Three months ended September 30, increase (decrease) due to change in Volume	Rate	Total	2017 Compared to 2016 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	$ 1,678	$ 2,337	$ 4,015	$ 5,788	$ 5,089	$ 10,877
Fixed income investment portfolio (taxable)	15,325	10,650	25,975	6,655	26,992	33,647
Fixed income investment portfolio (non-taxable)	1,342	(342)	1,000	2,620	(1,067)	1,553
Loans, net of unearned income	37,814	16,404	54,218	98,851	29,676	128,527
Increase in interest income, net	56,159	29,049	85,208	113,914	60,690	174,604
Interest expense:						
Interest bearing checking and savings accounts	25	1	26	63	(2)	61
Money market deposits	65	698	763	(219)	2,466	2,247
Money market deposits in foreign offices	(1)	2	1	10	(1)	9
Time deposits	—	5	5	(8)	6	(2)
Sweep deposits in foreign offices	(23)	(3)	(26)	(75)	(6)	(81)
Total increase (decrease) in deposits expense	66	703	769	(229)	2,463	2,234
Short-term borrowings	(1,558)	1,059	(499)	(1,851)	1,081	(770)
3.50% Senior Notes	5	(2)	3	4	4	8
5.375% Senior Notes	12	(5)	7	15	9	24
Junior Subordinated Debentures	1	—	1	(9)	10	1
6.05% Subordinated Notes	(236)	—	(236)	(405)	224	(181)
Total (decrease) increase in borrowings expense	(1,776)	1,052	(724)	(2,246)	1,328	(918)
(Decrease) increase in interest expense, net	(1,710)	1,755	45	(2,475)	3,791	1,316
Increase in net interest income	$ 57,869	$ 27,294	$ 85,163	$ 116,389	$ 56,899	$ 173,288

Net Interest Income (Fully Taxable Equivalent Basis)

Three months ended September 30, 2017 and 2016

Net interest income increased by $85.2 million to $374.6 million for the three months ended September 30, 2017, compared to $289.4 million for the comparable 2016 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 and SVB Private Bank loan portfolios and rate increases subsequent to September 30, 2016. 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, 2017, compared to the comparable 2016 period are discussed below:

- *Interest income* for the three months ended September 30, 2017 increased by $85.2 million due primarily to:
  - A $54.2 million increase in interest income on loans to $268.4 million for the three months ended September 30, 2017, compared to $214.2 million for the comparable 2016 period. The increase was reflective of an increase in average loan balances of $2.9 billion and an increase in the overall loan yield of 36 basis points to 4.93 percent from 4.57 percent. Gross loan yields, excluding loan interest recoveries and loan fees, increased 37 basis points to 4.30 percent from 3.93 percent, reflective primarily of the benefit of interest rate increases. Loan fee yields were flat at 61 basis points for both the three months ended September 30, 2017 and 2016.
  - A $27.0 million increase in interest income on fixed income investment securities to $111.2 million for the three months ended September 30, 2017, compared to $84.3 million for the comparable 2016 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 29 basis points to 1.91 percent from 1.62 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.

- A $4.0 million increase in interest income from our interest earning cash and short-term investment securities. The increase was due primarily to an increase of $0.9 billion in average interest-earning cash balances as a result of a $6.1 billion increase in average deposit balances and from the impact of the recent increases in the Federal Funds target rate.

The main factors affecting interest income and interest expense for the nine months ended September 30, 2017, compared to the comparable 2016 period are discussed below:

- *Interest income* for the nine months ended September 30, 2017 increased by $174.6 million due primarily to:
  - A $128.5 million increase in interest income on loans to $746.0 million for the nine months ended September 30, 2017, compared to $617.5 million for the comparable 2016 period. The increase was reflective of an increase in average loan balances of $2.8 billion and an increase in the overall loan yield of 22 basis points to 4.81 percent from 4.59 percent. Gross loan yields, excluding loan interest recoveries and loan fees, increased to 4.18 percent from 3.99 percent, reflective of the benefit of interest rate increases, partially offset by the strong growth of our lower yielding private equity/venture capital and Private Bank loan portfolios. Our private equity/venture capital loan portfolio represented 43.1 percent and 38.8 percent of our total gross loan portfolio at September 30, 2017 and 2016, respectively. Our Private Bank loan portfolio represented 11.2 percent and 10.8 percent of our total gross loan portfolio at September 30, 2017 and 2016, respectively.

    Loan fee yields increased two basis points to 60 basis points from 58 basis points in the comparable 2016 period. The increase in loan fee yields was primarily a result of higher income from loan prepayments.
  - A $35.2 million increase in interest income on fixed income investment securities to $298.9 million for the nine months ended September 30, 2017, compared to $263.7 million for the comparable 2016 period. The increase was primarily reflective of an increase in our fixed income investment securities yield of 21 basis points to 1.82 percent from 1.61 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.
  - A $10.9 million increase in interest income from our interest earning cash and short-term investment securities. The increase was due primarily to an increase of $1.1 billion in average interest-earning cash balances as a result of a $3.6 billion increase in average deposit balances. We also saw a benefit from the impact of the recent increases in the Federal Funds target rate.
- *Interest expense* for the nine months ended September 30, 2017 increased by $1.3 million primarily due to:
  - An increase in deposits interest expense of $2.2 million, due primarily to an increase in interest paid on our interest-bearing money market deposits as a result of market rate adjustments.

Net Interest Margin (Fully Taxable Equivalent Basis)

Three months ended September 30, 2017 and 2016

- Our net interest margin increased by 35 basis points to 3.10 percent for the three months ended September 30, 2017, compared to 2.75 percent for the comparable 2016 period. The higher margin during the third quarter of 2017 was reflective primarily of the increases in the Federal Funds target rate since the third quarter of 2016.

Nine months ended September 30, 2017 and 2016

- Our net interest margin increased by 27 basis points to 2.99 percent for the nine months ended September 30, 2017, compared to 2.72 percent for the comparable 2016 period. Our net interest margin increased primarily as a result of the impact of rising interest rates and a higher level of loans as a percentage of our interest-earning assets portfolio during the nine months ended September 30, 2017. Average loans represented 45 percent of year-to-date interest earning assets compared to 43 percent for the comparable 2016 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, 2017 and 2016:

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Average Balances, Rates and Yields for the Three Months Ended September 30, 2017 and 2016

	Three months ended September 30,					
	2017			2016		
(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)	$ 3,291,908	$ 6,211	0.75%	$ 2,404,006	$ 2,196	0.36%
Investment securities: (2)						
Available-for-sale securities:						
Taxable	12,674,610	52,825	1.65	12,743,715	44,741	1.40
Held-to-maturity securities:						
Taxable	10,249,131	56,618	2.19	7,947,983	38,727	1.94
Non-taxable (3)	218,339	1,803	3.28	55,842	803	5.72
Total loans, net of unearned income (4) (5)	21,584,892	268,445	4.93	18,647,194	214,227	4.57
Total interest-earning assets	48,018,880	385,902	3.19	41,798,740	300,694	2.86
Cash and due from banks	371,373			317,044		
Allowance for loan losses	(246,210)			(247,657)		
Other assets (6)	1,651,323			1,583,202		
Total assets	$ 49,795,366			$ 43,451,329		
Funding sources:						
Interest-bearing liabilities:						
Interest bearing checking and savings accounts	$ 442,518	$ 86	0.08%	$ 308,345	$ 60	0.08%
Money market deposits	5,774,281	2,079	0.14	5,592,603	1,316	0.09
Money market deposits in foreign offices	187,183	21	0.04	199,539	20	0.04
Time deposits	51,406	17	0.13	50,351	12	0.09
Sweep deposits in foreign offices	1,008,675	101	0.04	1,236,602	127	0.04
Total interest-bearing deposits	7,464,063	2,304	0.12	7,387,440	1,535	0.08
Short-term borrowings	48,614	164	1.34	513,446	663	0.51
3.50% Senior Notes	347,168	3,144	3.59	346,848	3,141	3.60
5.375% Senior Notes	347,934	4,854	5.53	347,345	4,847	5.55
Junior Subordinated Debentures	54,391	831	6.06	54,566	830	6.05
6.05% Subordinated Notes	—	—	—	47,421	236	1.98
Total interest-bearing liabilities	8,262,170	11,297	0.54	8,697,066	11,252	0.51
Portion of noninterest-bearing funding sources	39,756,710			33,101,674		
Total funding sources	48,018,880	11,297	0.09	41,798,740	11,252	0.11
Noninterest-bearing funding sources:						
Demand deposits	36,578,779			30,522,314		
Other liabilities	773,586			517,066		
SVBFG stockholders' equity	4,041,218			3,586,196		
Noncontrolling interests	139,613			128,687		
Portion used to fund interest-earning assets	(39,756,710)			(33,101,674)		
Total liabilities, noncontrolling interest, and SVBFG stockholders' equity	$ 49,795,366			$ 43,451,329		
Net interest income and margin		$ 374,605	3.10%		$ 289,442	2.75%
Total deposits	$ 44,042,842			$ 37,909,754		
Reconciliation to reported net interest income:						
Adjustments for taxable equivalent basis		(631)			(281)	
Net interest income, as reported		$ 373,974			$ 289,161	

(1) Includes average interest-earning deposits in other financial institutions of $1.3 billion and $0.8 billion for the three months ended September 30, 2017 and 2016, respectively. For the three months ended September 30, 2017 and 2016, balances also include $1.9 billion and $1.6 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 are presented on a fully taxable-equivalent basis using the federal statutory income tax rate of 35.0 percent for all periods presented.

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

(5) Interest income includes loan fees of $33.4 million and $28.4 million for the three months ended September 30, 2017 and 2016, respectively.

(6) Average investment securities of $692 million and $804 million for the three months ended September 30, 2017 and 2016, respectively, were classified as other assets as they were noninterest-earning assets. These investments consisted primarily of non-marketable and other securities.

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Average Balances, Rates and Yields for the Nine Months Ended September 30, 2017 and 2016

	Nine months ended September 30,					
	2017			2016		
(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)	$ 3,235,628	$ 16,670	0.69%	$ 2,111,619	$ 5,793	0.37%
Investment securities: (2)						
Available-for-sale securities:						
Taxable	12,539,773	146,803	1.57	13,608,722	140,932	1.38
Held-to-maturity securities:						
Taxable	9,242,953	147,965	2.14	8,287,043	120,189	1.94
Non-taxable (3)	162,572	4,158	3.42	60,147	2,605	5.79
Total loans, net of unearned income (4) (5)	20,726,467	745,983	4.81	17,955,497	617,456	4.59
Total interest-earning assets	45,907,393	1,061,579	3.09	42,023,028	886,975	2.82
Cash and due from banks	361,041			326,144		
Allowance for loan losses	(243,594)			(237,613)		
Other assets (6)	1,540,211			1,558,157		
Total assets	$ 47,565,051			$ 43,669,716		
Funding sources:						
Interest-bearing liabilities:						
Interest bearing checking and savings accounts	$ 420,680	$ 242	0.08%	$ 310,505	$ 181	0.08%
Money market deposits	5,664,082	5,544	0.13	5,887,627	3,297	0.07
Money market deposits in foreign offices	183,040	59	0.04	153,593	50	0.04
Time deposits	50,855	49	0.13	59,069	51	0.12
Sweep deposits in foreign offices	1,089,714	324	0.04	1,339,077	405	0.04
Total interest-bearing deposits	7,408,371	6,218	0.11	7,749,871	3,984	0.07
Short-term borrowings	39,523	295	1.00	287,735	1,065	0.49
3.5% Senior Notes	347,088	9,429	3.63	346,771	9,421	3.63
5.375% Senior Notes	347,786	14,558	5.60	347,205	14,534	5.59
Junior Subordinated Debentures	54,434	2,494	6.13	54,610	2,493	6.10
6.05% Subordinated Notes	25,641	467	2.44	47,859	648	1.81
Total interest-bearing liabilities	8,222,843	33,461	0.54	8,834,051	32,145	0.49
Portion of noninterest-bearing funding sources	37,684,550			33,188,977		
Total funding sources	45,907,393	33,461	0.10	42,023,028	32,145	0.10
Noninterest-bearing funding sources:						
Demand deposits	34,653,264			30,694,119		
Other liabilities	668,417			556,568		
SVBFG stockholders' equity	3,883,876			3,453,904		
Noncontrolling interests	136,651			131,074		
Portion used to fund interest-earning assets	(37,684,550)			(33,188,977)		
Total liabilities, noncontrolling interest, and SVBFG stockholders' equity	$ 47,565,051			$ 43,669,716		
Net interest income and margin		$ 1,028,118	2.99%		$ 854,830	2.72%
Total deposits	$ 42,061,635			$ 38,443,990		
Reconciliation to reported net interest income:						
Adjustments for taxable equivalent basis		(1,455)			(912)	
Net interest income, as reported		$ 1,026,663			$ 853,918	

(1) Includes average interest-earning deposits in other financial institutions of $1.0 billion and $0.7 billion for the nine months ended September 30, 2017 and 2016, respectively. The balance also includes $2.1 billion and $1.4 billion deposited at the FRB, earning interest at the Federal Funds target rate for the nine months ended September 30, 2017 and 2016, 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 35.0 percent for all periods presented.
(4) Nonaccrual loans are reflected in the average balances of loans.
(5) Interest income includes loan fees of $93.5 million and $78.1 million for the nine months ended September 30, 2017 and 2016, respectively.

(6) Average investment securities of $674 million and $803 million for the nine months ended September 30, 2017 and 2016, 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, 2017 and 2016:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands, except ratios)	2017	2016	2017	2016
Allowance for loan losses, beginning balance	$ 236,496	$ 244,723	$ 225,366	$ 217,613
Provision for loan losses (1)	22,409	18,950	67,273	88,624
Gross loan charge-offs	(12,338)	(24,616)	(51,449)	(71,466)
Loan recoveries	1,828	2,084	6,155	8,158
Foreign currency translation adjustments	615	(576)	1,665	(2,364)
Allowance for loan losses, ending balance	$ 249,010	$ 240,565	$ 249,010	$ 240,565
Allowance for unfunded credit commitments, beginning balance	$ 47,000	$ 34,889	$ 45,265	$ 34,415
Provision for unfunded credit commitments (1)	1,113	1,054	2,789	1,601
Foreign currency translation adjustments	59	(19)	118	(92)
Allowance for unfunded credit commitments, ending balance (2)	$ 48,172	$ 35,924	$ 48,172	$ 35,924
Ratios and other information:				
Provision for loan losses as a percentage of period-end total gross loans (annualized)	0.40%	0.39%	0.40%	0.62%
Gross loan charge-offs as a percentage of average total gross loans (annualized)	0.23	0.52	0.33	0.53
Net loan charge-offs as a percentage of average total gross loans (annualized)	0.19	0.48	0.29	0.47
Allowance for loan losses as a percentage of period-end total gross loans	1.12	1.25	1.12	1.25
Provision for credit losses (1)	$ 23,522	$ 20,004	$ 70,062	$ 90,225
Period-end total gross loans	22,329,829	19,228,928	22,329,829	19,228,928
Average total gross loans	21,712,866	18,762,144	20,850,468	18,067,893

(1) Our consolidated statements of income were modified from prior periods' presentation to conform to the current period presentation, which reflect our provision for loan losses and provision for unfunded credit commitments together as our "provision for credit losses."
(2) The "allowance for unfunded credit commitments" is included as a component of "other liabilities."

Three months ended September 30, 2017 and 2016

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. Our provision for credit losses was $20.0 million for the three months ended September 30, 2016, consisting of a provision for loan losses of $19.0 million and a provision for unfunded credit commitments of $1.0 million.

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,

offset by a benefit from 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 loan losses of $19.0 million for the three months ended September 30, 2016, was reflective primarily of $8.0 million increase in reserves for performing loans, $5.5 million for charge-offs that did not previously have a specific reserve, $4.0 million net reserves for nonaccrual loans and $2.8 million for loan growth. The net increase in reserves for nonaccrual loans included a $5.5 million partial reserve release for one of our non-performing sponsored buyout loans due to credit improvement.

Gross loan charge-offs were $12.3 million for three months ended September 30, 2017, of which $6.3 million was not specifically previously reserved for. 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 of $3.5 million from our hardware and life science/healthcare portfolios.

Gross loan charge-offs of $24.6 million for the three months ended September 30, 2016 included $14.2 million from two late-stage clients, all of which, previously, had been fully reserved. Remaining charge-offs were primarily from early-stage clients in our software/internet and hardware loan portfolios.

Nine months ended September 30, 2017 and 2016

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. Our provision for credit losses was $90.2 million for the third quarter of 2016, consisting of a provision for loan losses of $88.6 million and a provision for unfunded credit commitments of $1.6 million.

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 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 loan losses of $88.6 million for the nine months ended September 30, 2016 was reflective of $33.0 million for charge-offs that did not previously have a specific reserve and $23.0 million from period-end loan growth, with the remaining provision due primarily to reserves for new nonaccrual loans.

The provision for unfunded credit commitments of $2.8 million for nine months ended September 30, 2017 was driven primarily by qualitative allocations based on our loan portfolio being comprised of larger loans. Our provision for unfunded credit commitments was $1.6 million for nine months ended September 30, 2016.

Gross loan charge-offs of $51.4 million for the nine months ended September 30, 2017 included $27.8 million from our early-stage loan portfolio and $13.0 million from two Corporate Finance client loans. These charge-offs were primarily from our software/internet loan portfolio. Gross loan charge-offs of $71.5 million for the nine months ended September 30, 2016 included $35.4 million from our early-stage portfolio and $27.6 million from four late-stage 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 and 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, 2017, noninterest income was $158.8 million and $405.0 million, respectively, compared to $144.1 million and $343.1 million for the comparable 2016 periods. For the three and nine months ended September 30, 2017, non-GAAP noninterest income, net of noncontrolling interests was $153.2 million and $383.3 million, respectively, compared to $139.5 million and $339.4 million for the comparable 2016 periods. For the three and nine months ended September 30, 2017, non-GAAP core fee income was $102.7 million and $272.6 million, respectively, compared to $80.5 million and $231.5 million for the comparable 2016 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, 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 other certain 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. Core fee income includes foreign exchange fees, deposit service charges, credit card fees, lending related fees, client investment fees and 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, 2017 and 2016:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2017	2016	% Change	2017	2016	% Change
GAAP noninterest income	$ 158,778	$ 144,140	10.2%	$ 404,965	$ 343,050	18.0%
Less: income attributable to noncontrolling interests, including carried interest allocation	5,614	4,679	20.0	21,709	3,627	NM
Non-GAAP noninterest income, net of noncontrolling interests	$ 153,164	$ 139,461	9.8	$ 383,256	$ 339,423	12.9

NM—Not meaningful

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, 2017 and 2016:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2017	2016	% Change	2017	2016	% Change
GAAP noninterest income	$ 158,778	$ 144,140	10.2 %	$ 404,965	$ 343,050	18.0%
Less: gains on investment securities, net	15,238	23,178	(34.3)	48,838	41,764	16.9
Less: gains on equity warrant assets, net	24,922	21,558	15.6	42,432	33,253	27.6
Less: other noninterest income	15,896	18,878	(15.8)	41,128	36,511	12.6
Non-GAAP core fee income (1)	$ 102,722	$ 80,526	27.6	$ 272,567	$ 231,522	17.7

(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 fees.

Gains on Investment Securities, Net

Net gains and losses on investment securities include gains and losses from our non-marketable and other securities, as well as gains and losses from sales of our available-for-sale securities portfolio, when applicable.

Our available-for-sale securities portfolio represents primarily interest-earning fixed income investment securities and is managed to earn an appropriate portfolio yield over the long-term while maintaining sufficient liquidity and addressing our asset/liability management objectives. Sales of equity securities held as a result of our exercised warrants, result in net gains or losses on investment securities. These sales are conducted pursuant to the guidelines of our investment policy related to the

management of our liquidity position and interest rate risk. Though infrequent, sales of investment securities in our available-for-sale securities portfolio may result in net gains or losses and are also conducted pursuant to the guidelines of our investment policy.

Our non-marketable and other 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 securities from quarter to quarter, 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 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, 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.

Three months ended September 30, 2017 and 2016

For the three months ended September 30, 2017, we had net gains on investment securities of $15.2 million, compared to $23.2 million for the comparable 2016 period. Non-GAAP net gains on investment securities, net of noncontrolling interests, were $9.7 million for the three months ended September 30, 2017, compared to $18.4 million for the comparable 2016 period.

Non-GAAP net gains on investment securities, net of noncontrolling interests, of $9.7 million for the three months ended September 30, 2017 were driven by the following:

- Gains of $3.7 million from our strategic and other investments, comprised primarily of realized gains from distributions from our strategic venture capital fund investments reflective of M&A activity,
- Gains of $3.1 million from our managed funds of funds portfolio, related primarily to net unrealized valuation increases in the investments held by the funds driven by IPO and M&A activity, and
- Gains of $2.4 million from our debt funds portfolio, related primarily to net unrealized valuation increases in the investments held by the funds driven by IPO activity during the third quarter of 2017.

Nine months ended September 30, 2017 and 2016

For the nine months ended September 30, 2017, we had net gains on investment securities of $48.8 million, compared to $41.8 million for the comparable 2016 period. Non-GAAP net gains on investment securities, net of noncontrolling interests, were $27.4 million for the nine months ended September 30, 2017, compared to net gains of $38.1 million for the comparable 2016 period.

Non-GAAP net gains, net of noncontrolling interests, of $27.4 million for the nine months ended September 30, 2017 were driven by the following:

- Gains of $14.2 million from our strategic and other investments, attributable primarily to distribution gains from our strategic venture capital funds investments and $3.4 million related to the partial sale of shares of one of our direct equity investments,
- Gains of $9.4 million from our managed funds of funds portfolio, related primarily to net unrealized valuation increases in the investments held by the funds driven by IPO, M&A and private equity-backed financing activity, and
- Gains of $2.7 million from our debt funds portfolio, related primarily to net unrealized valuation increases in the investments held by the funds driven by IPO activity during the nine months ended September 30, 2017.

The following table provides 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, 2017 and 2016:

(Dollars in thousands)	Managed Funds of Funds	Managed Direct Venture Funds	Debt Funds	Available-For-Sale 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
Three months ended September 30, 2016						
Total gains (losses) on investment securities, net	$ 8,931	$ 390	$ 166	$ (15)	$ 13,706	$ 23,178
Less: income attributable to noncontrolling interests, including carried interest allocation	4,615	130	—	—	—	4,745
Non-GAAP net gains (losses) on investment securities, net of noncontrolling interests	$ 4,316	$ 260	$ 166	$ (15)	$ 13,706	$ 18,433
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
Nine months ended September 30, 2016						
Total gains (losses) on investment securities, net	$ 5,830	$ (411)	$ 801	$ 11,567	$ 23,977	$ 41,764
Less: income (losses) attributable to noncontrolling interests, including carried interest allocation	3,668	(17)	—	—	—	3,651
Non-GAAP net gains (losses) on investment securities, net of noncontrolling interests	$ 2,162	$ (394)	$ 801	$ 11,567	$ 23,977	$ 38,113

Gains on Equity Warrant Assets, Net

A summary of gains on equity warrant assets, net, for the three and nine months ended September 30, 2017 and 2016 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2017	2016	% Change	2017	2016	% Change
Equity warrant assets (1)						
Gains on exercises, net	$ 7,449	$ 5,931	25.6 %	$ 22,482	$ 13,808	62.8%
Cancellations and expirations	(757)	(1,161)	(34.8)	(3,614)	(2,544)	42.1
Changes in fair value, net	18,230	16,788	8.6	23,564	21,989	7.2
Gains on equity warrant assets, net	$ 24,922	$ 21,558	15.6	$ 42,432	$ 33,253	27.6

(1) At September 30, 2017, we held warrants in 1,842 companies, compared to 1,719 companies at September 30, 2016. The total fair value of our warrant portfolio was $142 million at September 30, 2017 and $145 million at September 30, 2016. 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.

Three months ended September 30, 2017 and 2016

Net gains on equity warrant assets were $24.9 million for the three months ended September 30, 2017, compared to net gains of $21.6 million for the comparable 2016 period. Net gains on equity warrant assets for the three months ended September 30, 2017 consisted of:

- Net gains of $18.2 million from changes in warrant valuations for the three months ended September 30, 2017, compared to net gains of $16.8 million for the comparable 2016 period, driven by an increase of $15.9 million in the valuation of one company in our portfolio associated with its IPO during the third quarter of 2017, and
- Net gains of $7.4 million from the exercise of equity warrant assets during the three months ended September 30, 2017, compared to net gains of $5.9 million for the comparable 2016 period, reflective of increased M&A activity in the third quarter of 2017.

Nine months ended September 30, 2017 and 2016

Net gains on equity warrant assets were $42.4 million for the nine months ended September 30, 2017, compared to net gains of $33.3 million for the comparable 2016 period. Net gains on equity warrant assets for the nine months ended September 30, 2017 consisted of:

- Net gains of $22.5 million from the exercise of equity warrant assets for the nine months ended September 30, 2017, compared to net gains of $13.8 million for the comparable 2016 period, reflective primarily of increased M&A and IPO activity during the nine months ended September 30, 2017, and
- Net gains of $23.6 million from changes in warrant valuations for the nine months ended September 30, 2017, compared to net gains of $22.0 million for the comparable 2016 period, driven primarily by an increase in the valuation of one company in our portfolio associated with its IPO during the third quarter of 2017 as mentioned above as well as increases in valuation in our private company warrant portfolio reflective of M&A exit activity during the nine months ended September 30, 2017.

Non-GAAP Core Fee Income

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2017	2016	% Change	2017	2016	% Change
Non-GAAP core fee income (1):						
Foreign exchange fees	$ 29,671	$ 25,944	14.4%	$ 82,026	$ 76,998	6.5%
Credit card fees	20,270	18,295	10.8	56,099	49,226	14.0
Deposit service charges	14,508	13,356	8.6	43,046	39,142	10.0
Client investment fees	15,563	7,952	95.7	37,571	23,959	56.8
Lending related fees	15,404	8,168	88.6	32,874	23,783	38.2
Letters of credit and standby letters of credit fees	7,306	6,811	7.3	20,951	18,414	13.8
Total non-GAAP core fee income (1)	$ 102,722	$ 80,526	27.6	$ 272,567	$ 231,522	17.7

(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 $29.7 million and $82.0 million for the three and nine months ended September 30, 2017, compared to $25.9 million and $77.0 million for the comparable 2016 periods. The increases in foreign exchange fees were driven by our continued investments in people, expertise and focused client engagement, largely from our focus on our foreign exchange business as a key area targeted for growth, resulting in increased client count and higher trade volumes from existing clients across all of our client portfolios.

Credit Card Fees

Credit card fees were $20.3 million and $56.1 million for the three and nine months ended September 30, 2017, compared to $18.3 million and $49.2 million for the comparable 2016 periods. The increases were primarily due to higher 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 increases in interchange fee income were partially offset by increases in rebate/rewards expense for the three and nine months ended September 30, 2017.

Deposit Service Charges

Deposit service charges were $14.5 million and $43.0 million for the three and nine months ended September 30, 2017, compared to $13.4 million and $39.1 million for the comparable 2016 periods. The increases were reflective of higher deposit client counts, as well as an increase in transaction volumes, during the three and nine months ended September 30, 2017.

Lending Related Fees

Lending related fees were $15.4 million and $32.9 million for the three and nine months ended September 30, 2017, compared to $8.2 million and $23.8 million for the comparable 2016 periods. The increases were due primarily to an adjustment of $4.5 million related to fees earned in prior periods from unused lines of credit with the remaining increase attributable primarily to higher loan syndication fee income for the three and nine months ended September 30, 2017.

Client Investment Fees

Client investment fees were $15.6 million and $37.6 million for the three and nine months ended September 30, 2017, compared to $8.0 million and $24.0 million for the comparable 2016 periods. The increases were attributable primarily to increases in average client investment fund balances driven by our clients' increased utilization of off-balance sheet products managed by SVB Asset Management and third-party sweep money market funds, as well as 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.

The following table summarizes average client investment funds for the three and nine months ended September 30, 2017 and 2016:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in millions)	2017	2016	% Change	2017	2016	% Change
Client directed investment assets (1)	$ 6,985	$ 6,846	2.0%	$ 6,190	$ 7,137	(13.3)%
Client investment assets under management (2)	26,123	20,692	26.2	24,531	21,215	15.6
Sweep money market funds	20,165	15,567	29.5	18,783	14,468	29.8
Total average client investment funds (3)	$ 53,273	$ 43,105	23.6	$ 49,504	$ 42,820	15.6

(1) Comprised of mutual funds and Repurchase Agreement Program assets.
(2) These funds represent investments in third party money market mutual funds and fixed-income securities managed by SVB Asset Management.
(3) 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, 2017 and December 31, 2016:

(Dollars in millions)	September 30, 2017	December 31, 2016	% Change
Client directed investment assets (1)	$ 6,860	$ 5,510	24.5%
Client investment assets under management (2)	26,718	23,115	15.6
Sweep money market funds	20,664	17,173	20.3
Total period-end client investment funds (3)	$ 54,242	$ 45,798	18.4

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

Other Noninterest Income

A summary of other noninterest income for the three and nine months ended September 30, 2017 and 2016 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2017	2016	% Change	2017	2016	% Change
Fund management fees	$ 5,198	$ 5,231	(0.6)%	$ 15,903	$ 14,149	12.4 %
Service-based fee income	469	2,029	(76.9)	3,860	6,270	(38.4)
Gains on revaluation of client foreign currency instruments, net (1)	3,760	3,488	7.8	8,889	7,009	26.8
Losses on client foreign exchange forward contracts, net (1)	(3,871)	(3,194)	21.2	(8,350)	(8,780)	(4.9)
Gains (losses) on revaluation of internal foreign currency instruments, net (2)	10,561	(1,406)	NM	29,265	(4,222)	NM
(Losses) gains on internal foreign exchange contracts, net (2)	(10,550)	1,352	NM	(28,349)	3,067	NM
Other (3)	10,329	11,378	(9.2)	19,910	19,018	4.7
Total other noninterest income	$ 15,896	$ 18,878	(15.8)	$ 41,128	$ 36,511	12.6

NM—Not meaningful

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

(2) Represents the net revaluation of foreign currency denominated financial instruments issued and held by us, primarily loans, deposits and cash. We enter into internal foreign exchange forward contracts to economically reduce our foreign exchange exposure related to these foreign currency denominated financial instruments issued and held by us.

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

Three months ended September 30, 2017 and 2016

Total other noninterest income was $15.9 million for the three months ended September 30, 2017, compared to $18.9 million for the comparable 2016 period. The decrease of $3.0 million in other noninterest income was due to the following:

- Service-based fee income of $0.5 million compared to $2.0 million for the comparable 2016 period. The $1.5 million decrease was primarily due to the sale of our equity valuation services business during the third quarter of 2017, and
- Other noninterest income of $10.3 million compared to $11.4 million for the comparable 2016 period. The $1.1 million decrease was primarily attributable to higher carried interest income earned from one of our unconsolidated fund investments during the third quarter of 2016 as compared to the third quarter of 2017.

Nine months ended September 30, 2017 and 2016

Total other noninterest income was $41.1 million for the nine months ended September 30, 2017, compared $36.5 million for the comparable 2016 period. The increase of $4.6 million in other noninterest income was due to the following:

- Fund management fees of $15.9 million compared to fees of $14.1 million for the comparable 2016 period. The increase was due primarily to the addition of new managed funds at SVB Capital,
- Service-based fee income of $3.9 million compared to $6.3 million for the comparable 2016 period. The $2.4 million decrease was primarily due to the sale of our equity valuation services business during the third quarter of 2017,
- Net gains of $0.5 million on client foreign exchange forward contracts and the revaluation of client foreign currency denominated cash for the nine months ended September 30, 2017, compared to net losses of $1.8 million for the comparable 2016 period. The net losses for the nine months ended September 30, 2016 was primarily due to a reclassification of $2.8 million in unrealized gains on forward contracts to foreign exchange fee income reflecting fees earned on forward contracts executed on behalf of our clients that were previously recorded in gains on derivative instruments, and

- Net gains of $0.9 million on internal foreign exchange forward contracts and the revaluation of internal foreign currency denominated cash for the nine months ended September 30, 2017, compared to net losses of $1.2 million for the comparable 2016 period. The net losses of $1.2 million for the nine months ended September 30, 2016 were primarily due to the strengthening of the U.S. dollar against various foreign currencies during the nine months ended September 30, 2016.

Noninterest Expense

A summary of noninterest expense for the three and nine months ended September 30, 2017 and 2016 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2017	2016	% Change	2017	2016	% Change
Compensation and benefits	$ 153,263	$ 136,568	12.2%	$ 449,412	$ 374,410	20.0%
Professional services	32,987	23,443	40.7	86,331	67,959	27.0
Premises and equipment	18,937	16,291	16.2	53,753	47,861	12.3
Business development and travel	10,329	8,504	21.5	30,913	30,077	2.8
Net occupancy	12,660	9,525	32.9	35,437	28,919	22.5
FDIC and state assessments	8,359	7,805	7.1	26,354	21,624	21.9
Correspondent bank fees	3,162	3,104	1.9	9,770	9,469	3.2
Other	18,064	15,533	16.3	54,670	44,292	23.4
Total noninterest expense (1)	$ 257,761	$ 220,773	16.8	$ 746,640	$ 624,611	19.5

(1) Our consolidated statements of income were modified from prior periods' presentation to the current period presentation, which reflects our provision for loan losses and provision for unfunded credit commitments together as our “provision for credit losses”. In prior periods, our provision for unfunded credit commitments were reported separately as a component of noninterest expense.

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, 2017 and 2016:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands, except ratios)	2017	2016	% Change	2017	2016	% Change
GAAP noninterest expense	$ 257,761	$ 220,773	16.8 %	$ 746,640	$ 624,611	19.5 %
Less: amounts attributable to noncontrolling interests	125	117	6.8	517	284	82.0
Non-GAAP noninterest expense, net of noncontrolling interests	$ 257,636	$ 220,656	16.8	$ 746,123	$ 624,327	19.5
GAAP net interest income	$ 373,974	$ 289,161	29.3	$ 1,026,663	$ 853,918	20.2
Adjustments for taxable equivalent basis	631	281	124.6	1,455	912	59.5
Non-GAAP taxable equivalent net interest income	$ 374,605	$ 289,442	29.4	$ 1,028,118	$ 854,830	20.3
Less: income attributable to noncontrolling interests	9	4	125.0	26	62	(58.1)
Non-GAAP taxable equivalent net interest income, net of noncontrolling interests	$ 374,596	$ 289,438	29.4	$ 1,028,092	$ 854,768	20.3
GAAP noninterest income	$ 158,778	$ 144,140	10.2	$ 404,965	$ 343,050	18.0
Less: income attributable to noncontrolling interests	5,614	4,679	20.0	21,709	3,627	NM
Non-GAAP noninterest income, net of noncontrolling interests	$ 153,164	$ 139,461	9.8	$ 383,256	$ 339,423	12.9
GAAP total revenue	$ 532,752	$ 433,301	23.0	$ 1,431,628	$ 1,196,968	19.6
Non-GAAP taxable equivalent revenue, net of noncontrolling interests	$ 527,760	$ 428,899	23.0	$ 1,411,348	$ 1,194,191	18.2
GAAP operating efficiency ratio	48.38%	50.95%	(5.0)	52.15%	52.18%	(0.1)
Non-GAAP operating efficiency ratio (1)	48.82	51.45	(5.1)	52.87	52.28	1.1

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, 2017 and 2016:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands, except employees)	2017	2016	% Change	2017	2016	% Change
Compensation and benefits:						
Salaries and wages	$ 72,799	$ 62,636	16.2 %	$ 207,687	$ 182,375	13.9%
Incentive compensation & ESOP	37,668	38,255	(1.5)	108,310	87,162	24.3
Other employee incentives and benefits (1)	42,796	35,677	20.0	133,415	104,873	27.2
Total compensation and benefits	$ 153,263	$ 136,568	12.2	$ 449,412	$ 374,410	20.0
Period-end full-time equivalent employees	2,433	2,280	6.7	2,433	2,280	6.7
Average full-time equivalent employees	2,434	2,255	7.9	2,384	2,199	8.4

(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 $153.3 million for the three months ended September 30, 2017, compared to $136.6 million for the comparable 2016 period. The key changes in factors affecting compensation and benefits expense were as follows:

- An increase of $10.2 million in salaries and wages, reflective primarily of an increase in the number of average FTE by 179 to 2,434 FTEs for the third quarter of 2017 compared to the same period in 2016, and annual pay raises. The increase in headcount was primarily to support our growth initiatives.
- An increase of $7.1 million in total other employee incentives and benefits, related to various expenses, particularly personnel contracting expenses, to support our growth both domestically and globally, and employer payroll taxes reflective of our increased headcount since the third quarter of 2016. The increase in other employee incentives and benefits also includes an increase of $2.7 million in warrant incentive plan expenses reflective of our quarterly equity warrant portfolio performance as well as an increase of $0.7 million in share-based compensation expense, primarily due to our accruals based on our performance expectations for our outstanding performance-based restricted stock awards compared to our estimate for the third quarter of 2016, reflective of the increase in our stock price relative to our peers.

Compensation and benefits expense was $449.4 million for the nine months ended September 30, 2017, compared to $374.4 million for the comparable 2016 period. The key changes in factors affecting compensation and benefits expense were as follows:

- An increase of $28.5 million in total other employee incentives and benefits, related to various expenses, particularly personnel contracting expenses, to support our growth both domestically and globally, as well as group health and life insurance and employer payroll taxes reflective of our increased headcount since the nine months ended September 30, 2016. The increase in other employee incentives and benefits also includes an increase of $5.4 million in warrant incentive plan expenses reflective of our year-to-date equity warrant portfolio performance as well as an increase of $5.4 million in share-based compensation expense, primarily due to our accruals based on our performance expectations for our outstanding performance-based restricted stock awards as compared to our estimate for the nine months ended September 30, 2016, reflective of the increase in our stock price relative to our peers.
- An increase of $25.3 million in salaries and wages, reflective primarily of an increase in the number of average FTE by 185 to 2,384 FTEs during the nine months ended September 30, 2017 compared to the same period in 2016, and annual pay raises.
- An increase of $21.1 million in expenses related to incentive compensation plans and ESOP. Our incentive compensation expense was higher during the nine months ended September 30, 2017 primarily due to higher expected full year performance for 2017 related to the trend of our improving ROE relative to our peers, which is one of our key plan performance metrics.

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 2016 Form 10-K). Total costs incurred under these plans were $45.9 million and $133.3 million for the three and nine months ended September 30, 2017, compared to $43.7 million and $105.9 million for the comparable 2016 periods. These amounts are included in total compensation and benefits expense discussed above.

Professional Services

Professional services expense was $33.0 million and $86.3 million for the three and nine months ended September 30, 2017, compared to $23.4 million and $68.0 million for the comparable 2016 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.

Premises and Equipment

Premises and equipment was $18.9 million and $53.8 million for the three and nine months ended September 30, 2017, compared to $16.3 million and $47.9 million for the comparable 2016 periods. The increases related to investments to projects, systems and technology to support our revenue growth and related initiatives as well as other operating costs.

Net Occupancy

Net occupancy expense was $12.7 million and $35.4 million for the three and nine months ended September 30, 2017, compared to $9.5 million and $28.9 million for the comparable 2016 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.

FDIC and State Assessments

FDIC and state assessments expense was $8.4 million and $26.4 million for the three and nine months ended September 30, 2017, compared to $7.8 million and $21.6 million for the comparable 2016 periods. The increases were due primarily to the increases in our average assets.

Other Noninterest Expense

A summary of other noninterest expense for the three and nine months ended September 30, 2017 and 2016 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2017	2016	% Change	2017	2016	% Change
Lending and other client related processing costs	$ 6,935	$ 5,885	17.8%	$ 18,806	$ 13,721	37.1 %
Telephone	2,518	2,460	2.4	7,892	7,109	11.0
Data processing services	2,244	2,137	5.0	7,254	6,353	14.2
Dues and publications	883	809	9.1	2,355	2,258	4.3
Postage and supplies	612	598	2.3	2,013	2,172	(7.3)
Other	4,872	3,644	33.7	16,350	12,679	29.0
Total other noninterest expense	$ 18,064	$ 15,533	16.3	$ 54,670	$ 44,292	23.4

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, 2017 and 2016 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2017	2016	% Change	2017	2016	% Change
Net interest income (1)	$ (9)	$ (4)	125.0%	$ (26)	$ (62)	(58.1)%
Noninterest income (1)	(4,341)	(3,721)	16.7	(19,059)	(1,144)	NM
Noninterest expense (1)	125	117	6.8	517	284	82.0
Carried interest allocation (2)	(1,273)	(958)	32.9	(2,650)	(2,483)	6.7
Net income attributable to noncontrolling interests	$ (5,498)	$ (4,566)	20.4	$ (21,218)	$ (3,405)	NM

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, 2017 and 2016

Net income attributable to noncontrolling interests was $5.5 million for the three months ended September 30, 2017, compared to $4.6 million for the comparable 2016 period. Net income attributable to noncontrolling interests of $5.5 million for the three months ended September 30, 2017 was primarily a result of net gains on investment securities (including carried interest allocation) from our managed funds of funds portfolio due to net unrealized valuation increases of investments held by the funds driven primarily by IPO and M&A activity. See "Results of Operations—Noninterest Income—Gains on Investment Securities, Net".

Nine months ended September 30, 2017 and 2016

Net income attributable to noncontrolling interests was $21.2 million for the nine months ended September 30, 2017, compared to $3.4 million for the comparable 2016 period. Net income attributable to noncontrolling interests of $21.2 million for the nine months ended September 30, 2017 was primarily a result of net gains on investment securities (including carried interest allocation) from our managed funds of funds portfolio due to net unrealized valuation increases of investments held by the funds driven by IPO, M&A and private equity-backed financing activity. See "Results of Operations—Noninterest Income—Gains on Investment Securities, Net".

Income Taxes

Our effective income tax expense rate was 39.6 percent and 37.1 percent for the three and nine months ended September 30, 2017, respectively, compared to 40.9 percent and 40.8 percent for the three and nine months ended September 30, 2016, 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, 2017 resulted from the recognition of a tax benefit of $1.3 million and $14.4 million, respectively, due to the adoption and implementation of Accounting Standards Update ("ASU") 2016-09, Improvements to Employee Share-Based Payment Accounting, in the first quarter of 2017. The new guidance requires tax impacts from employee share-based transactions to be recognized in the provision for income taxes rather than additional paid-in-capital in stockholders' equity required under the previous guidance. Additionally, our effective income tax expense rate for the nine months ended September 30, 2017 included the recognition of a tax benefit of $4.7 million reflective of the return of tax funds related to a prior years' tax return.

Additionally, in early November 2017, draft tax reform legislation entitled the Tax Cuts and Jobs Act (the "TCJ Act") was introduced. If enacted, the TCJ Act would make significant changes to the U.S. Internal Revenue Code of 1986, including corporate taxation provisions. Such changes under the TCJ Act or any other similar tax reform could have a material impact on our results of operations or financial condition.

Excluding the impact of the tax benefit items discussed above and any tax reform, we expect the annual effective tax rate for 2017 to be comparable to the full-year 2016 effective tax rate.

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 11—"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, 2017 and 2016:

Global Commercial Bank

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2017	2016	% Change	2017	2016	% Change
Net interest income	$ 337,860	$ 262,484	28.7%	$ 924,789	$ 773,342	19.6 %
Provision for credit losses	(20,874)	(16,974)	23.0	(65,007)	(86,143)	(24.5)
Noninterest income	97,227	79,226	22.7	260,650	231,295	12.7
Noninterest expense	(176,964)	(159,479)	11.0	(525,043)	(462,234)	13.6
Income before income tax expense	$ 237,249	$ 165,257	43.6	$ 595,389	$ 456,260	30.5
Total average loans, net of unearned income	$ 18,807,616	$ 16,357,099	15.0	$ 18,125,020	$ 15,769,964	14.9
Total average assets	47,817,114	40,828,549	17.1	45,414,432	41,020,808	10.7
Total average deposits	42,376,024	36,484,125	16.1	40,398,413	37,002,027	9.2

Three months ended September 30, 2017 and 2016

Income before income tax expense from our Global Commercial Bank ("GCB") increased to $237.2 million for the three months ended September 30, 2017, compared to $165.3 million for the comparable 2016 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, 2017 compared to the comparable 2016 period are discussed below.

Net interest income from GCB increased by $75.4 million for the three months ended September 30, 2017, 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 $20.9 million for the three months ended September 30, 2017, compared to $17.0 million for the comparable 2016 period. 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 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 of $17.0 million for the three months ended September 30, 2016 primarily reflected $8.0 million of reserves for performing loans, $5.5 million in charge-offs that did not previously have a specific reserve, $3.0 million net reserves for nonaccrual loans and $2.8 million for loan growth.

Noninterest income increased by $18.0 million for the three months ended September 30, 2017, related primarily to an increase across 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 $17.5 million for the three months ended September 30, 2017, due primarily to increased professional services expense and compensation and benefits expense. Professional services expenses were higher due to enhancements in our 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. Compensation and benefits expense increased as a result of increased salaries and wages and other employee benefits. The increase in GCB salaries and wages was due primarily to an increase in the average number of FTEs at GCB, which increased by 111 to 1,881 FTEs for the three months ended September 30, 2017, compared to 1,770 FTEs for the comparable 2016 period. The increase in total other employee benefits was related to various expenses, particularly personnel contracting expenses, to support our growth both domestically and globally, and employer payroll taxes reflective of our increased headcount since the third quarter 2016.

Nine months ended September 30, 2017 and 2016

Net interest income from our GCB increased by $151.4 million for the nine months ended September 30, 2017, 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 $65.0 million for the nine months ended September 30, 2017, compared to a provision of $86.1 million for the comparable 2016 period. 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 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 of $86.1 million for the nine months ended September 30, 2016 was reflective of $33.0 million in charge-offs that did not previously have a specific reserve and $23.0 million from period-end loan growth, with the remaining provision due primarily to reserves for new nonaccrual loans.

Noninterest income increased by $29.4 million for the nine months ended September 30, 2017, related primarily to an increase across our non-GAAP core fee income (higher foreign exchange fees, credit card fees and client investment 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 $62.8 million for the nine months ended September 30, 2017, due primarily to increased expenses for compensation and benefits and professional services. Compensation and benefits expense increased as a result of higher incentive compensation expenses, increased salaries and wages and higher other employee benefits. The increase in incentive compensation expenses was due to the expectation of our performance to exceed budget for 2017. The increase in our salaries and wages expenses was due primarily to an increase in the average number of FTEs at GCB, which increased by 124 to 1,857 FTEs for the nine months ended September 30, 2017, compared to 1,733 FTEs for the comparable 2016 period. The increase in total other employee incentives and benefits was related to various expenses, particularly personnel contracting expenses, to support our growth both domestically and globally as well as group health and life insurance and employer payroll taxes reflective of our increased headcount since the nine months ended September 30, 2016. Professional services expenses were higher due to enhancements in our 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.

SVB Private Bank

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	**2017**	**2016**	**% Change**	**2017**	**2016**	**% Change**
Net interest income	$ 14,600	$ 13,298	9.8 %	$ 42,952	$ 40,508	6.0 %
Provision for credit losses	(1,535)	(1,976)	(22.3)	(2,266)	(2,481)	(8.7)
Noninterest income	460	664	(30.7)	1,715	2,052	(16.4)
Noninterest expense	(4,706)	(3,122)	50.7	(12,675)	(9,481)	33.7
Income before income tax expense	$ 8,819	$ 8,864	(0.5)	$ 29,726	$ 30,598	(2.8)
Total average loans, net of unearned income	$ 2,499,507	$ 2,074,982	20.5	$ 2,371,027	$ 1,978,175	19.9
Total average assets	2,538,400	2,096,237	21.1	2,403,777	1,999,455	20.2
Total average deposits	1,231,390	1,115,446	10.4	1,289,990	1,120,575	15.1

Three months ended September 30, 2017 and 2016

Net interest income from our SVB Private Bank increased by $1.3 million for the three months ended September 30, 2017, due primarily to higher interest income due to loan growth, partially offset by a higher funding charge for loans funded as loan growth exceeded deposit growth.

Noninterest expense increased by $1.6 million for the three months ended September 30, 2017, due primarily to increased compensation and benefits expense. Compensation and benefits expense increased as a result of increased salaries and wages, reflective primarily of annual pay raises, and higher incentive compensation expenses due to the expectation of our performance to exceed budget for 2017.

Nine months ended September 30, 2017 and 2016

Net interest income from our SVB Private Bank increased by $2.4 million for the nine months ended September 30, 2017, due primarily to higher interest income due to loan growth, partially offset by a higher funding charge for loans funded as loan growth exceeded deposit growth.

SVB Private Bank had a provision for credit losses of $2.3 million for the nine months ended September 30, 2017, compared to $2.5 million for the comparable 2016 period. The provisions for both the nine months ended September 30, 2017 and 2016 were due primarily to reserves for period-end loan growth.

Noninterest expense increased by $3.2 million for the nine months ended September 30, 2017, due primarily to increased compensation and benefits expense. Compensation and benefits expense increased as a result of increased salaries and wages, reflective primarily of annual pay raises, and higher incentive compensation expenses due to the expectation of our performance to exceed budget for 2017.

SVB Capital

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2017	2016	% Change	2017	2016	% Change
Net interest income (expense)	$ 15	$ 1	NM	$ 41	$ (51)	(180.4)%
Noninterest income	13,913	30,619	(54.6)	45,707	44,492	2.7
Noninterest expense	(4,873)	(3,924)	24.2	(14,537)	(11,521)	26.2
Income before income tax expense	$ 9,055	$ 26,696	(66.1)	$ 31,211	$ 32,920	(5.2)
Total average assets	$ 323,417	$ 325,321	(0.6)	$ 333,439	$ 334,328	(0.3)

NM—Not meaningful

SVB Capital's components of noninterest income primarily include net gains and losses on non-marketable and other 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, 2017 and 2016

SVB Capital had noninterest income of $13.9 million for the three months ended September 30, 2017, compared to $30.6 million for the comparable 2016 period. The decrease in noninterest income was due primarily to lower net gains on investment securities compared to the comparable 2016 period. SVB Capital's components of noninterest income primarily include the following:

- Net gains on investment securities of $8.2 million for the three months ended September 30, 2017, compared to net gains of $18.2 million for the comparable 2016 period. The gains on investment securities of $8.2 million for the three months ended September 30, 2017 were primarily related to gains from distributions from our strategic venture capital fund investments and net unrealized valuation increases in the investments held by the funds driven by IPO and M&A activity during the third quarter of 2017. Investment security gains in the three months ended September 30, 2016 included $7.2 million from valuation increases for one of our equity method fund investments,
- In 2016, we recognized $6.7 million in carried interest related to the equity method fund that drove the $7.2 million of investment gains, and
- Fund management fees remained flat at $5.2 million for the three months ended September 30, 2017 and 2016.

Nine months ended September 30, 2017 and 2016

SVB Capital had noninterest income of $45.7 million for the nine months ended September 30, 2017, compared to $44.5 million for the comparable 2016 period. The increase in noninterest income was due primarily to higher net gains on investment securities compared to the comparable 2016 period. SVB Capital's components of noninterest income primarily include the following:

- Net gains on investment securities of $28.2 million for the nine months ended September 30, 2017, compared to net gains of $23.0 million for the comparable 2016 period. The net gains on investment securities of $28.2 million for the nine months ended September 30, 2017 were related to gains from distributions from our strategic venture capital

fund investments and net unrealized valuation increases in the investments held by the funds driven by IPO and M&A activity during the nine months ended September 30, 2017, and

- Fund management fees of $15.9 million compared to $14.1 million for the comparable 2016 period. The increase was due primarily to the addition of new managed funds at SVB Capital.

Consolidated Financial Condition

Our total assets, and total liabilities and stockholders' equity, were $50.8 billion at September 30, 2017 compared to $44.7 billion at December 31, 2016, an increase of $6.1 billion, or 13.6 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 $3.6 billion at September 30, 2017, an increase of $1.1 billion, or 39.7 percent, compared to $2.5 billion at December 31, 2016. The increase in period-end cash balances was primarily due to growth in our deposit balances during the nine months ended September 30, 2017.

As of September 30, 2017 and December 31, 2016, $1.6 billion and $1.1 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 $1.2 billion and $721 million, respectively.

Investment Securities

Investment securities totaled $24.3 billion at September 30, 2017, an increase of $2.6 billion, or 12.1 percent, compared to $21.7 billion at December 31, 2016. Our investment securities portfolio consists of: (i) an available-for-sale securities portfolio and a held-to-maturity securities portfolio, both of which represent primarily interest earning fixed income investment securities; and (ii) a non-marketable and other securities portfolio, which represents primarily investments managed as part of our funds management business.

Available-for-Sale Securities

Period-end available-for-sale securities were $12.6 billion at September 30, 2017 compared to $12.6 billion at December 31, 2016, a decrease of $17.1 million, or 0.1 percent. The $17.1 million decrease in period-end AFS securities balances from the fourth quarter of 2016 to the third quarter of 2017 was due primarily to $2.4 billion in portfolio paydowns and maturities offset by purchases of $2.4 billion of agency backed mortgage securities and U.S. Treasury securities.

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.

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, 2017. 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 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, 2017									
	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	$ 7,498,340	1.46%	$2,592,486	1.19%	$4,905,854	1.60%	$ —	—%	$ —	—%
U.S. agency debentures	1,676,169	1.71	314,852	1.45	1,361,317	1.77	—	—	—	—
Residential mortgage-backed securities:										
Agency-issued collateralized mortgage obligations—fixed rate	3,012,695	2.40	—	—	—	—	487,285	1.98	2,525,410	2.48
Agency-issued collateralized mortgage obligations—variable rate	395,880	0.71	—	—	—	—	—	—	395,880	0.71
Total	$12,583,084	1.69	$2,907,338	1.22	$6,267,171	1.64	$ 487,285	1.98	$2,921,290	2.24

Held-to-Maturity Securities

Period-end held-to-maturity securities were $11.1 billion at September 30, 2017 compared to $8.4 billion at December 31, 2016, an increase of $2.7 billion, or 31.2 percent. The $2.7 billion increase in period-end HTM security balances from the fourth quarter of 2016 to the third quarter of 2017 was due to new purchases of $3.9 billion primarily in agency backed mortgage securities, partially offset by $1.2 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, 2017. 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 35 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 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, 2017									
	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	$ 660,193	2.37%	$ —	—%	$ 102,581	2.73%	$ 557,612	2.30%	$ —	—%
Residential mortgage-backed securities:										
Agency-issued mortgage-backed securities	5,164,701	2.47	738	7.52	255,275	2.20	61,538	2.06	4,847,150	2.49
Agency-issued collateralized mortgage obligations—fixed rate	3,025,421	1.78	—	—	—	—	437,865	1.48	2,587,556	1.83
Agency-issued collateralized mortgage obligations—variable rate	269,495	0.74	—	—	—	—	—	—	269,495	0.74
Agency-issued commercial mortgage-backed securities	1,554,220	2.39	—	—	—	—	—	—	1,554,220	2.39
Municipal bonds and notes	380,976	2.24	7,560	4.04	71,631	3.06	159,509	3.24	142,276	0.59
Total	$11,055,006	2.21	$ 8,298	4.35	$ 429,487	2.47	$1,216,524	2.12	$9,400,697	2.21

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 duration was 2.7 years and 2.5 years at September 30, 2017 and December 31, 2016, respectively.

Non-Marketable and Other Securities

Our non-marketable and other 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. Included in our non-marketable and other 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 securities were $627.5 million at September 30, 2017 compared to $622.6 million at December 31, 2016, an increase of $4.9 million, or 0.8 percent. Non-marketable and other securities, net of noncontrolling interests were $506.1 million at September 30, 2017, compared to $500.1 million at December 31, 2016. 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, 2017 and December 31, 2016:

	September 30, 2017		December 31, 2016	
(Dollars in thousands)	Carrying value (as reported)	Amount attributable to SVBFG	Carrying value (as reported)	Amount attributable to SVBFG
Non-marketable securities (fair value accounting):				
Venture capital and private equity fund investments (1)	$ 128,768	$ 33,092	$ 141,649	$ 40,464
Other venture capital investments (2)	1,897	203	2,040	218
Other securities (fair value accounting) (3)	392	114	753	138
Non-marketable securities (equity method accounting):				
Venture capital and private equity fund investments	87,218	63,465	82,823	64,030
Debt funds	17,889	17,889	17,020	17,020
Other investments (4)	113,478	113,478	123,514	123,514
Non-marketable securities (cost method accounting):				
Venture capital and private equity fund investments	102,956	102,956	114,606	114,606
Other investments	26,835	26,835	27,700	27,700
Investments in qualified affordable housing projects, net	148,036	148,036	112,447	112,447
Total non-marketable and other securities	$ 627,469	$ 506,068	$ 622,552	$ 500,137

(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, 2017 and December 31, 2016:

	September 30, 2017		December 31, 2016	
(Dollars in thousands)	Carrying value (as reported)	Amount attributable to SVBFG	Carrying value (as reported)	Amount attributable to SVBFG
Strategic Investors Fund, LP	$ 15,624	$ 1,963	$ 18,459	$ 2,319
Capital Preferred Return Fund, LP	55,685	12,001	57,627	12,420
Growth Partners, LP	57,459	19,128	59,718	19,880
Other private equity fund (i)	—	—	5,845	5,845
Total venture capital and private equity fund investments	$ 128,768	$ 33,092	$ 141,649	$ 40,464

(i) On January 3, 2017, the other private equity fund was closed resulting in an immaterial impact on the Company's financial statements.

(2) The following table shows the amounts of other venture capital investments held by the following consolidated funds and amounts attributable to SVBFG for each fund at September 30, 2017 and December 31, 2016:

	September 30, 2017		December 31, 2016	
(Dollars in thousands)	Carrying value (as reported)	Amount attributable to SVBFG	Carrying value (as reported)	Amount attributable to SVBFG
CP I, LP	$ 1,897	$ 203	$ 2,040	$ 218
Total other venture capital investments	$ 1,897	$ 203	$ 2,040	$ 218

(3) Investments classified as other securities (fair value accounting) represent direct equity investments in public companies held by our consolidated funds.

(4) The following table shows the amounts of our other investments (equity method accounting) at September 30, 2017 and December 31, 2016:

	September 30, 2017		December 31, 2016	
(Dollars in thousands)	Carrying value (as reported)	Amount attributable to SVBFG	Carrying value (as reported)	Amount attributable to SVBFG
Other investments:				
SPD Silicon Valley Bank Co., Ltd.	$ 75,511	$ 75,511	$ 75,296	$ 75,296
Other investments	37,967	37,967	48,218	48,218
Total other investments	$ 113,478	$ 113,478	$ 123,514	$ 123,514

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, 2017, such prohibited investments had an estimated aggregate carrying value of approximately $147 million (and an aggregate fair value of approximately $249 million). (For more information about the Volcker Rule, see "Business—Supervision and Regulation" under Item 1 of Part 1 of our 2016 Form 10-K.)

Loans

Loans, net of unearned income increased by $2.3 billion to $22.2 billion at September 30, 2017, compared to $19.9 billion at December 31, 2016. Unearned income was $141 million at September 30, 2017 and $125 million at December 31, 2016. Total gross loans were $22.3 billion at September 30, 2017, an increase of $2.3 billion, compared to $20.0 billion at December 31, 2016. Period-end loans increased compared to December 31, 2016, driven primarily by loan growth in our private equity/venture capital portfolio. The breakdown of total gross loans and total loans as a percentage of total gross loans by category is as follows:

(Dollars in thousands)	September 30, 2017 Amount	September 30, 2017 Percentage	December 31, 2016 Amount	December 31, 2016 Percentage
Commercial loans:				
Software/internet	$ 5,851,323	26.2%	$ 5,668,578	28.3%
Hardware	1,122,024	5.0	1,189,114	5.9
Private equity/venture capital	9,634,928	43.1	7,747,911	38.7
Life science/healthcare	1,779,200	8.0	1,866,685	9.3
Premium wine	211,822	1.0	201,634	1.0
Other	395,091	1.8	396,458	2.0
Total commercial loans	18,994,388	85.1	17,070,380	85.2
Real estate secured loans:				
Premium wine	713,467	3.2	678,745	3.5
Consumer	2,203,877	9.9	1,925,620	9.6
Other	42,671	0.2	43,807	0.2
Total real estate secured loans	2,960,015	13.3	2,648,172	13.3
Construction loans	75,644	0.3	64,957	0.3
Consumer loans	299,782	1.3	241,153	1.2
Total gross loans	$ 22,329,829	100.0	$ 20,024,662	100.0

Loan Concentration

The following table provides a summary of 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, 2017:

	September 30, 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	$ 1,484,316	$ 859,890	$ 1,485,139	$ 1,144,494	$ 877,484	$ 5,851,323
Hardware	240,941	185,029	215,278	272,862	207,914	1,122,024
Private equity/venture capital	656,327	766,075	1,563,788	971,708	5,677,030	9,634,928
Life science/healthcare	330,412	456,618	500,453	325,108	166,609	1,779,200
Premium wine	73,551	42,149	39,630	48,492	8,000	211,822
Other	150,103	8,000	50,885	69,521	116,582	395,091
Commercial loans	2,935,650	2,317,761	3,855,173	2,832,185	7,053,619	18,994,388
Real estate secured loans:						
Premium wine	165,085	191,436	222,088	95,440	39,418	713,467
Consumer	1,886,402	234,167	83,308	—	—	2,203,877
Other	7,826	—	14,312	20,533	—	42,671
Real estate secured loans	2,059,313	425,603	319,708	115,973	39,418	2,960,015
Construction loans	6,587	46,164	—	22,893	—	75,644
Consumer loans	131,676	49,404	32,097	51,755	34,850	299,782
Total gross loans	$ 5,133,226	$ 2,838,932	$ 4,206,978	$ 3,022,806	$ 7,127,887	$ 22,329,829

At September 30, 2017, gross loans equal to or greater than $20 million to any single client (individually or in the aggregate) totaled $10.2 billion, or 45.5 percent of our portfolio. These loans represented 257 clients, and of these loans, $71.6 million were on nonaccrual status as of both September 30, 2017 and December 31, 2016.

The following table provides a summary of 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, 2016:

	December 31, 2016					
(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	$ 1,317,707	$ 779,986	$ 1,657,760	$ 1,021,486	$ 891,639	$ 5,668,578
Hardware	252,339	160,534	223,781	244,988	307,472	1,189,114
Private equity/venture capital	635,838	668,998	1,182,427	888,916	4,371,732	7,747,911
Life science/healthcare	328,942	372,171	457,833	420,580	287,159	1,866,685
Premium wine	76,400	25,209	76,609	15,902	7,514	201,634
Other	124,650	40,950	61,228	26,320	143,310	396,458
Commercial loans	2,735,876	2,047,848	3,659,638	2,618,192	6,008,826	17,070,380
Real estate secured loans:						
Premium wine	151,759	172,975	229,750	101,387	22,874	678,745
Consumer loans	1,664,432	196,345	64,843	—	—	1,925,620
Other	8,014	—	14,660	21,133	—	43,807
Real estate secured loans	1,824,205	369,320	309,253	122,520	22,874	2,648,172
Construction loans	23,976	6,685	14,016	20,280	—	64,957
Consumer loans	99,119	29,092	9,473	29,089	74,380	241,153
Total gross loans	$ 4,683,176	$ 2,452,945	$ 3,992,380	$ 2,790,081	$ 6,106,080	$ 20,024,662

At December 31, 2016, gross loans equal to or greater than $20 million to any single client (individually or in the aggregate) totaled $8.9 billion, or 44.4 percent of our portfolio. These loans represented 233 clients, and of these loans, $79.7 million were on nonaccrual status as of December 31, 2016.

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, 2017 and December 31, 2016. 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 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 10 percent of total gross loans at September 30, 2017 compared to 13 percent at December 31, 2016. 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, both represented three percent of total gross loans as of September 30, 2017 and five percent and two percent of total gross loans at December 31, 2016, respectively. 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, represent our largest source of repayment within our technology and life science/healthcare loan portfolios at approximately 19 percent of total gross loans at September 30, 2017, compared to 22 percent of total gross loans at December 31, 2016. 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 10 percent of total gross loans at September 30, 2017, compared to 11 percent of total gross loans at December 31, 2016. 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, 2017, our lending to private equity/venture capital firms and funds represented 43 percent of total gross loans, compared to 39 percent of total gross loans at December 31, 2016. 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, 2017 and December 31, 2016. Many of these clients have mortgages, which represented 85 percent of this portfolio at September 30, 2017; 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 31 percent and 11 percent of our outstanding total gross loan balances at both September 30, 2017 and December 31, 2016 were to borrowers based in California and New York. Other than California and New York, there are no states with gross loan balances greater than 10 percent. In October 2017, wildfires impacted regions of Northern California where some of our premium wine clients are located. As of September 30, 2017, our total loans outstanding for our wine portfolio was $925 million (4% of total loan portfolio) with loans outstanding to clients in the impacted regions of approximately $700 million. We do not currently believe there will be a material effect on the credit quality of our wine portfolio in the near term; however, we will continue to monitor this segment of our portfolio closely.

See generally “Risk Factors–Credit Risks” set forth under Item 1A, Part I in our 2016 Form 10-K.

Credit Quality Indicators

As of September 30, 2017 and December 31, 2016, our total criticized loans and impaired loans represented four percent and six percent of our total gross loans, respectively. Criticized and impaired loans to early-stage clients represented 17 percent of our total criticized and impaired loan balances at both September 30, 2017 and December 31, 2016. Loans to early-stage clients represent a relatively small percentage of our overall portfolio at six percent of total gross loans at September 30, 2017. 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, 2017	December 31, 2016
Gross nonaccrual, past due, and restructured loans:		
Nonaccrual loans	$ 124,672	$ 118,979
Loans past due 90 days or more still accruing interest	764	33
Total nonperforming loans	125,436	119,012
OREO and other foreclosed assets	—	—
Total nonperforming assets	$ 125,436	$ 119,012
Performing TDRs	$ 22,946	$ 33,732
Nonperforming loans as a percentage of total gross loans	0.56%	0.59%
Nonperforming assets as a percentage of total assets	0.25	0.27
Allowance for loan losses	$ 249,010	$ 225,366
As a percentage of total gross loans	1.12%	1.13%
As a percentage of total gross nonperforming loans	198.52	189.36
Allowance for loan losses for nonaccrual loans	$ 43,824	$ 37,277
As a percentage of total gross loans	0.20%	0.19%
As a percentage of total gross nonperforming loans	34.94	31.32
Allowance for loan losses for total gross performing loans	$ 205,186	$ 188,089
As a percentage of total gross loans	0.92%	0.94%
As a percentage of total gross performing loans	0.92	0.94
Total gross loans	$ 22,329,829	$ 20,024,662
Total gross performing loans	22,204,393	19,905,650
Allowance for unfunded credit commitments (1)	48,172	45,265
As a percentage of total unfunded credit commitments	0.29%	0.27%
Total unfunded credit commitments (2)	$ 16,341,930	$ 16,743,196

(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 one basis point to 1.12 percent at September 30, 2017, compared to 1.13 percent at December 31, 2016. The decrease of one basis point was reflective primarily of the decrease in our allowance for performing loans as a percentage of total gross loans which decreased by two basis points to 0.92 percent, partially offset by an increase of one basis point in the allowance for nonaccrual loans as a percentage of total gross loans at September 30, 2017.

Our allowance for loan losses for nonaccrual loans was $43.8 million at September 30, 2017, compared to $37.3 million at December 31, 2016. The $6.5 million increase in the allowance for nonaccrual loans included $48.0 million of new nonaccrual loan reserves, partially offset by $41.4 million of charge-offs and reserve releases. New nonaccrual loan reserves of $48.0 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, 2017 and 2016:

(Dollars in thousands)	Three months ended September 30, 2017	Three months ended September 30, 2016	Nine months ended September 30, 2017	Nine months ended September 30, 2016
Balance, beginning of period	$ 120,172	$ 124,319	$ 118,979	$ 123,392
Additions	29,650	15,940	85,990	73,680
Paydowns	(14,183)	(14,941)	(43,995)	(58,376)
Charge-offs	(10,967)	(19,102)	(36,299)	(31,348)
Other reductions	—	—	(3)	(1,132)
Balance, end of period	$ 124,672	$ 106,216	$ 124,672	$ 106,216

Our nonaccrual loans as of September 30, 2017 included $98.0 million from seven clients (software/internet clients represent $61.3 million, two life science/healthcare clients represent $25.0 million and one hardware client represents $11.7 million). Two of these loans are sponsored buyout loans that were added to our nonaccrual portfolio in 2015, another is a Corporate Finance client that was added during 2016 and four are new nonaccrual loans added during 2017 spread across our Accelerator and Growth practices. The total credit exposure for these seven largest nonaccrual loans is $99.0 million, for which we have specifically reserved $30.4 million.

Average nonaccrual loans for the three and nine months ended September 30, 2017 were $119.5 million and $124.6 million, respectively, compared to $111.8 million and $113.1 million for the comparable 2016 periods. The $7.7 million increase in average nonaccrual loans for the three months ended September 30, 2017 compared to September 30, 2016 was primarily from our software/internet and hardware loan portfolios, partially offset by a decrease in our life sciences loan portfolio. If the nonaccrual loans had not been impaired, $1.8 million and $5.6 million in interest income would have been recorded for the three and nine months ended September 30, 2017, respectively, compared to $1.1 million and $3.8 million for the comparable 2016 periods.

Accrued Interest Receivable and Other Assets

A summary of accrued interest receivable and other assets at September 30, 2017 and December 31, 2016 is as follows:

(Dollars in thousands)	September 30, 2017	December 31, 2016	% Change
Derivative assets, gross (1)	$ 248,556	$ 210,070	18.3%
Foreign exchange spot contract assets, gross	147,304	53,058	177.6
Accrued interest receivable	129,451	111,222	16.4
FHLB and Federal Reserve Bank stock	58,012	57,592	0.7
Accounts receivable	78,242	62,569	25.0
Net deferred tax assets	75,043	71,840	4.5
Other assets	113,153	106,337	6.4
Total accrued interest receivable and other assets	$ 849,761	$ 672,688	26.3

(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 $94.2 million was due primarily to an overall increase in activity at period-end as compared to December 31, 2016.

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, 2017 and December 31, 2016:

(Dollars in thousands)	September 30, 2017	December 31, 2016	% Change
Assets:			
Equity warrant assets	$ 141,785	$ 131,123	8.1 %
Foreign exchange forward and option contracts	94,947	68,027	39.6
Interest rate swaps	—	810	(100.0)
Client interest rate derivatives	11,824	10,110	17.0
Total derivative assets	$ 248,556	$ 210,070	18.3
Liabilities:			
Foreign exchange forward and option contracts	$ (88,961)	$ (54,668)	62.7
Client interest rate derivatives	(11,955)	(9,770)	22.4
Total derivative liabilities	$ (100,916)	$ (64,438)	56.6

Equity Warrant Assets

In connection with negotiating credit facilities and certain other services, we often obtain rights to acquire stock in the form of equity warrant assets in primarily private, venture-backed companies in the technology and life science/healthcare industries. At September 30, 2017, we held warrants in 1,842 companies, compared to 1,739 companies at December 31, 2016. Warrants in 16 companies each had 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. 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, 2017 and 2016:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2017	2016	2017	2016
Balance, beginning of period	$ 131,750	$ 129,800	$ 131,123	$ 137,105
New equity warrant assets	3,622	5,251	11,114	9,857
Non-cash changes in fair value, net	18,230	16,788	23,564	21,989
Exercised equity warrant assets	(11,060)	(5,338)	(20,402)	(21,066)
Terminated equity warrant assets	(757)	(1,161)	(3,614)	(2,545)
Balance, end of period	$ 141,785	$ 145,340	$ 141,785	$ 145,340

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 at September 30, 2017 was $1.1 million and our net exposure at December 31, 2016 was $0.8 million. 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 was zero at September 30, 2017 and our net exposure at December 31, 2016 was $0.3 million. 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 $44.8 billion at September 30, 2017, an increase of $5.8 billion, or 15.0 percent, compared to $39.0 billion at December 31, 2016. The increase in deposits was driven primarily by funds coming from both new and existing clients in our Technology Early-Stage, Private Equity Services, and our Life Sciences portfolios during the nine months ended September 30, 2017 due to healthy venture capital funding and robust secondary public offering market activities.

At September 30, 2017, the aggregate balance of time deposit accounts individually equal to or greater than $100,000 totaled $38.6 million, compared to $48.3 million at December 31, 2016. At September 30, 2017, $38.6 million 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 13 percent and 12 percent of our total deposits at September 30, 2017 and December 31, 2016, respectively, were from our clients in Asia.

Short-Term Borrowings

We had $4.8 million in short-term borrowings at September 30, 2017, compared to $512.7 million at December 31, 2016. The decrease was due to the repayment, on January 6, 2017, of our short-term FHLB advances utilized and outstanding at December 31, 2016.

Long-Term Debt

Our long-term debt was $749.6 million at September 30, 2017 and $795.7 million at December 31, 2016.

As of September 30, 2017, long-term debt included our 3.50% Senior Notes, 5.375% Senior Notes, and 7.0% Junior Subordinated Debentures. 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.

Our 6.05% Subordinated Notes, issued by the Bank, were repaid on June 1, 2017. The interest rate swap agreement relating to this issuance was terminated upon repayment of the notes.

Other Liabilities

A summary of other liabilities at September 30, 2017 and December 31, 2016 is as follows:

(Dollars in thousands)	September 30, 2017	December 31, 2016	% Change
Foreign exchange spot contract liabilities, gross	$ 249,175	$ 68,018	NM
Accrued compensation	124,111	135,842	(8.6)
Allowance for unfunded credit commitments	48,172	45,265	6.4
Derivative liabilities, gross (1)	100,916	64,438	56.6
Other	468,124	304,820	53.6
Total other liabilities	$ 990,498	$ 618,383	60.2

NM—Not meaningful
(1) See "Derivatives" section above.

Foreign Exchange Spot Contract Liabilities

Foreign exchange spot contract liabilities represent unsettled client trades at the end of the period. The increase of $181.2 million was due primarily to increased client trade activity at period-end as compared to December 31, 2016.

Other

Other includes various accrued liability amounts for other operational transactions. The increase of $163.3 million was reflective primarily of a $145.3 million increase in unsettled investment securities purchases at September 30, 2017 as compared to December 31, 2016.

Noncontrolling Interests

Noncontrolling interests totaled $137.5 million and $134.5 million at September 30, 2017 and December 31, 2016, respectively. The $3.0 million increase was due primarily to income attributable to noncontrolling interests of $21.2 million, partially offset by net distributions of $18.2 million to limited partners from various managed funds of funds for the nine months ended September 30, 2017.

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, 2017 and December 31, 2016:

	September 30, 2017		December 31, 2016	
(Dollars in thousands)	Total Balance	Level 3	Total Balance	Level 3
Assets carried at fair value	$ 12,982,950	$ 140,972	$ 12,974,923	$ 130,853
As a percentage of total assets	25.6%	0.3%	29.0%	0.3%
Liabilities carried at fair value	$ 100,916	$ —	$ 64,438	$ —
As a percentage of total liabilities	0.2%	—%	0.2%	—%
As a percentage of assets carried at fair value		1.1%		1.0%

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 14—"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 2016 Form 10-K.

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, primarily due to realized and unrealized net gains on equity warrant assets due primarily to M&A and IPO activity. During the three and nine months ended September 30, 2016, the Level 3 assets that are measured at fair value on a recurring basis experienced net realized and unrealized gains of $21.1 million and $33.1 million, primarily due to 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 $4.1 billion at September 30, 2017, an increase of $417.3 million, or 11.5 percent, compared to $3.6 billion at December 31, 2016. This increase was due primarily to net income of $373.3 million for the nine months ended September 30, 2017 and an increase in additional paid-in capital of $51.8 million attributable primarily to amortization of share-based compensation expense and common stock issued under employee benefit plans.

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, 2017 and December 31, 2016. 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, 2017	December 31, 2016	"Well Capitalized"	"Adequately Capitalized"
SVB Financial:				
CET 1 risk-based capital ratio	12.96%	12.80%	6.5%	4.5%
Tier 1 risk-based capital ratio	13.32	13.26	8.0	6.0
Total risk-based capital ratio	14.29	14.21	10.0	8.0
Tier 1 leverage ratio	8.34	8.34	N/A	4.0
Tangible common equity to tangible assets ratio (1)	8.00	8.15	N/A	N/A
Tangible common equity to risk-weighted assets ratio (1)	13.01	12.89	N/A	N/A
Bank:				
CET 1 risk-based capital ratio	12.41%	12.65%	6.5%	4.5%
Tier 1 risk-based capital ratio	12.41	12.65	8.0	6.0
Total risk-based capital ratio	13.40	13.66	10.0	8.0
Tier 1 leverage ratio	7.59	7.67	5.0	4.0
Tangible common equity to tangible assets ratio (1)	7.47	7.77	N/A	N/A
Tangible common equity to risk-weighted assets ratio (1)	12.44	12.75	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.

Capital ratios (CET 1, tier 1, total risk-based capital and tier 1 leverage) for SVB Financial increased as of September 30, 2017, compared to the same ratios as of December 31, 2016. The changes were driven by an increase in capital during the nine months ended September 30, 2017, primarily from net income. An increase in additional paid-in capital from share-based compensation expense during the nine months ended September 30, 2017 also resulted in a benefit to the capital ratios. The

increases in capital were partially offset by an increase in risk-weighted assets due to period-end loan growth and higher investment and cash balances driven by increases in deposits.

Capital ratios (CET 1, tier 1, total risk-based capital and tier 1 leverage) for the Bank decreased as of September 30, 2017, compared to the same ratios as of December 31, 2016. The decrease in the Bank's capital ratios reflected $60.0 million of cash dividends paid by the Bank to our bank holding company, SVB Financial, during the nine months ended September 30, 2017. 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, 2017 and December 31, 2016:

	SVB Financial		Bank	
Non-GAAP tangible common equity and tangible assets (Dollars in thousands, except ratios)	**September 30, 2017**	**December 31, 2016**	**September 30, 2017**	**December 31, 2016**
GAAP SVBFG stockholders' equity	$ 4,059,813	$ 3,642,554	$ 3,728,890	$ 3,423,427
Tangible common equity	$ 4,059,813	$ 3,642,554	$ 3,728,890	$ 3,423,427
GAAP total assets	$ 50,754,287	$ 44,683,660	$ 49,937,343	$ 44,059,340
Tangible assets	$ 50,754,287	$ 44,683,660	$ 49,937,343	$ 44,059,340
Risk-weighted assets	$ 31,208,081	$ 28,248,750	$ 29,970,913	$ 26,856,850
Tangible common equity to tangible assets	8.00%	8.15%	7.47%	7.77%
Tangible common equity to risk-weighted assets	13.01	12.89	12.44	12.75

The tangible common equity to tangible assets ratio decreased for SVB Financial and the Bank due to the proportionally higher increase in our assets compared to the increases in common equity during the nine months ended September 30, 2017. Increased capital was reflective primarily of net income for the nine months ended September 30, 2017. Total assets increased primarily as a result of loan growth and higher investment and cash balances driven by increases in deposits. The tangible common equity to risk-weighted assets ratio increased for SVB Financial and decreased for the Bank. The increase for SVB Financial was a result of the proportionally higher increase in net income compared to the changes in risk-weighted assets during the nine months ended September 30, 2017. The growth in period-end risk-weighted assets was primarily due to period-end loan growth and higher investment and cash balances driven by increases in deposits. The decrease for the Bank was a result of $60.0 million in cash dividends paid by the Bank to our bank holding company, SVB Financial, during the nine months ended September 30, 2017. See "SVBFG Stockholders' Equity" above for further details on changes to the individual components of our equity balance.

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 12—"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 12—"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, 2017, our period-end total deposit balances were $44.8 billion, compared to $39.0 billion at December 31, 2016.

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 high-quality fixed income securities as collateral) and an unsecured basis. These include repurchase agreements and uncommitted federal funds lines with various financial institutions. We also pledge securities to the FHLB of San Francisco and the discount window at the Federal Reserve Bank. The fair value of collateral pledged to the FHLB of San Francisco (comprised primarily of U.S. Treasury securities) at September 30, 2017 totaled $1.9 billion, all of which was unused and available to support additional borrowings. The fair value of collateral pledged at the discount window of the Federal Reserve Bank at September 30, 2017 totaled $0.7 billion, all of which was unused and available to support additional borrowings.

On a stand-alone basis, SVB Financial's primary liquidity channels include cash flow from investments and interest in financial assets (including equity warrants) held by SVB Financial or its operating subsidiaries other than the Bank; to the extent declared, dividends from the Bank; and to the extent needed, capital market transactions offering debt and equity instruments in the public and private markets. Consistent with recent prior quarters, the Bank has paid a quarterly dividend to SVB Financial. For the three and nine months ended September 30, 2017, the dividend amount paid was $20 million and $60 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 2016 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, 2017 and 2016. For further details, see our "Interim Consolidated Statements of Cash Flows (Unaudited)" under Part I, Item 1 of this report.

(Dollars in thousands)	Nine months ended September 30, 2017	2016
Average cash and cash equivalents	$ 3,596,669	$ 2,437,763
Percentage of total average assets	7.6%	5.6%
Net cash provided by operating activities	$ 468,032	$ 273,004
Net cash (used for) provided by investing activities	(4,734,383)	2,472,444
Net cash provided by (used for) financing activities	5,276,172	(1,727,386)
Net increase in cash and cash equivalents	$ 1,009,821	$ 1,018,062

Average cash and cash equivalents increased by $1.2 billion, or 47.5 percent, to $3.6 billion for the nine months ended September 30, 2017, compared to $2.4 billion for the comparable 2016 period.

Cash provided by operating activities was $468.0 million for the nine months ended September 30, 2017, reflective primarily of net income before noncontrolling interests of $394.5 million.

Cash used for investing activities of $4.7 billion for the nine months ended September 30, 2017 was driven by $6.2 billion in purchases of fixed income investment securities, partially offset by $3.7 billion of proceeds from maturities and principal paydowns from our fixed income investment securities portfolio. Additionally, $2.3 billion in cash outflows were used to fund loan growth during the nine months ended September 30, 2017.

Cash provided by financing activities was $5.3 billion for the nine months ended September 30, 2017, reflective primarily of a net increase of $5.8 billion in deposits, partially offset by $507.8 million of payments on our overnight short-term borrowings and $46.2 million for the repayment of our 6.05% Subordinated Notes upon maturity.

Cash and cash equivalents were $3.6 billion and $2.5 billion, respectively, at September 30, 2017 and September 30, 2016.

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, adjusted for any off-balance sheet items, if any. 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. Meaning, the size and composition of earning assets and funding liabilities are held constant over the simulation horizon. Simulated cash flows during the scenario horizon are assumed to be replaced as they occur, which restores the balance sheet to its original size and composition. More specifically, with respect to earning assets, loan maturities, principal maturities, paydowns and calls on investments are added back as replacement balances as they occur during the simulation horizon. 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 and SVB 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.

For the three months ended September 30, 2017, our results include two key modeling assumption changes relating to our non-maturity deposits and prepayments on outstanding commercial loans. The impact was seen primarily in our EVE sensitivity profile and, to a lesser degree, on our NII sensitivity.

For non-maturity deposits, the assumed deposit decay rate is greater in current modeled results compared to assumptions used in prior periods. The impact of the change in assumptions in all rate simulations resulted in greater market value sensitivity of deposits and greater EVE sensitivity overall. Prepayment rate assumptions on commercial loans are also greater in current modeled results compared to assumptions used in prior periods. The impact of the change in assumptions resulted in lower market value sensitivity on commercial loans but the impact on overall EVE sensitivity was minimal in comparison to the overall changes in EVE sensitivity.

The following table presents our EVE and NII sensitivity exposure related to an instantaneous and sustained parallel shift in market interest rates of 100 and 200 basis points at September 30, 2017 and at December 31, 2016 (as revised based on the assumptions noted above):

	Estimated	Estimated Increase/(Decrease) in EVE		Estimated	Estimated Increase/(Decrease) in NII	
Change in interest rates (basis points) (Dollars in thousands)	EVE	Amount	Percent	NII	Amount	Percent
September 30, 2017:						
200	$ 8,223,716	$ 999,900	13.8 %	$ 1,889,933	$ 426,799	29.2 %
100	7,767,694	543,878	7.5	1,677,489	214,355	14.7
—	7,223,816	—	—	1,463,134	—	—
-100	6,448,044	(775,772)	(10.7)	1,248,346	(214,788)	(14.7)
-200	5,444,025	(1,779,791)	(24.6)	1,190,846	(272,288)	(18.6)
December 31, 2016 (As revised):						
200	$ 7,601,404	$ 1,129,823	17.5 %	$ 1,543,247	$ 365,734	31.1 %
100	7,073,407	601,826	9.3	1,360,356	182,843	15.5
—	6,471,581	—	—	1,177,513	—	—
-100	5,765,799	(705,782)	(10.9)	1,075,353	(102,160)	(8.7)
-200	4,860,540	(1,611,041)	(24.9)	1,039,903	(137,610)	(11.7)

Economic Value of Equity

The estimated EVE in the preceding table is based on a combination of valuation methodologies including a discounted cash flow analysis and a multi-path lattice based valuation. Both methodologies use publicly available market interest rates to

determine discounting factors on projected cash flows. The model simulations and calculations are highly assumption-dependent and will change regularly as the composition of earning assets and funding liabilities change (including the impact of changes in the value of interest rate derivatives, if any), as interest rate environments evolve, and as we change our assumptions in response to relevant market conditions, competition or business circumstances. These calculations do not reflect forecast changes in our balance sheet or changes we may make to reduce our EVE exposure as a part of our overall interest rate risk management strategy.

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

Our base case EVE as of September 30, 2017 increased from December 31, 2016 by $0.8 billion primarily due to balance sheet mix changes as well as the assumption model changes discussed above. As of September 30, 2017, period-end loans, net of unearned income increased $2.3 billion as compared to December 31, 2016. Comparing the same periods, period-end total fixed income investment securities increased $2.6 billion and period-end cash and cash equivalents increased by $1.0 billion driven primarily by an increase in deposits balances of $5.8 billion.

Higher short-term LIBOR rates as of September 30, 2017, with marginally lower long-term rates, contributed to a flattening of the yield curve compared to December 31, 2016. Changes in nominal rates and a change in the shape of the yield curve resulted in the market value of deposits decreasing proportionally higher than assets. However, as noted above, non-maturity deposit modeling assumption changes were the primary driver of a higher base case EVE as of September 30, 2017. Compared to December 31, 2016, proportional growth in loans, investments, and deposits did not significantly impact EVE sensitivity measures in the +100 bps and +200 bps rate shock scenarios as of September 30, 2017. The change in EVE sensitivity can be attributed primarily to the non-maturity assumptions changes as described above.

12-Month Net Interest Income Simulation

Our simulated 12-month base case NII at September 30, 2017 increased from December 31, 2016 by $286 million, primarily due to the impact of the loan prepayment assumptions changes described above, higher rates on LIBOR and Prime rate based loans, higher period-end loan growth as noted above, and a higher level of earning assets at September 30, 2017.

NII sensitivity as of September 30, 2017 in the +100 and -100 bps rate shock scenarios is nearly symmetrical at +14.7% and -14.7%, respectively. This profile is as expected, given the composition of floating rate loans in our balance sheet. NII sensitivity in the +200 and -200 bps interest rate shock scenarios still shows asymmetry, with less sensitivity in the -200 bps rate shock scenario due to floors on loans.

The simulation model used in the above analysis incorporates embedded floors on loans 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 for each interest rate scenario 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

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.

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PART II–OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Please refer to Note 15—"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 2016 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 8, 2017

/s/ DANIEL BECK

Daniel Beck
Chief Financial Officer
(Principal Financial Officer)

SVB Financial Group

Date: November 8, 2017

/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 8, 2017

/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 8, 2017

/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, 2017, (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 8, 2017

/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, 2017, (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 8, 2017

/s/ DANIEL BECK

Daniel Beck

Chief Financial Officer

(Principal Financial Officer)