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

FORM 10-Q

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended September 30, 2020
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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

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

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

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

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

Title of Each Class	**Trading Symbol**	**Name of Exchange on Which Registered**
Common Stock, par value $0.001 per share	SIVB	The Nasdaq Stock Market LLC
Depositary shares, each representing a 1/40th ownership interest in a share of 5.250% Fixed-Rate Non-Cumulative Perpetual Preferred Stock, Series A	SIVBP	The Nasdaq Stock Market LLC

At October 31, 2020, 51,796,902 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

ASC— Accounting Standards Codification

ASU— Accounting Standards Update

CECL — Current Expected Credit Losses

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

PPP — Paycheck Protection Program

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, 2020	December 31, 2019
Assets:		
Cash and cash equivalents	$ 15,687,776	$ 6,781,783
Available-for-sale securities, at fair value (cost of $25,237,540 and $13,894,348, respectively)	25,904,324	14,014,919
Held-to-maturity securities, at amortized cost and net of allowance for credit losses of $291 and $0 (fair value of $13,612,463 and $14,115,272, respectively) (1)	12,982,223	13,842,946
Non-marketable and other equity securities	1,547,363	1,213,829
Total investment securities	40,433,910	29,071,694
Loans, amortized cost	38,413,891	33,164,636
Allowance for credit losses: loans	(512,958)	(304,924)
Net loans	37,900,933	32,859,712
Premises and equipment, net of accumulated depreciation and amortization	173,477	161,876
Goodwill	137,823	137,823
Other intangible assets, net	45,380	49,417
Lease right-of-use assets	220,493	197,365
Accrued interest receivable and other assets	2,316,979	1,745,233
Total assets	$ 96,916,771	$ 71,004,903
Liabilities and total equity:		
Liabilities:		
Noninterest-bearing demand deposits	$ 57,508,229	$ 40,841,570
Interest-bearing deposits	27,264,791	20,916,237
Total deposits	84,773,020	61,757,807
Short-term borrowings	19,068	17,430
Lease liabilities	246,652	218,847
Other liabilities	3,067,221	2,041,752
Long-term debt	843,430	347,987
Total liabilities	88,949,391	64,383,823
Commitments and contingencies (Note 15 and Note 18)		
SVBFG stockholders' equity:		
Preferred stock, $0.001 par value, 20,000,000 shares authorized; 350,000 shares issued and outstanding	340,138	340,138
Common stock, $0.001 par value, 150,000,000 shares authorized; 51,787,972 shares and 51,655,607 shares issued and outstanding, respectively	52	52
Additional paid-in capital	1,548,918	1,470,071
Retained earnings	5,283,433	4,575,601
Accumulated other comprehensive income	620,394	84,445
Total SVBFG stockholders' equity	7,792,935	6,470,307
Noncontrolling interests	174,445	150,773
Total equity	7,967,380	6,621,080
Total liabilities and total equity	$ 96,916,771	$ 71,004,903

(1) Prior to our adoption of Accounting Standard Update (ASU 2016-13, Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments) on January 1, 2020, the allowance for credit losses (ACL) related to held-to-maturity (HTM) securities was not applicable and is therefore presented as $0 at December 31, 2019. See "Adoption of New Accounting Standards" in Note 1 — "Basis of Presentation" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report for additional details.

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

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

(Dollars in thousands, except per share amounts)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Interest income:				
Loans	$ 368,981	$ 394,246	$ 1,116,660	$ 1,202,467
Investment securities:				
Taxable	156,517	149,656	452,449	410,768
Non-taxable	14,912	11,123	42,200	32,991
Federal funds sold, securities purchased under agreements to resell and other short-term investment securities	2,717	28,867	22,743	74,447
Total interest income	543,127	583,892	1,634,052	1,720,673
Interest expense:				
Deposits	8,218	55,106	51,310	130,163
Borrowings	7,169	8,142	17,938	27,577
Total interest expense	15,387	63,248	69,248	157,740
Net interest income	527,740	520,644	1,564,804	1,562,933
(Reduction) provision for credit losses	(52,018)	36,536	257,943	89,033
Net interest income after provision for credit losses	579,758	484,108	1,306,861	1,473,900
Noninterest income:				
Gains on investment securities, net	189,837	29,849	270,760	106,575
Gains on equity warrant assets, net	53,766	37,561	93,667	107,213
Client investment fees	31,914	46,679	107,192	136,905
Foreign exchange fees	43,881	40,309	127,642	116,863
Credit card fees	22,756	30,158	72,348	86,431
Deposit service charges	22,015	22,482	67,115	65,496
Lending related fees	13,562	11,707	37,851	36,857
Letters of credit and standby letters of credit fees	12,192	10,842	35,155	31,205
Investment banking revenue	92,181	38,516	280,551	137,005
Commissions	16,257	12,275	49,197	40,812
Other	49,222	13,631	76,887	42,773
Total noninterest income	547,583	294,009	1,218,365	908,135
Noninterest expense:				
Compensation and benefits	327,369	233,840	902,752	715,073
Professional services	67,215	55,202	169,748	133,018
Premises and equipment	30,772	26,775	85,420	72,386
Net occupancy	18,965	16,981	56,156	49,716
Business development and travel	2,214	19,539	19,277	51,915
FDIC and state assessments	6,933	4,881	18,986	13,343
Other	37,553	34,106	117,903	105,059
Total noninterest expense	491,021	391,324	1,370,242	1,140,510
Income before income tax expense	636,320	386,793	1,154,984	1,241,525
Income tax expense	162,265	105,075	299,491	331,624
Net income before noncontrolling interests	474,055	281,718	855,493	909,901
Net income attributable to noncontrolling interests	(27,748)	(14,437)	(40,035)	(35,901)
Preferred stock dividends	(4,594)	—	(12,557)	—
Net income available to common stockholders	$ 441,713	$ 267,281	$ 802,901	$ 874,000
Earnings per common share—basic	$ 8.53	$ 5.19	$ 15.55	$ 16.80
Earnings per common share—diluted	8.47	5.15	15.46	16.67

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, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Net income before noncontrolling interests	$ 474,055	$ 281,718	$ 855,493	$ 909,901
Other comprehensive income, net of tax:				
Change in foreign currency cumulative translation gains and losses:				
Foreign currency translation gains (losses)	10,279	(6,213)	1,323	(6,307)
Related tax (expense) benefit	(2,804)	1,731	(452)	1,757
Change in unrealized gains and losses on available-for-sale securities:				
Unrealized holding gains	13,860	70,185	604,479	236,203
Related tax expense	(3,842)	(19,547)	(167,542)	(65,786)
Reclassification adjustment for losses (gains) included in net income	—	—	(61,165)	3,905
Related tax (benefit) expense	—	—	16,953	(1,087)
Amortization of unrealized holding gains on securities transferred from available-for-sale to held-to-maturity	(368)	(374)	(1,058)	(1,767)
Related tax benefit	102	104	293	492
Change in unrealized gains and losses on cash flow hedges:				
Unrealized gains	—	9,810	231,920	28,466
Related tax expense	—	(2,733)	(64,281)	(7,930)
Reclassification adjustment for (gains) losses included in net income	(16,004)	2,713	(33,924)	3,224
Related tax expense (benefit)	4,436	(755)	9,403	(897)
Other comprehensive income, net of tax	5,659	54,921	535,949	190,273
Comprehensive income	479,714	336,639	1,391,442	1,100,174
Comprehensive income attributable to noncontrolling interests	(27,748)	(14,437)	(40,035)	(35,901)
Comprehensive income attributable to SVBFG	$ 451,966	$ 322,202	$ 1,351,407	$ 1,064,273

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

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

(Dollars in thousands)	Preferred Stock	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total SVBFG Stockholders' Equity	Noncontrolling Interests	Total Equity
Balance at December 31, 2018	**$ —**	**52,586,498**	**$ 53**	**$ 1,378,438**	**$ 3,791,838**	**$ (54,120)**	**$ 5,116,209**	**$ 148,634**	**$ 5,264,843**
Cumulative adjustment for the adoption of premium amortization on purchased callable debt securities, net of tax (ASU 2017-08)	—	—	—	—	(583)	—	(583)	—	(583)
Acquisition of SVB Leerink	—	—	—	—	—	—	—	5,256	5,256
Common stock issued under employee benefit plans, net of restricted stock cancellations	—	487,101	—	9,236	—	—	9,236	—	9,236
Common stock issued under ESOP	—	14,442	—	3,506	—	—	3,506	—	3,506
Net income	—	—	—	—	874,000	—	874,000	35,901	909,901
Capital calls and distributions, net	—	—	—	—	—	—	—	(32,002)	(32,002)
Net change in unrealized gains and losses on AFS securities, net of tax	—	—	—	—	—	173,235	173,235	—	173,235
Amortization of unrealized holding gains on securities transferred from AFS to HTM, net of tax	—	—	—	—	—	(1,275)	(1,275)	—	(1,275)
Foreign currency translation adjustments, net of tax	—	—	—	—	—	(4,550)	(4,550)	—	(4,550)
Net change in unrealized gains and losses on cash flow hedges, net of tax	—	—	—	—	—	22,863	22,863	—	22,863
Share-based compensation, net	—	—	—	50,550	—	—	50,550	—	50,550
Common stock repurchases	—	(1,532,210)	(1)	—	(352,510)	—	(352,511)	—	(352,511)
Balance at September 30, 2019	**$ —**	**51,555,831**	**$ 52**	**$ 1,441,730**	**$ 4,312,745**	**$ 136,153**	**$ 5,890,680**	**$ 157,789**	**$ 6,048,469**
Balance at December 31, 2019	**$ 340,138**	**51,655,607**	**$ 52**	**$ 1,470,071**	**$ 4,575,601**	**$ 84,445**	**$ 6,470,307**	**$ 150,773**	**$ 6,621,080**
Cumulative adjustment for the day one adoption of ASC 326, net of tax (1)	—	—	—	—	(35,049)	—	(35,049)	—	(35,049)
Common stock issued under employee benefit plans, net of restricted stock cancellations	—	364,494	—	15,691	—	—	15,691	—	15,691
Common stock issued under ESOP	—	12,094	—	2,447	—	—	2,447	—	2,447
Net income	—	—	—	—	815,458	—	815,458	40,035	855,493
Capital calls and distributions, net	—	—	—	—	—	—	—	(16,363)	(16,363)
Net change in unrealized gains and losses on AFS securities, net of tax	—	—	—	—	—	392,725	392,725	—	392,725
Amortization of unrealized holding gains on securities transferred from AFS to HTM, net of tax	—	—	—	—	—	(765)	(765)	—	(765)
Foreign currency translation adjustments, net of tax	—	—	—	—	—	871	871	—	871
Net change in unrealized gains and losses on cash flow hedges, net of tax	—	—	—	—	—	143,118	143,118	—	143,118
Share-based compensation, net	—	—	—	60,733	—	—	60,733	—	60,733
Common stock repurchases	—	(244,223)	—	—	(60,020)	—	(60,020)	—	(60,020)
Dividends on preferred stock	—	—	—	—	(12,557)	—	(12,557)	—	(12,557)
Other, net	—	—	—	(24)	—	—	(24)	—	(24)
Balance at September 30, 2020	**$ 340,138**	**51,787,972**	**$ 52**	**$ 1,548,918**	**$ 5,283,433**	**$ 620,394**	**$ 7,792,935**	**$ 174,445**	**$ 7,967,380**

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

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

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

(Dollars in thousands)	Nine months ended September 30, 2020	2019
Cash flows from operating activities:		
Net income before noncontrolling interests	$ 855,493	$ 909,901
Adjustments to reconcile net income to net cash provided by operating activities:		
Provision for credit losses	257,943	89,033
Changes in fair values of equity warrant assets, net of proceeds from exercises	(4,270)	12,801
Changes in fair values of derivatives, net	(87,740)	(29,472)
Gains on investment securities, net	(270,760)	(106,575)
Distributions of earnings from non-marketable and other equity securities	64,703	77,584
Depreciation and amortization	73,607	60,408
Amortization of premiums and discounts on investment securities, net	54,918	9,646
Amortization of share-based compensation	60,733	50,550
Amortization of deferred loan fees	(123,305)	(112,383)
Deferred income tax benefit	(4,124)	(1,720)
Excess tax benefit from exercise of stock options and vesting of restricted shares	(3,449)	(7,931)
Losses from the write-off of premises and equipment	—	185
Changes in other assets and liabilities:		
Accrued interest receivable and payable, net	15,565	(10,429)
Accounts receivable and payable, net	17,534	(18,278)
Income tax receivable and payable, net	(15,267)	(59,527)
Accrued compensation	(634)	(109,837)
Foreign exchange spot contracts, net	147,021	34,304
Proceeds from termination of interest rate swaps	227,500	—
Other, net	(212,177)	(78,516)
Net cash provided by operating activities	1,053,291	709,744
Cash flows from investing activities:		
Purchases of available-for-sale securities	(16,614,960)	(7,832,282)
Proceeds from sales of available-for-sale securities	2,654,212	2,189,087
Proceeds from maturities and paydowns of available-for-sale securities	2,634,123	801,605
Purchases of held-to-maturity securities	(1,756,920)	(408,479)
Proceeds from maturities and paydowns of held-to-maturity securities	2,833,290	1,516,340
Purchases of non-marketable and other equity securities	(163,817)	(100,068)
Proceeds from sales and distributions of capital of non-marketable and other equity securities	84,850	90,371
Net increase in loans	(5,193,146)	(2,685,151)
Purchases of premises and equipment	(66,003)	(33,871)
Acquisition of SVB Leerink, net of cash acquired	—	(102,328)
Net cash used for investing activities	(15,588,371)	(6,564,776)
Cash flows from financing activities:		
Net increase in deposits	23,015,213	10,213,974
Net increase (decrease) in short-term borrowings	1,638	(612,514)
Proceeds from issuance of 3.125% Senior Notes	495,024	—
(Distributions to noncontrolling interests), net of contributions from noncontrolling interests	(16,363)	(32,002)
Payment of preferred stock dividend	(12,557)	—
Common stock repurchases	(60,020)	(352,511)
Proceeds from issuance of common stock, ESPP and ESOP, net of restricted stock awards	18,138	12,742
Net cash provided by financing activities	23,441,073	9,229,689
Net increase in cash and cash equivalents	8,905,993	3,374,657
Cash and cash equivalents at beginning of period	6,781,783	3,571,539
Cash and cash equivalents at end of period	**$ 15,687,776**	**$ 6,946,196**
Supplemental disclosures:		
Cash paid during the period for:		
Interest	$ 67,012	$ 164,503
Income taxes	287,098	379,579
Noncash items during the period:		
Changes in unrealized gains and losses on available-for-sale securities, net of tax	$ 392,725	$ 173,235
Distributions of stock from investments	11,574	7,770

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

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

1. Basis of Presentation

SVB Financial Group is a diversified financial services company, as well as a bank holding company and a financial holding company. SVB Financial was incorporated in the state of Delaware in March 1999. Through our various subsidiaries and divisions, we offer a diverse set of banking and financial products and services to support our clients of all sizes and stages throughout their life cycles. In these notes to our unaudited interim 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, 2020 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, 2019 ("2019 Form 10-K").

Use of Estimates and Assumptions

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

Principles of Consolidation and Presentation

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

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

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

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

Reclassifications

Certain prior period amounts primarily related to the adoption of the Accounting Standard Update (ASU 2016-13, Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments) ("ASU 2016-13" or "CECL") as mentioned below have been reclassified to conform to current period presentations.

Summary of Significant Accounting Policies

With the exception of the updated accounting policies listed below, 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 2019 Form 10-K.

Loans

Loans are reported at amortized cost which consists of the principal amount outstanding, net of unearned loan fees. Unearned loan fees reflect unamortized deferred loan origination and commitment fees net of unamortized deferred loan origination costs. In addition to cash loan fees, we often obtain equity warrant assets that give us an option to purchase a position in a client company's stock in consideration for providing credit facilities. The grant date fair values of these equity warrant assets are deemed to be loan fees and are deferred as unearned income and recognized as an adjustment of loan yield through loan interest income. The net amount of unearned loan fees is amortized into loan interest income over the contractual terms of the underlying loans and commitments using the constant effective yield method, adjusted for actual loan prepayment experience, or the straight-line method, as applicable.

Allowance for Credit Losses: Loans

The allowance for credit losses for loans considers credit risk and is adjusted by a provision for expected credit losses ("ECL") charged to expense and reduced by the charge-off of loan amounts, net of recoveries. Our allowance for credit losses is an estimate of expected losses inherent with the Company's existing loans at the balance sheet date. Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain.

Portfolio Segments and Risk-Based Segments

The process to estimate the ECL on loans involves procedures to appropriately consider the unique characteristics of our six loan portfolio segments. Our six portfolio segments are determined by using the following risk dimensions: (i) underwriting methodology, (ii) industry niche and (iii) life stage. The six portfolio segments are further disaggregated into 11 classes of financing receivable, or risk-based segments, and represents the level at which credit risk is monitored. Credit quality is assessed and monitored by evaluating various attributes and the results of those evaluations are utilized in underwriting new loans and in our process to estimate ECL. Additionally, all of our loan and allowance for credit loss disclosures are presented at the risk-based segment level of disaggregation. For further information refer to Note 7 — “Loans and Allowance for Credit Losses: Loans and Unfunded Credit Commitments” of the “Notes to Interim Consolidated Financial Statements (unaudited)” under Part I, Item 1 of this report. The following provides additional information regarding our six portfolio segments and the additional disaggregation of our 11 risk-based segments:

Global Fund Banking

The vast majority of our Global Fund Banking (formerly Private Equity/Venture Capital) portfolio segment 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 certain private equity and venture capital 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.

Investor Dependent - Accelerator (Early-Stage) and Growth (Mid-Stage and Later-Stage)

Investor Dependent loans are comprised of two portfolio segments: (i) Accelerator, which is comprised of Early-Stage clients, and (ii) Growth, which is comprised of Mid-Stage and Later-Stage clients. Our Investor Dependent loans are made primarily to technology and life science/healthcare companies. Investor Dependent loans typically have modest or negative cash flows and no established record of profitable operations. Repayment of these loans may be dependent

upon receipt by borrowers of additional equity financing from venture capital firms or others, or in some cases, a successful sale to a third party or an IPO. Venture capital firms may provide financing selectively, at reduced amounts, or on less favorable terms, which may have an adverse effect on our borrowers' ability to repay their loans to us. When repayment is dependent upon the next round of venture investment and there is an indication that further investment is unlikely or will not occur, it is often likely that the company would need to be sold to repay the debt in full. If reasonable efforts have not yielded a likely buyer willing to repay all debt at the close of the sale or on commercially viable terms, the account will most likely be deemed to be non-performing or charged-off.

Our Accelerator, or Early-Stage, portfolio segment consists of pre-revenue, development-stage companies and companies that are in the early phases of commercialization, with revenues of up to $5 million. Our Growth portfolio segment is disaggregated into two risk-based segments for disclosure purposes; Mid-Stage and Later-Stage. Mid-Stage companies consist of growth-stage enterprises with revenues of between $5 million and $15 million or, in the case of biotechnology, pre-revenue clinical-stage companies. Later-Stage consists of companies with revenues of $15 million or more. This disaggregation of our Investor Dependent loans is based in part on the materially different historical loss rate we have experienced with each risk-based segment, with historical loss rates being the highest in the Early-Stage portfolio segment, and declining in the Mid-Stage and Later-Stage risk-based segments, as a function of the relatively higher enterprise value and asset coverage that is created as a company progresses through the various stages of development.

Cash Flow and Balance Sheet Dependent

Our Cash Flow and Balance Sheet Dependent portfolio segment is disaggregated into Cash Flow Dependent and Balance Sheet Dependent loans. Additionally, our Cash Flow Dependent loans are disaggregated into two risk-based segments for disclosure purposes: (i) Sponsor Led Buyout and (ii) Other. Our Cash Flow Dependent loans are made primarily to technology and life science/healthcare companies and 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. Sponsor Led Buyout 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 with loan structures that include meaningful financial covenants. The sponsor's equity contribution is often 50 percent or more of the acquisition price.

Balance Sheet Dependent loans are made primarily to technology and life science/healthcare companies, which include asset-based loans, and 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. The repayment of these arrangements is dependent on the financial condition, and payment ability, of third parties with whom our clients do business. As a result of the adoption of CECL and in connection with the revised approach to portfolio disaggregation discussed above, certain loans that were previously considered to be Balance Sheet Dependent have been reclassified as Investor Dependent - Later-Stage.

Private Bank

Our Private Bank clients are primarily private equity/venture capital professionals and executives in the innovation companies they support. We offer a customized suite of private banking services, including mortgages, home equity lines of credit, restricted and private stock loans, capital call lines of credit, lines of credit against liquid assets and other secured and unsecured lending products, as well as cash and wealth management services. In addition, we provide owner occupied commercial mortgages to Private Bank clients and real estate secured loans to eligible employees through our EHOP.

Other

Our Other portfolio segment consists of two risk-based segments for disclosure purposes: (i) Premium Wine and (ii) Other. Our Premium Wine clients primarily consist of premium wine producers, vineyards and wine industry or hospitality related businesses across the Western United States, primarily in California's Napa Valley, Sonoma County and Central Coast regions, as well as the Pacific Northwest. Our Other risk-based segment primarily includes our community development loans made as part of our responsibilities under the Community Reinvestment Act.

SBA Loans

The U.S. Small Business Administration’s ("SBA") loans are included across all of our six portfolio segments and are separately disclosed as a single risk-based segment. We participated in the SBA's Paycheck Protection Program ("PPP") to support small businesses across the United States. Under this program, the SBA provides a guarantee to banks making unsecured term loans of up to $10 million for qualified small businesses, as defined by the SBA. We are no longer taking

applications for this program and have begun accepting forgiveness applications from clients, whereby clients apply for loans to be forgiven (paid off) by the SBA. Loans funded under this program were primarily made to clients in the technology, life science/healthcare, premium wine and energy resource industries. While the recipients were located across the United States, more than half were made to clients that applied from the western United States.

We maintain a systematic process for the evaluation of individual loans and portfolio segments for inherent risk of estimated credit losses for loans. At the time of approval, each loan in our portfolio is assigned a credit risk rating. Credit risk ratings are assigned on a scale of 1 to 10, with 1 representing loans with a low risk of nonpayment, 9 representing loans with the highest risk of nonpayment and 10 representing loans which have been charged-off. The credit risk ratings for each loan are monitored and updated on an ongoing basis. This credit risk rating process includes, but is not limited to, consideration of such factors as payment status, the financial condition and operating performance of the borrower, borrower compliance with loan covenants, underlying collateral values and performance trends, the degree of access to additional capital, the presence of credit enhancements such as third party guarantees (where applicable), the degree to which the borrower is sensitive to external factors and the depth and experience of the borrower's management team. Our policies require a committee of senior management to review, at least quarterly, credit relationships with a credit risk rating of 5 through 9 that exceed specific dollar values.

Expected Credit Loss Measurement

The methodology for estimating the amount of ECL reported in the allowance for credit losses is the sum of two main components: (1) ECL assessed on a collective basis for pools of loans that share similar risk characteristics which includes a qualitative adjustment based on management’s assessment of the risks that may lead to a future loan loss experience different from our historical loan loss experience and (2) ECL assessed for individual loans that do not share similar risk characteristics with other loans. We do not estimate ECL on accrued interest receivable ("AIR") on loans as AIR is reversed or written off when the full collection of the AIR related to a loan becomes doubtful. AIR on loans totaled $109.3 million at September 30, 2020 and $119.1 million at December 31, 2019 and is reported in "Accrued interest receivable and other assets" in our unaudited interim consolidated balance sheets.

While the evaluation process of our allowance for credit losses on loans uses historical and other objective information, the classification of loans and the estimate of the allowance for credit losses for loans rely on the judgment and experience of our management. A committee comprised of senior management evaluates the adequacy of the allowance for credit losses for loans, which includes review of loan portfolio segmentation, quantitative models, internal and external data inputs, economic forecasts, credit risk ratings and qualitative adjustments.

Loans That Share Similar Risk Characteristics with Other Loans

We derive an estimated ECL assumption from a non-discounted cash flow approach based on our portfolio segments discussed above. This approach incorporates a calculation of three predictive metrics: (1) probability of default ("PD"), (2) loss given default ("LGD") and (3) exposure at default ("EAD"), over the estimated life of the exposure. PD and LGD assumptions are developed based on quantitative models and inherent risk of credit loss, both of which involve significant judgment. Renewals and extensions within our control are not considered in the estimated contractual term of a loan. However, we include potential extensions if management has a reasonable expectation that we will execute a TDR with the borrower. The quantitative models are based on historical credit loss experience, adjusted for probability-weighted economic scenarios. These scenarios are used to support a reasonable and supportable forecast period of three years for all portfolio segments. To the extent the remaining contractual lives of loans in the portfolio extend beyond this three-year period, we revert to historical averages using an autoregressive model of mean reversion that will continue to gradually trend towards the mean historical loss over the remaining contractual lives, adjusted for prepayments. The macroeconomic scenarios are reviewed on a quarterly basis.

We also apply a qualitative factor adjustment to the results obtained through our quantitative ECL models to consider model imprecision, emerging risk assessments, trends and other subjective factors that may not be adequately represented in the quantitative ECL models. These adjustments reflect our assessment of the extent that current conditions and reasonable and supportable forecasts differ from conditions that existed during the period over which historical information was evaluated. These adjustments are aggregated to become our qualitative allocation. Based on our qualitative assessment estimate of changing risks in the lending environment, the qualitative allocation may vary significantly from period to period and may include, but is not limited to, consideration of the following factors:

- Changes in lending policies and procedures, including changes in underwriting standards and collection, charge-off, and recovery practices not considered elsewhere in estimating credit losses;
- Changes in international, national, regional, and local economic and business conditions and developments that affect the collectability of the portfolio, including the condition of various market segments;

- Changes in the nature and volume of the portfolio and in the terms of loans;
- Changes in the experience, ability and depth of lending management and other relevant staff;
- Changes in the volume and severity of past due loans, the volume of nonaccrual loans and the volume and severity of adversely classified or graded loans;
- Changes in the quality of our loan review system;
- Changes in the value of underlying collateral for collateral-dependent loans;
- The existence and effect of any concentrations of credit, and changes in the level of such concentrations;
- The effect of other external factors such as competition and legal and regulatory requirements on the level of estimated credit losses in our existing portfolio; and
- The effect of limitations of available data, model imprecision and recent macro-economic factors that may not be reflected in the forecast information.

Loans That Do Not Share Similar Risk Characteristics

We monitor our loan pools to ensure all assets therein continue to share similar risk characteristics with other financial assets inside the pool. Changes in credit risk, borrower circumstances or the recognition of write-offs may indicate that a loan's risk profile has changed, and the asset should be removed from its current pool. For a loan that does not share risk characteristics with other loans, expected credit loss is measured based on the net realizable value, that is, the difference between the discounted value of the expected future cash flows and the amortized cost basis of the loan. When a loan is collateral-dependent and the repayment is expected to be provided substantially through the operation or sale of the collateral, the ECL is measured as the difference between the amortized cost basis of the loan and the fair value of the collateral. The fair value of the collateral will be determined by the most recent appraisal, as adjusted to reflect a reasonable marketing period for the sale of the asset(s) and an estimate of reasonable selling expenses. Collateral-dependent loans will have independent appraisals completed and accepted at least annually.

Allowance for Credit Losses: Unfunded Credit Commitments

We maintain a separate allowance for credit losses for unfunded credit commitments which is included in other liabilities and the related ECL in our provision for credit losses. We estimate the amount of expected losses by using historical trends to calculate a probability of an unfunded credit commitment being funded and derive historical lifetime expected loss factors for each portfolio segment similar to our funded loan ECL. The collectively assessed ECL for unfunded credit commitments also includes the same qualitative allocations applied for our funded loan ECL. For unfunded credit commitments related to loans that do not share similar risk characteristics with other loans, where applicable, a separate estimate of ECL will be included in our total allowance for credit losses on unfunded credit commitments. Loan commitments that are determined to be unconditionally cancellable by the Company do not require an allowance for credit losses on unfunded commitments.

Investment Securities

Available-for-Sale Securities and the Allowance for Credit Losses on Available-for-Sale Securities

Our available-for-sale securities portfolio is a fixed income investment portfolio that is managed to earn an appropriate portfolio yield over the long-term while maintaining sufficient liquidity and credit diversification and meeting our asset/liability management objectives. Unrealized gains and losses on available-for-sale securities, net of applicable taxes, are reported in accumulated other comprehensive income, which is a separate component of SVBFG's stockholders' equity, until realized.

We analyze available-for-sale securities for impairment related to credit losses each quarter. Market valuations represent the current fair value of a security at a specified point in time and incorporates the risk of timing of interest due and the return of principal over the contractual life of each security. Gains and losses on securities are realized when there is a sale of the security prior to maturity. A credit impairment is recognized through a valuation allowance against the security with an offset through earnings; the allowance is limited to the amount that fair value, calculated as the present value of expected future cash flow discounted at the security’s effective interest rate, is less than the amortized cost basis. We separate the amount of the impairment related to credit losses, if any, and the amount due to all other factors. The credit loss component is recognized in earnings and recorded as an allowance for credit losses for AFS securities.

Held-to-Maturity Securities and the Allowance for Credit Losses on Held-to-Maturity Securities

Debt securities purchased with the positive intent and ability to hold to maturity are classified as held-to-maturity securities and are recorded at amortized cost, net of any allowance for credit losses.

We measure ECL on held-to-maturity securities on a collective basis by major security type and standard credit rating. Our held-to-maturity securities portfolio, with the exception of our municipal bond portfolio, are either explicitly or implicitly guaranteed by the U.S. government, are highly rated by major rating agencies and have a long history of no credit losses. With respect to these securities, we consider the risk of credit loss to be zero and, therefore, we do not record an ECL. Our municipal bond portfolio primarily consists of highly rated bonds and currently carry ratings no lower than Aa3. The estimate of ECL on our municipal bond portfolio considers historical credit loss information and severity of loss in the event of default and leverages external data adjusted for current conditions. A reasonable and supportable forecast period of one year is applied to our municipal bond portfolio, with immediate reversion to long-term average historical loss rates when remaining contractual lives of securities exceed one year. We do not estimate ECL on AIR from held-to-maturity securities as AIR is reversed or written off when the full collection of the AIR related to a security becomes doubtful. AIR from held-to-maturity securities totaled $39.4 million at September 30, 2020 and $45.2 million at December 31, 2019 and is reported in "Accrued interest receivable and other assets" in our unaudited interim consolidated balance sheets.

Expected credit loss on municipal bonds that do not share common risk characteristics with our collective portfolio are individually measured based on net realizable value, or the difference between the discounted value of the expected future cash flows and the recorded amortized cost basis of the security.

Adoption of New Accounting Standards

Financial Instruments - Credit Losses

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 a current expected credit loss measurement to estimate the allowance for credit losses over the contractual life of the financial assets (including loans, unfunded credit commitments and HTM securities) and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. While the CECL model does not apply to available-for-sale debt securities, ASU 2016-13 does require entities to record an allowance for credit losses when recognizing credit losses for available-for-sale securities, rather than reduce the amortized cost of the securities by direct write-offs, which allows for reversal of credit impairments in future periods based on improvements in credit. We adopted the guidance on January 1, 2020, using a modified retrospective approach. We recognized the cumulative effect of initially applying CECL as an adjustment to the opening balance of retained earnings, net of tax. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods.

We completed a comprehensive implementation process that included loss forecasting model development, evaluation of technical accounting topics, updates to our allowance for credit loss accounting policies, reporting processes and related internal controls, overall operational readiness for our adoption of CECL as well as parallel runs for CECL alongside our previous allowance process. We provided quarterly updates to senior management and to the Audit and Credit Committees of the Board of Directors throughout the implementation process. For additional details regarding our allowance for credit losses methodology, see Note 7 — “Loans and Allowance for Credit Losses: Loans and Unfunded Credit Commitments” of the “Notes to Interim Consolidated Financial Statements (unaudited)” under Part I, Item 1 of this report.

Based on our loan, unfunded credit commitment, and HTM security portfolios composition at December 31, 2019, and the then current economic environment, the cumulative effect of the changes to our consolidated balance sheets at January 1, 2020, for the adoption of CECL were as follows:

(Dollars in thousands)	Balance at December 31, 2019	Adjustments Due to Adoption of ASC 326	Balance at January 1, 2020
Assets:			
Allowance for credit losses: loans	$ 304,924	$ 25,464	$ 330,388
Allowance for credit losses: held-to-maturity securities	—	174	174
Deferred tax assets	28,433	13,415	41,848
Other liabilities:			
Allowance for credit losses: unfunded credit commitments	67,656	22,826	90,482
Stockholders' equity:			
Retained earnings, net of tax	4,575,601	(35,049)	4,540,552

In light of the economic disruptions and operational challenges related to the Coronavirus Disease 2019 pandemic (“COVID-19”), in March 2020 the federal banking agencies provided transitional relief to banking organizations with respect to the impact of CECL on regulatory capital (the “2020 CECL Transition Rule”). Under the 2020 CECL Transition Rule, banking

organizations that adopt CECL during the 2020 calendar year, such as SVB Financial and the Bank, may delay the estimated impact of CECL on regulatory capital for two years, followed by a three-year period to phase out the aggregate capital benefit provided during the initial two-year delay. The rule prescribes a methodology for estimating the impact of differences in credit loss allowances reflected under CECL versus under the incurred loss methodology during the five-year transition period. We have elected to use the five-year transition option under the 2020 CECL Transition Rule. Refer to the "Capital Resources" section under Part I, Item 2 of this report for additional details.

Additionally, under the prior guidance, our loan portfolio and credit quality disclosures were disaggregated based on client market segments. Upon adoption of CECL, our technology (software/internet and hardware) and life science/healthcare market segments are disclosed by disaggregated risk-based segments determined by portfolio segments that align with their respective underwriting methodology and the level at which credit risk is now monitored by management. The primary underwriting method for our technology and life science/healthcare portfolios are classified as Investor Dependent - Accelerator (Early-Stage) and Growth (Mid-Stage and Later-Stage) and Cash Flow (Sponsor Led Buyout and Other) and Balance Sheet Dependent, as noted above, and prior period amounts were reclassified for comparability. There are no other material changes to our current market segments.

Other Adopted Accounting Pronouncements

In August 2018, the FASB issued a new Accounting Standard Update (ASU No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement). The ASU primarily modifies certain disclosures with respect to Level 3 fair value measurements. We adopted the guidance on January 1, 2020. The adoption did not have an impact on our consolidated financial position or results of operations and did not have a material impact on the disclosures in our notes to our unaudited interim consolidated financial statements.

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, 2020 and 2019:

		Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	Income Statement Location	2020	2019	2020	2019
Reclassification adjustment for (gains) losses on available-for-sale securities included in net income	Gains on investment securities, net	$ —	$ —	$ (61,165)	$ 3,905
Related tax expense (benefit)	Income tax expense	—	—	16,953	(1,087)
Reclassification adjustment for (gains) losses on cash flow hedges included in net income	Net interest income	(16,004)	2,713	(33,924)	3,224
Related tax expense (benefit)	Income tax expense	4,436	(755)	9,403	(897)
Total reclassification adjustment for (gains) losses included in net income, net of tax		$ (11,568)	$ 1,958	$ (68,733)	$ 5,145

The table below summarizes the activity relating to net gains and losses on our cash flow hedges included in accumulated other comprehensive income for the three and nine months ended September 30, 2020 and 2019. Refer to Note 11 — “Derivative Financial Instruments” of the “Notes to Interim Consolidated Financial Statements (unaudited)” under Part I, Item 1 of this report for additional information regarding the termination of our cash flow hedges during the quarter ended March 31, 2020. Over the next 12 months, we expect that approximately $63.5 million in accumulated other comprehensive income ("AOCI") at September 30, 2020, related to unrealized gains will be reclassified out of AOCI and recognized in net income.

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2020	2019	2020	2019
Balance, beginning of period, net of tax	$ 152,556	$ 13,828	$ (2,130)	$ —
Net increase in fair value, net of tax	—	7,077	167,639	20,536
Net realized (gain) loss reclassified to net income, net of tax	(11,568)	1,958	(24,521)	2,327
Balance, end of period, net of tax	$ 140,988	$ 22,863	$ 140,988	$ 22,863

EPS

Basic EPS is the amount of earnings available to each share of common stock outstanding during the reporting period. Diluted EPS is the amount of earnings available to each share of common stock outstanding during the reporting period adjusted to include the effect of potentially dilutive common shares. Potentially dilutive common shares include incremental shares issuable for stock options and restricted stock unit awards outstanding under our 2006 Equity Incentive Plan and our ESPP. Potentially dilutive common shares are excluded from the computation of dilutive EPS in periods in which the effect would be antidilutive.

The following is a reconciliation of basic EPS to diluted EPS for the three and nine months ended September 30, 2020 and 2019:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars and shares in thousands, except per share amounts)	2020	2019	2020	2019
Numerator:				
Net income available to common stockholders	$ 441,713	$ 267,281	$ 802,901	$ 874,000
Denominator:				
Weighted average common shares outstanding—basic	51,773	51,545	51,640	52,025
Weighted average effect of dilutive securities:				
Stock options and ESPP	141	203	147	238
Restricted stock units and awards	232	110	163	168
Weighted average common shares outstanding—diluted	52,146	51,858	51,950	52,431
Earnings per common share:				
Basic	$ 8.53	$ 5.19	$ 15.55	$ 16.80
Diluted	8.47	5.15	15.46	16.67

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, 2020 and 2019:

	Three months ended September 30,		Nine months ended September 30,	
(Shares in thousands)	2020	2019	2020	2019
Stock options	319	213	269	154
Restricted stock units	55	432	83	294
Total	374	645	352	448

Stock Repurchase Program

On October 24, 2019, our Board of Directors authorized a stock repurchase program that enables us to repurchase up to $350 million of our outstanding common stock. For the three months ended September 30, 2020, we did not repurchase any shares of our outstanding common stock under the stock repurchase program as the program remained on pause during the quarter end period. For the nine months ended September 30, 2020, we had repurchased 244,223 shares of our outstanding common stock for $60.0 million under the stock repurchase program. The program expired on October 29, 2020.

Preferred Stock

On December 9, 2019, the Company issued depositary shares representing an ownership interest in 350,000 shares of Series A Preferred Stock with $0.001 par value and liquidation preference of $1,000 per share, or $25 per depositary share. All preferred shares were issued in the form of depositary shares, with each depositary share representing a 1/40th ownership interest in a share of the preferred stock. The Series A Preferred Stock has no stated maturity and is not subject to any sinking fund or other obligation of the Company. Dividends are approved by the Board of Directors and, if declared, are payable quarterly, in arrears, at a rate per annum equal to 5.25 percent. The Series A Preferred Stock is redeemable at the Company's option, in whole or in part, on or after February 15, 2025. Prior to February 15, 2025, the Series A Preferred Stock is redeemable at the Company's option, in whole and not in part, following any change in laws or regulations that would not allow the Company to treat the full liquidation value of the Series A Preferred Stock as Tier 1 capital for purposes of the capital adequacy guidelines of the Board of Governors of the Federal Reserve System ("the Federal Reserve"). The redemption amount is computed at the per share liquidation preference plus any declared but unpaid dividends. Redemptions are subject to certain regulatory provisions, including approval of the Federal Reserve.

As of September 30, 2020, there were 350,000 shares issued and outstanding of Series A Preferred Shares, which had a carrying value of $340.1 million and liquidation preference of $350.0 million.

The following table summarizes our preferred stock at September 30, 2020:

Series	Description	Amount outstanding (in millions)	Carrying value (in millions)	Shares issued and outstanding	Par Value	Ownership interest per depository share	Liquidation preference per depository share	2020 dividends paid per depository share
Series A	5.250% Fixed-Rate Non-Cumulative Perpetual Preferred Stock	$ 350	$ 340.1	350,000	$ 0.001	1/40th	$ 25	$ 0.90

Consolidated Statement of Changes in Equity

The following table summarizes the changes in our consolidated equity for the three months ended September 30, 2020 and 2019:

(Dollars in thousands)	Preferred Stock	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 June 30, 2019	**$ —**	**51,561,719**	**$ 52**	**$ 1,421,565**	**$ 4,051,194**	**$ 81,232**	**$ 5,554,043**	**$ 152,132**	**$ 5,706,175**
Common stock issued under employee benefit plans, net of restricted stock cancellations	—	19,674	—	1,383	—	—	1,383	—	1,383
Net income	—	—	—	—	267,281	—	267,281	14,437	281,718
Capital calls and distributions, net	—	—	—	—	—	—	—	(8,780)	(8,780)
Net change in unrealized gains and losses on AFS securities, net of tax	—	—	—	—	—	50,638	50,638	—	50,638
Amortization of unrealized holding gains on securities transferred from AFS to HTM, net of tax	—	—	—	—	—	(270)	(270)	—	(270)
Foreign currency translation adjustments, net of tax	—	—	—	—	—	(4,482)	(4,482)	—	(4,482)
Net change in unrealized gains and losses on cash flow hedges, net of tax	—	—				9,035	9,035		9,035
Share-based compensation, net	—	—	—	18,782	—	—	18,782	—	18,782
Common stock repurchases	—	(25,562)	—	—	(5,730)	—	(5,730)	—	(5,730)
Balance at September 30, 2019	**$ —**	**51,555,831**	**$ 52**	**$ 1,441,730**	**$ 4,312,745**	**$ 136,153**	**$ 5,890,680**	**$ 157,789**	**$ 6,048,469**
Balance at June 30, 2020	**$ 340,138**	**51,740,714**	**$ 52**	**$ 1,522,728**	**$ 4,841,720**	**$ 614,735**	**$ 7,319,373**	**$ 148,940**	**$ 7,468,313**
Common stock issued under employee benefit plans, net of restricted stock cancellations	—	47,258	—	4,797	—	—	4,797	—	4,797
Net income	—	—	—	—	446,307	—	446,307	27,748	474,055
Capital calls and distributions, net	—	—	—	—	—	—	—	(2,243)	(2,243)
Net change in unrealized gains and losses on AFS securities, net of tax	—	—	—	—	—	10,018	10,018	—	10,018
Amortization of unrealized holding gains on securities transferred from AFS to HTM, net of tax	—	—	—	—	—	(266)	(266)	—	(266)
Foreign currency translation adjustments, net of tax	—	—	—	—	—	7,475	7,475	—	7,475
Net change in unrealized gains and losses on cash flow hedges, net of tax	—	—	—	—	—	(11,568)	(11,568)	—	(11,568)
Share-based compensation, net	—	—	—	21,408	—	—	21,408	—	21,408
Preferred stock dividends	—	—	—	—	(4,594)	—	(4,594)	—	(4,594)
Other, net	—	—	—	(15)	—	—	(15)	—	(15)
Balance at September 30, 2020	**$ 340,138**	**51,787,972**	**$ 52**	**$ 1,548,918**	**$ 5,283,433**	**$ 620,394**	**$ 7,792,935**	**$ 174,445**	**$ 7,967,380**

3. Share-Based Compensation

For the three and nine months ended September 30, 2020 and 2019, we recorded share-based compensation and related tax benefits as follows:

(Dollars in thousands)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Share-based compensation expense	$ 21,408	$ 18,782	$ 60,733	$ 50,550
Income tax benefit related to share-based compensation expense	(5,560)	(4,883)	(14,726)	(12,028)

Unrecognized Compensation Expense

As of September 30, 2020, unrecognized share-based compensation expense was as follows:

(Dollars in thousands)	Unrecognized Expense	Weighted Average Expected Recognition Period - in Years
Stock options	$ 15,541	2.60
Restricted stock units and awards	125,321	2.68
Total unrecognized share-based compensation expense	$ 140,862	

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, 2020:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life - in Years	Aggregate Intrinsic Value of In-The-Money Options
Outstanding at December 31, 2019	625,407	$ 169.33		
Granted	123,301	186.83		
Exercised	(130,330)	99.72		
Forfeited	(15,460)	231.75		
Expired	(1,030)	71.11		
Outstanding at September 30, 2020	601,888	186.55	4.08	$ 38,405,994
Vested and expected to vest at September 30, 2020	578,024	185.26	4.00	$ 37,654,264
Exercisable at September 30, 2020	317,896	152.61	2.59	$ 30,524,026

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 $240.62 as of September 30, 2020. The total intrinsic value of options exercised during the three and nine months ended September 30, 2020 was $5.6 million and $17.2 million, compared to $1.6 million and $16.0 million for the comparable 2019 periods, respectively.

The table below provides information for restricted stock units and awards under the 2006 Equity Incentive Plan for the nine months ended September 30, 2020:

	Shares	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2019	847,972	$ 236.54
Granted	426,071	190.79
Vested	(247,370)	207.82
Forfeited	(49,272)	226.32
Nonvested at September 30, 2020	977,401	224.38

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 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, 2020 and December 31, 2019:

(Dollars in thousands)	Consolidated VIEs	Unconsolidated VIEs	Maximum Exposure to Loss in Unconsolidated VIEs
September 30, 2020:			
Assets:			
Cash and cash equivalents	$ 14,082	$ —	$ —
Non-marketable and other equity securities (1)	318,356	771,329	771,329
Accrued interest receivable and other assets	853	—	—
Total assets	$ 333,291	$ 771,329	$ 771,329
Liabilities:			
Other liabilities (1)	1,500	332,031	—
Total liabilities	$ 1,500	$ 332,031	$ —
December 31, 2019:			
Assets:			
Cash and cash equivalents	$ 7,629	$ —	$ —
Non-marketable and other equity securities (1)	270,057	689,360	689,360
Accrued interest receivable and other assets	1,117	—	—
Total assets	$ 278,803	$ 689,360	$ 689,360
Liabilities:			
Other liabilities (1)	2,854	302,031	—
Total liabilities	$ 2,854	$ 302,031	$ —

(1) Included in our unconsolidated non-marketable and other equity securities portfolio at September 30, 2020 and December 31, 2019 are investments in qualified affordable housing projects of $561.0 million and $458.5 million, respectively, and related other liabilities consisting of unfunded commitments of $332.0 million and $302.0 million, respectively.

Non-marketable and other equity securities

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

All investments are generally nonredeemable, and distributions are expected to be received through the liquidation of the underlying investments throughout the life of the investment fund. Investments may only be sold or transferred subject to the notice and approval provisions of the underlying investment agreement. Subject to applicable regulatory requirements, including the Volcker Rule, we also make commitments to invest in venture capital and private equity funds. For additional details, see Note 15 — "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 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, 2020, our exposure to loss with respect to the consolidated VIEs is limited to our net assets of $331.8 million and our exposure to loss for our unconsolidated VIEs is equal to our investment in these assets of $771.3 million.

5. Cash and Cash Equivalents

The following table details our cash and cash equivalents at September 30, 2020 and December 31, 2019:

(Dollars in thousands)	September 30, 2020	December 31, 2019
Cash and due from banks (1)	$ 15,237,612	$ 6,492,443
Securities purchased under agreements to resell (2)	450,164	289,340
Total cash and cash equivalents	$ 15,687,776	$ 6,781,783

(1) At September 30, 2020 and December 31, 2019, $11.9 billion and $3.7 billion, respectively, of our cash and due from banks was deposited at the Federal Reserve Bank and was earning interest at the Federal Funds target rate, and interest-earning deposits in other financial institutions were $2.7 billion and $2.1 billion, respectively.

(2) At September 30, 2020 and December 31, 2019, securities purchased under agreements to resell were collateralized by U.S. Treasury securities and U.S. agency securities with aggregate fair values of $459.1 million and $295.3 million, respectively. None of these securities were sold or repledged as of September 30, 2020 and December 31, 2019.

6. Investment Securities

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

Available-for-Sale Securities

The major components of our available-for-sale investment securities portfolio at September 30, 2020 and December 31, 2019 are as follows:

	September 30, 2020			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Carrying Value
Available-for-sale securities, at fair value:				
U.S. Treasury securities	$ 4,251,342	$ 295,952	$ —	$ 4,547,294
U.S. agency debentures	150,000	2,526	—	152,526
Foreign government debt securities	23,452	—	(3)	23,449
Residential mortgage-backed securities:				
Agency-issued mortgage-backed securities	9,569,724	200,691	(102)	9,770,313
Agency-issued collateralized mortgage obligations—fixed rate	7,277,652	45,809	(7,488)	7,315,973
Agency-issued commercial mortgage-backed securities	3,965,370	130,384	(985)	4,094,769
Total available-for-sale securities	$ 25,237,540	$ 675,362	$ (8,578)	$ 25,904,324

(Dollars in thousands)	December 31, 2019 Amortized Cost	Unrealized Gains	Unrealized Losses	Carrying Value
Available-for-sale securities, at fair value:				
U.S. Treasury securities	$ 6,815,874	$ 82,267	$ (4,131)	$ 6,894,010
U.S. agency debentures	100,000	—	(453)	99,547
Foreign government debt securities	9,037	1	—	9,038
Residential mortgage-backed securities:				
Agency-issued mortgage-backed securities	4,109,372	39,438	(19)	4,148,791
Agency-issued collateralized mortgage obligations—fixed rate	1,520,414	17,929	—	1,538,343
Agency-issued commercial mortgage-backed securities	1,339,651	1,078	(15,539)	1,325,190
Total available-for-sale securities	$ 13,894,348	$ 140,713	$ (20,142)	$ 14,014,919

The following table summarizes sale activity of available-for-sale securities during the three and nine months ended September 30, 2020 and 2019 as recorded in the line item “Gains on investment securities, net," a component of noninterest income:

(Dollars in thousands)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Sales proceeds	$ —	$ —	$ 2,654,212	$ 2,189,087
Net realized gains and losses:				
Gross realized gains	—	—	61,165	1,250
Gross realized losses	—	—	—	(5,155)
Net realized gains (losses)	$ —	$ —	$ 61,165	$ (3,905)

The following tables summarize our available-for-sale securities in an unrealized loss position for which an allowance for credit losses has not been recorded and summarized into categories of less than 12 months, or 12 months or longer, as of September 30, 2020 and December 31, 2019:

(Dollars in thousands)	September 30, 2020 Less than 12 months Fair Value of Investments	Less than 12 months Unrealized Losses	12 months or longer (1) Fair Value of Investments	12 months or longer (1) Unrealized Losses	Total Fair Value of Investments	Total Unrealized Losses
Available-for-sale securities:						
Foreign government debt securities	$ 23,449	$ (3)	$ —	$ —	$ 23,449	$ (3)
Residential mortgage-backed securities:						
Agency-issued mortgage-backed securities	179,050	(102)	—	—	179,050	(102)
Agency-issued collateralized mortgage obligations—fixed rate	1,772,593	(7,488)	—	—	1,772,593	(7,488)
Agency-issued commercial mortgage-backed securities	518,223	(985)	—	—	518,223	(985)
Total available-for-sale securities (1)	$ 2,493,315	$ (8,578)	$ —	$ —	$ 2,493,315	$ (8,578)

(1) As of September 30, 2020, we identified a total of 57 investments that were in unrealized loss positions with no investment in an unrealized loss position for a period of time greater than 12 months. Based on our analysis of the securities in an unrealized loss position as of September 30, 2020, the decline in value is unrelated to credit loss and is related to changes in market interest rates since purchase and therefore changes in value for securities are included in other comprehensive income. Market valuations and credit loss analyses on assets in the available-for-sale securities portfolio are reviewed and monitored on a quarterly basis. As of September 30, 2020, we do not intend to sell any of our securities in an unrealized loss position prior to recovery of our amortized 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 amortized cost basis. None of the investments in our available-for-sale securities portfolio were past due as of September 30, 2020.

	December 31, 2019					
	Less than 12 months		12 months or longer (1)		Total	
(Dollars in thousands)	Fair Value of Investments	Unrealized Losses	Fair Value of Investments	Unrealized Losses	Fair Value of Investments	Unrealized Losses
Available-for-sale securities:						
U.S. Treasury securities	$ 971,572	$ (3,996)	$ 449,850	$ (135)	$ 1,421,422	$ (4,131)
U.S. agency debentures	99,547	(453)	—	—	99,547	(453)
Residential mortgage-backed securities:						
Agency-issued mortgage-backed securities	4,014	(19)	—	—	4,014	(19)
Agency-issued commercial mortgage-backed securities	1,027,232	(15,539)	—	—	1,027,232	(15,539)
Total available-for-sale securities (1)	$ 2,102,365	$ (20,007)	$ 449,850	$ (135)	$ 2,552,215	$ (20,142)

(1) As of December 31, 2019, we identified a total of 58 investments that were in unrealized loss positions, of which 12 investments totaling $0.4 billion with unrealized losses of $0.1 million have been in an unrealized loss 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, 2020 by the remaining contractual principal maturities. For U.S. Treasury securities, U.S. agency debentures and foreign government debt securities, the expected maturity is the actual contractual maturity of the notes. Expected maturities for mortgage-backed securities may differ significantly from their contractual maturities because mortgage borrowers have the right to prepay outstanding loan obligations with or without penalties. Mortgage-backed securities classified as available-for-sale typically have original contractual maturities from 10 to 30 years whereas expected average lives of these securities tend to be significantly shorter and vary based upon structure and prepayments in lower interest rate environments.

	September 30, 2020				
(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	$ 4,547,294	$ 60,221	$ 2,989,181	$ 1,497,892	$ —
U.S. agency debentures	152,526	—	—	152,526	—
Foreign government debt securities	23,449	23,449	—	—	—
Residential mortgage-backed securities:					
Agency-issued mortgage-backed securities	9,770,313	—	—	—	9,770,313
Agency-issued collateralized mortgage obligations—fixed rate	7,315,973	—	—	—	7,315,973
Agency-issued commercial mortgage-backed securities	4,094,769	—	—	1,431,547	2,663,222
Total	$ 25,904,324	$ 83,670	$ 2,989,181	$ 3,081,965	$ 19,749,508

Held-to-Maturity Securities

The components of our held-to-maturity investment securities portfolio at September 30, 2020 and December 31, 2019 are as follows:

	September 30, 2020				
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Allowance for Credit Losses (2)
Held-to-maturity securities, at cost:					
U.S. agency debentures (1)	$ 402,346	$ 19,496	$ —	$ 421,842	$ —
Residential mortgage-backed securities:					
Agency-issued mortgage-backed securities	5,363,541	266,455	(62)	5,629,934	—
Agency-issued collateralized mortgage obligations —fixed rate	1,909,965	26,601	(437)	1,936,129	—
Agency-issued collateralized mortgage obligations—variable rate	147,714	362	—	148,076	—
Agency-issued commercial mortgage-backed securities	2,229,811	154,061	—	2,383,872	—
Municipal bonds and notes	2,929,137	171,591	(8,118)	3,092,610	291
Total held-to-maturity securities	$ 12,982,514	$ 638,566	$ (8,617)	$ 13,612,463	$ 291

(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.

(2) Refer to Note 1 - "Basis of Presentation" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part i, Item 1 of this report for more information on our credit loss methodology.

	December 31, 2019			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Held-to-maturity securities, at amortized cost:				
U.S. agency debentures (1)	$ 518,728	$ 6,640	$ (668)	$ 524,700
Residential mortgage-backed securities:				
Agency-issued mortgage-backed securities	6,992,009	142,209	(2,066)	7,132,152
Agency-issued collateralized mortgage obligations—fixed rate	1,608,032	592	(8,502)	1,600,122
Agency-issued collateralized mortgage obligations—variable rate	178,611	94	(259)	178,446
Agency-issued commercial mortgage-backed securities	2,759,615	56,914	(4,508)	2,812,021
Municipal bonds and notes	1,785,951	83,314	(1,434)	1,867,831
Total held-to-maturity securities	$ 13,842,946	$ 289,763	$ (17,437)	$ 14,115,272

(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.

Allowance for Credit Losses for HTM Securities

The following table summarizes the activity relating to our allowance for credit losses for HTM securities for the three and nine months ended September 30, 2020:

Three months ended September 30, (Dollars in thousands)	Beginning Balance June 30, 2020	Provision for Credit Losses	Ending Balance September 30, 2020
Municipal bonds and notes	$ 222	$ 69	$ 291
Total allowance for credit losses	$ 222	$ 69	$ 291

Nine months ended September 30, (Dollars in thousands)	Beginning Balance December 31, 2019	Day One Impact of adopting ASC 326	Provision for Credit Losses	Ending Balance September 30, 2020
Municipal bonds and notes	$ —	$ 174	$ 117	$ 291
Total allowance for credit losses	$ —	$ 174	$ 117	$ 291

Credit Quality Indicators

On a quarterly basis, management monitors the credit quality for HTM securities through the use of standard credit ratings. The following table summarizes our amortized cost of HTM securities aggregated by credit quality indicator at September 30, 2020:

(Dollars in thousands)	September 30, 2020
Municipal bonds and notes:	
Aaa	$ 1,732,450
Aa1	935,970
Aa2	259,767
Aa3	950
Total	$ 2,929,137

The following table summarizes the remaining contractual principal maturities on fixed income investment securities classified as held-to-maturity as of September 30, 2020. For 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 held-to-maturity typically have original contractual maturities from 10 to 30 years whereas expected average lives of these securities tend to be significantly shorter and vary based upon structure and prepayments in lower interest rate environments.

	September 30, 2020									
	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	$ 402,346	$ 421,842	$ 4,675	$ 4,720	$ 148,559	$ 153,787	$ 249,112	$ 263,335	$ —	$ —
Residential mortgage-backed securities:										
Agency-issued mortgage-backed securities	5,363,541	5,629,934	7,113	7,432	28,722	29,739	588,606	609,151	4,739,100	4,983,612
Agency-issued collateralized mortgage obligations—fixed rate	1,909,965	1,936,129	—	—	—	—	551,213	563,127	1,358,752	1,373,002
Agency-issued collateralized mortgage obligations—variable rate	147,714	148,076	—	—	—	—	—	—	147,714	148,076
Agency-issued commercial mortgage-backed securities	2,229,811	2,383,872	—	—	—	—	102,428	120,085	2,127,383	2,263,787
Municipal bonds and notes	2,929,137	3,092,610	44,340	44,839	134,029	140,191	540,308	587,096	2,210,460	2,320,484
Total	$ 12,982,514	$ 13,612,463	$ 56,128	$ 56,991	$ 311,310	$ 323,717	$ 2,031,667	$ 2,142,794	$ 10,583,409	$ 11,088,961

Non-marketable and Other Equity Securities

The major components of our non-marketable and other equity securities portfolio at September 30, 2020 and December 31, 2019 are as follows:

(Dollars in thousands)	September 30, 2020	December 31, 2019
Non-marketable and other equity securities:		
Non-marketable securities (fair value accounting):		
Consolidated venture capital and private equity fund investments (1)	$ 74,293	$ 87,180
Unconsolidated venture capital and private equity fund investments (2)	152,367	178,217
Other investments without a readily determinable fair value (3)	56,008	55,255
Other equity securities in public companies (fair value accounting) (4)	229,297	59,200
Non-marketable securities (equity method accounting) (5):		
Venture capital and private equity fund investments	274,721	215,367
Debt funds	6,918	7,271
Other investments	192,776	152,863
Investments in qualified affordable housing projects, net (6)	560,983	458,476
Total non-marketable and other equity securities	$ 1,547,363	$ 1,213,829

(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, 2020 and December 31, 2019 (fair value accounting):

	September 30, 2020		December 31, 2019	
(Dollars in thousands)	Amount	Ownership %	Amount	Ownership %
Strategic Investors Fund, LP	$ 4,646	12.6 %	$ 5,729	12.6 %
Capital Preferred Return Fund, LP	39,246	20.0	45,341	20.0
Growth Partners, LP	30,267	33.0	35,976	33.0
CP I, LP	134	10.7	134	10.7
Total consolidated venture capital and private equity fund investments	$ 74,293		$ 87,180	

(2) The carrying value represents investments in 179 and 205 funds (primarily venture capital funds) at September 30, 2020 and December 31, 2019, respectively, where our ownership interest is typically less than 5% of the voting interests of each such fund and in which we do not have the ability to exercise significant influence over the partnerships operating activities and financial policies. We carry our unconsolidated venture capital and private equity fund investments at fair value based on the fund investments' net asset values per share as obtained from the general partners of the investments. For each fund investment, we adjust the net asset value per share for differences between our measurement date and the date of the fund investment's net asset value by using the most recently available financial information from the investee general partner, for example June 30th for our September 30 th consolidated financial statements, adjusted for any contributions paid, distributions received from the investment, and significant fund transactions or market events during the reporting period.

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

The following table shows the changes to the carrying amount of other investments without a readily determinable fair value for the nine months ended September 30, 2020:

(Dollars in thousands)	Nine months ended September 30, 2020	Cumulative Adjustments
Measurement alternative:		
Carrying value at September 30, 2020	$ 56,008	
Carrying value adjustments:		
Impairment	$ (487)	$ (947)
Upward changes for observable prices	1,438	2,236
Downward changes for observable prices	(6,210)	(8,918)

(4) Investments classified as other equity securities (fair value accounting) represent shares held in public companies as a result of exercising public equity warrant assets and direct equity investments in public companies held by our consolidated funds. Changes in equity securities measured at fair value are recognized through net income. This amount includes total unrealized gains of $108.4 million in BigCommerce Holdings, Inc. ("BigCommerce") which is currently subject to a lock-up agreement.

(5) The following table shows the carrying value and our ownership percentage of each investment at September 30, 2020 and December 31, 2019 (equity method accounting):

	September 30, 2020		December 31, 2019	
(Dollars in thousands)	Amount	Ownership %	Amount	Ownership %
Venture capital and private equity fund investments:				
Strategic Investors Fund II, LP	$ 3,519	8.6 %	$ 3,612	8.6 %
Strategic Investors Fund III, LP	14,984	5.9	15,668	5.9
Strategic Investors Fund IV, LP	25,451	5.0	27,064	5.0
Strategic Investors Fund V funds	52,575	Various	46,830	Various
CP II, LP (i)	4,773	5.1	5,907	5.1
Other venture capital and private equity fund investments	173,419	Various	116,286	Various
Total venture capital and private equity fund investments	$ 274,721		$ 215,367	
Debt funds:				
Gold Hill Capital 2008, LP (ii)	$ 5,317	15.5 %	$ 5,525	15.5 %
Other debt funds	1,601	Various	1,746	Various
Total debt funds	$ 6,918		$ 7,271	
Other investments:				
SPD Silicon Valley Bank Co., Ltd.	$ 107,969	50.0 %	$ 74,190	50.0 %
Other investments	84,807	Various	78,673	Various
Total other investments	$ 192,776		$ 152,863	

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

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

(6) The following table presents the balances of our investments in qualified affordable housing projects and related unfunded commitments included as a component of “Other liabilities” on our consolidated balance sheets at September 30, 2020 and December 31, 2019:

(Dollars in thousands)	September 30, 2020	December 31, 2019
Investments in qualified affordable housing projects, net	$ 560,983	$ 458,476
Other liabilities	332,031	302,031

The following table presents other information relating to our investments in qualified affordable housing projects for the three and nine months ended September 30, 2020 and 2019:

(Dollars in thousands)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Tax credits and other tax benefits recognized	$ 15,290	$ 8,705	$ 46,772	$ 28,950
Amortization expense included in provision for income taxes (i)	10,222	6,042	32,081	20,436

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

The following table presents the net gains and losses on non-marketable and other equity securities for the three and nine months ended September 30, 2020 and 2019 as recorded in the line item “Gains on investment securities, net," a component of noninterest income:

(Dollars in thousands)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Net gains (losses) on non-marketable and other equity securities:				
Non-marketable securities (fair value accounting):				
Consolidated venture capital and private equity fund investments	$ 8,778	$ 4,555	$ 13,168	$ 22,674
Unconsolidated venture capital and private equity fund investments	16,400	8,530	15,187	26,688
Other investments without a readily determinable fair value	217	(471)	(3,619)	4,701
Other equity securities in public companies (fair value accounting)	112,615	(11,979)	118,099	106
Non-marketable securities (equity method accounting):				
Venture capital and private equity fund investments	51,334	29,049	69,681	54,189
Debt funds	15	187	(253)	1,529
Other investments	478	(22)	(2,668)	593
Total net gains on non-marketable and other equity securities	$ 189,837	$ 29,849	$ 209,595	$ 110,480
Less: realized net gains on sales of non-marketable and other equity securities	5,262	277	5,477	12,637
Net gains on non-marketable and other equity securities still held	$ 184,575	$ 29,572	$ 204,118	$ 97,843

7. Loans and Allowance for Credit Losses: Loans and 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 (such as 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”). Our life science/healthcare clients primarily tend to be in the industries of biotechnology, medical devices, healthcare information technology and healthcare services. Loans to our technology, life science/healthcare and ERI clients are reported under the Investor Dependent, Cash Flow Dependent and Balance Sheet Dependent risk-based segments below. Loans made to private equity/venture capital firm clients typically enable them to fund investments prior to their receipt of funds from capital calls and are reported under the Global Fund Banking (previously Private Equity/Venture Capital) portfolio segment below. 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.

We also provide community development loans made as part of our responsibilities under the CRA. These loans are included within “construction loans” below and are primarily secured by real estate. Additionally, beginning in April 2020, we accepted applications under the PPP administered by the SBA under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") and originated loans to qualified small businesses.

CECL Adoption

On January 1, 2020, we adopted the new credit loss guidance, CECL, and all related amendments. Our loan portfolio was pooled into six portfolio segments that share similar risk characteristics and represent the level at which we developed our systematic methodology to determine our allowance for credit losses. Further, our portfolio segments were disaggregated and grouped into ten classes of financing receivable that represent the level at which we monitor and assess credit risk, which we refer to as "risk-based segments". As such, our funded loans and credit quality disclosures below are presented at the risk-based segment level of disaggregation. As of September 30, 2020, we have six portfolio segments and eleven risk-based segments reflective of the funding of SBA loans under the PPP. The comparative information below has been reclassified to conform to current period risk-based segment presentations. However, the financial results continue to be reported under the accounting standards in effect for those periods. Certain prior period credit quality disclosures related to impaired loans and our individually and collectively evaluated loan portfolio have been superseded with the current guidance and have not been included below, please refer to Note 10 - “Loans, Allowance for Loan Losses and Allowance for Unfunded Credit Commitments" under Part II, Item 8 of our 2019 Form 10-K for additional prior period information.

Refer to Note 1 — “Basis of Presentation” of the “Notes to Interim Consolidated Financial Statements (unaudited)” under Part I, Item 1 of this report for additional information regarding the adoption of CECL.

The composition of loans at amortized cost basis broken out by risk-based segment at September 30, 2020 and December 31, 2019 is presented in the following table:

(Dollars in thousands)	September 30, 2020	December 31, 2019
Global fund banking	$ 19,584,518	$ 17,696,794
Investor dependent:		
Early stage	1,470,941	1,624,221
Mid stage	1,626,794	1,047,398
Later stage	2,013,934	1,663,576
Total investor dependent	5,111,669	4,335,195
Cash flow dependent:		
Sponsor led buyout	2,062,243	2,185,497
Other	2,600,157	2,238,741
Total cash flow dependent	4,662,400	4,424,238
Private bank (1) (5)	4,424,899	3,492,269
Balance sheet dependent	1,698,220	1,286,153
Premium wine (1) (5)	1,081,963	1,062,264
Other (1) (5)	48,206	867,723
SBA loans	1,802,016	—
Total loans (2) (3) (4)	$ 38,413,891	$ 33,164,636
Allowance for credit losses	(512,958)	(304,924)
Net loans	$ 37,900,933	$ 32,859,712

(1) As of September 30, 2020, as a result of enhanced portfolio characteristic definitions for our risk-based segments, loans in the amount of $411.2 million and $50.3 million that would have been reported in Other under historical definitions, are now being reported in our Private Bank and Premium Wine risk-based segments, respectively.
(2) Total loans at amortized cost is net of unearned income of $222 million and $163 million at September 30, 2020 and December 31, 2019, respectively.
(3) Included within our total loan portfolio are credit card loans of $329 million and $395 million at September 30, 2020 and December 31, 2019, respectively.
(4) Included within our total loan portfolio are construction loans of $118 million and $183 million at September 30, 2020 and December 31, 2019, respectively.
(5) Of our total loans, the table below includes those secured by real estate at amortized cost at September 30, 2020 and

December 31, 2019 and were comprised of the following:

(Dollars in thousands)	September 30, 2020	December 31, 2019
Real estate secured loans:		
Private bank:		
Loans for personal residence	$ 3,179,148	$ 2,829,880
Loans to eligible employees	449,551	401,396
Home equity lines of credit	50,929	55,461
Other	137,320	38,880
Total private bank loans secured by real estate	$ 3,816,948	$ 3,325,617
Premium wine	831,182	820,730
Other	60,501	—
Total real estate secured loans	$ 4,708,631	$ 4,146,347

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 “Criticized.” All of our nonaccrual loans are risk-rated 8 or 9 and are classified under the nonperforming category. Loans rated 10 are charged-off and are not included as part of our loan portfolio balance. We review our credit quality indicators on a quarterly basis for performance and appropriateness of risk ratings as part of our evaluation process for our allowance for credit losses for loans.

The following table summarizes the credit quality indicators, broken out by risk-based segment, as of September 30, 2020 and December 31, 2019:

(Dollars in thousands)	Pass	Criticized	Nonperforming (Nonaccrual)	Total
September 30, 2020:				
Global fund banking	$ 19,576,723	$ 7,782	$ 13	$ 19,584,518
Investor dependent:				
Early stage	1,296,789	154,420	19,732	1,470,941
Mid stage	1,449,525	165,642	11,627	1,626,794
Later stage	1,795,229	180,130	38,575	2,013,934
Total investor dependent	4,541,543	500,192	69,934	5,111,669
Cash flow dependent:				
Sponsor led buyout	1,827,943	212,708	21,592	2,062,243
Other	2,314,453	279,419	6,285	2,600,157
Total cash flow dependent	4,142,396	492,127	27,877	4,662,400
Private bank	4,395,531	23,936	5,432	4,424,899
Balance sheet dependent	1,565,597	131,947	676	1,698,220
Premium wine	941,511	138,777	1,675	1,081,963
Other	48,041	61	104	48,206
SBA loans	1,663,383	138,633	—	1,802,016
Total loans (1)	$ 36,874,725	$ 1,433,455	$ 105,711	$ 38,413,891
December 31, 2019:				
Global fund banking	$ 17,708,550	$ 4,247	$ —	$ 17,712,797
Investor dependent				
Early stage	1,436,022	206,310	11,093	1,653,425
Mid stage	924,002	125,451	17,330	1,066,783
Later stage	1,490,561	201,819	6,296	1,698,676
Total investor dependent	3,850,585	533,580	34,719	4,418,884
Cash flow dependent				
Sponsor led buyout	2,039,847	118,588	44,585	2,203,020
Other	2,141,766	93,400	17,681	2,252,847
Total cash flow dependent	4,181,613	211,988	62,266	4,455,867
Private bank	3,472,138	11,601	5,480	3,489,219
Balance sheet dependent	1,231,961	65,343	—	1,297,304
Premium wine	1,026,973	36,335	204	1,063,512
Other	890,059	62	—	890,121
Total loans (1)	$ 32,361,879	$ 863,156	$ 102,669	$ 33,327,704

(1) As of September 30, 2020, loan amounts are disclosed using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed using the gross basis.

The following table summarizes the credit quality indicators, broken out by risk-based segment and vintage year, as of September 30, 2020:

	Term Loans by Origination Year								
(Dollars in thousands)	2020	2019	2018	2017	2016	Prior	Revolving Loans	Revolving Loans Converted to Term Loans	Total
Global fund banking:									
Risk rating:									
Pass	$ 271,164	$ 156,714	$ 70,084	$ 36,907	$ 2,552	$ 11,588	$ 19,022,934	$ 4,780	$ 19,576,723
Criticized	8	—	—	—	—	—	994	6,780	7,782
Nonperforming	—	8	—	—	—	—	5	—	13
Total global fund banking	$ 271,172	$ 156,722	$ 70,084	$ 36,907	$ 2,552	$ 11,588	$ 19,023,933	$ 11,560	$ 19,584,518
Investor dependent:									
Early stage:									
Risk rating:									
Pass	$ 589,224	$ 452,550	$ 140,448	$ 37,911	$ 2,430	$ 390	$ 73,199	$ 637	$ 1,296,789
Criticized	20,744	68,381	36,841	10,878	2,530	363	13,750	933	154,420
Nonperforming	2,466	8,870	6,956	463	—	4	973	—	19,732
Total early stage	$ 612,434	$ 529,801	$ 184,245	$ 49,252	$ 4,960	$ 757	$ 87,922	$ 1,570	$ 1,470,941
Mid stage:									
Risk rating:									
Pass	$ 726,708	$ 344,458	$ 209,372	$ 39,603	$ 7,510	$ 2,725	$ 116,655	$ 2,494	$ 1,449,525
Criticized	59,623	43,386	32,668	12,725	1,966	—	15,274	—	165,642
Nonperforming	2	2,558	5,405	3,519	—	—	143	—	11,627
Total mid stage	$ 786,333	$ 390,402	$ 247,445	$ 55,847	$ 9,476	$ 2,725	$ 132,072	$ 2,494	$ 1,626,794
Later stage:									
Risk rating:									
Pass	$ 790,085	$ 473,800	$ 178,768	$ 60,009	$ 562	$ 9,110	$ 277,911	$ 4,984	$ 1,795,229
Criticized	17,108	72,028	30,280	2,666	—	8,708	49,340	—	180,130
Nonperforming	17,506	1,886	12,434	—	—	—	6,749	—	38,575
Total later stage	$ 824,699	$ 547,714	$ 221,482	$ 62,675	$ 562	$ 17,818	$ 334,000	$ 4,984	$ 2,013,934
Total investor dependent	$ 2,223,466	$ 1,467,917	$ 653,172	$ 167,774	$ 14,998	$ 21,300	$ 553,994	$ 9,048	$ 5,111,669
Cash flow dependent:									
Sponsor led buyout:									
Risk rating:									
Pass	$ 534,579	$ 601,938	$ 326,172	$ 226,326	$ 50,267	$ —	$ 88,661	$ —	$ 1,827,943
Criticized	43,221	70,050	53,043	21,400	12,238	—	12,756	—	212,708
Nonperforming	33	11,907	—	7,200	—	—	2,452	—	21,592
Total sponsor led buyout	$ 577,833	$ 683,895	$ 379,215	$ 254,926	$ 62,505	$ —	$ 103,869	$ —	$ 2,062,243
Other									
Risk rating:									
Pass	$ 465,243	$ 574,231	$ 189,501	$ 116,918	$ 39,627	$ 346	$ 928,587	$ —	$ 2,314,453
Criticized	9,589	55,118	74,916	956	416	—	138,424	—	279,419
Nonperforming	—	—	3,845	—	—	—	2,440	—	6,285
Total other	$ 474,832	$ 629,349	$ 268,262	$ 117,874	$ 40,043	$ 346	$ 1,069,451	$ —	$ 2,600,157
Total cash flow dependent	$ 1,052,665	$ 1,313,244	$ 647,477	$ 372,800	$ 102,548	$ 346	$ 1,173,320	$ —	$ 4,662,400
Private bank:									
Risk rating:									
Pass	$ 1,191,024	$ 1,212,000	$ 420,440	$ 397,847	$ 342,594	$ 463,198	$ 368,107	$ 321	$ 4,395,531
Criticized	1,456	5,549	3,040	1,201	5,101	6,802	787	—	23,936
Nonperforming	—	520	2,475	—	—	1,702	735	—	5,432
Total private bank	$ 1,192,480	$ 1,218,069	$ 425,955	$ 399,048	$ 347,695	$ 471,702	$ 369,629	$ 321	$ 4,424,899
Balance sheet dependent:									
Risk rating:									

Pass	$ 374,768	$ 202,185	$ 237,529	$ 31,838	$ —	$ —	$ 717,771	$ 1,506	$ 1,565,597
Criticized	60,238	8,877	5,559	610	—	—	56,663	—	131,947
Nonperforming	—	—	—	—	—	675	1	—	676
Total balance sheet dependent	$ 435,006	$ 211,062	$ 243,088	$ 32,448	$ —	$ 675	$ 774,435	$ 1,506	$ 1,698,220
Premium wine:									
Risk rating:									
Pass	$ 154,624	$ 181,416	$ 70,297	$ 84,221	$ 102,297	$ 156,397	$ 154,685	$ 37,574	$ 941,511
Criticized	14,001	26,446	35,898	338	13,674	8,210	40,210	—	138,777
Nonperforming	—	—	—	—	1,662	—	13	—	1,675
Total Premium wine	$ 168,625	$ 207,862	$ 106,195	$ 84,559	$ 117,633	$ 164,607	$ 194,908	$ 37,574	$ 1,081,963
Other:									
Risk rating:									
Pass	$ 1,474	$ 23,286	$ 13,092	$ 1,900	$ —	$ 80	$ 8,209	$ —	$ 48,041
Criticized	22	—	—	—	—	—	39	—	61
Nonperforming	—	104	—	—	—	—	—	—	104
Total other	$ 1,496	$ 23,390	$ 13,092	$ 1,900	$ —	$ 80	$ 8,248	$ —	$ 48,206
SBA loans:									
Risk rating:									
Pass	$ 1,663,383	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ 1,663,383
Criticized	138,633	—	—	—	—	—	—	—	138,633
Nonperforming	—	—	—	—	—	—	—	—	—
Total SBA loans	$ 1,802,016	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ 1,802,016
Total loans	$ 7,146,926	$ 4,598,266	$ 2,159,063	$ 1,095,436	$ 585,426	$ 670,298	$ 22,098,467	$ 60,009	$ 38,413,891

Allowance for Credit Losses: Loans

In the third quarter of 2020, ACL for loans decreased $76.9 million primarily driven by an improved economic forecast in Moody's Analytics September 2020 forecast utilized in our quantitative model, as compared to the forecast utilized in June 2020. Those assumptions included an improvement in the unemployment rate as a result of businesses re-opening and the effect of government aid programs. The gross domestic product contraction rate also improved in the September 2020 forecast. We determined the above forecast to be a reasonable view of the outlook for the economy given the available information at current quarter end. To the extent we identified credit risk considerations that were not captured by the Moody's Analytics September 2020 forecast, we addressed the risk through management's qualitative adjustments to our ACL.

The following tables summarize the activity relating to our allowance for credit losses for loans for the three and nine months ended September 30, 2020 and 2019, broken out by risk-based segment:

Three months ended September 30, 2020 (Dollars in thousands)	Beginning Balance June 30, 2020	Charge-offs	Recoveries	(Reduction) Provision for Credit Losses	Foreign Currency Translation Adjustments	Ending Balance September 30, 2020
Global fund banking	$ 53,723	$ —	$ —	$ (14,734)	$ —	$ 38,989
Investor dependent:						
Early stage	148,270	(14,950)	2,511	(33,171)	(101)	102,559
Mid stage	56,393	(7,162)	697	12,578	(88)	62,418
Later stage	87,604	(6,205)	600	15,792	(80)	97,711
Total investor dependent	292,267	(28,317)	3,808	(4,801)	(269)	262,688
Cash flow dependent:						
Sponsor led buyout	54,853	(130)	—	(3,062)	—	51,661
Other	43,100	—	—	(2,779)	—	40,321
Total cash flow dependent	97,953	(130)	—	(5,841)	—	91,982
Private bank	91,345	—	15	(14,881)	—	76,479
Balance sheet dependent	24,728	—	—	4,341	—	29,069
Premium wine	12,319	—	—	(1,914)	—	10,405
Other	13,635	(2)	531	(14,898)	1,600	866
SBA loans	3,858	—	—	(1,378)	—	2,480
Total allowance for credit losses	$ 589,828	$ (28,449)	$ 4,354	$ (54,106)	$ 1,331	$ 512,958

Three months ended September 30, 2019 (Dollars in thousands)	Beginning Balance June 30, 2019	Charge-offs	Recoveries	Provision for (Reduction) Credit Losses	Foreign Currency Translation Adjustments	Ending Balance September 30, 2019
Global fund banking	$ 101,253	$ —	$ 1,200	$ 1,485	$ (22)	$ 103,916
Investor dependent:						
Early stage	30,969	(7,524)	1,760	5,783	(85)	30,903
Mid stage	28,264	(16,581)	385	5,778	(85)	17,761
Later stage	37,940	(11,449)	276	17,513	(259)	44,021
Total investor dependent	97,173	(35,554)	2,421	29,074	(429)	92,685
Cash flow dependent:						
Sponsor led buyout	32,131	—	—	9,663	(143)	41,651
Other	24,551	—	250	(3,199)	47	21,649
Total cash flow dependent	56,682	—	250	6,464	(96)	63,300
Private Bank	20,397	—	15	1,307	(19)	21,700
Balance sheet dependent	17,256	—	—	(2,496)	37	14,797
Premium wine	4,227	—	—	27	—	4,254
Other	4,900	(1,266)	2	124	(2)	3,758
Total allowance for credit losses	$ 301,888	$ (36,820)	$ 3,888	$ 35,985	$ (531)	$ 304,410

Nine months ended September 30, 2020 (Dollars in thousands)	Beginning Balance December 31, 2019	Impact of adopting ASC 326	Charge-offs	Recoveries	Provision for (Reduction) Credit Losses	Foreign Currency Translation Adjustments	Ending Balance September 30, 2020
Global fund banking	$ 107,285	$ (69,888)	$ —	$ —	$ 1,772	$ (180)	$ 38,989
Investor dependent:							
Early stage	26,245	39,911	(26,897)	6,474	57,494	(668)	102,559
Mid stage	15,936	6,963	(20,147)	5,303	54,584	(221)	62,418
Later stage	40,189	24,750	(20,189)	600	52,880	(519)	97,711
Total investor dependent	82,370	71,624	(67,233)	12,377	164,958	(1,408)	262,688
Cash flow dependent:							
Sponsor led buyout	42,939	3,151	(2,754)	2,845	5,613	(133)	51,661
Other	25,159	(3,056)	(3,385)	1	21,727	(125)	40,321
Total cash flow dependent	68,098	95	(6,139)	2,846	27,340	(258)	91,982
Private bank	21,551	12,615	(1,616)	15	44,194	(280)	76,479
Balance sheet dependent	12,722	(1,364)	(4,900)	—	22,685	(74)	29,069
Premium wine	5,296	3,650	(192)	—	1,691	(40)	10,405
Other	7,602	8,732	(320)	944	(18,426)	2,334	866
SBA loans	—	—	—	—	2,480	—	2,480
Total allowance for credit losses	$ 304,924	$ 25,464	$ (80,400)	$ 16,182	$ 246,694	$ 94	$ 512,958

Nine months ended September 30, 2019 (Dollars in thousands)	Beginning Balance December 31, 2018	Charge-offs	Recoveries	Provision for (Reduction) Credit Losses	Foreign Currency Translation Adjustments	Ending Balance September 30, 2019
Global fund banking	$ 93,781	$ (2,047)	$ 1,200	$ 11,304	$ (322)	$ 103,916
Investor dependent:						
Early stage	25,885	(16,819)	5,685	16,547	(395)	30,903
Mid stage	20,999	(36,492)	1,288	31,443	523	17,761
Later stage	25,217	(11,449)	2,053	28,616	(416)	44,021
Total investor dependent	72,101	(64,760)	9,026	76,606	(288)	92,685
Cash flow dependent:						
Sponsor led buyout	44,274	(2,402)	—	(253)	32	41,651
Other	21,754	(716)	4,647	(4,083)	47	21,649
Total cash flow dependent	66,028	(3,118)	4,647	(4,336)	79	63,300
Private Bank	20,583	(1,019)	240	1,999	(103)	21,700
Balance sheet dependent	21,707	—	—	(7,135)	225	14,797
Premium wine	3,646	—	—	611	(3)	4,254
Other	3,057	(1,311)	20	1,905	87	3,758
Total allowance for credit losses	$ 280,903	$ (72,255)	$ 15,133	$ 80,954	$ (325)	$ 304,410

The following table summarizes the aging of our loans broken out by risk-based segment as of September 30, 2020 and December 31, 2019:

(Dollars in thousands)	30 - 59 Days Past Due	60 - 89 Days Past Due	Equal to or Greater Than 90 Days Past Due	Total Past Due	Current	Total	Loans Past Due 90 Days or More Still Accruing Interest
September 30, 2020:							
Global fund banking	$ 6,285	$ —	$ 14	$ 6,299	$ 19,578,219	$ 19,584,518	$ —
Investor dependent:							
Early stage	605	323	367	1,295	1,469,646	1,470,941	—
Mid stage	250	145	211	606	1,626,188	1,626,794	—
Later stage	51	—	—	51	2,013,883	2,013,934	—
Total investor dependent	906	468	578	1,952	5,109,717	5,111,669	—
Cash flow dependent:							
Sponsor led buyout	—	—	—	—	2,062,243	2,062,243	—
Other	742	3	—	745	2,599,412	2,600,157	—
Total cash flow dependent	742	3	—	745	4,661,655	4,662,400	—
Private bank	4	4	—	8	4,424,891	4,424,899	—
Balance sheet dependent	2,851	7	—	2,858	1,695,362	1,698,220	—
Premium wine	3,117	4,355	—	7,472	1,074,491	1,081,963	—
Other	23	—	155	178	48,028	48,206	—
SBA loans	—	—	—	—	1,802,016	1,802,016	—
Total loans (1)	$ 13,928	$ 4,837	$ 747	$ 19,512	$ 38,394,379	$ 38,413,891	$ —
December 31, 2019:							
Global fund banking	$ 97,739	$ 383	$ 3,150	$ 101,272	$ 17,611,525	$ 17,712,797	$ 3,150
Investor dependent:							
Early stage	1,307	22,062	723	24,092	1,629,333	1,653,425	—
Mid stage	10,025	6,999	—	17,024	1,049,759	1,066,783	—
Later stage	8,113	500	10,569	19,182	1,679,494	1,698,676	—
Total investor dependent	19,445	29,561	11,292	60,298	4,358,586	4,418,884	—
Cash flow dependent							
Sponsor led buyout	—	—	—	—	2,203,020	2,203,020	—
Other	2,426	3,061	2	5,489	2,247,358	2,252,847	—
Total cash flow dependent	2,426	3,061	2	5,489	4,450,378	4,455,867	—
Private bank	6,582	2,049	1,544	10,175	3,479,044	3,489,219	365
Balance sheet dependent	2,731	—	—	2,731	1,294,573	1,297,304	—
Premium wine	8,435	3,170	—	11,605	1,051,907	1,063,512	—
Other	17	—	—	17	890,104	890,121	—
Total loans (1)	$ 137,375	$ 38,224	$ 15,988	$ 191,587	$ 33,136,117	$ 33,327,704	$ 3,515

(1) As of September 30, 2020, loan amounts are disclosed using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed using the gross basis.

Nonaccrual Loans

The following tables summarize our nonaccrual loan activity by risk-based segment for the three and nine months ended September 30, 2020 and 2019:

Three months ended September 30, 2020 (Dollars in thousands)	Beginning Balance June 30, 2020	Additions	Paydowns and Other Reductions	Charge-offs	Ending Balance September 30, 2020
Global fund banking	$ 9	$ 6	$ (2)	$ —	$ 13
Investor dependent:					
Early stage	24,422	6,269	(2,790)	(8,169)	19,732
Mid stage	8,119	10,290	(292)	(6,490)	11,627
Later stage	10,498	36,779	(3,500)	(5,202)	38,575
Total investor dependent	43,039	53,338	(6,582)	(19,861)	69,934
Cash flow dependent:					
Sponsor led buyout	21,658	172	(238)	—	21,592
Other	5,317	12,356	(11,388)	—	6,285
Total cash flow dependent	26,975	12,528	(11,626)	—	27,877
Private bank	6,517	3,348	(4,433)	—	5,432
Balance sheet dependent	11,842	675	(11,841)	—	676
Premium wine	1,681	—	(6)	—	1,675
Other	61	105	(62)	—	104
SBA loans	4,202	—	(4,202)	—	—
Total nonaccrual loans	$ 94,326	$ 70,000	$ (38,754)	$ (19,861)	$ 105,711

Three months ended September 30, 2019 (Dollars in thousands)	Beginning Balance June 30, 2019	Additions	Paydowns and Other Reductions	Charge-offs	Ending Balance September 30, 2019
Global fund banking	$ —	$ —	$ —	$ —	$ —
Investor dependent:					
Early stage	10,290	12,409	(2,172)	(1,569)	18,958
Mid stage	28,699	6	(8,151)	(15,323)	5,231
Later stage	38,346	2,216	(6,462)	(6,837)	27,263
Total investor dependent	77,335	14,631	(16,785)	(23,729)	51,452
Cash flow dependent:					
Sponsor led buyout	8,365	37,294	(640)	—	45,019
Other	79	13	—	—	92
Total cash flow dependent	8,444	37,307	(640)	—	45,111
Private bank	5,644	1,531	(86)	—	7,089
Balance sheet dependent	4,974	—	(4,974)	—	—
Premium wine	244	174	(25)	—	393
Other	—	—	—	—	—
Total nonaccrual loans (1)	$ 96,641	$ 53,643	$ (22,510)	$ (23,729)	$ 104,045

Nine months ended September 30, 2020 (Dollars in thousands)	Beginning Balance December 31, 2019	Additions	Paydowns and Other Reductions	Charge-offs	Ending Balance September 30, 2020
Global fund banking	$ —	$ 15	$ (2)	$ —	$ 13
Investor dependent:					
Early stage	11,093	28,218	(8,695)	(10,884)	19,732
Mid stage	17,330	22,875	(1,079)	(27,499)	11,627
Later stage	6,296	48,962	(8,276)	(8,407)	38,575
Total investor dependent	34,719	100,055	(18,050)	(46,790)	69,934
Cash flow dependent:					
Sponsor led buyout	44,585	21,830	(42,199)	(2,624)	21,592
Other	17,681	20,936	(32,314)	(18)	6,285
Total cash flow dependent	62,266	42,766	(74,513)	(2,642)	27,877
Private bank	5,480	5,982	(5,449)	(581)	5,432
Balance sheet dependent	—	17,417	(16,741)	—	676
Premium wine	204	1,686	(23)	(192)	1,675
Other	—	339	(235)	—	104
SBA loans	—	4,202	(4,202)	—	—
Total nonaccrual loans (1)	$ 102,669	$ 172,462	$ (119,215)	$ (50,205)	$ 105,711

Nine months ended September 30, 2019 (Dollars in thousands)	Beginning Balance December 31, 2018	Additions	Paydowns and Other Reductions	Charge-offs	Ending Balance September 30, 2019
Global fund banking	$ 3,700	$ 2,247	$ (3,900)	$ (2,047)	$ —
Investor dependent:					
Early stage	7,616	25,221	(10,615)	(3,264)	18,958
Mid stage	4,751	42,497	(9,541)	(32,476)	5,231
Later stage	11,385	32,786	(10,071)	(6,837)	27,263
Total investor dependent	23,752	100,504	(30,227)	(42,577)	51,452
Cash flow dependent:					
Sponsor led buyout	39,534	37,294	(29,407)	(2,402)	45,019
Other	17,156	92	(16,690)	(466)	92
Total cash flow dependent	56,690	37,386	(46,097)	(2,868)	45,111
Private bank	3,919	3,411	(174)	(67)	7,089
Balance sheet dependent	5,004	238	(5,242)	—	—
Premium wine	285	174	(66)	—	393
Other	792	—	(792)	—	—
Total nonaccrual loans (1)	$ 94,142	$ 143,960	$ (86,498)	$ (47,559)	$ 104,045

(1) For the three and nine months ended September 30, 2020, loan amounts are disclosed using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed using the gross basis.

The following table summarizes our nonaccrual loans with no allowance for credit loss at September 30, 2020 and December 31, 2019:

	September 30, 2020		December 31, 2019	
(Dollars in thousands)	Nonaccrual Loans	Nonaccrual Loans with no Allowance for Credit Loss	Nonaccrual Loans	Nonaccrual Loans with no Allowance for Credit Loss
Global fund banking	$ 13	$ 8	$ —	$ —
Investor dependent:				
Early stage	19,732	10	11,093	460
Mid stage	11,627	—	17,330	274
Later stage	38,575	—	6,296	—
Total investor dependent	69,934	10	34,719	734
Cash flow dependent:				
Sponsor led buyout	21,592	—	44,585	—
Other	6,285	705	17,681	2,782
Total cash flow dependent	27,877	705	62,266	2,782
Private bank	5,432	4,912	5,480	3,714
Balance sheet dependent	676	—	—	—
Premium wine	1,675	998	204	—
Other	104	104	—	—
SBA loans	—	—	—	—
Total nonaccrual loans (1)	$ 105,711	$ 6,737	$ 102,669	$ 7,230

(1) As of September 30, 2020, loan amounts are disclosed using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed using the gross basis.

Troubled Debt Restructurings

As of September 30, 2020, we had 16 TDRs with a total carrying value of $50.5 million where concessions have been granted to borrowers experiencing financial difficulties, in an attempt to maximize collection. There were no unfunded commitments available for funding to the clients associated with these TDRs as of September 30, 2020.

The following table summarizes our loans modified in TDRs, broken out by risk-based segment, at September 30, 2020 and December 31, 2019:

(Dollars in thousands)	September 30, 2020	December 31, 2019
Loans modified in TDRs:		
Global fund banking	$ —	$ —
Investor dependent:		
Early stage	7,771	9,471
Mid stage	3,781	5,189
Later stage	3,297	23,318
Total investor dependent	14,849	37,978
Cash flow dependent:		
Sponsor led buyout	30,799	55,443
Other	855	—
Total cash flow dependent	31,654	55,443
Private bank	—	2,104
Balance sheet dependent	675	—
Premium wine	3,341	13,457
Other	—	—
SBA loans	—	—
Total loans modified in TDRs (1)	$ 50,519	$ 108,982

(1) As of September 30, 2020, loan amounts are disclosed using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed using the gross basis.

The following table summarizes the recorded investment in loans modified in TDRs, broken out by risk-based segment, for modifications made during the three and nine months ended September 30, 2020 and 2019:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2020	2019	2020	2019
Loans modified in TDRs during the period:				
Global fund banking	$ —	$ —	$ —	$ —
Investor dependent:				
Early stage	4,043	2,205	4,193	2,205
Mid stage	—	—	209	3,480
Later stage	—	6,361	3,297	17,324
Total investor dependent	4,043	8,566	7,699	23,009
Cash flow dependent:				
Sponsor led buyout	21,611	—	21,611	48,604
Other	—	—	855	—
Total cash flow dependent	21,611	—	22,466	48,604
Private bank	—	—	—	1,826
Balance sheet dependent	675	—	675	—
Premium wine	—	—	998	—
Other	—	—	—	—
SBA loans	—	—	—	—
Total loans modified in TDRs during the period (1) (2)	$ 26,329	$ 8,566	$ 31,838	$ 73,439

(1) For the three and nine months ended September 30, 2020, loan amounts are disclosed using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed using the gross basis.
(2) There were $13.6 million and $31.1 million of partial charge-offs for the three and nine months ended September 30, 2020, respectively, and $3.7 million and $9.2 million of partial charge-offs for the three and nine months ended September 30, 2019.

During the three months ended September 30, 2020, new TDRs of $25.6 million were modified through payment deferrals granted to our clients and $0.7 million were modified through forgiveness of principal. During the nine months ended September 30, 2020, new TDRs of $30.9 million were modified through payment deferrals granted to our clients and $0.9 million were modified through forgiveness of principal. During the three and nine months ended September 30, 2019, $6.4 million and $69.4 million, respectively, were modified through payment deferrals granted to our clients. During the three and nine months ended September 30, 2019, $2.2 million and $4.0 million, respectively, were modified through partial forgiveness of principal.

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, 2020 and 2019:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	**2020**	**2019**	**2020**	**2019**
TDRs modified within the previous 12 months that defaulted during the period:				
Global fund banking	$ —	$ —	$ —	$ —
Investor dependent:				
Early stage	—	—	—	—
Mid stage	—	—	—	—
Later stage	—	10,963	—	10,963
Total investor dependent	—	10,963	—	10,963
Cash flow dependent:				
Sponsor led buyout	—	37,294	—	37,294
Other	—	—	—	—
Total cash flow dependent	—	37,294	—	37,294
Private bank	—	—	—	—
Balance sheet dependent	—	—	—	—
Premium wine	998	—	998	—
Other	—	—	—	—
SBA loans	—	—	—	—
Total TDRs modified within the previous 12 months that defaulted in the period (1)	$ 998	$ 48,257	$ 998	$ 48,257

(1) For the three and nine months ended September 30, 2020, loan amounts are disclosed using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed using the gross basis.

Charge-offs and defaults on previously restructured loans are evaluated to determine the impact to the allowance for credit losses for loans, if any. The evaluation of these defaults may impact the assumptions used in calculating the reserve on other TDRs and nonaccrual loans as well as management's overall outlook of macroeconomic factors that affect the reserve on the loan portfolio as a whole. After evaluating the charge-offs and defaults experienced on our TDRs we determined that no change to our reserving methodology for TDRs was necessary to determine the allowance for credit losses for loans as of September 30, 2020.

Allowance for Credit Losses: Unfunded Credit Commitments

We maintain a separate allowance for credit losses for unfunded credit commitments that is determined using a methodology that is inherently similar to the methodology used for calculating the allowance for credit losses for loans. At September 30, 2020, our ACL estimates utilized the improved Moody's economic forecasts from September 2020 as mentioned above.

The following table summarizes the activity relating to our allowance for credit losses for unfunded credit commitments for the three and nine months ended September 30, 2020 and 2019:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2020	2019	2020	2019
Allowance for credit losses: unfunded credit commitments, beginning balance	$ 99,294	$ 62,664	$ 67,656	$ 55,183
Impact of adopting ASC 326	—	—	22,826	—
Provision for credit losses	2,019	551	11,132	8,079
Foreign currency translation adjustments	202	(107)	(99)	(154)
Allowance for credit losses: unfunded credit commitments, ending balance (1)	$ 101,515	$ 63,108	$ 101,515	$ 63,108

(1) The "allowance for credit losses: unfunded credit commitments" is included as a component of "other liabilities" on our unaudited interim consolidated balance sheets. See Note 15 — "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.

8. Leases

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

At the inception of the lease, the lease is evaluated to determine whether the lease will be accounted for as an operating or a finance lease. There were no significant assumptions or judgments required upon applying the new lease standard. Operating lease right-of-use assets and operating lease liabilities are included in our consolidated balance sheets. We have no leases that meet the definition of a finance lease under ASC 842 and our lessor accounting treatment for subleases is not material.

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

(Dollars in thousands)	September 30, 2020	December 31, 2019
Assets:		
Right-of-use assets - operating leases	$ 220,493	$ 197,365
Liabilities:		
Lease liabilities - operating leases	246,652	218,847

The components of our lease cost and supplemental cash flow information related to leases for the three and nine months ended September 30, 2020 and 2019 were as follows:

(Dollars in thousands)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Operating lease cost	$ 11,998	$ 10,120	$ 35,040	$ 29,099
Short-term lease cost	333	370	1,092	1,214
Variable lease cost	830	903	2,548	2,683
Less: sublease income	(346)	(1,140)	(1,633)	(3,363)
Total lease cost, net	$ 12,815	$ 10,253	$ 37,047	$ 29,633
Supplemental cash flows information:				
Cash paid for amounts included in the measurement of lease liabilities:				
Cash paid for operating leases	$ 12,273	$ 11,514	$ 36,753	$ 32,752
Noncash items during the period:				
Lease obligations in exchange for obtaining Right-of-use assets:				
Operating leases	$ 14,741	$ 7,770	$ 55,316	$ 7,770

The table below presents additional information related to the Company's leases as of September 30, 2020 and December 31, 2019:

	September 30, 2020	December 31, 2019
Weighted-average remaining term (in years) - operating leases	6.13	6.29
Weighted-average discount rate - operating leases (1)	2.54 %	2.92 %

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

The following table presents our undiscounted future cash payments for our operating lease liabilities as of September 30, 2020:

Years ended December 31, (Dollars in thousands)	Operating Leases
2020 (excluding the nine months ended September 30, 2020)	$ 12,782
2021	50,271
2022	45,430
2023	44,337
2024	38,437
2025 and thereafter	75,799
Total future lease payments (1)	$ 267,056
Less: imputed interest	(20,404)
Total lease liabilities	$ 246,652

(1) As of September 30, 2020, we have additional leases that have not yet commenced. We estimate that we will record additional lease liabilities of $2.8 million upon commencement. These leases will commence in 2020 with lease terms of two years to ten years.

9. Goodwill and Other Intangible Assets

Goodwill

Goodwill at both September 30, 2020 and December 31, 2019 was $137.8 million, which was a result of revenue generating synergies expected from our acquisition of SVB Leerink in 2019. All reported goodwill amounts have been allocated to the SVB Leerink reporting segment and are expected to be deductible for tax purposes. Refer to Note 14 — "Segment Reporting" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report for additional information.

Other Intangible Assets

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

	September 30, 2020			December 31, 2019		
(Dollars in thousands)	Gross Amount	Accumulated Amortization	Net Carrying Amount	Gross Amount	Accumulated Amortization	Net Carrying Amount
Other intangible assets:						
Customer relationships	$ 42,000	$ 6,682	$ 35,318	$ 42,000	$ 3,818	$ 38,182
Other	18,900	8,838	10,062	18,900	7,665	11,235
Total other intangible assets	$ 60,900	$ 15,520	$ 45,380	$ 60,900	$ 11,483	$ 49,417

For the nine months ended September 30, 2020, we recorded amortization expense of $4.0 million. Assuming no future impairments of other intangible assets or additional acquisitions or dispositions, the following table presents the Company's future expected amortization expense for other intangible assets that will continue to be amortized as of September 30, 2020:

Years ended December 31, (Dollars in thousands)	Other Intangible Assets
2020 (excluding the nine months ended September 30, 2020)	$ 1,345
2021	4,732
2022	4,732
2023	4,732
2024	4,732
2025 and thereafter	25,107
Total future amortization expense	$ 45,380

10. Short-Term Borrowings and Long-Term Debt

The following table represents outstanding short-term borrowings and long-term debt at September 30, 2020 and December 31, 2019:

			Carrying Value	
(Dollars in thousands)	Maturity	Principal value at September 30, 2020	September 30, 2020	December 31, 2019
Short-term borrowings:				
Other short-term borrowings	(1)	$ 19,068	$ 19,068	17,430
Total short-term borrowings			$ 19,068	$ 17,430
Long-term debt:				
3.50% Senior Notes	January 29, 2025	$ 350,000	$ 348,257	$ 347,987
3.125% Senior Notes	June 5, 2030	500,000	495,173	—
Total long-term debt			$ 843,430	$ 347,987

(1) Represents cash collateral received from certain counterparties in relation to market value exposures of derivative contracts in our favor.

Interest expense related to short-term borrowings and long-term debt was $7.2 million and $17.9 million for the three and nine months ended September 30, 2020 and $8.1 million and $27.6 million for the three and nine months ended September 30, 2019. The weighted average interest rate associated with our short-term borrowings was 0.08 percent as of September 30, 2020 and 1.55 percent as of as of December 31, 2019.

Short-term Borrowings

We have certain facilities in place to enable us to access short-term borrowings on a secured and unsecured basis. Our secured facilities include collateral pledged to the FHLB of San Francisco and the discount window at the FRB (using both fixed income securities and loans as collateral). Our unsecured facility consists of our uncommitted federal funds lines. As of September 30, 2020, collateral pledged to the FHLB of San Francisco was comprised primarily of fixed income investment securities and loans and had a carrying value of $6.6 billion, of which $5.5 billion was available to support additional borrowings. As of September 30, 2020, collateral pledged to the discount window at the FRB was comprised of fixed income investment securities and had a carrying value of $0.9 billion, all of which was unused and available to support additional borrowings. Our total unused and available borrowing capacity for our uncommitted federal funds lines totaled $1.9 billion at September 30, 2020. Our total unused and available borrowing capacity under our master repurchase agreements with various financial institutions totaled $3.3 billion at September 30, 2020.

3.125% Senior Notes

On June 5, 2020, the Company issued $500 million of 3.125% Senior Notes due in June 2030 ("3.125% Senior Notes"). The 3.125% Senior Notes may be redeemed by us, at our option, at any time prior to March 5, 2030, at a redemption price equal to the full aggregate principal amount plus a “make-whole” premium payment. We received net proceeds from this offering of approximately $495.4 million after deducting underwriting discounts and commissions and issuance costs. The balance of our 3.125% Senior Notes at September 30, 2020 was $495.2 million, which is reflective of $4.4 million of debt issuance costs and a $0.4 million discount.

11. Derivative Financial Instruments

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

Interest Rate Risk

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

We assess hedge effectiveness under ASC 815 on a quarterly basis to ensure all hedges remain highly effective to ensure hedge accounting under ASC 815 can be applied. If the hedging relationship no longer exists or no longer qualifies as a hedge per ASC 815, any amounts remaining as gain or loss in accumulated other comprehensive income are reclassified into earnings in the line item "Loans" as part of interest income, a component of consolidated net income. As of March 31, 2020, all derivatives previously classified as hedges with notional balances totaling $5.0 billion and a net asset fair value of $227.5 million were terminated. As of September 30, 2020, the total unrealized gains on terminated cash flow hedges remaining in AOCI is $195.0 million, $141.0 million net of tax. The unrealized gains will be reclassified into interest income as the underlying forecasted transactions impact earnings through the original maturity of the hedged forecasted transactions. The total remaining term over which the unrealized gains will be reclassified into earnings is approximately five years.

Currency Exchange Risk

We enter into foreign exchange forward contracts to economically reduce our foreign exchange exposure risk associated with the net difference between foreign currency denominated assets and liabilities. We do not designate any foreign exchange forward contracts as derivative instruments that qualify for hedge accounting. Gains or losses from changes in

currency rates on foreign currency denominated instruments are recorded in the line item “other” as part of noninterest income, a component of consolidated net income. We may experience ineffectiveness in the economic hedging relationship, because the instruments are revalued based upon changes in the currency’s spot rate on the principal value, while the forwards are revalued on a discounted cash flow basis. We record forward agreements in gain positions in other assets and loss positions in other liabilities, while net changes in fair value are recorded in the line item “other” as part of noninterest income, a component of consolidated net income.

Other Derivative Instruments

Also included in our derivative instruments are equity warrant assets and client forward and option contracts, and client interest rate contracts. For further description of these other derivative instruments, refer to Note 2 — “Summary of Significant Accounting Policies" under Part II, Item 8 of our 2019 Form 10-K.

Counterparty Credit Risk

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

The total notional or contractual amounts and fair value of our derivative financial instruments at September 30, 2020 and December 31, 2019 were as follows:

	September 30, 2020			December 31, 2019		
		Fair Value			Fair Value	
(Dollars in thousands)	Notional or Contractual Amount	Derivative Assets (1)	Derivative Liabilities (1)	Notional or Contractual Amount	Derivative Assets (1)	Derivative Liabilities (1)
Derivatives designated as hedging instruments:						
Interest rate risks:						
Interest rate swaps	$ —	$ —	$ —	$ 1,915,000	$ 22,676	$ —
Interest rate swaps	—	—	—	3,085,000	—	25,623
Derivatives not designated as hedging instruments:						
Currency exchange risks:						
Foreign exchange forwards	462,765	4,083	—	—	—	—
Foreign exchange forwards	59,992	—	278	300,250	—	2,154
Other derivative instruments:						
Equity warrant assets	256,774	202,184	—	225,893	165,473	—
Client foreign exchange forwards	6,955,487	138,522	—	4,661,517	114,546	—
Client foreign exchange forwards	5,754,213	—	108,959	4,326,059	—	94,745
Client foreign currency options	111,107	2,986	—	154,985	1,308	—
Client foreign currency options	111,107	—	2,986	154,985	—	1,308
Client interest rate derivatives	916,573	79,270	—	1,275,190	28,811	—
Client interest rate derivatives (2)	1,048,715	—	25,558	1,372,914	—	14,154
Total derivatives not designated as hedging instruments		427,045	137,781		310,138	112,361
Total derivatives		$ 427,045	$ 137,781		$ 332,814	$ 137,984

(1) Derivative assets and liabilities are included in "accrued interest receivable and other assets" and "other liabilities", respectively, on our consolidated balance sheets.

(2) The amount reported reflects reductions of approximately $59.2 million and $17.4 million of derivative liabilities at September 30, 2020 and December 31, 2019, respectively, reflecting variation margin treated as settlement of the related derivative fair values for legal and accounting purposes as required by central clearing houses.

A summary of our derivative activity and the related impact on our consolidated statements of income for the three and nine months ended September 30, 2020 and 2019 is as follows:

		Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	**Statement of income location**	**2020**	**2019**	**2020**	**2019**
Derivatives designated as hedging instruments:					
Interest rate risks:					
Amounts reclassified from accumulated other comprehensive income into income	Interest income - loans	$ 16,004	$ (2,713)	$ 33,924	$ (3,224)
Derivatives not designated as hedging instruments:					
Currency exchange risks:					
Gains (losses) on revaluations of internal foreign currency instruments, net	Other noninterest income	$ 17,085	$ (8,724)	$ 20,138	$ (5,183)
(Losses) gains on internal foreign exchange forward contracts, net	Other noninterest income	(19,344)	8,660	(20,010)	4,917
Net (losses) gains associated with internal currency risk		$ (2,259)	$ (64)	$ 128	$ (266)
Other derivative instruments:					
Gains (losses) on revaluations of client foreign currency instruments, net	Other noninterest income	$ 71	$ (2,181)	$ (3,302)	$ (14,793)
Gains on client foreign exchange forward contracts, net	Other noninterest income	1,641	2,167	2,582	15,232
Net gains (losses) associated with client currency risk		$ 1,712	$ (14)	$ (720)	$ 439
Net gains on equity warrant assets	Gains on equity warrant assets, net	$ 53,766	$ 37,561	$ 93,667	$ 107,213
Net gains (losses) on other derivatives	Other noninterest income	$ 31,151	$ (1,123)	$ 26,533	$ (2,619)

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, 2020 and December 31, 2019:

(Dollars in thousands)	Gross Amounts of Recognized Assets	Gross Amounts offset in the Statement of Financial Position	Net Amounts of Assets Presented in the Statement of Financial Position	Gross Amounts Not Offset in the Statement of Financial Position but Subject to Master Netting Arrangements		Net Amount
				Financial Instruments	Cash Collateral Received (1)	
September 30, 2020						
Derivative assets:						
Interest rate swaps	$ —	$ —	$ —	$ —	$ —	$ —
Foreign exchange forwards	142,605	—	142,605	(56,584)	(19,049)	66,972
Foreign currency options	2,986	—	2,986	(2,323)	(19)	644
Client interest rate derivatives	79,270	—	79,270	(79,270)	—	—
Total derivative assets	224,861	—	224,861	(138,177)	(19,068)	67,616
Reverse repurchase, securities borrowing, and similar arrangements	450,164	—	450,164	(450,164)	—	—
Total	$ 675,025	$ —	$ 675,025	$ (588,341)	$ (19,068)	$ 67,616
December 31, 2019						
Derivative assets:						
Interest rate swaps	$ 22,676	$ —	$ 22,676	$ (22,598)	$ —	$ 78
Foreign exchange forwards	114,546	—	114,546	(36,855)	(17,095)	60,596
Foreign currency options	1,308	—	1,308	(848)	(335)	125
Client interest rate derivatives	28,811	—	28,811	(28,811)	—	—
Total derivative assets	167,341	—	167,341	(89,112)	(17,430)	60,799
Reverse repurchase, securities borrowing, and similar arrangements	289,340	—	289,340	(289,340)	—	—
Total	$ 456,681	$ —	$ 456,681	$ (378,452)	$ (17,430)	$ 60,799

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

The following table summarizes our liabilities subject to enforceable master netting arrangements as of September 30, 2020 and December 31, 2019:

(Dollars in thousands)	Gross Amounts of Recognized Liabilities	Gross Amounts offset in the Statement of Financial Position	Net Amounts of Liabilities Presented in the Statement of Financial Position	Gross Amounts Not Offset in the Statement of Financial Position but Subject to Master Netting Arrangements		Net Amount
				Financial Instruments	Cash Collateral Pledged (1)	
September 30, 2020						
Derivative liabilities:						
Interest rate swaps	$ —	$ —	$ —	$ —	$ —	$ —
Foreign exchange forwards	109,237	—	109,237	(49,862)	(12,918)	46,457
Foreign currency options	2,986	—	2,986	(644)	—	2,342
Client interest rate derivatives	25,558	—	25,558	—	(24,898)	660
Total derivative liabilities	137,781	—	137,781	(50,506)	(37,816)	49,459
Repurchase, securities lending, and similar arrangements	—	—	—	—	—	—
Total	$ 137,781	$ —	$ 137,781	$ (50,506)	$ (37,816)	$ 49,459
December 31, 2019						
Derivative liabilities:						
Interest rate swaps	$ 25,623	$ —	$ 25,623	$ (22,676)	$ (2,947)	$ —
Foreign exchange forwards	96,899	—	96,899	(33,314)	(22,030)	41,555
Foreign currency options	1,308	—	1,308	(531)	—	777
Client interest rate derivatives	14,154	—	14,154	—	(13,936)	218
Total derivative liabilities	137,984	—	137,984	(56,521)	(38,913)	42,550
Repurchase, securities lending, and similar arrangements	—	—	—	—	—	—
Total	$ 137,984	$ —	$ 137,984	$ (56,521)	$ (38,913)	$ 42,550

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

12. Noninterest Income

All of the Company's revenue from contracts with customers within the scope of ASC 606 is recognized within noninterest income. Included below is a summary of noninterest income for the three and nine months ended September 30, 2020 and 2019:

(Dollars in thousands)	Three months ended September 30,		Nine months ended September 30,	
	2020	2019	2020	2019
Noninterest income:				
Gains on investment securities, net	$ 189,837	$ 29,849	$ 270,760	$ 106,575
Gains on equity warrant assets, net	53,766	37,561	93,667	107,213
Client investment fees	31,914	46,679	107,192	136,905
Foreign exchange fees	43,881	40,309	127,642	116,863
Credit card fees	22,756	30,158	72,348	86,431
Deposit service charges	22,015	22,482	67,115	65,496
Lending related fees	13,562	11,707	37,851	36,857
Letters of credit and standby letters of credit fees	12,192	10,842	35,155	31,205
Investment banking revenue	92,181	38,516	280,551	137,005
Commissions	16,257	12,275	49,197	40,812
Other	49,222	13,631	76,887	42,773
Total noninterest income	$ 547,583	$ 294,009	$ 1,218,365	$ 908,135

Gains on investment securities, net

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

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

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

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

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

Gains on investment securities are recognized outside of the scope of ASC 606 as it explicitly excludes noninterest income earned from our investment-related activities. A summary of gains and losses on investment securities for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	**2020**	**2019**	**2020**	**2019**
Gains on non-marketable and other equity securities, net	$ 189,837	$ 29,849	$ 209,595	$ 110,480
Gains (losses) on sales of available-for-sale securities, net	—	—	61,165	(3,905)
Total gains on investment securities, net	$ 189,837	$ 29,849	$ 270,760	$ 106,575

Gains on equity warrant assets, net

In connection with negotiating credit facilities and certain other services, we often obtain rights to acquire stock in the form of equity warrant assets in primarily private, venture-backed companies in the technology and life science/healthcare industries. Any changes in fair value from the grant date fair value of equity warrant assets will be recognized as increases or decreases to other assets on our balance sheet and as net gains or losses on equity warrant assets, in noninterest income, a component of consolidated net income. Gains on equity warrant assets are recognized outside of the scope of ASC 606 as it explicitly excludes noninterest income earned from our derivative-related activities. A summary of net gains on equity warrant assets for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2020	2019	2020	2019
Equity warrant assets:				
Gains on exercises, net	$ 23,940	$ 30,047	$ 59,370	$ 90,357
Terminations	(361)	(481)	(1,332)	(2,931)
Changes in fair value, net	30,187	7,995	35,629	19,787
Total net gains on equity warrant assets	$ 53,766	$ 37,561	$ 93,667	$ 107,213

Client investment fees

Client investment fees include fees earned from discretionary investment management services for substantially all clients, managing clients' portfolios based on their investment policies, strategies and objectives and investment advisory fees. Revenue is recognized on a monthly basis upon completion of our performance obligation and consideration is typically received in the subsequent month. Included in our sweep money market fees are Rule 12(b)-1 fees, revenue sharing and customer transactional-based fees. Rule 12(b)-1 fees and revenue sharing are recognized as earned based on client funds that are invested in the period, typically monthly. Transactional based fees are earned and recognized on fixed income securities when the transaction is executed on the clients' behalf. Amounts paid to third-party service providers are predominantly expensed, such that client investment fees are recorded gross of payments made to third parties. A summary of client investment fees by instrument type for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2020	2019	2020	2019
Client investment fees by type:				
Sweep money market fees	$ 18,155	$ 26,202	$ 60,617	$ 79,698
Asset management fees (1)	12,172	7,256	32,905	20,883
Repurchase agreement fees	1,587	13,221	13,670	36,324
Total client investment fees (2)	$ 31,914	$ 46,679	$ 107,192	$ 136,905

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

Foreign exchange fees

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

Forward contract and option premium fees are recognized outside of the scope of ASC 606 as it explicitly excludes noninterest income earned from our derivative-related activities. A summary of foreign exchange fee income by instrument type for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2020	2019	2020	2019
Foreign exchange fees by instrument type:				
Spot contract commissions	$ 38,794	$ 36,836	$ 112,821	$ 106,561
Forward contract commissions	4,613	3,371	14,004	10,144
Option premium fees	474	102	817	158
Total foreign exchange fees	$ 43,881	$ 40,309	$ 127,642	$ 116,863

Credit card fees

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

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

A summary of credit card fees by instrument type for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2020	2019	2020	2019
Credit card fees by instrument type:				
Card interchange fees, net	$ 18,168	$ 24,560	$ 55,257	$ 68,808
Merchant service fees	3,670	3,943	13,727	12,763
Card service fees	918	1,655	3,364	4,860
Total credit card fees	$ 22,756	$ 30,158	$ 72,348	$ 86,431

Deposit service charges

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

Lending related fees

Unused commitment fees, minimum finance fees and unused line fees are recognized as earned on a monthly basis. Fees that qualify for syndication treatment are recognized at the completion of the syndicated loan deal for which the fees were received. Lending related fees are recognized outside of the scope of ASC 606 as it explicitly excludes noninterest income earned from our lending-related activities. A summary of lending related fees by instrument type for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2020	2019	2020	2019
Lending related fees by instrument type:				
Unused commitment fees	$ 9,872	$ 8,339	$ 26,602	$ 25,060
Other	3,690	3,368	11,249	11,797
Total lending related fees	$ 13,562	$ 11,707	$ 37,851	$ 36,857

Letters of credit and standby letters of credit fees

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

Investment banking revenue

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

A summary of investment banking revenue by instrument type for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2020	2019	2020	2019
Investment banking revenue:				
Underwriting fees	$ 85,009	$ 31,016	$ 247,384	$ 109,371
Advisory fees	1,761	5,200	26,170	22,789
Private placements and other	5,411	2,300	6,997	4,845
Total investment banking revenue	$ 92,181	$ 38,516	$ 280,551	$ 137,005

Commissions

Commissions include commissions received from customers for the execution of agency-based brokerage transactions in listed and over-the-counter equities. The execution of each trade order represents a distinct performance obligation and the transaction price is fixed at the point in time or trade order execution. Trade execution is satisfied at the point in time that the customer has control of the asset and as such, fees are recorded on a trade date basis. Commissions are presented in the *"Disaggregation of revenue from contracts with customers"* table below.

Other

Other noninterest income primarily includes income from fund management fees, gains from conversion of convertible debt options and service revenue. Fund management fees are comprised of fees charged directly to our managed funds of funds and direct venture funds. Fund management fees are based upon the contractual terms of the limited partnership agreements and are generally recognized as earned over the specified contract period, which is generally equal to the life of the individual fund. Fund management fees are calculated as a percentage of committed capital and collected in advance and are received quarterly. Fund management fees for certain of our limited partnership agreements are calculated as a percentage of distributions made by the funds and revenue is recorded only at the time of a distribution event. As distribution events are not predetermined for these certain funds, management fees are considered variable and constrained under ASC 606.

Gains from conversion of convertible debt options represent unrealized valuation gains on loan conversion derivative assets, and realized gains from the conversion of debt instruments, convertible into a third party's common stock upon a triggering event such as an IPO. Gains from conversion of convertible debt options are recognized outside of the scope of ASC 606 as it explicitly excludes noninterest income earned from our derivative-related activities.

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

A summary of other noninterest income by instrument type for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	**2020**	**2019**	**2020**	**2019**
Other noninterest income by instrument type:				
Fund management fees	$ 9,669	$ 8,493	$ 26,422	$ 24,292
Net (losses) gains on revaluation of foreign currency instruments, net of foreign exchange forward contracts (1)	(547)	(78)	(592)	173
Gains from conversion of convertible debt options	30,018	—	30,018	—
Other service revenue	10,082	5,216	21,039	18,308
Total other noninterest income	$ 49,222	$ 13,631	$ 76,887	$ 42,773

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

Disaggregation of revenue from contracts with customers

The following tables present our revenues from contracts with customers disaggregated by revenue source and segment for the three and nine months ended September 30, 2020 and 2019:

Three months ended September 30, 2020 (Dollars in thousands)	Global Commercial Bank (2)	SVB Private Bank	SVB Capital (2)	SVB Leerink (2)	Other Items	Total
Revenue from contracts with customers:						
Client investment fees	$ 31,132	$ 782	$ —	$ —	$ —	$ 31,914
Spot contract commissions	38,546	108	—	—	140	38,794
Card interchange fees, gross	29,255	5	—	—	287	29,547
Merchant service fees	3,670	—	—	—	—	3,670
Deposit service charges	21,914	20	—	—	81	22,015
Investment banking revenue	—	—	—	92,181	—	92,181
Commissions	—	—	—	16,257	—	16,257
Fund management fees	—	—	8,239	1,430	—	9,669
Performance fees	—	—	1,613	—	—	1,613
Correspondent bank rebates	1,377	—	—	—	—	1,377
Total revenue from contracts with customers	$ 125,894	$ 915	$ 9,852	$ 109,868	$ 508	$ 247,037
Revenues outside the scope of ASC 606 (1)	21,700	1	50,528	3,783	224,534	300,546
Total noninterest income	$ 147,594	$ 916	$ 60,380	$ 113,651	$ 225,042	$ 547,583

(1) Amounts are accounted for under separate guidance than ASC 606.
(2) Global Commercial Bank's, SVB Capital's and SVB Leerink's components of noninterest income are shown net of noncontrolling interests. Noncontrolling interest is included within "Other Items."

Three months ended September 30, 2019 (Dollars in thousands)	Global Commercial Bank (2)	SVB Private Bank	SVB Capital (2)	SVB Leerink (2)	Other Items	Total
Revenue from contracts with customers:						
Client investment fees	$ 46,171	$ 508	$ —	$ —	$ —	$ 46,679
Spot contract commissions	36,644	89	—	—	103	36,836
Card interchange fees, gross	34,867	—	—	—	181	35,048
Merchant service fees	3,943	—	—	—	—	3,943
Deposit service charges	22,263	36	—	—	183	22,482
Investment banking revenue	—	—	—	38,516	—	38,516
Commissions	—	—	—	12,275	—	12,275
Fund management fees	—	—	7,063	1,430	—	8,493
Correspondent bank rebates	1,633	—	—	—	—	1,633
Total revenue from contracts with customers	$ 145,521	$ 633	$ 7,063	$ 52,221	$ 467	$ 205,905
Revenues outside the scope of ASC 606 (1)	15,508	1	27,892	726	43,977	88,104
Total noninterest income	$ 161,029	$ 634	$ 34,955	$ 52,947	$ 44,444	$ 294,009

(1) Amounts are accounted for under separate guidance than ASC 606.
(2) Global Commercial Bank's and SVB Capital's components of noninterest income are shown net of noncontrolling interests. Noncontrolling interest is included within "Other Items."

Nine months ended September 30, 2020 (Dollars in thousands)	Global Commercial Bank (2)	SVB Private Bank	SVB Capital (2)	SVB Leerink (2)	Other Items	Total
Revenue from contracts with customers:						
Client investment fees	$ 105,176	$ 2,016	$ —	$ —	$ —	$ 107,192
Spot contract commissions	112,086	367	—	—	368	112,821
Card interchange fees, gross	90,909	17	—	—	1,144	92,070
Merchant service fees	13,727	—	—	—	—	13,727
Deposit service charges	66,612	60	—	—	443	67,115
Investment banking revenue	—	—	—	280,551	—	280,551
Commissions	—	—	—	49,197	—	49,197
Fund management fees	—	—	22,132	4,290	—	26,422
Performance fees	—	—	3,601	—	—	3,601
Correspondent bank rebates	4,151	—	—	—	—	4,151
Total revenue from contracts with customers	$ 392,661	$ 2,460	$ 25,733	$ 334,038	$ 1,955	$ 756,847
Revenues outside the scope of ASC 606 (1)	55,241	26	61,015	6,107	339,129	461,518
Total noninterest income	$ 447,902	$ 2,486	$ 86,748	$ 340,145	$ 341,084	$ 1,218,365

(1) Amounts are accounted for under separate guidance than ASC 606.
(2) Global Commercial Bank's, SVB Capital's and SVB Leerink's components of noninterest income are shown net of noncontrolling interests. Noncontrolling interest is included within "Other Items."

Nine months ended September 30, 2019 (Dollars in thousands)	Global Commercial Bank (2)	SVB Private Bank	SVB Capital (2)	SVB Leerink (2)	Other Items	Total
Revenue from contracts with customers:						
Client investment fees	$ 135,551	$ 1,354	$ —	$ —	$ —	$ 136,905
Spot contract commissions	105,877	376	—	—	308	106,561
Card interchange fees, gross	115,468	—	—	—	518	115,986
Merchant service fees	12,764	—	—	—	—	12,764
Deposit service charges	64,806	104	—	—	586	65,496
Investment banking revenue	—	—	—	137,005	—	137,005
Commissions	—	—	—	40,812	—	40,812
Fund management fees	—	—	20,050	4,242	—	24,292
Correspondent bank rebates	4,712	—	—	—	—	4,712
Total revenue from contracts with customers	$ 439,178	$ 1,834	$ 20,050	$ 182,059	$ 1,412	$ 644,533
Revenues outside the scope of ASC 606 (1)	32,314	(5)	79,810	6,005	145,478	263,602
Total noninterest income	$ 471,492	$ 1,829	$ 99,860	$ 188,064	$ 146,890	$ 908,135

(1) Amounts are accounted for under separate guidance than ASC 606.
(2) Global Commercial Bank's, SVB Capital's and SVB Leerink's components of noninterest income are shown net of noncontrolling interests. Noncontrolling interest is included within "Other Items."

The timing of revenue recognition may differ from the timing of cash settlements or invoicing to customers. We record a receivable when revenue is recognized prior to invoicing, and unearned revenue when revenue is recognized subsequent to receipt of consideration. These assets and liabilities are reported on the consolidated balance sheets on a contract-by-contract basis at the end of each reporting period. During the three and nine months ended September 30, 2020 and 2019, changes in our contract assets, contract liabilities and receivables were not material. Additionally, revenues recognized during the three and nine months ended September 30, 2020 and 2019 that were included in the corresponding contract liability balance at the beginning of the periods were not material.

13. Other Noninterest Expense

A summary of other noninterest expense for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2020	2019	2020	2019
Lending and other client related processing costs	$ 7,194	$ 7,502	$ 23,155	$ 21,442
Correspondent bank fees	3,581	3,657	11,400	10,970
Investment banking activities	2,835	1,864	13,633	9,918
Trade order execution costs	2,806	2,615	8,165	7,959
Data processing services	3,984	3,066	10,945	8,624
Telephone	2,342	2,466	6,458	7,629
Dues and publications	1,159	1,055	3,199	3,439
Postage and supplies	538	720	2,117	2,168
Other	13,114	11,161	38,831	32,910
Total other noninterest expense	$ 37,553	$ 34,106	$ 117,903	$ 105,059

14. Segment Reporting

We have four reportable segments for management reporting purposes: Global Commercial Bank, SVB Private Bank, SVB Capital and SVB Leerink. The results of our operating segments are based on our internal management reporting process.

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

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

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

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

- **Global Commercial Bank** is comprised of results from the following:
  - Our **Commercial Bank** products and services are provided by the Bank and its subsidiaries to commercial clients in key innovation markets. The Bank provides solutions to the financial needs of commercial clients through credit, treasury management, foreign exchange, trade finance, and other services. 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 **Global Fund Banking (formerly Private Equity) Division** provides banking products and services primarily to our private equity and venture capital clients.
  - **SVB Wine** provides banking products and services to our premium wine industry clients, including vineyard development loans.
  - **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 and private stock loans, capital call lines of credit and other secured and unsecured lending products, as well as cash and wealth management services. In addition, we provide real estate secured loans to eligible employees through our Employee Home Ownership Program.
- **SVB Capital** is the funds management business of SVB Financial Group, which focuses primarily on venture capital investments. SVB Capital manages funds (primarily venture capital funds) on behalf of third-party limited partners and, on a more limited basis, SVB Financial Group. The SVB Capital family of funds is comprised of direct venture funds that invest in companies and funds of funds that invest in other venture capital funds. SVB Capital generates income for the Company primarily from investment returns (including carried interest allocations) and management fees.
- **SVB Leerink** is an investment bank specializing in the equity and convertible capital markets, mergers and acquisitions, equity research and sales and trading for growth and innovation-minded healthcare and life science companies and operates as a wholly-owned subsidiary of SVB Financial. SVB Leerink provides investment banking services across all subsectors of healthcare including: biotechnology, pharmaceuticals, medical devices, diagnostic and life science tools, healthcare services and digital health. SVB Leerink focuses on two primary lines of business: (i) investment banking focused on providing companies with capital-raising services, financial advice on mergers and acquisitions, sales and trading services and equity research, and (ii) sponsorship of private investment funds.

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

Our segment information for the three and nine months ended September 30, 2020 and 2019 is as follows:

(Dollars in thousands)	Global Commercial Bank (1)	SVB Private Bank	SVB Capital (1)	SVB Leerink (1)	Other Items (2)	Total
Three months ended September 30, 2020						
Net interest income (loss)	$ 512,963	$ 19,145	$ 2	$ 175	$ (4,545)	$ 527,740
Reduction (provision for) credit losses	37,847	14,881	—	—	(710)	52,018
Noninterest income	147,594	916	60,380	113,651	225,042	547,583
Noninterest expense (3)	(258,035)	(12,293)	(11,198)	(77,567)	(131,928)	(491,021)
Income before income tax expense (4)	$ 440,369	$ 22,649	$ 49,184	$ 36,259	$ 87,859	$ 636,320
Total average loans, amortized cost	$ 30,763,715	$ 4,263,324	$ —	$ —	$ 2,291,561	$ 37,318,600
Total average assets (5) (6)	77,802,730	4,297,011	413,882	605,263	5,229,480	88,348,366
Total average deposits	74,825,725	2,163,903	—	—	690,388	77,680,016
Three months ended September 30, 2019						
Net interest income	$ 455,161	$ 12,772	$ 9	$ 277	$ 52,425	$ 520,644
Provision for credit losses	(34,075)	(1,910)	—	—	(551)	(36,536)
Noninterest income	161,029	634	34,955	52,947	44,444	294,009
Noninterest expense (3)	(213,786)	(11,638)	(8,129)	(55,200)	(102,571)	(391,324)
Income (loss) before income tax expense (4)	$ 368,329	$ (142)	$ 26,835	$ (1,976)	$ (6,253)	$ 386,793
Total average loans, amortized cost	$ 25,839,647	$ 3,400,889	$ —	$ —	$ 581,890	$ 29,822,426
Total average assets (5) (6) (8)	58,384,473	3,431,313	396,031	428,848	2,687,083	65,327,748
Total average deposits	55,250,154	1,497,303	—	—	487,512	57,234,969
Nine months ended September 30, 2020						
Net interest income	$ 1,461,768	$ 52,952	$ 28	$ 373	$ 49,683	$ 1,564,804
Provision for credit losses	(200,020)	(44,194)	—	—	(13,729)	(257,943)
Noninterest income	447,902	2,486	86,748	340,145	341,084	1,218,365
Noninterest expense (3)	(724,233)	(32,547)	(28,040)	(248,254)	(337,168)	(1,370,242)
Income (loss) before income tax expense (4)	$ 985,417	$ (21,303)	$ 58,736	$ 92,264	$ 39,870	$ 1,154,984
Total average loans, net of unearned income	$ 30,126,870	$ 4,053,018	$ —	$ —	$ 1,656,039	$ 35,835,927
Total average assets (5) (6)	69,212,733	4,087,786	430,391	514,836	5,514,904	79,760,650
Total average deposits	66,408,359	2,069,196	—	—	688,509	69,166,064
Nine months ended September 30, 2019						
Net interest income	$ 1,360,997	$ 37,200	$ 20	$ 961	$ 163,755	$ 1,562,933
Provision for credit losses	(79,175)	(1,779)	—	—	(8,079)	(89,033)
Noninterest income	471,492	1,829	99,860	188,064	146,890	908,135
Noninterest expense (3)	(617,933)	(30,015)	(21,794)	(177,675)	(293,093)	(1,140,510)
Income before income tax expense (4)	$ 1,135,381	$ 7,235	$ 78,086	$ 11,350	$ 9,473	$ 1,241,525
Total average loans, net of unearned income	$ 25,457,997	$ 3,235,943	$ —	$ —	$ 517,020	$ 29,210,960
Total average assets (5) (6)	54,196,976	3,264,071	382,707	380,290	2,990,088	61,214,132
Total average deposits	51,352,644	1,461,170	—	—	517,530	53,331,344

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

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

(3) The Global Commercial Bank segment includes direct depreciation and amortization of $6.4 million and $5.1 million for the three months ended September 30, 2020 and 2019, respectively, and $17.7 million and $14.8 million for the nine months ended September 30, 2020 and 2019.
(4) The internal reporting model used by management to assess segment performance does not calculate income tax expense by segment. Our effective tax rate is a reasonable approximation of the segment rates.
(5) Total average assets equal the greater of total average assets or the sum of total average liabilities and total average stockholders' equity for each segment to reconcile the results to the consolidated financial statements prepared in conformity with GAAP.
(6) Included in the total average assets for SVB Leerink is goodwill of $137.8 million for the three and nine months ended September 30, 2020 and 2019.

15. 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, 2020 and December 31, 2019:

(Dollars in thousands)	September 30, 2020	December 31, 2019
Loan commitments available for funding: (1)		
Fixed interest rate commitments	$ 2,474,804	$ 2,434,042
Variable interest rate commitments	24,796,923	19,309,317
Total loan commitments available for funding	27,271,727	21,743,359
Commercial and standby letters of credit (2)	3,058,069	2,778,561
Total unfunded credit commitments	$ 30,329,796	$ 24,521,920
Commitments unavailable for funding (3)	$ 2,519,517	$ 3,051,075
Allowance for unfunded credit commitments (4)	101,515	67,656

(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 credit losses 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, 2020. The maximum potential amount of future payments represents the amount that could be remitted under letters of credit if there were a total default by the guaranteed parties, without consideration of possible recoveries under recourse provisions or from the collateral held or pledged.

(Dollars in thousands)	Expires in One Year or Less	Expires After One Year	Total Amount Outstanding	Maximum Amount of Future Payments
Financial standby letters of credit	$ 2,838,280	$ 90,452	$ 2,928,732	$ 2,928,732
Performance standby letters of credit	109,224	18,057	127,281	127,281
Commercial letters of credit	2,056	—	2,056	2,056
Total	$ 2,949,560	$ 108,509	$ 3,058,069	$ 3,058,069

Deferred fees related to financial and performance standby letters of credit were $16.5 million at September 30, 2020 and $17.2 million at December 31, 2019. At September 30, 2020, collateral in the form of cash of $1.7 billion was available to us to reimburse losses, if any, under financial and performance standby letters of credit.

Commitments to Invest in Venture Capital and Private Equity Funds

We make commitments to invest in venture capital and private equity funds, which generally make 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, 2020:

(Dollars in thousands)	SVBFG Capital Commitments	SVBFG Unfunded Commitments	SVBFG Ownership of each Fund (3)
CP I, LP	$ 6,000	$ 270	10.7 %
CP II, LP (1)	1,200	162	5.1
Capital Preferred Return Fund, LP	12,688	—	20.0
Growth Partners, LP	24,670	1,340	33.0
Strategic Investors Fund, LP	15,300	688	12.6
Strategic Investors Fund II, LP	15,000	1,050	8.6
Strategic Investors Fund III, LP	15,000	1,275	5.9
Strategic Investors Fund IV, LP	12,239	2,325	5.0
Strategic Investors Fund V funds	515	131	Various
Other venture capital and private equity fund investments (equity method accounting)	25,197	6,258	Various
Debt funds (equity method accounting)	58,733	240	Various
Other fund investments (2)	278,339	5,614	Various
Total	$ 464,881	$ 19,353	

(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 185 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 investments in “covered funds”. Under revised regulations that became effective on October 1, 2020, venture capital and credit funds that meet certain criteria will no longer be considered covered funds. We believe that, as a result of these changes, we will not be required to sell or otherwise conform certain of our fund investments. See the “Volcker Rule” section under Part I, Item 2 of this report for additional details.

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, 2020:

(Dollars in thousands)	Unfunded Commitments
Strategic Investors Fund, LP	$ 376
Capital Preferred Return Fund, LP	1,517
Growth Partners, LP	2,513
Total	$ 4,406

16. Income Taxes

We are subject to income tax and non-income based taxes by the U.S. federal tax authorities as well as various state and foreign tax authorities. We have identified the U.S. federal and California state jurisdictions as major tax filings. All U.S. federal and California state tax returns remain open to full examination for 2016 and subsequent tax years.

At September 30, 2020, our unrecognized tax benefit was $15.0 million, the recognition of which would reduce our income tax expense by $11.8 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, 2020.

17. Fair Value of Financial Instruments

Fair Value Measurements

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

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

Level 1

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

Level 2

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

U.S. agency debentures: Fair value measurements of U.S. agency debentures are based on the characteristics specific to bonds held, such as issuer name, issuance date, 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.

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

Interest rate derivative and interest rate swap assets and liabilities: Fair value measurements of interest rate derivatives and interest rate swaps are priced considering the coupon rate of the fixed leg of the contract and the variable coupon rate 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.

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

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

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. The valuation techniques are consistent with the market approach, income approach and/or the cost approach used to measure fair value. Below is a summary of the valuation techniques used for each class of Level 3 assets:

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

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

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, 2020:

(Dollars in thousands)	Level 1	Level 2	Level 3	Balance at September 30, 2020
Assets:				
Available-for-sale securities:				
U.S. Treasury securities	$ 4,547,294	$ —	$ —	$ 4,547,294
U.S. agency debentures	—	152,526	—	152,526
Foreign government debt securities	23,449	—	—	23,449
Residential mortgage-backed securities:				
Agency-issued mortgage-backed securities	—	9,770,313	—	9,770,313
Agency-issued collateralized mortgage obligations—fixed rate	—	7,315,973	—	7,315,973
Agency-issued commercial mortgage-backed securities	—	4,094,769	—	4,094,769
Total available-for-sale securities	4,570,743	21,333,581	—	25,904,324
Non-marketable and other equity securities (fair value accounting):				
Non-marketable securities:				
Venture capital and private equity fund investments measured at net asset value	—	—	—	226,526
Venture capital and private equity fund investments not measured at net asset value (1)	—	—	134	134
Other equity securities in public companies	26,205	203,092	—	229,297
Total non-marketable and other equity securities (fair value accounting)	26,205	203,092	134	455,957
Other assets:				
Foreign exchange forward and option contracts	—	145,591	—	145,591
Equity warrant assets	—	9,501	192,683	202,184
Client interest rate derivatives	—	79,270	—	79,270
Total assets	$ 4,596,948	$ 21,771,035	$ 192,817	$ 26,787,326
Liabilities:				
Foreign exchange forward and option contracts	$ —	$ 112,223	$ —	$ 112,223
Client interest rate derivatives	—	25,558	—	25,558
Total liabilities	$ —	$ 137,781	$ —	$ 137,781

(1) Included in Level 3 assets is $120 thousand attributable to noncontrolling interests calculated based on the ownership percentages of the noncontrolling interests.

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

(Dollars in thousands)	Level 1	Level 2	Level 3	Balance at December 31, 2019
Assets:				
Available-for-sale securities:				
U.S. Treasury securities	$ 6,894,010	$ —	$ —	$ 6,894,010
U.S. agency debentures	—	99,547	—	99,547
Foreign government debt securities	9,038	—	—	9,038
Residential mortgage-backed securities:				
Agency-issued mortgage-backed securities	—	4,148,791	—	4,148,791
Agency-issued collateralized mortgage obligations—fixed rate	—	1,538,343	—	1,538,343
Agency-issued commercial mortgage-backed securities	—	1,325,190	—	1,325,190
Total available-for-sale securities	6,903,048	7,111,871	—	14,014,919
Non-marketable and other equity securities (fair value accounting):				
Non-marketable securities:				
Venture capital and private equity fund investments measured at net asset value	—	—	—	265,263
Venture capital and private equity fund investments not measured at net asset value (1)	—	—	134	134
Other equity securities in public companies	17,290	41,910	—	59,200
Total non-marketable and other equity securities (fair value accounting)	17,290	41,910	134	324,597
Other assets:				
Foreign exchange forward and option contracts	—	115,854	—	115,854
Equity warrant assets	—	4,435	161,038	165,473
Interest rate swaps	—	22,676	—	22,676
Client interest rate derivatives	—	28,811	—	28,811
Total assets	$ 6,920,338	$ 7,325,557	$ 161,172	$ 14,672,330
Liabilities:				
Foreign exchange forward and option contracts	$ —	$ 98,207	$ —	$ 98,207
Interest rate swaps	—	25,623	—	25,623
Client interest rate derivatives	—	14,154	—	14,154
Total liabilities	$ —	$ 137,984	$ —	$ 137,984

(1) Included in Level 3 assets is $120 thousand attributable to noncontrolling interests calculated based on the ownership percentages of the noncontrolling interests.

The following table presents additional information about Level 3 assets measured at fair value on a recurring basis for the three and nine months ended September 30, 2020 and 2019:

(Dollars in thousands)	Beginning Balance	Total Net Gains Included in Net Income	Purchases	Sales/Exits	Issuances	Distributions and Other Settlements	Transfers Out of Level 3	Ending Balance
Three months ended September 30, 2020								
Non-marketable and other equity securities (fair value accounting):								
Venture capital and private equity fund investments not measured at net asset value (1)	$ 134	$ —	$ —	$ —	$ —	$ —	$ —	$ 134
Other assets:								
Equity warrant assets (2)	165,225	52,537	—	(28,760)	4,605	—	(924)	192,683
Total assets	$ 165,359	$ 52,537	$ —	$ (28,760)	$ 4,605	$ —	$ (924)	$ 192,817
Three months ended September 30, 2019								
Non-marketable and other equity securities (fair value accounting):								
Venture capital and private equity fund investments not measured at net asset value (1)	$ 441	$ 57	$ —	$ (364)	$ —	$ —	$ —	$ 134
Other assets:								
Equity warrant assets (2)	147,770	39,527	—	(45,270)	4,130	—	(1,116)	145,041
Total assets	$ 148,211	$ 39,584	$ —	$ (45,634)	$ 4,130	$ —	$ (1,116)	$ 145,175
Nine months ended September 30, 2020								
Non-marketable and other equity securities (fair value accounting):								
Venture capital and private equity fund investments not measured at net asset value (1)	$ 134	$ 5	$ —	$ (5)	$ —	$ —	$ —	$ 134
Other assets:								
Equity warrant assets (2)	161,038	91,224	—	(74,110)	15,894	—	(1,363)	192,683
Total assets	$ 161,172	$ 91,229	$ —	$ (74,115)	$ 15,894	$ —	$ (1,363)	$ 192,817
Nine months ended September 30, 2019								
Non-marketable and other equity securities (fair value accounting):								
Venture capital and private equity fund investments not measured at net asset value (1)	$ 1,079	$ 12	$ —	$ (960)	$ —	$ 3	$ —	$ 134
Other assets:								
Equity warrant assets (2)	145,199	105,338	575	(113,143)	11,714	—	(4,642)	145,041
Total assets	$ 146,278	$ 105,350	$ 575	$ (114,103)	$ 11,714	$ 3	$ (4,642)	$ 145,175

(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, 2020 and 2019:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	**2020**	**2019**	**2020**	**2019**
Non-marketable and other equity securities (fair value accounting):				
Venture capital and private equity fund investments not measured at net asset value (1)	$ —	$ 57	$ —	$ 12
Other assets:				
Equity warrant assets (2)	26,360	(727)	33,469	21,041
Total unrealized gains (losses) , net	$ 26,360	$ (670)	$ 33,469	$ 21,053
Unrealized losses attributable to noncontrolling interests (1)	$ —	$ (158)	$ —	$ (199)

(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, 2020 and December 31, 2019. 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**	**Input Range**	**Weighted Average**
September 30, 2020:					
Venture capital and private equity fund investments (fair value accounting)	$ 134	Private company equity pricing	(1)	(1)	(1)
Equity warrant assets (public portfolio)	1,166	Black-Scholes option pricing model	Volatility	45.1% - 56.8%	51.9 %
			Risk-Free interest rate	0.3- 0.7	0.6
			Sales restrictions discount (2)	10.0 - 20.0	15.9
Equity warrant assets (private portfolio)	191,517	Black-Scholes option pricing model	Volatility	23.9 - 56.8	43.6
			Risk-Free interest rate	0.01 - 0.69	0.2
			Marketability discount (3)	22.1	22.1
			Remaining life assumption (4)	45.0	45.0
December 31, 2019:					
Venture capital and private equity fund investments (fair value accounting)	$ 134	Private company equity pricing	(1)	(1)	(1)
Equity warrant assets (public portfolio)	346	Black-Scholes option pricing model	Volatility	39.2% - 54.8%	50.7 %
			Risk-Free interest rate	1.9	1.9
			Sales restrictions discount (2)	10.0 - 20.0	13.6
Equity warrant assets (private portfolio)	160,692	Black-Scholes option pricing model	Volatility	23.6 - 54.8	38.2
			Risk-Free interest rate	0.5 - 1.9	1.6
			Marketability discount (3)	17.5	17.5
			Remaining life assumption (4)	45.0	45.0

(1) In determining the fair value of our venture capital and private equity fund investment portfolio (not measured at net asset value), we evaluate a variety of factors related to each underlying private portfolio company including, but not limited to, actual and forecasted results, cash position, recent or planned transactions and market comparable

companies. Additionally, we have ongoing communication with the portfolio companies and venture capital fund managers, to determine whether there is a material change in fair value. We use company provided valuation reports, if available, to support our valuation assumptions. These factors are specific to each portfolio company and a weighted average or range of values of the unobservable inputs is not meaningful.

(2) We adjust quoted market prices of public companies, which are subject to certain sales restrictions. Sales restriction discounts generally range from 10 percent to 20 percent depending on the duration of the sales restrictions, which typically range from three to six months.

(3) Our marketability discount is applied to all private company warrants to account for a general lack of liquidity due to the private nature of the associated underlying company. The quantitative measure used is based upon various option-pricing models. On a quarterly basis, a sensitivity analysis is performed on our marketability discount.

(4) We adjust the contractual remaining term of private company warrants based on our estimate of the actual remaining life, which we determine by utilizing historical data on terminations and exercises. At September 30, 2020, the weighted average contractual remaining term was 6.2 years, compared to our estimated remaining life of 2.8 years. On a quarterly basis, a sensitivity analysis is performed on our remaining life assumption.

For the three and nine months ended September 30, 2020 and 2019, we did not have any transfers between Level 3 and Level 1. All transfers from Level 3 to Level 2 for the three and nine months ended September 30, 2020 and 2019 were due to the transfer of equity warrant assets from our private portfolio to our public portfolio (see our Level 3 reconciliation above).

Financial Instruments not Carried at Fair Value

FASB guidance over financial instruments requires that we disclose estimated fair values for our financial instruments not carried at fair value. The following fair value hierarchy table presents the estimated fair values of our financial instruments that are not carried at fair value at September 30, 2020 and December 31, 2019:

		Estimated Fair Value			
(Dollars in thousands)	**Carrying Amount**	**Total**	**Level 1**	**Level 2**	**Level 3**
September 30, 2020:					
Financial assets:					
Cash and cash equivalents	$ 15,687,776	$ 15,687,776	$ 15,687,776	$ —	$ —
Held-to-maturity securities	12,982,223	13,612,463	—	13,612,463	—
Non-marketable securities not measured at net asset value	228,564	228,564	—	—	228,564
Non-marketable securities measured at net asset value	293,269	293,269	—	—	—
Net commercial loans	33,552,513	34,091,696	—	—	34,091,696
Net consumer loans	4,348,420	4,418,614	—	—	4,418,614
FHLB and Federal Reserve Bank stock	61,232	61,232	—	—	61,232
Financial liabilities:					
Short-term borrowings	19,068	19,068	—	19,068	—
Non-maturity deposits (1)	84,438,332	84,438,332	84,438,332	—	—
Time deposits	334,687	273,785	—	273,785	—
3.50% Senior Notes	348,257	378,606	—	378,606	—
3.125% Senior Notes	495,173	557,495	—	557,495	—
Off-balance sheet financial assets:					
Commitments to extend credit	—	34,126	—	—	34,126
December 31, 2019:					
Financial assets:					
Cash and cash equivalents	$ 6,781,783	$ 6,781,783	$ 6,781,783	$ —	$ —
Held-to-maturity securities	13,842,946	14,115,272	—	14,115,272	—
Non-marketable securities not measured at net asset value	195,405	195,405	—	—	195,405
Non-marketable securities measured at net asset value	235,351	235,351	—	—	—
Net commercial loans	29,104,532	29,615,176	—	—	29,615,176
Net consumer loans	3,755,180	3,820,804	—	—	3,820,804
FHLB and Federal Reserve Bank stock	60,258	60,258	—	—	60,258
Financial liabilities:					
Short-term borrowings	17,430	17,430	—	17,430	—
Non-maturity deposits (1)	61,569,714	61,569,714	61,569,714	—	—
Time deposits	188,093	187,980	—	187,980	—
3.50% Senior Notes	347,987	366,856	—	366,856	—
Off-balance sheet financial assets:					
Commitments to extend credit	—	27,197	—	—	27,197

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

Investments in Entities that Calculate Net Asset Value Per Share

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

Our investments in debt funds and venture capital and private equity fund investments generally cannot be redeemed. Alternatively, we expect distributions, if any, to be received primarily through IPO and M&A activity of the underlying assets of the fund. Subject to applicable requirements under the Volcker Rule, we do not have any plans to sell any of these fund investments. If we decide to sell these investments in the future, the investee fund's management must approve of the buyer before the sale of the investments can be completed. The fair values of the fund investments have been estimated using the net asset value per share of the investments, adjusted for any differences between our measurement date and the date of the fund investment's net asset value by using the most recently available financial information from the investee general partner, for example June 30th for our September 30th consolidated financial statements, adjusted for any contributions paid, distributions received from the investment, and significant fund transactions or market events during the reporting period.

The following table is a summary of the estimated fair values of these investments and remaining unfunded commitments for each major category of these investments as of September 30, 2020:

(Dollars in thousands)	Carrying Amount	Fair Value	Unfunded Commitments
Non-marketable securities (fair value accounting):			
Venture capital and private equity fund investments (1)	$ 226,524	$ 226,524	$ 9,133
Non-marketable securities (equity method accounting):			
Venture capital and private equity fund investments (2)	274,721	274,721	11,201
Debt funds (2)	6,918	6,918	240
Other investments (2)	11,629	11,629	886
Total	$ 519,792	$ 519,792	$ 21,460

(1) Venture capital and private equity fund investments within non-marketable securities (fair value accounting) include investments made by our managed funds of funds and one of our direct venture funds (consolidated VIEs) and investments in venture capital and private equity fund investments (unconsolidated VIEs). Collectively, these investments in venture capital and private equity funds are primarily in U.S. and global technology and life science/healthcare companies. Included in the fair value and unfunded commitments of fund investments under fair value accounting are $55.0 million and $3.2 million, respectively, attributable to noncontrolling interests. It is estimated that we will receive distributions from the fund investments over the next 10 to 13 years, depending on the age of the funds and any potential extensions of terms of the funds.

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

18. 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.

19. Related Parties

We have no material related party transactions requiring disclosure. In the ordinary course of business, the Bank may extend credit to related parties, including executive officers, directors, principal shareholders and their related interests. Additionally, we provide real estate secured loans to eligible employees through our EHOP. For additional details, see Note 17 — “Employee Compensation and Benefit Plans" under Part II, Item 8 of our 2019 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 credit losses, nonperforming loans, loan growth and client funds;
- The potential effects of the COVID-19 pandemic; 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 COVID-19 pandemic and its effects on the economic and business environments in which we operate;
- The impact of the upcoming U.S. elections on the economic environment, capital markets and regulatory landscape, including monetary, tax and other trade policies;
- The adequacy of our allowance for credit losses and the need to make provisions for credit 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 regulations promulgated by the Board of Governors of the Federal Reserve System (the "Federal Reserve"), and other regulatory requirements;
- The impact of lawsuits and claims, as well as legal or regulatory proceedings;

- The impact of changes in accounting standards and tax laws;
- The levels of equity capital available to our client or portfolio companies;
- The effectiveness of our risk management framework and quantitative models;
- Our ability to maintain or increase our market share, including through successfully implementing our business strategy and undertaking new business initiatives, including through the integration of SVB Leerink; and
- Other factors as discussed in "Risk Factors" under Part I, Item 1A in our 2019 Form 10-K and under Part II, Item 1A of this report.

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 2019 Form 10-K.

Reclassifications

Certain prior period amounts primarily related to the adoption of ASU 2016-13, CECL, have been reclassified to conform to current period presentations.

Management's Overview of Third Quarter 2020 Performance

Our third quarter 2020 performance reflected the resilience of our markets and our ability to execute effectively. We had an outstanding quarter driven by outstanding balance sheet growth, higher core fee income, strong investment banking revenue, outsized gains related to client IPO activity and solid credit from improved model economic scenarios and strong performance in our Private Bank portfolio segment resulting in a reduction of reserves. During the third quarter of 2020, we continued to manage through the COVID-19 pandemic, utilizing our business continuity plans to maintain client service while most of our employees and partners continue to work from home. We continue to support and engage with clients virtually, including the hosting of remote events designed to facilitate our response to the business needs of our clients within the innovation ecosystem. We also continued to successfully administer client support initiatives, such as those which allowed temporary payment deferrals and other relief provided through the PPP. We continue to provide employees extended benefits, as well as practical support for working from home. Additionally, we continue to commit financial support for local, regional and global activities focused on health security, food security and shelter, and small business owner relief during this unprecedented time.

Recent Developments - COVID-19

The current global health crisis created by the COVID-19 pandemic has resulted in unprecedented challenges and volatility in economic, market and business conditions. It has caused significant economic and financial disruptions that have adversely affected, and are likely to continue to adversely affect, our business, financial condition and results of operations. We cannot predict at this time the scope and duration of the pandemic, as COVID-19 has not yet been contained and the number of cases continues to increase in many locations, including in the United States and other international locations in which we operate. Moreover, the impact of COVID-19 on economic, market and business conditions is likely to be exacerbated if uncontained for a prolonged period of time, and even if it is contained, there may be a seasonal or other resurgence of the pandemic as we have seen domestically and internationally. While there have been varying governmental and other responses to slow or control the spread of COVID-19 and to mitigate the adverse impact of COVID-19, such as stay at home orders, restrictions on business activities, economic relief for individuals and businesses, and monetary policy measures, such responses have met varying degrees of success, and it remains uncertain whether these actions will be successful as the pandemic continues.

The global spread of COVID-19 accelerated in March 2020 at which time it was declared a pandemic by the World Health Organization. Since then, we have been focused on our business and human response to the crisis --- managing and operating our business as seamlessly as possible, and supporting our clients, employees and communities as we weather the crisis together.

During this volatile time, we remain focused on our capital and liquidity. We are "well-capitalized," remaining above all applicable regulatory capital requirements. We have a liquid and high-quality balance sheet, with approximately half of our assets as of September 30, 2020 held in cash and marketable securities, primarily agency-backed mortgage securities and U.S. Treasuries. We also have access to other funding sources, as necessary. Moreover, we temporarily paused our stock repurchase program, and the program expired on October 29, 2020. In addition, we have also elected to use a phase-in transitional approach for the estimated impact of CECL on our regulatory capital, as permitted by the 2020 CECL Transition Rule.

The uncertainties of the duration and severity of the effect of COVID-19 on economic, market and business conditions have made it more difficult to forecast our operating results and the macroeconomic conditions to which our business is subject. Some notable negative effects emerged late in the first quarter and continued through the third quarter, as discussed in this Management Discussion and Analysis section, but any longer-term effects or trends remain subject to significant uncertainty. Moreover, we are subject to heightened business, operational (including fraud), market, credit and other risks related to the COVID-19 pandemic, which may have an adverse effect on our business, financial condition and results of operations. (See "Risk Factors" under Part II, Item 1A of this report)

We continue to serve our clients during this difficult time, while managing our credit risk. During the third quarter, we continued to provide special debt relief assistance to support certain clients who are experiencing financial hardships related to the COVID-19 pandemic, including offering certain venture-backed companies, Private Bank, Wine and other clients the opportunity to temporarily defer their scheduled loan principal payments. We continue to engage with our clients to understand client needs, and we may implement additional assistance or other relief to support clients across various sectors and life stages. Additionally, we participated as a lender in the PPP under the CARES Act and the U.K. Coronavirus Business Interruption Loan Scheme ("CBILS") and Coronavirus Large Business Interruption Loan Scheme ("CLBILS"), and may participate in other government relief programs in the U.S. or internationally. These government programs are complex and our participation in any of these programs may lead to governmental, regulatory and other scrutiny, litigation, negative publicity and reputation damage for us and our customers who participate. For example, like many other participating banks in the United States, we have been named in various lawsuits regarding the right to agent fees under the PPP. Overall, these relief

measures, whether our own programs or our participation in government programs, are new programs for us and we may not be successful in implementing or administering the programs as intended. Further, the extent to which these programs are successful in assisting our clients is uncertain. These relief programs are temporary in nature, such as the PPP, which as currently designed, provides one-time relief, and our loan payment deferral programs, which expire during the second half of the year (certain of our programs ended in the third quarter with the remaining ending by year end). Our clients may experience financial difficulties without the continued support from these programs. If these relief measures are not effective, or if they are effective for only a limited period and our clients experience delayed financial hardship, there may be an adverse effect on our revenue and results of operations, including increased provisions in our allowance for credit losses, higher rates of default and increased credit losses in future periods.

We are also prioritizing the safety and well-being of our employees. In March 2020, we activated our business continuity and pandemic plans globally, moving to a work-from-home plan, prohibiting all business travel, postponing or moving online all SVB-hosted events, and enabling remote access to our systems. We have implemented various programs to provide work, life and health-related support for our employees, ranging from expanded time-off, counseling and medical benefits for employees directly impacted by COVID-19, to providing reimbursements and practical support for working from home. In addition, we are also developing a plan for employees to eventually return to work in our offices, which will be subject to a variety of complex considerations. While much of our workforce continues to work from home through the crisis (currently expected until January 2021, subject to further extensions or other changes) and perhaps to some extent beyond the crisis, in the event that we allow an increase in remote working practices even after the pandemic subsides, we will need to continue to provide support to our employees to work effectively in a remote environment, taking into consideration needs relating to technology, physical working conditions, work/life balance, and continued team collaboration.

Moreover, consistent with our tradition of supporting and giving back to our communities, we have also committed $5.5 million to local, regional and global COVID-19 relief activities in various U.S. and international locations where we have offices. This includes corporate contributions to global, national and regional charities, direct community-based giving, and a 3:1 match for employees' donations to relevant causes. We also announced our intention to donate PPP loan origination fees, net of costs incurred, received from the Small Business Administration for COVID-19 relief efforts. We expect to make a donation in the fourth quarter of 2020 in the estimated amount of $20 million, irrespective of when forgiveness amounts are actually received from the SBA.

Although the effects of the pandemic remain uncertain, for the fourth quarter of 2020, we currently expect growth in average on-balance sheet deposits and average loans and lower core fees. While credit metrics have been stable to date, we continue to monitor our portfolio vigilantly, in light of continued economic uncertainty, fading government stimulus and expiring deferral programs. Additionally, volatile equity markets, IPO and M&A activity may impact investment banking and market-sensitive revenues. Even after the pandemic subsides, it is possible that the U.S. and other major economies will continue to experience a prolonged recession, which we expect would materially and adversely affect our business, financial condition, liquidity, capital and results of operations.

A summary of our performance for the three months ended September 30, 2020 (compared to the three months ended September 30, 2019, where applicable) is as follows:

BALANCE SHEET

Assets. $88.3 billion in average total assets (up 35.2%). $96.9 billion in period-end total assets (up 42.0%).

Loans. $37.3 billion in average total loan balances (up 25.1%). $38.4 billion in period-end total loan balances (up 23.7%).

Total Client Funds. (on-balance sheet deposits and off-balance sheet client investment funds). $201.2 billion in average total client fund balances (up 34.1%). $211.6 billion in period-end total client fund balances (up 35.6%).

AFS/HTM Fixed Income Investments. $32.6 billion in average fixed income investment securities (up 29.6%). $38.9 billion in period-end fixed income investment securities (up 42.6%).

EARNINGS

EPS. Earnings per diluted share of $8.47 (up 64.5%).

Net Income. Consolidated net income available to common stockholders of $441.7 million (up 65.3%).

- Net interest income of $527.7 million (up 1.4%).
-Net interest margin of 2.53% (down 81 bps).
-Noninterest income of $547.6 million (up 86.3%), non-GAAP core fee income+ of $146.3 million (down 9.8%) and non-GAAP core fee income plus investment banking revenue and commissions++ of $254.8 million (up 19.6%).
-Noninterest expense of $491.0 million (up 25.5%).

ROE. Return on average equity (annualized) ("ROE") performance of 24.19%.

Operating Efficiency Ratio. Operating efficiency ratio of 45.66% with a non-GAAP core operating efficiency ratio of 56.86%+++.

CAPITAL

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

- CET 1 risk-based capital ratio of 12.31% and 10.75%.
- Tier 1 risk-based capital ratio of 13.25% and 10.75%.
- Total risk-based capital ratio of 14.19% and 11.75%.
- Tier 1 leverage ratio of 8.26% and 6.45%.

CREDIT QUALITY

Credit Quality. Improved model economic scenarios and continued strong Private Bank performance drive reserve release.

- Allowance for credit losses for loans of 1.34% as a percentage of period-end total loans.
- Provision for loans was a net benefit of 0.56% as a percentage of period-end total loans (annualized).
- Net loan charge-offs of 0.26% as a percentage of average total loans (annualized).

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

++ Consists of non-GAAP core fee income plus investment banking revenue and commissions. This is a non-GAAP financial measure. (See the non-GAAP reconciliation under "Results of Operations—Noninterest Income").

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

++++ In March 2020, the federal banking agencies provided transitional relief to banking organizations with respect to the impact of CECL on regulatory capital. Under the 2020 CECL Transition Rule, banking organizations may delay the estimated impact of CECL on regulatory capital for two years, followed by a three-year period to phase out the aggregate capital benefit provided during the initial two-year delay. We have elected to use this five-year transition option. For additional details, see "Capital Resources" within "Consolidated Financial Condition" under Part 1, Item 2 of this report.

A summary of our performance for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands, except per share data, employees and ratios)	2020	2019	% Change	2020	2019	% Change
Income Statement:						
Diluted earnings per share	$ 8.47	$ 5.15	64.5 %	$ 15.46	$ 16.67	(7.3) %
Net income available to common stockholders	441,713	267,281	65.3	802,901	874,000	(8.1)
Net interest income	527,740	520,644	1.4	1,564,804	1,562,933	0.1
Net interest margin	2.53 %	3.34 %	(81) bps	2.79 %	3.60 %	(81) bps
(Reduction) provision for credit losses	$ (52,018)	$ 36,536	(242.4) %	$ 257,943	$ 89,033	189.7 %
Noninterest income	547,583	294,009	86.2	1,218,365	908,135	34.2
Noninterest expense	491,021	391,324	25.5	1,370,242	1,140,510	20.1
Non-GAAP core fee income (1)	146,320	162,177	(9.8)	447,303	473,757	(5.6)
Non-GAAP core fee income, plus investment banking revenue and commissions (1)	254,758	212,968	19.6	777,051	651,574	19.3
Non-GAAP noninterest income, net of noncontrolling interests (1)	519,721	279,441	86.0	1,177,972	871,583	35.2
Non-GAAP noninterest expense, net of noncontrolling interests (2)	490,907	391,179	25.5	1,369,858	1,139,818	20.2
Balance Sheet:						
Average available-for-sale securities	$ 20,026,864	$ 10,600,449	88.9 %	$ 15,475,686	$ 8,572,314	80.5 %
Average held-to-maturity securities	12,553,196	14,534,505	(13.6)	13,054,393	14,891,158	(12.3)
Average loans, amortized cost	37,318,600	29,822,426	25.1	35,835,927	29,210,960	22.7
Average noninterest-bearing demand deposits	51,543,903	39,146,184	31.7	46,341,335	38,498,971	20.4
Average interest-bearing deposits	26,136,113	18,088,785	44.5	22,824,729	14,832,373	53.9
Average total deposits	77,680,016	57,234,969	35.7	69,166,064	53,331,344	29.7
Earnings Ratios:						
Return on average assets (annualized) (3)	1.99 %	1.62 %	22.8 %	1.34 %	1.91 %	(29.8) %
Return on average SVBFG stockholders' equity (annualized) (4)	24.19	18.27	32.4	15.56	21.16	(26.5)
Asset Quality Ratios:						
Allowance for credit losses for loans as a % of total period-end loans (5)	1.34 %	0.97 %	37 bps	1.34 %	0.97 %	37 bps
Allowance for credit losses for performing loans as a % of total performing loans (5)	1.17	0.81	36	1.17	0.81	36
Gross loan charge-offs as a % of average total loans (annualized) (5)	0.30	0.49	(19)	0.30	0.33	(3)
Net loan charge-offs as a % of average total loans (annualized) (5)	0.26	0.44	(18)	0.24	0.26	(2)
Capital Ratios:						
SVBFG CET 1 risk-based capital ratio	12.31 %	12.71 %	(40) bps	12.31 %	12.71 %	(40) bps
SVBFG tier 1 risk-based capital ratio	13.25	12.86	39	13.25	12.86	39
SVBFG total risk-based capital ratio	14.19	13.70	49	14.19	13.70	49
SVBFG tier 1 leverage ratio	8.26	8.64	(38)	8.26	8.64	(38)
SVBFG tangible common equity to tangible assets (6)	7.52	8.38	(86)	7.52	8.38	(86)
SVBFG tangible common equity to risk-weighted assets (6)	13.28	13.04	24	13.28	13.04	24
Bank CET 1 risk-based capital ratio	10.75	11.48	(73)	10.75	11.48	(73)
Bank tier 1 risk-based capital ratio	10.75	11.48	(73)	10.75	11.48	(73)
Bank total risk-based capital ratio	11.75	12.36	(61)	11.75	12.36	(61)
Bank tier 1 leverage ratio	6.45	7.48	(103)	6.45	7.48	(103)
Bank tangible common equity to tangible assets (6)	6.42	7.36	(94)	6.42	7.36	(94)
Bank tangible common equity to risk-weighted assets (6)	11.79	11.82	(3)	11.79	11.82	(3)
Other Ratios:						
Operating efficiency ratio (7)	45.66 %	48.04 %	(5.0) %	49.23 %	46.15 %	6.7 %
Non-GAAP core operating efficiency ratio (2)	56.86	48.05	18.3	53.41	46.09	15.9
Total costs of deposits (annualized) (8)	0.04	0.38	(89.5)	0.10	0.33	(69.7)
Book value per common share (9)	$ 143.91	$ 114.26	25.9	$ 143.91	$ 114.26	25.9
Other Statistics:						
Average full-time equivalent employees	4,216	3,413	23.5 %	3,914	3,309	18.3 %
Period-end full-time equivalent employees	4,336	3,460	25.3	4,336	3,460	25.3

(1) See “Results of Operations–Noninterest Income” for a description and reconciliation of non-GAAP core fee income and non-GAAP core fee income plus investment banking revenue and commissions.
(2) See “Results of Operations–Noninterest Expense” for a description and reconciliation of non-GAAP noninterest expense and non-GAAP core operating efficiency ratio.
(3) Ratio represents annualized consolidated net income available to common stockholders divided by quarterly average assets.
(4) Ratio represents annualized consolidated net income available to common stockholders divided by quarterly average SVBFG stockholders’ equity.
(5) For the three and nine months ended September 30, 2020, the ratios are calculated using the amortized cost basis for total loans as a result of the adoption of CECL. Prior period ratios were calculated using total gross loans in accordance with previous methodology.
(6) 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.
(7) The operating efficiency ratio is calculated by dividing total noninterest expense by total net interest income plus noninterest income.
(8) Ratio represents annualized total cost of deposits and is calculated by dividing interest expense from deposits by average total deposits.
(9) Book value per common share is calculated by dividing total SVBFG common 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.

Except as set forth below, there have been no significant changes during the nine months ended September 30, 2020 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 2019 Form 10-K.

We disclose our method and approach for the allowance for credit losses for loans, unfunded credit commitments and HTM securities critical accounting policy in Note 1 - “Basis of Presentation” of the “Notes to Interim Consolidated Financial Statements” under Part I, Item 1 of this report.

Allowance for Credit Losses

We consider this accounting policy to be critical as estimation of expected credit losses involves material management estimates and is susceptible to significant changes in the near-term. Determining the allowance for credit losses for loans, unfunded credit commitments and HTM securities requires us to make forecasts that are highly uncertain and require a high degree of judgment. A committee comprised of senior management evaluates the adequacy of the allowance for credit losses for loans, which includes review of loan portfolio segmentation, quantitative models, internal and external data inputs, economic forecasts, credit risk ratings and qualitative adjustments.

Expected Credit Losses Estimate for Loans

The methodology for estimating the amount of ECL reported in the allowance for credit losses is the sum of two main components: (1) ECL assessed on a collective basis for pools of loans that share similar risk characteristics which includes a qualitative adjustment based on our assessment of the risks that may lead to a future loan loss experience different from our historical loan loss experience and (2) ECL assessed for individual loans that do not share similar risk characteristics with other loans.

We derive an estimated ECL assumption from a non-discounted cash flow approach based on our portfolio segments discussed above. This approach incorporates a calculation of three predictive metrics: (1) probability of default ("PD"), (2) loss given default ("LGD") and (3) exposure at default ("EAD"), over the estimated life of the exposure. PD and LGD assumptions are developed based on quantitative models and inherent risk of credit loss, both of which involve significant judgment. Renewals and extensions within our control are not considered in the estimated contractual term of a loan. However, we include potential extensions if management has a reasonable expectation that we will execute a TDR with the borrower. The quantitative models are based on historical credit loss experience, adjusted for probability-weighted economic scenarios. These scenarios are used to support a reasonable and supportable forecast period of three-years for all portfolio segments. To the extent the remaining contractual lives of loans in the portfolio extend beyond this three-year period, we revert to historical averages using an autoregressive model of mean reversion that will continue to gradually trend towards the mean historical loss over the remaining contractual lives, adjusted for prepayments. The macroeconomic scenarios are reviewed on a quarterly basis.

We also apply a qualitative factor adjustment to the results obtained through our quantitative ECL models to consider model imprecision, emerging risk assessments, trends and other subjective factors that may not be adequately represented in the quantitative ECL models. These adjustments reflect our assessment of the extent that current conditions and reasonable and supportable forecasts differ from conditions that existed during the period over which historical information was evaluated. These adjustments are aggregated to become our qualitative allocation. Based on our qualitative assessment and prediction or estimate of changing risks in the lending environment, the qualitative allocation may vary significantly from period to period. Refer to Note 1 - "Basis of Presentation" of the "Notes to Interim Consolidated Financial Statements" under Part I, Item I of this report for a summary of the factors we consider for its qualitative adjustments as part of our estimate of the changing risks in the lending environment.

We monitor our loan pools to ensure all assets therein continue to share similar risk characteristics with other financial assets inside the pool. Changes in credit risk, borrower circumstances, or the recognition of write-offs may indicate that a loan's risk profile has changed, and the asset should be removed from its current pool. For a loan that does not share risk characteristics with other loans, expected credit loss is measured based on the net realizable value, that is, the difference between the discounted value of the expected future cash flows and the amortized cost basis of the loan. When a loan is collateral-dependent and the repayment is expected to be provided substantially through the operation or sale of the collateral, the ECL is measured as the difference between the amortized cost basis of the loan and the fair value of the collateral. The fair value of the collateral will be determined by the most recent appraisal, as adjusted to reflect a reasonable marketing period for the sale of the asset(s) and an estimate of reasonable selling expenses. Collateral-dependent loans will have independent appraisals completed and accepted at least annually.

Expected Credit Losses Estimate for Unfunded Credit Commitments

We maintain a separate allowance for credit losses for unfunded credit commitments which is included in other liabilities and the related ECL in our provision for credit losses. We estimate the amount of expected losses by using historical trends to calculate a probability of an unfunded credit commitment being funded and derive historical lifetime expected loss factors for each portfolio segment similar to our funded loan ECL. The collectively assessed ECL for unfunded credit commitments also includes the same qualitative allocations applied for our funded loan ECL. For unfunded credit commitments related to loans that do not share similar risk characteristics with other loans, where applicable, a separate estimate of ECL will be included in our total allowance for credit losses on unfunded credit commitments. Loan commitments that are determined to be unconditionally cancellable by the Bank do not require an allowance for credit losses.

Expected Credit Losses Estimate for Held-to-Maturity Investments

We measure ECL on held-to-maturity securities on a collective basis by major security type and standard credit rating. Our held-to-maturity securities portfolio, with the exception of our municipal bond portfolio, are either explicitly or implicitly guaranteed by the U.S. government, are highly rated by major rating agencies and have a long history of no credit losses. With respect to these securities, we consider the risk of credit loss to be zero and, therefore, we do not record an ECL. The estimate of ECL on our municipal bond portfolio considers historical credit loss information and severity of loss in the event of default and leverages external data adjusted for current conditions. A reasonable and supportable forecast period of one year is applied to our municipal bond portfolio, with immediate reversion to long-term average historical loss rates when remaining contractual lives of securities exceed one year.

Recent Accounting Pronouncements

In December 2019, the FASB issued Accounting Standards Update No. 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes which is part of the FASB's initiative to reduce cost and complexity related to accounting for income taxes. The ASU eliminates certain exceptions to the general principles of ASC 740, Income Taxes, and simplifies income tax accounting in several areas. The amendments are effective for fiscal years (and interim periods within those fiscal years) beginning after December 15, 2020, with early adoption permitted. The ASU allows entities to adopt this provision on a retrospective basis for all periods presented or a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption. We do not anticipate a material impact from this ASU on our financial position, results of operations, cash flows and disclosures.

In March 2020, the FASB issued a new Accounting Standard Update (ASU No. 2020-04, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting). This ASU provides temporary optional expedients and exceptions to GAAP guidance on contract modifications and hedge accounting to ease the financial reporting burdens of the expected market transition from LIBOR and other interbank offered rates to alternative reference rates, such as SOFR. For instance, entities can (1) elect not to apply certain modification accounting requirements to contracts affected by reference rate reform, if certain criteria are met. An entity that makes this election would not have to remeasure the contracts at the modification date or reassess a previous accounting determination; (2) elect various optional expedients that

would allow them to continue applying hedge accounting for hedging relationships affected by reference rate reform, if certain criteria are met; and (3) make a one-time election to sell and/or reclassify held-to-maturity debt securities that reference an interest rate affected by reference rate reform. This guidance became effective on March 12, 2020 and an entity may elect to prospectively apply each category of exemption independently, either in the interim period that includes March 12, 2020, or in a subsequent period through December 31, 2022. We have implemented a process to assess the population of contracts that will be impacted by this ASU and to evaluate expedients we will use and when we might apply them. We are currently evaluating the impact this guidance will have on our financial position, results of operations, cash flows and disclosures.

Results of Operations

Net Interest Income and Margin (Fully Taxable Equivalent Basis)

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

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

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

	2020 Compared to 2019			2020 Compared to 2019		
	Three months ended September 30, increase (decrease) due to change in			Nine months ended September 30, increase (decrease) due to change in		
(Dollars in thousands)	Volume	Rate	Total	Volume	Rate	Total
Interest income:						
Federal Reserve deposits, federal funds sold, securities purchased under agreements to resell and other short-term investment securities	$ 1,306	$ (27,456)	$ (26,150)	$ 10,986	$ (62,690)	$ (51,704)
Fixed income investment portfolio (taxable)	23,710	(16,849)	6,861	57,830	(16,149)	41,681
Fixed income investment portfolio (non-taxable)	5,452	(656)	4,796	13,220	(1,562)	11,658
Loans, amortized cost	73,886	(99,151)	(25,265)	206,671	(292,478)	(85,807)
Increase (decrease) in interest income, net	104,354	(144,112)	(39,758)	288,707	(372,879)	(84,172)
Interest expense:						
Interest bearing checking and savings accounts	2,705	231	2,936	3,792	686	4,478
Money market deposits	935	(45,510)	(44,575)	12,998	(84,069)	(71,071)
Money market deposits in foreign offices	12	(3)	9	34	(6)	28
Time deposits	270	(401)	(131)	755	(310)	445
Sweep deposits in foreign offices	(14)	(5,113)	(5,127)	167	(12,900)	(12,733)
Total increase (decrease) in deposits expense	3,908	(50,796)	(46,888)	17,746	(96,599)	(78,853)
Short-term borrowings	—	(115)	(115)	2,147	(2,356)	(209)
3.125% Senior Notes	4,012	—	4,012	5,171	—	5,171
3.50% Senior Notes	3	—	3	10	—	10
5.375% Senior Notes	(4,873)	—	(4,873)	(14,611)	—	(14,611)
Total decrease in borrowings expense	(858)	(115)	(973)	(7,283)	(2,356)	(9,639)
Increase (decrease) in interest expense, net	3,050	(50,911)	(47,861)	10,463	(98,955)	(88,492)
Increase (decrease) in net interest income	$ 101,304	$ (93,201)	$ 8,103	$ 278,244	$ (273,924)	$ 4,320

Net Interest Income (Fully Taxable Equivalent Basis)

Three months ended September 30, 2020 and 2019

Net interest income increased by $8.1 million to $531.7 million for the three months ended September 30, 2020, compared to $523.6 million for the comparable 2019 period. Overall, our net interest income increased primarily from an increase in interest earned on interest earning assets from average growth in our fixed income securities of $7.4 billion and loan balances of $7.5 billion, driven by growth in our deposit balances of $20.4 billion. In addition, the increase was reflective of decreases in interest paid on deposits due to market interest rate decreases. These increases were offset by lower cash and cash equivalents, investment and loan yields reflective of the three 25 basis point Federal Funds rate decreases in the latter half of 2019 as well as the aggregate 150 basis point decrease in March 2020.

The main factors affecting interest income and interest expense for the three months ended September 30, 2020, compared to the comparable 2019 period are discussed below:

- *Interest income* for the three months ended September 30, 2020 decreased by $39.8 million due primarily to:
  - A $26.2 million decrease in interest income from our interest earning cash and short-term investment securities. The decrease was due primarily to the decrease in Federal Funds rates as discussed above.
  - A $25.3 million decrease in interest income on loans to $369.0 million for the three months ended September 30, 2020, compared to $394.2 million for the comparable 2019 period. The decrease was reflective of a decrease in the overall loan yields of 131 basis points to 3.93 percent from 5.24 percent partially offset by an increase in average loan balances of $7.5 billion. Gross loan yields, excluding loan interest recoveries and loan fees, decreased 131 basis points to 3.41 percent from 4.72 percent, reflective primarily of the impact of the decreases in Federal Funds rates as discussed above, partially offset by an increase reflective of the impact of the reclassification of unrealized gains on interest rate swap cash flow hedges that were terminated in the first quarter of 2020 and effective loan floors, partially offset by
  - An $11.7 million increase in interest income from our fixed income investment securities due primarily to the increase of $7.4 billion in average fixed income investment securities. The increase in interest income from growth of our average fixed income investment securities was partially offset by declines in yields earned on these investments reflective of the lower interest rate market environment.
- *Interest expense* for the three months ended September 30, 2020 decreased by $47.9 million due primarily to:
  - A $46.9 million decrease in interest expense on deposits due primarily to a decrease in interest paid on our interest-bearing money market deposits due to the decreases in market rates, and
  - A $1.0 million decrease in interest expense on borrowings due primarily to the extinguishment of our 5.375% Senior Notes in December 2019, partially offset by interest expense on our 3.125% Senior Notes issued in June 2020.

Nine months ended September 30, 2020 and 2019

The main factors affecting interest income and interest expense for the nine months ended September 30, 2020, compared to the comparable 2019 period are discussed below:

- *Interest income* for the nine months ended September 30, 2020 decreased by $84.2 million due primarily to:
  - A $85.8 million decrease in interest income on loans to $1.1 billion for the nine months ended September 30, 2020, compared to $1.2 billion for the comparable 2019 period. The decrease was reflective of a decrease in the overall loan yields of 134 basis points to 4.16 percent from 5.50 percent partially offset by an increase in average loan balances of $6.6 billion. Gross loan yields, excluding loan interest recoveries and loan fees, decreased 129 basis points to 3.66 percent from 4.95 percent, reflective primarily of the impact of the decreases in Federal Funds rates as discussed above, partially offset by an increase reflective of the impact of the reclassification of unrealized gains on interest rate swap cash flow hedges that were terminated in the first quarter of 2020 and effective loan floors, and
  - A $51.7 million decrease in interest income from our interest earning cash and short-term investment securities. The decrease was due primarily to the decrease in Federal Funds interest rates as discussed above, partially offset by growth in average balances of $5.3 billion.

These decreases were offset by the following:

- A $53.3 million increase in interest income from our fixed income investment securities. The increase was due primarily to the increase of $5.1 billion in average fixed income investment securities, partially offset by declines in yields earned on these investments reflective of the lower interest rate market environment.

- *Interest expense* for the nine months ended September 30, 2020 decreased by $88.5 million primarily due to:
  - A $78.9 million decrease in interest expense on deposits due primarily to a decrease in interest paid on our interest-bearing money market and on-balance sheet sweep deposits reflective of the decreases in market rates. These decreases were partially offset by interest income earned from $5.8 billion of growth in average balances for our interest-bearing money markets deposits.
  - A $9.6 million decrease in interest expense on borrowings due primarily to the extinguishment of our 5.375% Senior Notes, partially offset by interest expense for our 3.125% Senior Notes issued towards the end of the second quarter of 2020.

Net Interest Margin (Fully Taxable Equivalent Basis)

Three months ended September 30, 2020 and 2019

- Our net interest margin decreased by 81 basis points to 2.53 percent for the three months ended September 30, 2020, compared to 3.34 percent for the comparable 2019 period. The lower margin for the three months ended September 30, 2020 was due primarily to a decrease in yields on loans reflective of the Federal Funds rate decreases as discussed above, as well as a shift in the mix of the growth in our interest-earning assets to lower-yielding short-term investment securities portfolio relative to the growth in our loan portfolio. The decrease in our net interest margin was partially offset by increases from our interest rate swap cash flow hedges which were terminated in the first quarter of 2020 and effective loan floors. Average loans represented 44.6 percent of average interest earnings assets for the three months ended September 30, 2020, compared to 48.0 percent for the comparable 2019 period.

Nine months ended September 30, 2020 and 2019

- Our net interest margin decreased by 81 basis points to 2.79 percent for the nine months ended September 30, 2020, compared to 3.60 percent for the comparable 2019 period. The lower margin for the nine months ended September 30, 2020 was reflective primarily of the decreases in the Federal Funds as discussed above, as well as a shift in the mix of the growth in our interest-earning assets to lower-yielding short-term investment securities portfolio relative to the growth in our loan portfolio, partially offset by increases from our interest rate swap cash flow hedges which were terminated in the first quarter of 2020 and effective loan floors. Average loans represented 47.5 percent of year-to-date average interest earnings assets, compared to 50.0 percent for the comparable 2019 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, preferred stock, 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, 2020 and 2019:

Average Balances, Rates and Yields for the Three Months Ended September 30, 2020 and 2019

	Three months ended September 30,					
	2020			2019		
(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)	$ 13,817,353	$ 2,717	0.08 %	$ 7,193,195	$ 28,867	1.59 %
Investment securities: (2)						
Available-for-sale securities:						
Taxable	20,026,864	87,792	1.74	10,600,449	62,121	2.32
Held-to-maturity securities:						
Taxable	10,286,332	68,725	2.66	12,922,438	87,535	2.69
Non-taxable (3)	2,266,864	18,876	3.31	1,612,067	14,080	3.47
Total loans, amortized cost (4) (5)	37,318,600	368,981	3.93	29,822,426	394,246	5.24
Total interest-earning assets	83,716,013	547,091	2.60	62,150,575	586,849	3.74
Cash and due from banks	1,162,156			590,391		
Allowance for credit losses for loans	(610,212)			(308,609)		
Other assets (6)	4,080,409			2,895,391		
Total assets	$ 88,348,366			$ 65,327,748		
Funding sources:						
Interest-bearing liabilities:						
Interest bearing checking and savings accounts	$ 4,297,874	$ 3,038	0.28 %	$ 470,601	$ 102	0.09 %
Money market deposits	19,829,441	4,594	0.09	15,805,507	49,169	1.23
Money market deposits in foreign offices	261,903	21	0.03	115,590	12	0.04
Time deposits	380,560	459	0.48	157,218	590	1.49
Sweep deposits in foreign offices	1,366,335	106	0.03	1,539,869	5,233	1.35
Total interest-bearing deposits	26,136,113	8,218	0.13	18,088,785	55,106	1.21
Short-term borrowings	15,335	4	0.10	22,045	119	2.14
3.125% Senior Notes	495,095	4,012	3.22	—	—	—
3.50% Senior Notes	348,197	3,153	3.60	347,841	3,150	3.59
5.375% Senior Notes	—	—	—	349,216	4,873	5.54
Total interest-bearing liabilities	26,994,740	15,387	0.23	18,807,887	63,248	1.33
Portion of noninterest-bearing funding sources	56,721,273			43,342,688		
Total funding sources	83,716,013	15,387	0.07	62,150,575	63,248	0.40
Noninterest-bearing funding sources:						
Demand deposits	51,543,903			39,146,184		
Other liabilities	2,055,599			1,417,659		
Preferred stock	340,138			—		
SVBFG common stockholders' equity	7,265,863			5,802,907		
Noncontrolling interests	148,123			153,111		
Portion used to fund interest-earning assets	(56,721,273)			(43,342,688)		
Total liabilities, noncontrolling interest, and SVBFG stockholders' equity	$ 88,348,366			$ 65,327,748		
Net interest income and margin		$ 531,704	2.53 %		$ 523,601	3.34 %
Total deposits	$ 77,680,016			$ 57,234,969		
Reconciliation to reported net interest income:						
Adjustments for taxable equivalent basis		(3,964)			(2,957)	
Net interest income, as reported		$ 527,740			$ 520,644	

(1) Includes average interest-earning deposits in other financial institutions of $1.0 billion and $1.1 billion for the three months ended September 30, 2020 and 2019, respectively. For the three months ended September 30, 2020 and 2019, balances also include $11.3 billion and $5.1 billion, respectively, deposited at the FRB, earning interest at the Federal Funds target rate.

(2) Yields on interest-earning investment securities do not give effect to changes in fair value that are reflected in other comprehensive income.

(3) Interest income on non-taxable investment securities is presented on a fully taxable equivalent basis using the federal statutory tax rate of 21.0 percent for all periods presented.

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

(5) Interest income includes loan fees of $49.5 million and $39.4 million for the three months ended September 30, 2020 and 2019, respectively.

(6) Average investment securities of $2.1 billion and $1.2 billion for the three months ended September 30, 2020 and 2019, respectively, were classified as other assets as they were noninterest-earning assets. These investments primarily consisted of non-marketable and other equity securities.

Average Balances, Rates and Yields for the Nine Months Ended September 30, 2020 and 2019

	Nine months ended September 30,					
	2020			2019		
(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)	$ 11,025,519	$ 22,743	0.28 %	$ 5,696,501	$ 74,447	1.75 %
Investment securities: (2)						
Available-for-sale securities:						
Taxable	15,475,686	234,066	2.02	8,572,314	142,891	2.23
Held-to-maturity securities:						
Taxable	10,947,145	218,383	2.66	13,305,424	267,877	2.69
Non-taxable (3)	2,107,248	53,418	3.39	1,585,734	41,760	3.52
Total loans, amortized cost (4) (5)	35,835,927	1,116,660	4.16	29,210,960	1,202,467	5.50
Total interest-earning assets	75,391,525	1,645,270	2.91	58,370,933	1,729,442	3.96
Cash and due from banks	952,118			553,523		
Allowance for credit losses for loans	(499,962)			(303,154)		
Other assets (6)	3,916,969			2,592,830		
Total assets	$ 79,760,650			$ 61,214,132		
Funding sources:						
Interest-bearing liabilities:						
Interest bearing checking and savings accounts	$ 2,347,019	$ 4,796	0.27 %	$ 491,663	$ 318	0.09 %
Money market deposits	18,330,106	41,178	0.30	12,540,843	112,249	1.20
Money market deposits in foreign offices	272,940	71	0.03	142,053	43	0.04
Time deposits	244,099	1,235	0.68	94,934	790	1.11
Sweep deposits in foreign offices	1,630,565	4,030	0.33	1,562,880	16,763	1.43
Total interest-bearing deposits	22,824,729	51,310	0.30	14,832,373	130,163	1.17
Short-term borrowings	532,549	3,310	0.83	186,930	3,519	2.52
3.125% Senior Notes	213,234	5,171	3.24	—	—	—
3.50% Senior Notes	348,108	9,457	3.63	347,756	9,447	3.63
5.375% Senior Notes	—	—	—	349,050	14,611	5.60
Total interest-bearing liabilities	23,918,620	69,248	0.39	15,716,109	157,740	1.34
Portion of noninterest-bearing funding sources	51,472,905			42,654,824		
Total funding sources	75,391,525	69,248	0.12	58,370,933	157,740	0.36
Noninterest-bearing funding sources:						
Demand deposits	46,341,335			38,498,971		
Other liabilities	2,118,690			1,327,040		
Preferred stock	340,148			—		
SVBFG common stockholders' equity	6,892,301			5,523,196		
Noncontrolling interests	149,556			148,816		
Portion used to fund interest-earning assets	(51,472,905)			(42,654,824)		
Total liabilities, noncontrolling interest, and SVBFG stockholders' equity	$ 79,760,650			$ 61,214,132		
Net interest income and margin		$ 1,576,022	2.79 %		$ 1,571,702	3.60 %
Total deposits	$ 69,166,064			$ 53,331,344		
Reconciliation to reported net interest income:						
Adjustments for taxable equivalent basis		(11,218)			(8,769)	
Net interest income, as reported		$ 1,564,804			$ 1,562,933	

(1) Includes average interest-earning deposits in other financial institutions of $0.9 billion and $0.9 billion for the nine months ended September 30, 2020 and 2019, respectively. The balance also includes $8.9 billion and $3.9 billion deposited at the FRB, earning interest at the Federal Funds target rate for the nine months ended September 30, 2020 and 2019, 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 tax rate of 21.0 percent for all periods presented.
(4) Nonaccrual loans are reflected in the average balances of loans.
(5) Interest income includes loan fees of $135.8 million and $120.2 million for the nine months ended September 30, 2020 and 2019, respectively.
(6) Average investment securities of $1.9 billion and $1.1 billion for the nine months ended September 30, 2020 and 2019, respectively, were classified as other assets as they were noninterest-earning assets. These investments consisted primarily of non-marketable and other equity securities.

(Reduction) Provision for Credit Losses

The (reduction) provision for credit losses is the combination of (i) the provision for loans, (ii) the provision for unfunded credit commitments and (iii) the provision for HTM securities. Our (reduction) 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 credit losses for loans, unfunded credit commitments and HTM securities for the three and nine months ended September 30, 2020 and 2019:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands, except ratios)	**2020**	**2019**	**2020**	**2019**
Allowance for credit losses for loans, beginning balance	$ 589,828	$ 301,888	$ 304,924	$ 280,903
Day one impact of adopting ASC 326	—	—	25,464	—
(Reduction) provision for loans	(54,106)	35,985	246,694	80,954
Gross loan charge-offs	(28,449)	(36,820)	(80,400)	(72,255)
Loan recoveries	4,354	3,888	16,182	15,133
Foreign currency translation adjustments	1,331	(531)	94	(325)
Allowance for credit losses for loans, ending balance	$ 512,958	$ 304,410	$ 512,958	$ 304,410
Allowance for credit losses for unfunded credit commitments, beginning balance	99,294	62,664	67,656	55,183
Day one impact of adopting ASC 326	—	—	22,826	—
Provision for unfunded credit commitments	2,019	551	11,132	8,079
Foreign currency translation adjustments	202	(107)	(99)	(154)
Allowance for credit losses for unfunded credit commitments, ending balance (1)	$ 101,515	$ 63,108	$ 101,515	$ 63,108
Allowance for credit losses for HTM securities, beginning balance	222	—	—	—
Day one impact of adopting ASC 326	—	—	174	—
Provision for HTM securities	69	—	117	—
Allowance for credit losses for HTM securities, ending balance (2)	$ 291	$ —	$ 291	$ —
Ratios and other information:				
(Reduction) provision for loans as a percentage of period-end total loans (annualized) (3)	(0.56)%	0.46 %	0.86 %	0.35 %
Gross loan charge-offs as a percentage of average total loans (annualized)	0.30	0.49	0.30	0.33
Net loan charge-offs as a percentage of average total loans (annualized)	0.26	0.44	0.24	0.26
Allowance for credit losses for loans as a percentage of period-end total loans (3)	1.34	0.97	1.34	0.97
(Reduction) provision for credit losses	$ (52,018)	$ 36,536	$ 257,943	$ 89,033
Period-end total loans (3)	38,413,891	31,229,003	38,413,891	31,229,003
Average total loans (3)	37,318,600	29,979,522	35,835,927	29,373,264
Allowance for loan losses for nonaccrual loans	64,479	53,728	64,479	53,728
Nonaccrual loans	105,711	104,045	105,711	104,045

(1) The “allowance for credit losses for unfunded credit commitments” is included as a component of “Other liabilities” on our consolidated balance sheets.
(2) The "allowance for credit losses for HTM securities" is included as a component of HTM securities and presented net in our consolidated financial statements.
(3) For the three and nine months ended September 30, 2020, loan amounts are disclosed, and ratios are calculated, using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed, and ratios are calculated, using the gross basis.

Three months ended September 30, 2020 and 2019

The reduction of our expected credit losses was $52.0 million for the three months ended September 30, 2020, consisting of a reduction of our expected credit losses for loans of $54.1 million, a provision for credit losses for unfunded credit commitments of $2.0 million and a provision for our credit losses for our HTM securities of $69 thousand. Our provision for credit losses was $36.5 million for the three months ended September 30, 2019, consisting of a provision for loans of $36.0 million and a provision for unfunded credit commitments of $0.5 million.

The reduction of our expected credit losses for loans of $54.1 million for the three months ended September 30, 2020 was driven primarily by an $82.4 million reduction in reserves for our performing loans reflective of improved economic scenarios in our forecast models, as well as a qualitative adjustment reflective of strong credit performance from our Private Bank portfolio segment, a $4.6 million decrease related to changes in loan composition within our portfolio segments and $4.4 million of recoveries. These decreases were partially offset by $23.3 million for net new nonaccrual loans and $15.2 million for charge-offs not specifically reserved for at June 30, 2020. The reduction related to improved economic scenarios in our forecast models was driven primarily by our Investor Dependent Early-Stage portfolio segment which is more sensitive to the underlying macro-economic forecasts utilized in our CECL model as compared to the remaining portfolio segments as well as a decrease in balances in that portfolio segment.

A provision for credit losses for unfunded credit commitments of $2.0 million was driven primarily by the forecast models of the current economic environment as well as changes in the unfunded credit commitments composition within our portfolio segments.

The provision for loan losses of $36.0 million for the three months ended September 30, 2019 reflects an increase of $19.1 million for net new nonaccrual loans, $18.3 million for charge-offs not specifically reserved for and $15.2 million in additional reserves for period-end loan growth, partially offset by a decrease of $13.0 million for the qualitative component of our performing loans and $3.9 million of recoveries.

The provision for unfunded credit commitments of $0.5 million was driven primarily by the growth in unfunded credit commitments of $1.3 billion for the three months ended September 30, 2019, offset by a decrease related to the continued shift in the mix of our unfunded credit facilities to our large, higher credit quality private equity/venture capital clients.

Gross loan charge-offs were $28.4 million for the third quarter of 2020, of which $15.2 million was not specifically reserved for at June 30, 2020. Gross loan charge-offs were primarily driven by $28.3 million for our Investor Dependent clients.

Gross loan charge-offs were $36.8 million for the three months ended September 30, 2019, of which $18.3 million was not specifically reserved for in prior quarters. Gross loan charge-offs were primarily driven by a $9.4 million charge-off for one mid-stage life science/healthcare portfolio client and $7.6 million for one later-stage software client, both of which were previously included in our nonaccrual loan portfolio. The remaining charge-offs came primarily from our early-stage clients.

Nine Months Ended September 30, 2020 and 2019

Our provision for credit losses was $257.9 million for the nine months ended September 30, 2020, consisting of a provision for loan losses of $246.7 million, a provision for unfunded credit commitments of $11.1 million and a provision for HTM securities of $117 thousand. Our provision for credit losses was $89.0 million for the nine months ended September 30, 2019, consisting of a provision for loan losses of $81.0 million and a provision for unfunded credit commitments of $8.0 million.

The provision for credit losses for loans of $246.7 million was driven primarily by $134.5 million in additional reserves for our performing loans based on our forecast models of the current economic environment under the CECL methodology adopted January 1, 2020, including the impact of the COVID-19 pandemic, as well as changes in loan composition within our portfolio segments, $58.1 million in net new nonaccrual loans, $38.8 million for charge-offs not specifically reserved for at December 31, 2019 and $31.5 million in additional reserves for period-end loan growth, partially offset by $16.2 million of recoveries.

A provision for credit losses for unfunded credit commitments of $11.1 million was driven primarily by the forecast models of the current economic environment under the CECL methodology adopted January 1, 2020, including the impact of the COVID-19 pandemic, as well as changes in the unfunded credit commitments composition within our portfolio segments.

The provision for loan losses of $81.0 million for the nine months ended September 30, 2019 was reflective primarily of $57.5 million in net new specific reserves for nonaccrual loans, $30.5 million for charge-offs not specifically reserved for in prior quarters and $22.4 million from period-end loan growth, partially offset by a decrease of $14.3 million for our performing loans and $15.1 million of recoveries.

The provision for unfunded credit commitments of $8.0 million for nine months ended September 30, 2019 was driven primarily by growth in unfunded credit commitments of $3.4 billion.

Gross loan charge-offs were $80.4 million for the nine months ended September 30, 2020, of which $38.8 million was not specifically reserved for in prior quarters. Gross loan charge-offs were primarily driven by $67.2 million for our Investor Dependent clients and a $4.9 million charge-off from one Balance Sheet Dependent client. The remaining charge-offs came primarily from our Cash Flow Dependent risk-based segments.

Gross loan charge-offs were $72.3 million for the nine months ended September 30, 2019, of which $30.5 million was not specifically reserved for in prior quarters. Gross loan charge-offs included $26.9 million from our life science/healthcare loan portfolio and $38.3 million from our software/internet loan portfolio. Gross loan charge-offs for our life science/healthcare portfolio were driven primarily by $22.5 million from one mid-stage client. Gross loan charge-offs for our software/internet loan portfolio were driven primarily by our early-stage clients.

See “Consolidated Financial Condition—Credit Quality and Allowance for Credit Losses for Loans and for Unfunded Credit Commitments” below and Note 7 — “Loans and Allowance for Credit Losses: Loans and 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 credit losses for loans and unfunded credit commitments.

Noninterest Income

For the three and nine months ended September 30, 2020, noninterest income was $547.6 million and $1.2 billion, respectively, compared to $294.0 million and $908.1 million for the comparable 2019 periods. For the three and nine months ended September 30, 2020, non-GAAP noninterest income, net of noncontrolling interests was $519.7 million and $1.2 billion, respectively, compared to $279.4 million and $871.6 million for the comparable 2019 periods. For the three and nine months ended September 30, 2020, non-GAAP core fee income plus investment banking revenue and commissions was $254.8 million and $777.1 million, respectively compared to $213.0 million and $651.6 million for the comparable 2019 periods. For the three and nine months ended September 30, 2020, non-GAAP core fee income was $146.3 million and $447.3 million, respectively, compared to $162.2 million and $473.8 million for the comparable 2019 periods. (See reconciliations of non-GAAP measures used below under “Use of Non-GAAP Financial Measures”.)

Included in results for three and nine months ended September 30, 2020 are revenues related to our investments in BigCommerce comprised of: (i) $108.4 million from unrealized gains on investment securities; (ii) $10.8 million from gains on equity warrant assets; and (iii) $30.0 million in gains included in other noninterest income as discussed further below.

Use of Non-GAAP Financial Measures

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

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

Included in net income is income and expense attributable to noncontrolling interests. We recognize, as part of our investment funds management business through SVB Capital and SVB Leerink, 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 (i) certain line items where performance is typically subject to market or other conditions beyond our control, primarily our net gains (losses) on investment securities and equity warrant assets, (ii) our investment banking revenue and commissions, and (iii) other noninterest income. Core fee income includes client investment fees, foreign exchange fees, credit card fees, deposit service charges, lending related fees and letters of credit and standby letters of credit fees.

Core fee income plus investment banking revenue and commissions is a non-GAAP measure, which represents GAAP noninterest income, but excludes certain line items where performance is typically subject to market or other conditions beyond our control, primarily our net gains (losses) on investment securities and equity warrant assets, and other noninterest income. Core fee income plus investment banking revenue and commissions includes core fee income plus investment banking revenue and commissions.

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, 2020 and 2019:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2020	2019	% Change	2020	2019	% Change
GAAP noninterest income	$ 547,583	$ 294,009	86.2 %	$ 1,218,365	$ 908,135	34.2 %
Less: income attributable to noncontrolling interests, including carried interest allocation	27,862	14,568	91.3	40,393	36,552	10.5
Non-GAAP noninterest income, net of noncontrolling interests	$ 519,721	$ 279,441	86.0	$ 1,177,972	$ 871,583	35.2

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, 2020 and 2019:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2020	2019	% Change	2020	2019	% Change
GAAP noninterest income	$ 547,583	$ 294,009	86.2 %	$ 1,218,365	$ 908,135	34.2 %
Less: gains on investment securities, net	189,837	29,849	NM	270,760	106,575	154.1
Less: gains on equity warrant assets, net	53,766	37,561	43.1	93,667	107,213	(12.6)
Less: other noninterest income	49,222	13,631	NM	76,887	42,773	79.8
Non-GAAP core fee income plus investment banking revenue and commissions (1)	$ 254,758	$ 212,968	19.6	$ 777,051	$ 651,574	19.3
Less: investment banking revenue	92,181	38,516	139.3	280,551	137,005	104.8
Less: commissions	16,257	12,275	32.4	49,197	40,812	20.5
Non-GAAP core fee income (2)	$ 146,320	$ 162,177	(9.8)	$ 447,303	$ 473,757	(5.6)

NM—Not meaningful

(1) Non-GAAP core fee income plus investment banking revenue and commissions represents noninterest income, but excludes certain line items where performance is typically subject to market or other conditions beyond our control, and other noninterest income. Core fee income plus investment banking revenue and commissions is Non-GAAP core fee income (as defined in the subsequent footnote) with the addition of investment banking revenue and commissions.

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

Gains on Investment Securities, Net

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

Our non-marketable and other equity securities portfolio primarily represents investments in venture capital and private equity funds, SPD Silicon Valley Bank Co., Ltd. (the Bank's joint venture in China ("SPD-SVB")), debt funds, private and public portfolio companies and qualified affordable housing projects. We experience variability in the performance of our non-marketable and other equity securities from period to period, which results in net gains or losses on investment securities

(both realized and unrealized). This variability is due to a number of factors, including unrealized changes in the values of our investments, changes in the amount of realized gains and losses from distributions, changes in liquidity events and general economic and market conditions. Unrealized gains or losses from non-marketable and other equity securities for any single period are typically driven by valuation changes, and are therefore subject to potential increases or decreases in future periods. Such variability may lead to volatility in the gains or losses from investment securities. As such, our results for a particular period are not necessarily indicative of our expected performance in a future period.

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

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

Three months ended September 30, 2020 and 2019

For the three months ended September 30, 2020, we had net gains on investment securities of $189.8 million, compared to $29.8 million for the comparable 2019 period. Non-GAAP net gains on investment securities, net of noncontrolling interests, were $162.1 million for the three months ended September 30, 2020, compared to non-GAAP net gains, net of controlling interest of $15.2 million for the comparable 2019 period.

Non-GAAP net gains on investment securities, net of noncontrolling interests, of $162.1 million for the three months ended September 30, 2020 were driven by the following:

- Gains of $108.4 million from our public equity securities investments, primarily driven by our previously announced investments in BigCommerce, which completed its IPO in August 2020,
- Gains of $23.1 million from our managed funds of funds portfolio related primarily to unrealized valuation gains, and
- Gains of $18.4 million from our strategic and other investments, primarily driven by net unrealized valuation increases in our strategic venture capital funds.

Nine months ended September 30, 2020 and 2019

For the nine months ended September 30, 2020, we had net gains on investment securities of $270.8 million, compared to $106.6 million for the comparable 2019 period. Non-GAAP net gains on investment securities, net of noncontrolling interests, were $230.2 million for the nine months ended September 30, 2020, compared to $69.9 million for the comparable 2019 period. Non-GAAP net gains, net of noncontrolling interests, of $230.2 million for the nine months ended September 30, 2020 were driven primarily by the following:

- Gains of $112.7 million from our public equity securities investments, primarily driven by our previously announced investments in BigCommerce, which completed its IPO in August 2020,
- Gains of $61.2 million from our AFS debt securities portfolio, resulting from the sale of $2.6 billion of U.S. Treasury securities, and
- Gains of $27.4 million from our managed funds of funds portfolio related primarily to unrealized valuation gains.

The following tables provide a reconciliation of GAAP total gains (losses) on investment securities, net, to non-GAAP net gains (losses) on investment securities, net of noncontrolling interests, for the three and nine months ended September 30, 2020 and 2019:

(Dollars in thousands)	Managed Funds of Funds	Managed Direct Venture Funds	Public Equity Securities	Debt Funds	Sales of AFS Securities	Strategic and Other Investments	SVB Leerink	Total
Three months ended September 30, 2020								
Total gains on investment securities, net	$ 42,885	$ 14,775	$ 108,417	$ 15	$ —	$ 18,426	$ 5,319	$ 189,837
Less: income attributable to noncontrolling interests, including carried interest allocation	19,832	7,492	—	—	—	—	461	27,785
Non-GAAP net gains on investment securities, net of noncontrolling interests	$ 23,053	$ 7,283	$ 108,417	$ 15	$ —	$ 18,426	$ 4,858	$ 162,052
Three months ended September 30, 2019								
Total gains (losses) on investment securities, net	$ 22,223	$ 9,668	$ (11,488)	$ 187	$ —	$ 8,035	$ 1,224	$ 29,849
Less: income attributable to noncontrolling interests, including carried interest allocation	9,676	4,138	—	—	—	—	826	$ 14,640
Non-GAAP net gains (loss) on investment securities, net of noncontrolling interests	$ 12,547	$ 5,530	$ (11,488)	$ 187	$ —	$ 8,035	$ 398	$ 15,209
Nine months ended September 30, 2020								
Total gains (losses) on investment securities, net	$ 53,768	$ 27,246	$ 112,744	$ (253)	$ 61,165	$ 9,490	$ 6,600	$ 270,760
Less: income attributable to noncontrolling interests, including carried interest allocation	26,344	13,741	—	—	—	—	493	40,578
Non-GAAP net gains (losses) on investment securities, net of noncontrolling interests	$ 27,424	$ 13,505	$ 112,744	$ (253)	$ 61,165	$ 9,490	$ 6,107	$ 230,182
Nine months ended September 30, 2019								
Total gains (losses) on investment securities, net	$ 60,787	$ 13,135	$ (1,408)	$ 1,529	$ (3,905)	$ 30,348	$ 6,089	$ 106,575
Less: income attributable to noncontrolling interests, including carried interest allocation	30,273	5,540	—	—	—	—	861	36,674
Non-GAAP net gains (losses) on investment securities, net of noncontrolling interests	$ 30,514	$ 7,595	$ (1,408)	$ 1,529	$ (3,905)	$ 30,348	$ 5,228	$ 69,901

Gains on Equity Warrant Assets, Net

Three months ended September 30, 2020 and 2019

Net gains on equity warrant assets were $53.8 million for the three months ended September 30, 2020, compared to net gains of $37.6 million for the comparable 2019 period. Net gains on equity warrant assets for the three months ended September 30, 2020 consisted of:

- Net gains of $30.2 million from warrant valuations increases, driven by valuation increases in our private company warrant portfolio, and
- Net gains of $23.9 million from the exercise of equity warrant assets driven by IPO and M&A activity, which included $10.8 million from our exercised warrant position in BigCommerce.

Nine months ended September 30, 2020 and 2019

Net gains on equity warrant assets were $93.7 million for the nine months ended September 30, 2020, compared to net gains of $107.2 million for the comparable 2019 period. Net gains on equity warrant assets for the nine months ended September 30, 2020 consisted of:

- Net gains of $59.4 million from the exercise of equity warrant assets, driven by IPO and M&A activity, which, included $10.8 million from our exercised warrant position in BigCommerce, and
- Net gains of $35.6 million from warrant valuation increases, driven primarily by valuation increases in our private company warrant portfolio during the nine months ended September 30, 2020.

A summary of gains on equity warrant assets, net, for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	**2020**	**2019**	**% Change**	**2020**	**2019**	**% Change**
Equity warrant assets (1):						
Gains on exercises, net	$ 23,940	$ 30,047	(20.3) %	$ 59,370	$ 90,357	(34.3) %
Terminations	(361)	(481)	(24.9) %	(1,332)	(2,931)	(54.6)
Changes in fair value, net	30,187	7,995	NM	35,629	19,787	80.1
Total gains on equity warrant assets, net	$ 53,766	$ 37,561	43.1	$ 93,667	$ 107,213	(12.6)

NM—Not meaningful

(1) At September 30, 2020, we held warrants in 2,503 companies, compared to 2,227 companies at September 30, 2019. The total fair value of our warrant portfolio was $202.2 million at September 30, 2020 and $149.1 million at September 30, 2019. Warrants in 28 companies each had fair values greater than $1.0 million and collectively represented $83.0 million, or 41.1 percent, of the fair value of the total warrant portfolio at September 30, 2020. Warrants in 15 companies each had fair values greater than $1.0 million and collectively represented $43.7 million, or 29.3 percent, of the fair value of the total warrant portfolio at September 30, 2019.

Investment in Root, Inc.

As of September 30, 2020, we held investments in Root, Inc. (“Root”), consisting of: (i) approximately 600,000 shares related to warrants held by SVBFG, and (ii) approximately 15.6 million shares directly held by two of our SVB Capital funds (in which SVBFG holds certain carried interests), of which we estimated to be entitled to approximately $24.1 million before taxes in the form of carried interest subject to the fund's performance and assuming the fund exceeds certain performance targets.

In late October 2020, Root completed its initial public offering. As part of the IPO which priced at $27 per share: (i) SVBFG sold all of our warrant shares, which resulted in a pre-tax gain of $5.5 million; and (ii) our SVB Capital funds sold approximately 1.6 million shares, of which SVBFG would be entitled to approximately $3.7 million before taxes in the form of carried interest, assuming the fund exceeds certain performance targets. SVB Capital currently holds approximately 14.0 million shares, which based on the closing price of Root’s common stock of $23.03 as of November 4, 2020, we currently estimate SVBFG to be entitled to approximately $29.8 million before taxes in the form of carried interest, assuming the fund exceeds certain performance targets. Carried interest may be subject to change to the extent fund performance levels fluctuate.

Gains (or losses) related to our equity securities in public companies such as Root, Inc are based on valuation changes or the sale of any securities, and are subject to such companies’ stock price, which are subject to market conditions and various other factors. Additionally, the public equity investment expected gains and losses, and the extent to which such gains or (losses) will become realized is subject to a variety of factors, including among other factors, changes in prevailing market prices and the timing of any sales of securities, which are subject to our securities sales and governance process, as well as certain sales restrictions (e.g. lock-up agreements). The lock up agreement for common stock shares held in Root, Inc, is scheduled to expire during April 2021.

Non-GAAP Core Fee Income

(Dollars in thousands)	Three months ended September 30, 2020	2019	% Change	Nine months ended September 30, 2020	2019	% Change
Non-GAAP core fee income (1):						
Client investment fees	$ 31,914	$ 46,679	(31.6) %	$ 107,192	$ 136,905	(21.7) %
Foreign exchange fees	43,881	40,309	8.9	127,642	116,863	9.2
Credit card fees	22,756	30,158	(24.5)	72,348	86,431	(16.3)
Deposit service charges	22,015	22,482	(2.1)	67,115	65,496	2.5
Lending related fees	13,562	11,707	15.8	37,851	36,857	2.7
Letters of credit and standby letters of credit fees	12,192	10,842	12.5	35,155	31,205	12.7
Total non-GAAP core fee income (1)	$ 146,320	$ 162,177	(9.8)	$ 447,303	$ 473,757	(5.6)
Investment banking revenue	92,181	38,516	139.3	280,551	137,005	104.8
Commissions	16,257	12,275	32.4	49,197	40,812	20.5
Total non-GAAP core fee income plus investment banking revenue and commissions (2)	$ 254,758	$ 212,968	19.6	$ 777,051	$ 651,574	19.3

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

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

Client Investment Fees

Client investment fees were $31.9 million and $107.2 million for the three and nine months ended September 30, 2020, compared to $46.7 million and $136.9 million for the comparable 2019 periods. The decreases were reflective of lower spreads due to decreases in market interest rates, offset by large increases in average off-balance sheet client investment funds. Given our expectations of a continued low rate environment, we generally expect client investment fees in 2020 to be lower than 2019.

A summary of client investment fees by instrument type for the three and nine months ended September 30, 2020 and 2019 is as follows:

(Dollars in thousands)	Three months ended September 30, 2020	2019	% Change	Nine months ended September 30, 2020	2019	% Change
Client investment fees by type:						
Sweep money market fees	$ 18,155	$ 26,202	(30.7) %	$ 60,617	$ 79,698	(23.9) %
Asset management fees	12,172	7,256	67.8	32,905	20,883	57.6
Repurchase agreement fees	1,587	13,221	(88.0)	13,670	36,324	(62.4)
Total client investment fees	$ 31,914	$ 46,679	(31.6)	$ 107,192	$ 136,905	(21.7)

The following table summarizes average client investment funds for the three and nine months ended September 30, 2020 and 2019:

(Dollars in millions)	Three months ended September 30, 2020	2019	% Change	Nine months ended September 30, 2020	2019	% Change
Sweep money market funds	$ 54,495	$ 40,321	35.2 %	$ 48,367	$ 40,048	20.8 %
Client investment assets under management (1)	59,338	42,834	38.5	53,928	40,969	31.6
Repurchase agreements	9,731	9,670	0.6	9,809	8,947	9.6
Total average client investment funds (2)	$ 123,564	$ 92,825	33.1	$ 112,104	$ 89,964	24.6

(1) These funds represent investments in third-party money market mutual funds and fixed-income securities managed by SVB Asset Management.

(2) Client investment funds are maintained at third-party financial institutions and are not recorded on our balance sheet.

The following table summarizes period-end client investment funds at September 30, 2020 and December 31, 2019:

(Dollars in millions)	September 30, 2020	December 31, 2019	% Change
Sweep money market funds	$ 56,395	$ 43,226	30.5 %
Client investment assets under management (1)	60,773	46,904	29.6
Repurchase agreements	9,613	9,062	6.1
Total period-end client investment funds (2)	$ 126,781	$ 99,192	27.8

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

Foreign Exchange Fees

Foreign exchange fees were $43.9 million and $127.6 million for the three and nine months ended September 30, 2020, respectively, compared to $40.3 million and $116.9 million for the comparable 2019 periods. The increase for the three months ended September 30, 2020, compared to the comparable period ending September 30, 2019, was driven by increased trade volumes reflective primarily by private equity deal activity coupled with quarterly hedging activity. The increase for the nine months ended September 30, 2020 compared to September 30, 2019, is due primarily to the overall increase in the number of clients executing spot contracts resulting in higher trade volumes from the previous year reflective of our global expansion initiative and increased client engagement efforts. Foreign exchange fees have been, and may further be, impacted by effects of the COVID-19 pandemic.

A summary of foreign exchange fee income by instrument type for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2020	2019	% Change	2020	2019	% Change
Foreign exchange fees by instrument type:						
Spot contract commissions	$ 38,794	$ 36,836	5.3 %	$ 112,821	$ 106,561	5.9 %
Forward contract commissions	4,613	3,371	36.8	14,004	10,144	38.1
Option premium fees	474	102	NM	817	158	NM
Total foreign exchange fees	$ 43,881	$ 40,309	8.9	$ 127,642	$ 116,863	9.2

NM—Not meaningful

Credit Card Fees

Credit card fees were $22.8 million and $72.3 million for the three and nine months ended September 30, 2020, respectively, compared to $30.2 million and $86.4 million for the comparable 2019 periods. The decreases were primarily due to lower transaction volumes starting in March of 2020 reflective of the COVID-19 pandemic interrupting normal business activity. Credit card fees have been, and may further be, impacted by the effects of the COVID-19 pandemic.

A summary of credit card fees by instrument type for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	2020	2019	% Change	2020	2019	% Change
Credit card fees by instrument type:						
Card interchange fees, net	$ 18,168	$ 24,560	(26.0) %	$ 55,257	$ 68,808	(19.7) %
Merchant service fees	3,670	3,943	(6.9)	13,727	12,763	7.6
Card service fees	918	1,655	(44.5)	3,364	4,860	(30.8)
Total credit card fees	$ 22,756	$ 30,158	(24.5)	$ 72,348	$ 86,431	(16.3)

Deposit Service Charges

Deposit service charges were $22.0 million and $67.1 million for the three and nine months ended September 30, 2020, respectively, compared to $22.5 million and $65.5 million for the comparable 2019 periods. The decrease in deposit service charges for the three months ended September 30, 2020, compared to the comparable period ending September 30, 2019, was reflective of the decrease in client activity including the impact of a slower macro-economic environment resulting from the COVID-19 pandemic as well as increased earnings credits reflective of growth in deposit demand accounts from clients conserving cash resulting in qualifying balances to offset service charges. The increase for the nine months ended September 30, 2020 compared to the comparable period ending September 30, 2019, was reflective of higher deposit client counts as well as higher volumes of our transaction-based fee products from the previous year.

Lending Related Fees

Lending related fees were $13.6 million and $37.9 million for the three and nine months ended September 30, 2020, respectively, compared to $11.7 million and $36.9 million for the comparable 2019 periods. The increases were primarily due to increases in fees earned from unused lines of credit.

A summary of lending related fees by type for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	**2020**	**2019**	**% Change**	**2020**	**2019**	**% Change**
Lending related fees by instrument type:						
Unused commitment fees	$ 9,872	$ 8,339	18.4 %	$ 26,602	$ 25,060	6.2 %
Other	3,690	3,368	9.6	11,249	11,797	(4.6)
Total lending related fees	$ 13,562	$ 11,707	15.8	$ 37,851	$ 36,857	2.7

Letters of Credit and Standby Letters of Credit Fees

Letters of credit and standby letters of credit fees were $12.2 million and $35.2 million for the three and nine months ended September 30, 2020, respectively, compared to $10.8 million and $31.2 million for the comparable 2019 periods. The increases were primarily driven by an increase in deferred fee income reflective of larger letter of credit issuances.

Investment Banking Revenue

Investment banking revenue was $92.2 million and $280.6 million for the three and nine months ended September 30, 2020, respectively, compared to $38.5 million and $137.0 million for the comparable 2019 periods. The increases were attributable to higher levels of funding activity in the life science/healthcare secondary markets and by the increase in public equity underwriting fees.

A summary of investment banking revenue by type for the nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	**2020**	**2019**	**% Change**	**2020**	**2019**	**% Change**
Investment banking revenue:						
Underwriting fees	$ 85,009	$ 31,016	174.1	$ 247,384	$ 109,371	126.2 %
Advisory fees	1,761	5,200	(66.1)	26,170	22,789	14.8
Private placements and other	5,411	2,300	135.3	6,997	4,845	44.4
Total investment banking revenue	$ 92,181	$ 38,516	139.3	$ 280,551	$ 137,005	104.8

Commissions

Commissions for the three and nine months ended September 30, 2020 were $16.3 million and $49.2 million, respectively, compared to $12.3 million and $40.8 million for the comparable 2019 periods. The increases were driven by client trading activity, consistent with market volumes. Commissions include commissions received from clients for the execution of agency-based brokerage transactions in listed and over-the-counter equities.

Other

Other noninterest income for the three and nine months ended September 30, 2020 were $49.2 million and $76.9 million, respectively, compared to $13.6 million and $42.8 million for the comparable 2019 periods. The increases were primarily driven by a $30.0 million recognized gain upon the exercise and conversion of our convertible debt option for BigCommerce during the third quarter of 2020.

Noninterest Expense

A summary of noninterest expense for the three and nine months ended September 30, 2020 and 2019 is as follows:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	**2020**	**2019**	**% Change**	**2020**	**2019**	**% Change**
Compensation and benefits	$ 327,369	$ 233,840	40.0 %	$ 902,752	$ 715,073	26.2 %
Professional services	67,215	55,202	21.8	169,748	133,018	27.6
Premises and equipment	30,772	26,775	14.9	85,420	72,386	18.0
Net occupancy	18,965	16,981	11.7	56,156	49,716	13.0
Business development and travel	2,214	19,539	(88.7)	19,277	51,915	(62.9)
FDIC and state assessments	6,933	4,881	42.0	18,986	13,343	42.3
Other	37,553	34,106	10.1	117,903	105,059	12.2
Total noninterest expense	$ 491,021	$ 391,324	25.5	$ 1,370,242	$ 1,140,510	20.1

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

Non-GAAP Noninterest Expense

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

The table below provides a summary of non-GAAP noninterest expense and non-GAAP core operating efficiency ratio for the three and nine months ended September 30, 2020 and 2019:

Non-GAAP core operating efficiency ratio (Dollars in thousands, except ratios)	Three months ended September 30, 2020	2019	% Change	Nine months ended September 30, 2020	2019	% Change
GAAP noninterest expense	$ 491,021	$ 391,324	25.5 %	$ 1,370,242	$ 1,140,510	20.1 %
Less: expense attributable to noncontrolling interests	114	145	(21.4)	384	692	(44.5)
Non-GAAP noninterest expense, net of noncontrolling interests	490,907	391,179	25.5	1,369,858	1,139,818	20.2
Less: expense attributable to SVB Leerink	77,567	55,200	40.5	248,254	177,675	39.7
Non-GAAP noninterest expense, net of noncontrolling interests and SVB Leerink	$ 413,340	$ 335,979	23.0	$ 1,121,604	$ 962,143	16.6
GAAP net interest income	$ 527,740	$ 520,644	1.4	$ 1,564,804	$ 1,562,933	0.1
Adjustments for taxable equivalent basis	3,964	2,957	34.1	11,218	8,769	27.9
Non-GAAP taxable equivalent net interest income	531,704	523,601	1.5	1,576,022	1,571,702	0.3
Less: income attributable to noncontrolling interests	—	14	(100.0)	26	41	(36.6)
Non-GAAP taxable equivalent net interest income, net of noncontrolling interests	531,704	523,587	1.6	1,575,996	1,571,661	0.3
Less: net interest income attributable to SVB Leerink	175	277	(36.8)	373	961	(61.2)
Non-GAAP taxable equivalent net interest income, net of noncontrolling interests and SVB Leerink	$ 531,529	$ 523,310	1.6	$ 1,575,623	$ 1,570,700	0.3
GAAP noninterest income	$ 547,583	$ 294,009	86.2	$ 1,218,365	$ 908,135	34.2
Less: income attributable to noncontrolling interests, including carried interest allocation	27,862	14,568	91.3	40,393	36,552	10.5
Non-GAAP noninterest income, net of noncontrolling interests	519,721	279,441	86.0	1,177,972	871,583	35.2
Less: non-GAAP net gains on investment securities, net of noncontrolling interests	162,052	15,209	NM	230,182	69,901	NM
Less: net gains on equity warrant assets	53,766	37,561	43.1	93,667	107,213	(12.6)
Less: investment banking revenue	92,181	38,516	139.3	280,551	137,005	104.8
Less: commissions	16,257	12,275	32.4	49,197	40,812	20.5
Non-GAAP noninterest income, net of noncontrolling interests and net of net gains on investment securities, net gains on equity warrant assets, investment banking revenue and commissions	$ 195,465	$ 175,880	11.1	$ 524,375	$ 516,652	1.5
GAAP total revenue	$ 1,075,323	$ 814,653	32.0	$ 2,783,169	$ 2,471,068	12.6
Non-GAAP taxable equivalent revenue, net of noncontrolling interests and SVB Leerink, net gains on investment securities, net gains on equity warrant assets, investment banking revenue and commissions	$ 726,994	$ 699,190	4.0	$ 2,099,998	$ 2,087,352	0.6
Operating efficiency ratio	45.66 %	48.04 %	(5.0)	49.23 %	46.15 %	6.7
Non-GAAP core operating efficiency ratio (1)	56.86	48.05	18.3	53.41	46.09	15.9

NM—Not meaningful

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

Compensation and Benefits Expense

The following table provides a summary of our compensation and benefits expense for the three and nine months ended September 30, 2020 and 2019:

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands, except employees)	**2020**	**2019**	**% Change**	**2020**	**2019**	**% Change**
Compensation and benefits:						
Salaries and wages	$ 135,705	$ 109,473	24.0 %	$ 375,844	$ 316,472	18.8 %
Incentive compensation plans	103,898	59,602	74.3	291,101	200,483	45.2
Other employee incentives and benefits (1)	87,766	64,765	35.5	235,807	198,118	19.0
Total compensation and benefits	$ 327,369	$ 233,840	40.0	$ 902,752	$ 715,073	26.2
Period-end full-time equivalent employees	4,336	3,460	25.3	4,336	3,460	25.3
Average full-time equivalent employees	4,216	3,413	23.5	3,914	3,309	18.3

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

Compensation and benefits expense was $327.4 million for the three months ended September 30, 2020, compared to $233.8 million for the comparable 2019 period. The key changes in factors affecting compensation and benefits expense were as follows:

- An increase of $26.2 million in salaries and wages reflective primarily of the increase in the number of average FTE to 4,216 for the third quarter of 2020 compared to 3,413 for the second quarter of 2019, driven by strong hiring for in-sourcing, product development and revenue growth, as well as annual pay raises,
- An increase of $44.3 million in incentive compensation plans expense attributable primarily to an increase in SVB Leerink incentive compensation expense as a result of a strong third quarter performance as compared to the same period in 2019,
- An increase of $23.0 million in other employee incentives and benefits primarily driven by an increase in warrant incentive plan of $5.7 million, an increase in payroll taxes of $2.7 million and an increase of $2.6 million in share-based compensation expense due to the increased restricted stock awards granted during 2020.

Compensation and benefits expense was $902.8 million for the nine months ended September 30, 2020, compared to $715.1 million for the comparable 2019 period. The key changes in factors affecting compensation and benefits expense were as follows:

- An increase of $59.4 million in salaries and wages reflective primarily of the increase in the number of average FTE to 3,914 for the nine months ended September 30, 2020 from 3,309 for the nine months ended September 30, 2019, as well as annual pay raises,
- An increase of $90.6 million in incentive compensation reflective primarily of the Leerink incentive compensation for the nine months ended September 30, 2020, and
- An increase of $37.7 million in other employee incentives and benefits primarily driven by an increase in agency fees of $10.6 million and an increase of $10.2 million in share-based compensation expense due to the increased restricted stock awards granted during 2020.

Our variable compensation plans consist primarily of our Incentive Compensation Plan, Direct Drive Incentive Compensation Plan, Retention Program, Warrant Incentive Plan, Deferred Compensation Plan, 401(k) and ESOP Plan, SVB Leerink Incentive Compensation Plan and SVB Leerink Retention Award (see descriptions in our 2019 Form 10-K). Total costs incurred under these plans were $127.2 million and $345.1 million for the three and nine months ended September 30, 2020 compared to $74.5 million and $249.1 million for the comparable 2019 periods. These amounts are included in total compensation and benefits expense discussed above.

We anticipate higher incentive compensation expenses in 2020, compared to 2019, primarily due to strong SVB Leerink performance.

Professional Services

Professional services expense was $67.2 million and $169.7 million for the three and nine months ended September 30, 2020, compared to $55.2 million and $133.0 million for the comparable 2019 periods. The increases were primarily related to costs to support the PPP during the second and third quarters of 2020 as well as our continued effort towards investments in our infrastructure, initiatives, and operating projects to support our presence both domestically and globally.

Premises and Equipment

Premises and equipment expense was $30.8 million and $85.4 million for the three and nine months ended September 30, 2020, compared to $26.8 million and $72.4 million for the comparable 2019 periods. The increases were related to investments in projects, systems and technology to support our revenue growth and related initiatives as well as other operating costs.

Net Occupancy

Net occupancy expense was $19.0 million and $56.2 million for the three and nine months ended September 30, 2020, compared to $17.0 million and $49.7 million for the comparable 2019 periods. The increases were primarily due to the expansion of certain offices to support our growth and lease renewals at higher costs, reflective of market conditions.

Business Development and Travel

Business development and travel expense was $2.2 million and $19.3 million for the three and nine months ended September 30, 2020, compared to $19.5 million and $51.9 million for the comparable 2019 periods. The decreases were primarily due to the impact of COVID-19 on the global economy and our restrictions placed on domestic and international travel beginning March 2020. In light of the economic impact of COVID-19 and the continuing travel restrictions, we expect our business development and travel expense to continue to remain lower for the remainder of 2020 compared to 2019.

FDIC and State Assessments

FDIC and state assessments expense was $6.9 million and $19.0 million for the three and nine months ended September 30, 2020, compared to $4.9 million and $13.3 million for the comparable 2019 periods. The increases were due primarily to the increase in our average assets.

Other Noninterest Expense

Total other noninterest expense was $37.6 million and $117.9 million for the three and nine months ended September 30, 2020, compared to $34.1 million and $105.1 million for the comparable 2019 periods. The increases were driven primarily by the increase in investment banking expenses due to the strong investment banking activity. A summary of other noninterest expense for the three and nine months ended September 30, 2020 and 2019 is as follows:

(Dollars in thousands)	Three months ended September 30, 2020	2019	% Change	Nine months ended September 30, 2020	2019	% Change
Lending and other client related processing costs	$ 7,194	$ 7,502	(4.1) %	$ 23,155	$ 21,442	8.0 %
Correspondent bank fees	3,581	3,657	(2.1)	11,400	10,970	3.9
Investment banking activities	2,835	1,864	52.1	13,633	9,918	37.5
Trade order execution costs	2,806	2,615	7.3	8,165	7,959	2.6
Data processing services	3,984	3,066	29.9	10,945	8,624	26.9
Telephone	2,342	2,466	(5.0)	6,458	7,629	(15.3)
Dues and publications	1,159	1,055	9.9	3,199	3,439	(7.0)
Postage and supplies	538	720	(25.3)	2,117	2,168	(2.4)
Other	13,114	11,161	17.5	38,831	32,910	18.0
Total other noninterest expense	$ 37,553	$ 34,106	10.1	$ 117,903	$ 105,059	12.2

Net Income Attributable to Noncontrolling Interests

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

In the table below, noninterest income consists primarily of net investment gains and losses from our consolidated funds. Noninterest expense is primarily related to management fees paid by our managed funds to SVB Financial's subsidiaries as the managed funds' general partners. A summary of net income attributable to noncontrolling interests for the three and nine months ended September 30, 2020 and 2019 is as follows:

(Dollars in thousands)	Three months ended September 30, 2020	2019	% Change	Nine months ended September 30, 2020	2019	% Change
Net interest income (1)	$ —	$ (14)	(100.0) %	$ (26)	$ (41)	(36.6) %
Noninterest income (1)	(8,620)	(4,910)	75.6	(12,033)	(19,586)	(38.6)
Noninterest expense (1)	114	145	(21.4)	384	692	(44.5)
Carried interest allocation (2)	(19,242)	(9,658)	99.2	(28,360)	(16,966)	67.2
Net income attributable to noncontrolling interests	$ (27,748)	$ (14,437)	92.2	$ (40,035)	$ (35,901)	11.5

(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, 2020 and 2019

Net income attributable to noncontrolling interests was $27.7 million for the three months ended September 30, 2020, compared to net income of $14.4 million for the comparable 2019 period. Net income attributable to noncontrolling interests of $27.7 million for the three months ended September 30, 2020 was primarily driven by net gains on investments securities (including carried interest allocation) from our managed funds of funds and our managed direct venture funds portfolios reflective of the overall market performance during the third quarter of 2020. See "Results of Operations—Noninterest Income—Gains on Investment Securities, Net".

Nine months ended September 30, 2020 and 2019

Net income attributable to noncontrolling interests was $40.0 million for the nine months ended September 30, 2020, compared to net income of $35.9 million for the comparable 2019 period. Net income attributable to noncontrolling interests of $40.0 million for the nine months ended September 30, 2020 was primarily a result of net gains on investment securities (including carried interest allocation) from our managed funds of funds and our managed direct funds portfolios related primarily to net unrealized valuation increases. See "Results of Operations—Noninterest Income—Gains on Investment Securities, Net".

Income Taxes

Our effective income tax rate was 26.7 percent and 26.9 percent for the three and nine months ended September 30, 2020, respectively, compared to 28.2 percent and 27.5 percent for the comparable 2019 periods. The effective tax rates are consistent year over year as tax adjustments impacting the effective tax rate have been proportional to changes in pre-tax income. 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.

Operating Segment Results

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

We report segment information based on the "management" approach. The management approach designates the internal reporting used by management for making decisions and assessing performance as the source of our reporting segments. Please refer to Note 14 — "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, 2020 and 2019:

Global Commercial Bank

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	**2020**	**2019**	**% Change**	**2020**	**2019**	**% Change**
Net interest income	$ 512,963	$ 455,161	12.7 %	$ 1,461,768	$ 1,360,997	7.4 %
Reduction (provision for) credit losses	37,847	(34,075)	NM	(200,020)	(79,175)	152.6
Noninterest income	147,594	161,029	(8.3)	447,902	471,492	(5.0)
Noninterest expense	(258,035)	(213,786)	20.7	(724,233)	(617,933)	17.2
Income before income tax expense	$ 440,369	$ 368,329	19.6	$ 985,417	$ 1,135,381	(13.2)
Total average loans, amortized cost	$ 30,763,715	$ 25,839,647	19.1	$ 30,126,870	$ 25,457,997	18.3
Total average assets	77,802,730	58,384,473	33.3	69,212,733	54,196,976	27.7
Total average deposits	74,825,725	55,250,154	35.4	66,408,359	51,352,644	29.3

NM—Not meaningful

Three months ended September 30, 2020 and 2019

Income before income tax expense from our Global Commercial Bank ("GCB") increased to $440.4 million for the three months ended September 30, 2020, compared to $368.3 million for the comparable 2019 period. The key components of GCB's performance for the three months ended September 30, 2020 compared to the comparable 2019 period are discussed below.

Net interest income from GCB increased by $57.8 million for the three months ended September 30, 2020, due primarily to an increase in loan interest income resulting mainly from higher average loan balances, partially offset by a decrease in loan yields as a result of rate decreases.

GCB had a reduction of credit losses of $37.8 million for the three months ended September 30, 2020, compared to a provision of $34.1 million for the comparable 2019 period. The reduction of $37.8 million for the three months ended September 30, 2020 was driven primarily by a $57.7 million reduction in reserves for our performing loans based on our forecast models of the current economic environment under the CECL methodology adopted January 1, 2020, a $15.1 million decrease related to changes in loan composition within our portfolio segments and $4.4 million of recoveries, partially offset by $25.4 million for net new nonaccrual loans and $15.2 million for charge-offs not specifically reserved for at June 30, 2020.

The provision of $34.1 million for the three months ended September 30, 2019 primarily reflects an increase of $19.1 million for net new nonaccrual loans, $18.3 million for charge-offs not specifically reserved for and $15.2 million in additional reserves for period-end loan growth, partially offset by a decrease of $13.0 million for the qualitative component of our performing loans and $3.9 million of recoveries.

Noninterest income decreased by $13.4 million for the three months ended September 30, 2020 related primarily to an overall decrease in our non-GAAP core fee income (lower client investment fees and credit card fees). These decreases were due primarily to the impact of the federal rate cuts on yield rates affecting client investment fees as well as a decrease in transactional volume for credit cards.

Noninterest expense increased by $44.2 million for the three months ended September 30, 2020, due primarily to compensation and benefits expense and professional services expense, partially offset by a decrease in business development and travel expense. Compensation and benefits expense increased $41.5 million as a result of higher salaries and wages expenses and higher incentive compensation expense. The increase in GCB salaries and wages was due primarily to an increase in the average number of FTEs at GCB, which increased to 3,102 FTEs for the three months ended September 30, 2020, from 2,364 FTEs for the comparable 2019 period. Incentive compensation expense increased due primarily to an increase in our 2020 full-year projected financial performance. Professional services expense increased due to higher expenses primarily related to our continued effort towards investments in our infrastructure, initiatives and operating projects to support our presence both domestically and globally. Business development and travel expense decreased primarily due to the impact of COVID-19 on the global economy and our restrictions placed on domestic and international travel beginning March 2020.

Nine Months Ended September 30, 2020 and 2019

Net interest income from our GCB increased by $100.8 million for the nine months ended September 30, 2020, due primarily to an increase in loan interest income resulting mainly from higher average loan balances, partially offset by a decrease in loan yields as a result of rate decreases.

GCB had a provision for credit losses of $200.0 million for the nine months ended September 30, 2020, compared to a provision of $79.2 million for the comparable 2019 period. The provision of $200.0 million for the nine months ended September 30, 2020 was reflective primarily of $108.8 million in additional reserves for our performing loans based on our forecast models of the current economic environment under the CECL methodology adopted January 1, 2020, including the impact of the COVID-19 pandemic, as well as changes in loan composition within our portfolio segments, $12.2 million in additional reserves for period-end loan growth, $38.8 million for charge-offs not specifically reserved for at December 31, 2019 and $58.3 million in net new nonaccrual loans, partially offset by $16.2 million of recoveries.

The provision of $79.2 million for the nine months ended September 30, 2019 was reflective primarily of $57.5 million in net new specific reserves for nonaccrual loans, $30.5 million for charge-offs not specifically reserved for in prior quarters, and $22.4 million for period-end loan growth, partially offset by a decrease of $14.3 million for our performing loans and $15.1 million of recoveries.

Noninterest income decreased by $23.6 million for the nine months ended September 30, 2020, related primarily to an overall decrease in our non-GAAP core fee income (lower client investment fees and credit card fees partially offset by an increase in foreign exchange fees). The decreases were due primarily to the impact of the federal rate cuts on yield rates affecting client investment fees as well as a decrease in transactional volume on credit cards. The increase in foreign exchange fees was driven primarily by private equity deal activity coupled with quarterly hedging activity.

Noninterest expense increased by $106.3 million for the nine months ended September 30, 2020, due primarily to increased expenses for compensation and benefits expense and professional services expense, partially offset by a decrease in business development and travel expense. Compensation and benefits expense increased by $78.2 million primarily as a result of increased salaries and wages. The increase in GCB salaries and wages was due primarily to an increase in the average number of FTEs at GCB, which increased to 2,872 FTEs for the nine months ended September 30, 2020 from 2,283 FTEs for the comparable 2019 period. Professional services expense increased $24.1 million due to higher expenses primarily related to our continued effort towards investments in our infrastructure, initiatives and operating projects to support our presence both domestically and globally. Business development and travel expense decreased by $21.3 million primarily due to the impact of COVID-19 on the global economy and our restrictions placed on domestic and international travel beginning March 2020.

SVB Private Bank

(Dollars in thousands)	Three months ended September 30, 2020	2019	% Change	Nine months ended September 30, 2020	2019	% Change
Net interest income	$ 19,145	$ 12,772	49.9 %	$ 52,952	$ 37,200	42.3 %
Reduction (provision for) credit losses	14,881	(1,910)	NM	(44,194)	(1,779)	NM
Noninterest income	916	634	44.5	2,486	1,829	35.9
Noninterest expense	(12,293)	(11,638)	5.6	(32,547)	(30,015)	8.4
Income (loss) before income tax expense	$ 22,649	$ (142)	NM	$ (21,303)	$ 7,235	NM
Total average loans, amortized cost	$ 4,263,324	$ 3,400,889	25.4	$ 4,053,018	$ 3,235,943	25.2
Total average assets	4,297,011	3,431,313	25.2	4,087,786	3,264,071	25.2
Total average deposits	2,163,903	1,497,303	44.5	2,069,196	1,461,170	41.6

NM—Not meaningful

Three months ended September 30, 2020 and 2019

Net interest income from our SVB Private Bank increased by $6.4 million for the three months ended September 30, 2020, due primarily to the increase in average loans for the three months ended September 30, 2020 as compared to the 2019 comparable period, partially offset by decreases in loan yields as a result of overall market rate decreases.

The reduction of credit losses of $14.9 million for the three months ended September 30, 2020, was reflective primarily of improved economic scenarios in our forecast models as well as a qualitative adjustment reflective of strong credit performance, partially offset by loan growth.

Nine Months Ended September 30, 2020 and 2019

Net interest income from our SVB Private Bank increased by $15.8 million for the nine months ended September 30, 2020, due primarily to the increase in average loans for the nine months ended September 30, 2020 as compared to the 2019 comparable period, partially offset by decreases in loan yields as a result of overall market rate decreases.

The provision for credit losses increased by $42.4 million for the nine months ended September 30, 2020, due primarily to a $24.9 million increase in additional reserves for our performing loans and a $17.6 million increase due to loan growth. The increase for our performing loans is reflective of the increases in reserves required for longer duration mortgage loans as well as the additional reserves for our performing loans based on our forecast models of the current economic environment under the CECL methodology adopted January 1, 2020, including the impact of the COVID-19 pandemic.

SVB Capital

(Dollars in thousands)	Three months ended September 30, 2020	2019	% Change	Nine months ended September 30, 2020	2019	% Change
Net interest income	$ 2	$ 9	(77.8) %	$ 28	$ 20	40.0 %
Noninterest income	60,380	34,955	72.7	86,748	99,860	(13.1)
Noninterest expense	(11,198)	(8,129)	37.8	(28,040)	(21,794)	28.7
Income before income tax expense	$ 49,184	$ 26,835	83.3	$ 58,736	$ 78,086	(24.8)
Total average assets	$ 413,882	$ 396,031	4.5	$ 430,391	$ 382,707	12.5

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

We experience variability in the performance of SVB Capital from quarter to quarter due to a number of factors, including changes in the values of our funds' underlying investments, changes in the amount of distributions and general economic and market conditions. Such variability may lead to volatility in the gains and losses from investment securities and cause our results to differ from period to period. The performance of these securities has been, and may further be, impacted by the effects of the COVID-19 pandemic.

Three months ended September 30, 2020 and 2019

SVB Capital had noninterest income of $60.4 million for the three months ended September 30, 2020, compared to $35.0 million for the comparable 2019 period. The increase in noninterest income was due primarily to an increase in net gains on investment securities for the three months ended September 30, 2020, compared to net gains for the comparable 2019 period. SVB Capital's components of noninterest income primarily include the following:

- Net gains on investment securities of $47.5 million for the three months ended September 30, 2020, compared to net gains of $26.0 million for the comparable 2019 period. The net gains on investment securities of $47.5 million were primarily driven by unrealized net valuation increases from private company investments held in our strategic venture capital funds as well as in our managed funds of funds portfolio.

Nine Months Ended September 30, 2020 and 2019

SVB Capital had noninterest income of $86.7 million for the nine months ended September 30, 2020, compared to $99.9 million for the comparable 2019 period. The decrease in noninterest income was due primarily to a decrease in net gains on investment securities for the nine months ended September 30, 2020, compared to the comparable 2019 period. SVB Capital's components of noninterest income primarily include the following:

- Net gains on investment securities of $53.6 million for the nine months ended September 30, 2020, compared to net gains of $70.0 million for the comparable 2019 period. The net gains on investment securities of $53.6 million were primarily driven by unrealized net valuation increases from private company investments held in our managed funds of funds portfolio as well as in our managed direct venture fund portfolio.

SVB Leerink

	Three months ended September 30,			Nine months ended September 30,		
(Dollars in thousands)	**2020**	**2019**	**% Change**	**2020**	**2019**	**% Change**
Net interest income	$ 175	$ 277	(36.8)%	$ 373	$ 961	(61.2)%
Noninterest income	113,651	52,947	114.7	340,145	188,064	80.9
Noninterest expense	(77,567)	(55,200)	40.5	(248,254)	(177,675)	39.7
Income (loss) before income tax expense	$ 36,259	$ (1,976)	NM	$ 92,264	$ 11,350	NM
Total average assets	$ 605,263	$ 428,848	41.1	$ 514,836	$ 380,290	35.4

NM—Not meaningful

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

Three months ended September 30, 2020 and 2019

SVB Leerink had noninterest income of $113.7 million for the three months ended September 30, 2020, compared to $52.9 million for the comparable 2019 period. The $60.8 million increase in noninterest income was primarily due to a $53.7 million increase in investment banking revenues attributable to higher levels of funding activity in the life science/healthcare secondary markets and by the increase in public equity underwriting fees.

SVB Leerink had noninterest expense of $77.6 million for the three months ended September 30, 2020, compared to $55.2 million for the comparable 2019 period. The $22.4 million increase in noninterest expense was primarily driven by an increase of $26.2 million in compensation and benefit expense due to an increase in incentive plan expense as a result of a strong performance in the third quarter of 2020.

Nine Months Ended September 30, 2020 and 2019

SVB Leerink had noninterest income of $340.1 million for the nine months ended September 30, 2020, compared to $188.1 million for the comparable 2019 period. The $152.0 million increase was primarily driven by a $143.5 million increase investment banking revenues attributable to higher levels of funding activity in the life science/healthcare secondary markets and by the increase in public equity underwriting fees.

SVB Leerink had noninterest expense of $248.3 million for the nine months ended September 30, 2020, compared to $177.7 million for the comparable 2019 period. The $70.6 million increase was primarily driven by an increase of $76.8 million in compensation and benefit expense due to an increase in incentive plan expense as a result of a strong performance during 2020, partially offset by a $6.6 million decrease in business travel expense due to the impact of travel restrictions put in place in response to the COVID-19 pandemic towards the end of the first quarter of 2020.

Consolidated Financial Condition

Our total assets, and total liabilities and stockholders' equity, were $96.9 billion at September 30, 2020 compared to $71.0 billion at December 31, 2019, an increase of $25.9 billion, or 36.5 percent. Refer below to a summary of the individual components driving the changes in total assets, total liabilities and stockholders' equity.

Cash and Cash Equivalents

Cash and cash equivalents totaled $15.7 billion at September 30, 2020, an increase of $8.9 billion, or 131.3 percent, compared to $6.8 billion at December 31, 2019. The increase was driven by the significant growth in deposits of $23.0 billion. We have also raised our cash target level to between $7.0 billion and $9.0 billion in response to the current economic environment. As of September 30, 2020, $11.9 billion of our cash and due from banks was deposited at the Federal Reserve Bank and was earning interest at the Federal Funds target rate and interest-earning deposits in other financial institutions were $2.7 billion. As of December 31, 2019, $3.7 billion of our cash and due from banks was deposited at the Federal Reserve Bank and was earning interest at the Federal Funds target rate and interest-earning deposits in other financial institutions were $2.1 billion.

Investment Securities

Investment securities totaled $40.4 billion at September 30, 2020, an increase of $11.3 billion, or 39.1 percent, compared to $29.1 billion at December 31, 2019. Our investment securities portfolio is comprised of: (i) an available-for-sale securities portfolio and a held-to-maturity securities portfolio, both of which represent interest earning fixed income investment securities; and (ii) a non-marketable and other equity securities portfolio, which represents primarily investments managed as part of our funds management business, investments in qualified affordable housing projects, as well as public equity securities held as a result of equity warrant assets exercised.

Available-for-Sale Securities

Period-end available-for-sale securities were $25.9 billion at September 30, 2020, compared to $14.0 billion at December 31, 2019, an increase of $11.9 billion, or 84.8 percent. The $11.9 billion increase in period-end AFS securities balances from December 31, 2019 to September 30, 2020, was primarily driven by the purchase of $16.6 billion of securities and a $0.5 billion increase in our AFS portfolio reflective of the 150 basis point decrease in Federal Funds interest rates, partially offset by the sale of $2.6 billion of securities and $2.6 billion of portfolio cash flows. 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, 2020. The weighted average yield is computed using the amortized cost of fixed income investment securities, which are reported at fair value. For U.S. Treasury securities, U.S. agency debentures and foreign government debt securities, the expected maturity is the actual contractual maturity of the notes. Expected maturities for mortgage-backed securities may differ significantly from their contractual maturities because mortgage borrowers have the right to prepay outstanding loan obligations with or without penalties. Mortgage-backed securities classified as available-for-sale typically have original contractual maturities from 10 to 30 years whereas expected average lives of these securities tend to be significantly shorter and vary based upon structure and prepayments in lower interest rate environments. The weighted average yield on mortgage-backed securities is based on prepayment assumptions at the purchase date. Actual yields earned may differ significantly based upon actual prepayments.

	September 30, 2020									
	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	$ 4,547,294	1.86 %	$ 60,221	1.57 %	$ 2,989,181	1.84 %	$ 1,497,892	1.91 %	$ —	— %
U.S. agency debentures	152,526	1.52	—	—	—	—	152,526	1.52	—	—
Foreign government debt securities	23,449	(0.82)	23,449	(0.82)	—	—	—	—	—	—
Residential mortgage-backed securities:										
Agency-issued mortgage-backed securities	9,770,313	1.84	—	—	—	—	—	—	9,770,313	1.84
Agency-issued collateralized mortgage obligations—fixed rate	7,315,973	1.32	—	—	—	—	—	—	7,315,973	1.32
Agency-issued commercial mortgage-backed securities	4,094,769	1.80	—	—	—	—	1,431,547	1.81	2,663,222	1.80
Total	$ 25,904,324	1.69	$ 83,670	0.90	$ 2,989,181	1.84	$ 3,081,965	1.84	$ 19,749,508	1.64

Held-to-Maturity Securities

Period-end held-to-maturity securities were $13.0 billion at September 30, 2020, compared to $13.8 billion at December 31, 2019, a decrease of $0.8 billion, or 6.2 percent. The $0.8 billion decrease in period-end HTM security balances from December 31, 2019 to September 30, 2020 was due primarily to pay downs and maturities of $2.8 billion, partially offset by the purchase of $2.0 billion of securities.

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, 2020. Interest income on certain municipal bonds and notes (non-taxable investments) are presented on a fully taxable equivalent basis using the federal statutory tax rate of 21.0 percent. The weighted average yield is computed using the amortized cost of fixed income investment securities. For U.S. agency debentures, the expected maturity is the actual contractual maturity of the notes. Expected 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 held-to-maturity typically have original contractual maturities from 10 to 30 years whereas expected average lives of these securities tend to be significantly shorter and vary based upon structure and prepayments in lower interest rate environments. The weighted average yield on mortgage-backed securities is based on prepayment assumptions at the purchase date. Actual yields earned may differ significantly based upon actual prepayments.

	September 30, 2020									
	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	$ 402,346	2.61 %	$ 4,675	3.22 %	$ 148,559	2.59 %	$ 249,112	2.67 %	$ —	— %
Residential mortgage-backed securities:										
Agency-issued mortgage-backed securities	5,363,541	2.86	7,113	2.39	28,722	1.89	588,606	2.47	4,739,100	2.92
Agency-issued collateralized mortgage obligations—fixed rate	1,909,965	1.50	—	—	—	—	551,213	1.62	1,358,752	1.45
Agency-issued collateralized mortgage obligations—variable rate	147,714	0.74	—	—	—	—	—	—	147,714	0.74
Agency-issued commercial mortgage-backed securities	2,229,811	3.08	—	—	—	—	102,428	3.56	2,127,383	3.06
Municipal bonds and notes	2,929,137	3.21	44,340	2.52	134,029	2.63	540,308	3.20	2,210,460	3.26
Total	$ 12,982,514	2.75	$ 56,128	2.56	$ 311,310	2.54	$ 2,031,667	2.51	$ 10,583,409	2.80

Portfolio duration is a standard measure used to approximate changes in the market value of fixed income instruments due to a change in market interest rates. The measure is an estimate based on the level of current market interest rates, expectations for changes in the path of forward rates and the effect of forward rates on mortgage prepayment speed assumptions. As such, portfolio duration will fluctuate with changes in market interest rates. Changes in portfolio duration are also impacted by changes in the mix of longer versus shorter term-to-maturity securities. The estimated weighted-average duration of our fixed income investment securities portfolio was 4.1 years and 3.9 years at September 30, 2020 and December 31, 2019, respectively.

Non-Marketable and Other Equity Securities

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

Period-end non-marketable and other equity securities were $1.5 billion ($1.4 billion net of noncontrolling interest) at September 30, 2020 compared to $1.2 billion ($1.1 billion net of noncontrolling interest) at December 31, 2019, an increase of $0.3 billion, or 27.5 percent. The increase in period end non-marketable and other equity securities of $0.3 billion was primarily attributable to the increase in other equity securities in public companies of $0.2 billion, driven by our investment in BigCommerce, private equity fund investments driven by an increase in valuations, and new investments within our qualified housing projects portfolio. The following table summarizes the carrying value (as reported) of non-marketable and other equity securities compared to the amounts attributable to SVBFG (which generally represents the carrying value times our ownership percentage) at September 30, 2020 and December 31, 2019:

	September 30, 2020		December 31, 2019	
(Dollars in thousands)	Carrying value (as reported)	Amount attributable to SVBFG	Carrying value (as reported)	Amount attributable to SVBFG
Non-marketable and other equity securities:				
Non-marketable securities (fair value accounting):				
Consolidated venture capital and private equity fund investments (1)	$ 74,293	$ 19,132	$ 87,180	$ 22,482
Unconsolidated venture capital and private equity fund investments (2)	152,367	152,367	178,217	178,217
Other investments without a readily determinable fair value (3)	56,008	56,008	55,255	55,255
Other equity securities in public companies (fair value accounting (4)	229,297	229,151	59,200	59,056
Non-marketable securities (equity method accounting) (5):				
Venture capital and private equity fund investments	274,721	161,699	215,367	131,403
Debt funds	6,918	6,918	7,271	7,271
Other investments	192,776	192,776	152,863	152,863
Investments in qualified affordable housing projects, net	560,983	560,983	458,476	458,476
Total non-marketable and other equity securities	$ 1,547,363	$ 1,379,034	$ 1,213,829	$ 1,065,023

(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, 2020 and December 31, 2019:

	September 30, 2020		December 31, 2019	
(Dollars in thousands)	Carrying value (as reported)	Amount attributable to SVBFG	Carrying value (as reported)	Amount attributable to SVBFG
Strategic Investors Fund, LP	$ 4,646	$ 584	$ 5,729	$ 720
Capital Preferred Return Fund, LP	39,246	8,458	45,341	9,772
Growth Partners, LP	30,267	10,076	35,976	11,976
CP I, LP	134	14	134	14
Total consolidated venture capital and private equity fund investments	$ 74,293	$ 19,132	$ 87,180	$ 22,482

(2) The carrying value represents investments in 179 and 205 funds (primarily venture capital funds) at September 30, 2020 and December 31, 2019, respectively, where our ownership interest is typically less than 5% of the voting interests of each such fund and in which we do not have the ability to exercise significant influence over the partnerships' operating

activities and financial policies. Our unconsolidated venture capital and private equity fund investments are carried at fair value based on the fund investments' net asset values per share as obtained from the general partners of the funds. For each fund investment, we adjust the net asset value per share for differences between our measurement date and the date of the fund investment's net asset value by using the most recently available financial information from the investee general partner, for example June 30th for our September 30 th consolidated financial statements, adjusted for any contributions paid, distributions received from the investment, and significant fund transactions or market events during the reporting period.

(3) Investments classified as "Other investments without a readily determinable fair value" include direct equity investments in private companies. The carrying value is based on the price at which the investment was acquired plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments. We consider a range of factors when adjusting the fair value of these investments, including, but not limited to, the term and nature of the investment, local market conditions, values for comparable securities, current and projected operating performance, exit strategies, financing transactions subsequent to the acquisition of the investment and a discount for certain investments that have lock-up restrictions or other features that indicate a discount to fair value is warranted. For further details on the carrying value of these investments refer to Note 6 — "Investment Securities" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

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

(5) The following table shows the carrying value and our ownership percentage of each investment at September 30, 2020 and December 31, 2019 (equity method accounting):

	September 30, 2020		December 31, 2019	
(Dollars in thousands)	Carrying value (as reported)	Amount attributable to SVBFG	Carrying value (as reported)	Amount attributable to SVBFG
Venture capital and private equity fund investments:				
Strategic Investors Fund II, LP	$ 3,519	$ 3,271	$ 3,612	$ 3,387
Strategic Investors Fund III, LP	14,984	12,113	15,668	12,701
Strategic Investors Fund IV, LP	25,451	21,399	27,064	22,780
Strategic Investors Fund V, LP	52,575	27,602	46,830	24,586
CP II, LP (i)	4,773	2,871	5,907	3,567
Other venture capital and private equity fund investments	173,419	94,443	116,286	64,382
Total venture capital and private equity fund investments	$ 274,721	$ 161,699	$ 215,367	$ 131,403
Debt funds:				
Gold Hill Capital 2008, LP (ii)	$ 5,317	$ 5,317	$ 5,525	$ 5,525
Other debt funds	1,601	1,601	1,746	1,746
Total debt funds	$ 6,918	$ 6,918	$ 7,271	$ 7,271
Other investments:				
SPD Silicon Valley Bank Co., Ltd.	$ 107,969	$ 107,969	$ 74,190	$ 74,190
Other investments	84,807	84,807	78,673	78,673
Total other investments	$ 192,776	$ 192,776	$ 152,863	$ 152,863

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

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

Volcker Rule

The Volcker Rule prohibits, subject to certain exceptions, a banking entity, such as the Company, from sponsoring, investing in, or having certain relationships with covered funds. Under the currently effective regulations implementing the Volcker Rule, covered funds are defined to include many venture capital and private equity funds.

On June 6, 2017, we received notice that the Federal Reserve approved the Company's application for an extension of the permitted conformance period for the Company's investments in "illiquid" covered funds. The Company must sell, divest, restructure or otherwise conform such investments to the provisions of the Volcker Rule by 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 of September 30, 2020, such investments had an estimated aggregate carrying value and fair value of approximately $185 million. (For more information about the Volcker Rule, see "Business—Supervision and Regulation" under Part 1, Item 1 of our 2019 Form 10-K.)

On June 25, 2020, the Federal Reserve and other agencies finalized revisions to the regulations implementing the Volcker Rule ("2020 Volcker Amendments"), which became effective on October 1, 2020. The amendments include, among other things, new exclusions for credit funds, venture capital funds, family wealth management vehicles and customer facilitation vehicles; revisions to existing exclusions for foreign public funds, loan securitizations and public welfare and small business funds; and modifications to the Super 23A provisions of the Volcker Rule. We believe that certain venture capital funds and credit funds in which we have investments qualify for these new exclusions, and, as a result, we will not be required to sell or otherwise conform such portion of "illiquid" fund holdings that are subject to the extension from the Federal Reserve as discussed above. We are continuing to assess the impact of the 2020 Volcker Amendments on the Company's existing fund investments and our future funds business.

Investment in BigCommerce Holdings, Inc.

As of September 30, 2020 we held approximately 2.8 million shares of common stock in BigCommerce comprised of: (i) common stock issued pursuant to our exercise of certain warrants, and (ii) common stock acquired through debt conversion. With respect to these securities and transactions, during the three months ending September 30, 2020, we recognized a $30.0 million gain upon the exercise and conversion of the convertible debt option (included in other noninterest income), a $10.8 million warrant gain from the exercise and conversion of our warrants, and a $108.4 million unrealized investment gain on the quarter-end valuation of equity shares at a price of $83.30.

Gains (or losses) related to our equity securities in public companies such as BigCommerce are based on valuation changes or the sale of any securities, and are subject to such companies' stock price, which are subject to market conditions and various other factors. Additionally, the public equity investment expected gains and losses, and the extent to which such gains (or losses) will become realized is subject to a variety of factors, including among other factors, changes in prevailing market prices and the timing of any sales of securities, which are subject to our securities sales and governance process as well as certain sales restrictions (e.g. lock-up agreements). The lock-up agreement for common stock shares held in BigCommerce is scheduled to expire during February 2021.

Loans

Loans, amortized cost basis, increased by $5.2 billion to $38.4 billion at September 30, 2020, compared to $33.2 billion at December 31, 2019. Unearned income was $222 million at September 30, 2020 and $163 million at December 31, 2019. Period-end loans increased compared to December 31, 2019, driven primarily by our Global Fund Banking, SBA, Investor Dependent and Balance Sheet Dependent risk-based segments. The increase in risk-based segments was primarily driven by participation in the Paycheck Protection Program and increased credit line utilization.

The breakdown of total loans and loans as a percentage of total loans by risk-based segment is as follows:

(Dollars in thousands)	September 30, 2020 Amount	September 30, 2020 Percentage	December 31, 2019 Amount	December 31, 2019 Percentage
Global fund banking	$ 19,584,518	51.0 %	$ 17,712,797	53.1 %
Investor dependent:				
Early stage	1,470,941	3.8	1,653,425	5.0
Mid stage	1,626,794	4.2	1,066,783	3.2
Later stage	2,013,934	5.3	1,698,676	5.1
Total investor dependent	5,111,669	13.3	4,418,884	13.3
Cash flow dependent:				
Sponsor led buyout	2,062,243	5.4	2,203,020	6.6
Other	2,600,157	6.8	2,252,847	6.8
Total cash flow dependent	4,662,400	12.2	4,455,867	13.4
Private bank (1)	4,424,899	11.5	3,489,219	10.4
Balance sheet dependent	1,698,220	4.4	1,297,304	3.9
Premium wine (1)	1,081,963	2.8	1,063,512	3.2
Other (1)	48,206	0.1	890,121	2.7
SBA loans	1,802,016	4.7	—	—
Total loans (2)	$ 38,413,891	100.0	$ 33,327,704	100.0

(1) As of September 30, 2020, as a result of enhanced portfolio characteristic definitions for our risk-based segments, loans in the amount of $411.2 million and $50.3 million that would have been reported in Other under historical definitions, are now being reported in our Private Bank and Premium Wine risk-based segments, respectively.

(2) As of September 30, 2020, loan amounts are disclosed using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed using the gross basis.

Loan Concentration

The following table provides a summary of total loans by size and risk-based segment. The breakout below is based on total client balances (individually or in the aggregate) as of September 30, 2020 to any single client:

(Dollars in thousands)	September 30, 2020 Less than Five Million	Five to Ten Million	Ten to Twenty Million	Twenty to Thirty Million	Thirty Million or More	Total
Global fund banking	$ 1,050,604	$ 1,360,678	$ 2,705,859	$ 1,983,241	$ 12,492,083	$ 19,592,465
Investor dependent:						
Early stage	1,988,463	226,895	84,560	27,738	34,818	2,362,474
Mid stage	880,423	542,855	210,759	197,162	92,895	1,924,094
Later stage	302,248	502,367	742,294	325,919	236,584	2,109,412
Total investor dependent	3,171,134	1,272,117	1,037,613	550,819	364,297	6,395,980
Cash flow dependent:						
Sponsor led buyout	13,838	77,169	500,763	658,535	821,589	2,071,894
Other	426,605	255,151	620,051	587,133	1,119,861	3,008,801
Total cash flow dependent	440,443	332,320	1,120,814	1,245,668	1,941,450	5,080,695
Private bank (1)	3,398,733	492,804	297,444	23,651	213,233	4,425,865
Balance sheet dependent	205,838	370,864	380,100	209,427	581,967	1,748,196
Premium wine (1)	249,620	247,718	330,815	125,283	160,868	1,114,304
Other (1)	9,328	7,583	39,475	—	—	56,386
Total loans (2) (3)	$ 8,525,700	$ 4,084,084	$ 5,912,120	$ 4,138,089	$ 15,753,898	$ 38,413,891

(1) As of September 30, 2020, as a result of enhanced portfolio characteristic definitions for our risk-based segments, loans in the amount of $411.2 million and $50.3 million that would have been reported in Other under historical definitions, are now being reported in our Private Bank and Premium Wine risk-based segments, respectively.

(2) As of September 30, 2020, loan amounts are disclosed using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed using the gross basis.
(3) Included in total loans at amortized cost is approximately $1.8 billion in PPP loans. The PPP loans consist of loans across all of our risk-based segments.

At September 30, 2020, loans equal to or greater than $20 million to any single client (individually or in the aggregate) totaled $19.9 billion, or 51.8 percent of our total loan portfolio. These loans represented 433 clients, and of these loans, $45.8 million were on nonaccrual status as of September 30, 2020.

The following table provides a summary of loans by size and risk-based segment. The breakout below is based on total client balances (individually or in the aggregate) as of December 31, 2019:

	December 31, 2019					
(Dollars in thousands)	Less than Five Million	Five to Ten Million	Ten to Twenty Million	Twenty to Thirty Million	Thirty Million or More	Total
Global fund banking	$ 1,016,051	$ 1,082,201	$ 2,559,384	$ 2,029,547	$ 11,025,614	$ 17,712,797
Investor dependent:						
Early stage	1,090,852	260,685	191,661	76,542	33,685	1,653,425
Mid stage	544,167	316,617	156,418	49,581	—	1,066,783
Later stage	167,500	348,832	648,382	304,373	229,589	1,698,676
Total investor dependent	1,802,519	926,134	996,461	430,496	263,274	4,418,884
Cash flow dependent:						
Sponsor led buyout	16,034	97,458	550,753	723,737	815,038	2,203,020
Other	206,209	86,929	465,304	463,073	1,031,332	2,252,847
Total cash flow dependent	222,243	184,387	1,016,057	1,186,810	1,846,370	4,455,867
Private bank	2,791,587	359,429	191,979	49,996	96,228	3,489,219
Balance sheet dependent	256,247	269,744	404,356	78,197	288,760	1,297,304
Premium wine	243,094	267,389	261,951	148,469	142,609	1,063,512
Other	526,850	40,511	106,247	112,764	103,749	890,121
Total loans (1)	$ 6,858,591	$ 3,129,795	$ 5,536,435	$ 4,036,279	$ 13,766,604	$ 33,327,704

(1) As of September 30, 2020, loan amounts are disclosed using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed using the gross basis.

At December 31, 2019, loans equal to or greater than $20 million to any single client (individually or in the aggregate) totaled $17.8 billion, or 53.4 percent of our total loan portfolio. These loans represented 397 clients, and of these loans, $37.3 million were on nonaccrual status as of December 31, 2019.

Our three main market segments include (i) Global Fund Banking (formerly private equity/venture capital), (ii) technology (software/internet and hardware) and life science/healthcare, and (iii) SVB Private Bank.

(i) Global Fund Banking

Our Global Fund Banking loan portfolio includes financial services to clients in the private equity/venture capital community. Our lending to private equity/venture capital firms and funds represented 51 percent of total loans at September 30, 2020 and 53 percent at December 31, 2019. 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.

(ii) Technology and Life Science/Healthcare

Our technology and life science/healthcare loan portfolios include loans to clients at the various stages of their life cycles. The risk-based segments for our technology and life science/healthcare market segments are classified as investor dependent, cash flow dependent or balance sheet dependent for reporting purposes.

Investor dependent loans represented 13 percent of total loans at both September 30, 2020 and December 31, 2019. These loans are made to companies in both our Accelerator (early-stage) and Growth practices (mid-stage and later-stage).

Cash flow dependent loans, which include sponsor led buyout lending, represented 12 percent of total loans at September 30, 2020 and 13 percent at December 31, 2019. Sponsor led buyout loans represented five percent of total loans at September 30, 2020, compared to seven percent at December 31, 2019.

Balance sheet dependent loans, which include asset-based loans, represented four percent of total loans at both September 30, 2020 and December 31, 2019. Working capital lines and accounts receivable financing, both part of our asset-based lending, represented one percent of total loans each, respectively, at September 30, 2020 and two percent and one percent of total loans, respectively, at December 31, 2019.

(iii) SVB Private Bank

Our SVB Private Bank clients are primarily private equity/venture capital professionals and executives of the innovation companies they support. Our lending to SVB Private Bank clients represented 12 percent of total loans at September 30, 2020 and 10 percent at December 31, 2019. Many of these clients have mortgages, which represented 86 percent of this portfolio at September 30, 2020; the balance of this portfolio consisted of home equity lines of credit, restricted and private stock loans, capital call lines of credit, lines of credit against liquid assets and other secured and unsecured lending products. In addition, we provide owner occupied commercial mortgages to Private Bank clients and real estate secured loans to eligible employees through our EHOP.

Paycheck Protection Program

Beginning in April 2020, we accepted applications under the PPP administered by the U.S. Small Business Association (“SBA”) under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") and originated loans to qualified small businesses. Under the terms of the program, loans funded through the PPP are eligible to be forgiven if certain requirements are met, including using the funds for certain costs relating to payroll, healthcare and qualifying mortgage interest, rent and utility payments. To the extent not forgiven, loans are subject to certain terms including, among others, the following: maximum two-year term for loans issued before June 5, 2020 (unless borrower and lender agree otherwise); a maximum five-year term for loans issued on or after June 5, 2020; an interest rate of 1.0%; deferral of loan payments until a loan forgiveness decision is rendered or until 10 months after the end of a borrower’s forgiveness covered period; and no requirement for any collateral or personal guarantees. PPP borrowers are not required to pay any fees to the government or the lender, and the loans may be repaid by the borrower at any time. The SBA, however, will pay lenders a processing fee based on the size of the PPP loan, ranging from 1% to 5% of the loan.

As of September 30, 2020, we have outstanding PPP loans in the amount of $1.8 billion, as approved by the SBA. This funded amount reflects repayments received as of such date.

Additionally, we announced our intention to donate PPP loan origination fees, net of costs incurred, received from the SBA to COVID-19 relief efforts, currently estimated to be approximately $20 million to be donated in the fourth quarter of 2020 irrespective of when forgiveness amounts are actually received from the SBA.

Loan Deferral Programs

In April 2020, we implemented three loan payment deferral programs targeted to assist borrowers who were the most impacted by the COVID-19 pandemic. These programs included relief for venture-backed, private bank and wine borrowers who met certain criteria. The three-month private bank and wine deferral programs ended, and payments resumed, in the third quarter of 2020. The six-month venture debt and private bank deferral programs are expected to end, and payments to resume, in the fourth quarter of 2020. As of September 30, 2020, loans modified under these programs had outstanding balances of $1.9 billion, $13.6 million and $73.3 million, for venture-backed, private bank and wine borrowers, respectively. These amounts reflect repayments received as of September 30, 2020.

For loans modified under these programs, in accordance with the provisions of Section 4013 of the CARES Act, we elected to not apply troubled debt restructuring classification to borrowers who were current as of December 31, 2019. In addition, for loans modified under these programs that did not meet the CARES Act criteria, we applied the guidance in an interagency statement issued by bank regulatory agencies. Using this guidance, we may assume that borrowers are not experiencing financial difficulty if loan modifications a) are performed in response to the COVID-19 pandemic, b) provide loan payment deferrals that are up to six months in duration and c) are granted to borrowers who were current as of the implementation date of the loan modification program. We evaluated all loans modified under these programs against the CARES Act and interagency guidance, as applicable, and determined the loan modifications would not be considered TDRs. We do not expect to defer interest income recognition during periods of payment deferral, nor do we expect any qualifying modification to trigger nonaccrual status. The effectiveness of our programs is uncertain considering the unknown duration and impact of the COVID-19 pandemic.

State Concentrations

Approximately 27 percent of our outstanding total loan balances as of both September 30, 2020 and December 31, 2019 were to borrowers based in California. Additionally, as of September 30, 2020, borrowers in Massachusetts and New York increased to 11 percent and 10 percent of our outstanding total loan balances as of September 30, 2020, respectively, compared to nine percent each as of December 31, 2019. Other than California, Massachusetts and New York, as of September 30, 2020, there are no states with loan balances greater than or equal to 10 percent.

See generally “Risk Factors–Credit Risks” set forth under Part I, Item 1A in our 2019 Form 10-K and "Risk Factors" under Part II, Item 1A of this report.

Credit Quality Indicators

As of September 30, 2020 and December 31, 2019, our total criticized loans and nonaccrual loans represented four and three percent of our total loans, respectively. Criticized and nonaccrual loans to early-stage clients represented 11 and 23 percent of our total criticized and nonaccrual loan balances at September 30, 2020 and December 31, 2019, respectively. Loans to early-stage clients represent a relatively small percentage of our overall portfolio at four percent of total loans at September 30, 2020 and five percent at December 31, 2019. 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.

More specifically, given the economic environment in light of the COVID-19 pandemic, we are closely monitoring our loan portfolio. Notwithstanding the increase of our allowance for credit losses in the first quarter which was largely attributable to longer duration mortgage loans based on our forecast models, we currently expect particularly for 2020 continued strong credit performance for our Private Bank and Global Fund Banking portfolios, consistent with the historic low credit losses we have typically experienced. However, we expect that our technology, life science/healthcare and premium wine portfolios will be likelier to be impacted negatively by the challenging economic environment in 2020. Particular areas of credit focus include: early-stage companies; Sponsor Finance clients; consumer internet and advertising technology clients; life science/healthcare companies that require clinical trials or provide elective services; and wine clients who are dependent on tasting room or restaurant sales.

Credit Quality and Allowance for Credit Losses for Loans and for Unfunded Credit Commitments

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 credit losses for loans and unfunded credit commitments:

(Dollars in thousands)	September 30, 2020	December 31, 2019
Nonperforming, past due, and restructured loans:		
Nonaccrual loans	$ 105,711	$ 102,669
Loans past due 90 days or more still accruing interest	—	3,515
Total nonperforming loans (1)	105,711	106,184
OREO and other foreclosed assets	1,179	—
Total nonperforming assets	$ 106,890	$ 106,184
Performing TDRs	$ 14,163	$ 31,990
Nonperforming loans as a percentage of total loans (1)	0.28 %	0.32 %
Nonperforming assets as a percentage of total assets	0.11	0.15
Allowance for credit losses for loans	$ 512,958	$ 304,924
As a percentage of total loans (1)	1.34 %	0.91 %
As a percentage of total nonperforming loans (1)	485.25	287.17
Allowance for credit losses for nonaccrual loans	$ 64,479	$ 44,859
As a percentage of total loans (1)	0.17 %	0.13 %
As a percentage of total nonperforming loans (1)	61.00	42.25
Allowance for credit losses for total performing loans	$ 448,479	$ 260,065
As a percentage of total loans (1)	1.17 %	0.78 %
As a percentage of total performing loans (1)	1.17	0.78
Total loans (1)	$ 38,413,891	$ 33,327,704
Total performing loans (1)	38,308,180	33,221,520
Allowance for credit losses for unfunded credit commitments (2)	101,515	67,656
As a percentage of total unfunded credit commitments	0.33 %	0.28 %
Total unfunded credit commitments (3)	$ 30,329,796	$ 24,521,920

(1) As of September 30, 2020, loan amounts are disclosed, and ratios are calculated, using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed, and ratios calculated, using the gross basis.

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

(3) Includes unfunded loan commitments and letters of credit.

Our allowance for credit losses for loans as a percentage of total loans increased 43 basis points to 1.34 percent at September 30, 2020, compared to 0.91 percent at December 31, 2019. The 43 basis points increase was due primarily to a 39 basis points increase for our performing loan reserve as a percentage of total loans and a four basis points increase for nonaccrual loans.

Our allowance for credit losses for performing loans was $448.5 million at September 30, 2020, compared to $260.1 million at December 31, 2019. Included in the allowance for credit losses at September 30, 2020 is the day one impact of adopting CECL of $22.4 million driven by an increase in our expected credit loss for our Investor Dependent loan portfolio given the higher relative risk and longer-duration, which is taken into account under the CECL methodology, partially offset by a decrease for our Global Fund Banking loan portfolio, given its higher historical credit quality and shorter duration. The remaining $166.0 million increase was due primarily to an increase of $134.5 million related to the expected credit losses for our performing loan reserves based on our forecast models of the current economic environment and $31.5 million related to period-end loan growth of $5.2 billion.

To determine the allowance for credit losses for performing loans as of September 30, 2020, we utilized three scenarios, on a weighted basis, from Moody's Analytics September 2020 forecast in our expected lifetime loss estimates. The baseline scenario, which carries the highest weighting, reflected an improvement in the economic forecast utilized for our ACL as of June 30, 2020. Those assumptions included an improvement in the unemployment rate from 13 percent as of June 30, 2020, to 9 percent as of September 30, 2020, as a result of businesses re-opening and the effect of government aid programs. The gross domestic product ("GDP") contraction rate improved from 33 percent as of June 30, 2020 to 27 percent as of September 30, 2020.. We also utilized a more favorable (Moody's S1, Upside) and a less favorable (Moody's S3, Downside) economic forecast scenario, in addition to the baseline. To the extent we identified credit risk considerations that were not captured by the Moody's Analytics September 2020 scenarios, we addressed the risk through management's qualitative adjustments to our ACL for performing loans.

Our allowance for credit losses for nonaccrual loans was $64.5 million at September 30, 2020, compared to $44.9 million at December 31, 2019. The $19.6 million increase was due primarily to $90.4 million in reserves for new nonaccrual loans as noted below and $3.1 million due to the day one impact of adopting CECL, partially offset by $34.6 million in repayments and $39.3 million in charge-offs. Reserves for new nonaccruals were primarily driven by reserves of $31.7 million for five Investor Dependent clients and $14.1 million for one Sponsor Led Buyout client. Repayments were primarily driven by $12.9 million for one Sponsor Led Buyout client that was added to our nonaccrual loan portfolio during the third quarter of 2019.

The following table presents a summary of changes in nonaccrual loans for the nine months ended September 30, 2020 and 2019:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	**2020**	**2019**	**2020**	**2019**
Balance, beginning of period (1)	$ 94,326	$ 96,641	$ 102,669	$ 94,142
Additions	70,000	53,643	172,462	143,960
Paydowns and other reductions	(38,754)	(22,493)	(119,215)	(86,430)
Charge-offs	(19,861)	(23,729)	(50,205)	(47,559)
Other reductions	—	(17)	—	(68)
Balance, end of period (1)	$ 105,711	$ 104,045	$ 105,711	$ 104,045

(1) For the quarter ended September 30, 2020, loan amounts are disclosed using the amortized cost basis as a result of the adoption of CECL. Prior period loan amounts are disclosed using the gross basis.

Nonaccrual loans were $105.7 million at September 30, 2020, compared to $102.7 million at December 31, 2019. Our nonaccrual loan balance increased $3.0 million primarily driven by $172.4 million in new nonaccrual loans, partially offset by $119.2 million in paydowns and other reductions and $50.2 million charge-offs. New nonaccrual loans were driven primarily by $57.4 million for six clients in our Investor Dependent portfolio, $21.8 million for one client in our Sponsor Led Buyout portfolio and $14.8 million for one client in our Balance Sheet Dependent portfolio. Repayments were primarily driven by $34.5 million for one Sponsor Led Buyout client that was added to our nonaccrual loan portfolio during the third quarter of 2019 and $11.7 million for one Balance Sheet Dependent client that was added in the second quarter of 2020. As of September 30, 2020, we have specifically reserved $64.5 million for our nonaccrual loans.

Average nonaccrual loans for the three and nine months ended September 30, 2020 were $96.1 million and $78.9 million, respectively, compared to $90.3 million and $98.1 million for the comparable 2019 period. The $5.8 million increase in average nonaccrual loans for the three months ended September 30, 2020 compared to September 30, 2019 was primarily driven by new nonaccruals occurring in the latter part of the second quarter and third quarter. If the nonaccrual loans had not been nonperforming, $0.7 million and $1.7 million in interest income would have been recorded for the three and nine months ended September 30, 2020, respectively, compared to $1.0 million and $4.1 million for the comparable 2019 period.

Accrued Interest Receivable and Other Assets

A summary of accrued interest receivable and other assets at September 30, 2020 and December 31, 2019 is as follows:

(Dollars in thousands)	September 30, 2020	December 31, 2019	% Change
Derivative assets (1)	$ 427,044	$ 332,814	28.3 %
Foreign exchange spot contract assets, gross	1,243,419	810,275	53.5
Accrued interest receivable	203,633	216,962	(6.1)
FHLB and Federal Reserve Bank stock	61,232	60,258	1.6
Net deferred tax assets (2)	347	28,433	(98.8)
Accounts receivable	33,320	47,663	(30.1)
Other assets	347,984	248,828	39.8
Total accrued interest receivable and other assets	$ 2,316,979	$ 1,745,233	32.8

(1) See "Derivatives" section below.
(2) See "Other Liabilities" 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 $433.1 million was primarily due to an overall increase in the amount of unsettled spot trades at period-end as compared to December 31, 2019.

Accrued Interest Receivable

The decrease of $13.3 million in accrued interest receivable is reflective of lower accrued interest receivables on loans and fixed income investment securities from lower overall market rates offset by an increase in accrued interest receivable reflective of growth in period-end fixed income investment securities of $11.0 billion at September 30, 2020 as compared to December 31, 2019.

Other Assets

Other assets includes various asset amounts for other operational transactions. The increase of $99.2 million was primarily due to a $31.9 million increase in Leerink trade receivables reflective of increased investment banking activity during the nine months ended September 30, 2020.

Derivatives

Derivative instruments are recorded as a component of other assets and other liabilities on the balance sheet. The following table provides a summary of derivative assets and liabilities at September 30, 2020 and December 31, 2019:

(Dollars in thousands)	September 30, 2020	December 31, 2019	% Change
Assets:			
Equity warrant assets	$ 202,184	$ 165,473	22.2 %
Foreign exchange forward and option contracts	145,591	115,854	25.7
Client interest rate derivatives	79,270	28,811	175.1
Interest rate swaps	—	22,676	—
Total derivative assets	$ 427,045	$ 332,814	28.3
Liabilities:			
Foreign exchange forward and option contracts	$ 112,223	$ 98,207	14.3
Client interest rate derivatives	25,558	14,154	80.6
Interest rate swaps	—	25,623	—
Total derivative liabilities	$ 137,781	$ 137,984	(0.1)

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, 2020, we held warrants in 2,503 companies, compared to 2,268 companies at December 31, 2019. Warrants in 28 companies each had fair values greater than $1.0 million and collectively represented $83.0 million, or 41.1 percent, of the fair value of the total warrant portfolio at September 30, 2020. 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, 2020 and 2019:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	**2020**	**2019**	**2020**	**2019**
Balance, beginning of period	$ 171,082	$ 158,048	$ 165,473	$ 149,238
New equity warrant assets	4,726	3,843	16,598	11,365
Non-cash changes in fair value, net	30,187	7,995	35,629	19,787
Exercised equity warrant assets	(3,450)	(20,292)	(14,184)	(28,346)
Terminated equity warrant assets	(361)	(481)	(1,332)	(2,931)
Balance, end of period	$ 202,184	$ 149,113	$ 202,184	$ 149,113

Foreign Exchange Forward and Foreign Currency Option Contracts

We enter into foreign exchange forward contracts and foreign currency option contracts with clients involved in foreign activities, either as the purchaser or seller, depending upon the clients' needs. For each forward or option contract entered into with our clients, we enter into an opposite way forward or option contract with a correspondent bank, which mitigates the risk of fluctuations in currency rates. We also enter into forward contracts with correspondent banks to economically reduce our foreign exchange exposure related to certain foreign currency denominated instruments. Net gains and losses on the revaluation of foreign currency denominated instruments are recorded in the line item "Other" as part of noninterest income, a component of consolidated net income. We have not experienced nonperformance by any of our counterparties and therefore have not incurred any related losses. Further, we anticipate performance by all counterparties. Our net exposure for foreign exchange forward and foreign currency option contracts, net of cash collateral, was $27.2 million at September 30, 2020 and $22.2 million at December 31, 2019. For additional information on our foreign exchange forward contracts and foreign currency option contracts, see Note 11 — "Derivative Financial Instruments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

Client Interest Rate Derivatives

We sell interest rate contracts to clients who wish to mitigate their interest rate exposure. We economically reduce the interest rate risk from this business by entering into opposite way contracts with correspondent banks. Our net exposure for client interest rate derivative contracts, net of cash collateral, was $78.6 million at September 30, 2020 and $28.6 million at December 31, 2019. For additional information on our client interest rate derivatives, see Note 11 — "Derivative Financial Instruments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

Interest Rate Swaps

To manage interest rate risk on our variable-interest rate loan portfolio, we enter into interest rate swap contracts to hedge against future changes in interest rates by using hedging instruments to lock in future cash inflows that would otherwise be impacted by movements in the market interest rates. We designate these interest rate swap contracts as cash flow hedges that qualify for hedge accounting under ASC 815 and record them in other assets and other liabilities. Refer to Note 11 — "Derivative Financial Instruments" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report for additional information regarding the termination of our interest rate swap cash flow hedges during the first quarter of 2020.

Deposits

Deposits were $84.8 billion at September 30, 2020, an increase of $23.0 billion, or 37.3 percent, compared to $61.8 billion at December 31, 2019. The increase in deposits was driven by strong public and private fundraising as well as from clients conserving cash.

At September 30, 2020, the aggregate balance of time deposit accounts individually equal to or greater than $100,000 totaled $332 million, compared to $185 million at December 31, 2019. At September 30, 2020, $331 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 11 percent and 13 percent of our total deposits at September 30, 2020 and December 31, 2019, respectively, were from our clients in Asia.

We expect in 2020 that our deposit growth will be impacted by slower cash burn rates as clients look to conserve cash.

Long-Term Debt

Our long-term debt was $843.4 million at September 30, 2020 and $348.0 million at December 31, 2019. The increase in our long-term debt was due to the issuance of 3.125% Senior Notes during the second quarter of 2020.

As of September 30, 2020, long-term debt included our 3.50% Senior Notes and 3.125% Senior Notes. For more information on our long-term debt, see Note 10 — "Short-Term Borrowings and Long-Term Debt" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

Other Liabilities

A summary of other liabilities at September 30, 2020 and December 31, 2019 is as follows:

(Dollars in thousands)	September 30, 2020	December 31, 2019	% Change
Foreign exchange spot contract liabilities, gross	$ 1,468,525	$ 888,360	65.3
Accrued compensation	353,759	354,393	(0.2)
Allowance for unfunded credit commitments	101,515	67,656	50.0
Derivative liabilities (1)	137,781	137,984	(0.1)
Net deferred tax liabilities	159,967	—	—
Other liabilities	845,674	593,359	42.5
Total other liabilities	$ 3,067,221	$ 2,041,752	50.2

(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 $580.2 million was due primarily to an increase in the fair value of unsettled spot trades at September 30, 2020 as compared to December 31, 2019.

Accrued Compensation

Accrued compensation includes amounts for our Incentive Compensation Plan, Direct Drive Incentive Compensation Plan, Retention Program, Warrant Incentive Plan, ESOP, SVB Leerink Incentive Compensation Plan, SVB Leerink Retention Award and other compensation arrangements. The accruals remained relatively flat, as the increase in the number of average FTEs for the first nine months ended of 2020 as well as the SVB Leerink incentive compensation resulting from strong year-to-date performance offsets the decrease in incentive compensation accrued for the nine months ended September 30, 2020, reflective of strong prior year performance compared to the current year forecasted performance.

Allowance for Unfunded Credit Commitments

Allowance for unfunded credit commitments includes an allowance for both our unfunded loan commitments and our letters of credit. The increase of $33.9 million was due primarily to the day one impact of the adoption of CECL of $22.8 million as well as an $11.1 million increase for the nine months ended September 30, 2020, driven primarily by growth in unfunded credit commitments of $5.8 billion.

Net Deferred Tax Liabilities

Net deferred tax liabilities increased to $160.0 million due to an increase in unrealized gains recorded to accumulated other comprehensive income from our available-for-sale securities and the termination of our interest rate swap cash flow hedge contracts, as well as gains from conversion of convertible debt options, partially offset by an increase in allowance for credit losses for loans.

Other Liabilities

Other liabilities includes various accrued liability amounts for other operational transactions. The increase of $252.3 million was reflective primarily of a $225.1 million increase in investment securities payable due to unsettled purchases of fixed income investment securities and a $30.0 million increase in new commitments for our qualified affordable tax credit funds.

Noncontrolling Interests

Noncontrolling interests totaled $174.4 million and $150.8 million at September 30, 2020 and December 31, 2019, respectively. The $23.6 million increase was due primarily to net income attributable to noncontrolling interests of $40.0 million, partially offset by $16.4 million in distributions for the nine months ended September 30, 2020.

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, 2020 and December 31, 2019:

	September 30, 2020		December 31, 2019	
(Dollars in thousands)	**Total Balance**	**Level 3**	**Total Balance**	**Level 3**
Assets carried at fair value	$ 26,787,326	$ 192,817	$ 14,672,330	$ 161,172
As a percentage of total assets	27.6 %	0.2 %	20.7 %	0.2 %
As a percentage of assets carried at fair value		0.7		1.1
Liabilities carried at fair value	$ 137,781	$ —	$ 137,984	$ —
As a percentage of total liabilities	0.2 %	— %	0.2 %	— %

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 17 — “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 generally “Risk Factors” set forth under Part I, Item 1A in our 2019 Form 10-K, and under Part II, Item 1A of this report.

During the three and nine months ended September 30, 2020, the Level 3 assets that are measured at fair value on a recurring basis experienced net realized and unrealized gains of $52.5 million and $91.2 million, respectively, primarily reflective of net gains realized on exercised warrant assets. During the three and nine months ended September 30, 2019, the Level 3 assets that are measured at fair value on a recurring basis experienced net realized and unrealized gains of $39.6 million and $105.4 million, respectively, primarily reflective of valuation increases from our private company warrant portfolio driven by net gains realized on exercised warrant assets.

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 applicable regulatory capital guidelines, including the joint agency rules implementing the "Basel III" capital rules (the "Capital Rules"). Our primary sources of new capital include retained earnings and proceeds from the sale and issuance of our capital stock or other securities. Under the oversight of the Finance Committee of our Board of Directors, management engages in regular capital planning processes in an effort to optimize the use of the 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 $7.8 billion at September 30, 2020, an increase of $1.3 billion, or 20.4 percent, compared to $6.5 billion at December 31, 2019. This increase was due primarily to net income available to common stockholders of $802.9 million and an increase in other comprehensive income of $535.9 million. The increase in other comprehensive income was driven primarily by a $604.5 million ($436.9 million net of tax) increase in the fair value of our AFS securities portfolio reflective of decreases in market interest rates and a $198.0 million ($143.1 million net of tax) gain from the termination of our interest rate swap cash flow hedge contracts, partially offset by a reclassification to net income for realized gains of $61.2 million ($44.2 million net of tax) attributable to sales of AFS securities.

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 under the Capital Rules as well as for a "well capitalized" bank holding company and insured depository institution, respectively, as of September 30, 2020 and December 31, 2019. Capital ratios for SVB Financial and the Bank, compared to the minimum capital ratios, are set forth below:

	September 30, 2020	December 31, 2019	Required Minimum (1)	Well Capitalized Minimum
SVB Financial:				
CET 1 risk-based capital ratio (2)(3)	12.31 %	12.58 %	7.0 %	N/A
Tier 1 risk-based capital ratio (3)	13.25	13.43	8.5	6.0
Total risk-based capital ratio (3)	14.19	14.23	10.5	10.0
Tier 1 leverage ratio (2)(3)	8.26	9.06	4.0	N/A
Tangible common equity to tangible assets ratio (4)(5)	7.52	8.39	N/A	N/A
Tangible common equity to risk-weighted assets ratio (4)(5)	13.28	12.76	N/A	N/A
Bank:				
CET 1 risk-based capital ratio (3)	10.75 %	11.12 %	7.0 %	6.5 %
Tier 1 risk-based capital ratio (3)	10.75	11.12	8.5	8.0
Total risk-based capital ratio (3)	11.75	11.96	10.5	10.0
Tier 1 leverage ratio (3)	6.45	7.30	4.0	5.0
Tangible common equity to tangible assets ratio (4)(5)	6.42	7.24	N/A	N/A
Tangible common equity to risk-weighted assets ratio (4)(5)	11.79	11.31	N/A	N/A

(1) Percentages represent the minimum capital ratios plus, as applicable, the fully phased-in 2.5% CET1 capital conservation buffer under the Capital Rules.
(2) "Well-Capitalized Minimum" CET 1 risk-based capital and Tier 1 leverage ratios are not formally defined under applicable banking regulations for bank holding companies.
(3) Capital ratios include regulatory capital phase-in of the allowance for credit losses under the 2020 CECL Transition Rule for periods beginning March 31, 2020.

(4) See below for a reconciliation of non-GAAP tangible common equity to tangible assets and tangible common equity to risk-weighted assets.
(5) The Federal Reserve has not issued any minimum guidelines for the tangible common equity to tangible assets ratio or the tangible common equity to risk-weighted assets ratio, however, we believe these ratios provide meaningful supplemental information regarding our capital levels and are therefore provided above.

Regulatory Capital Phase-In under the 2020 CECL Transition Rule

In March 2020, the federal banking agencies issued the 2020 CECL Transition Rule, which provides transitional relief to banking organizations with respect to the impact of CECL on regulatory capital. Under the rule, banking organizations that adopt CECL during the 2020 calendar year, such as SVB Financial and the Bank, may delay the estimated impact of CECL on regulatory capital for two years, followed by a three-year period to phase out the aggregate capital benefit provided during the initial two-year delay. The rule prescribes a methodology for estimating the impact of differences in credit loss allowances reflected under CECL versus under the incurred loss methodology during the five-year transition period. We have elected to use the five-year transition option under the 2020 CECL Transition Rule.

Capital Simplification Rules

In July 2019, the federal banking agencies adopted final rules intended to simplify compliance with capital rules for non-advanced approaches banking organizations (the "Capital Simplification Rules"), such as SVB Financial and the Bank. The Capital Simplification Rules took effect for SVB Financial as of January 1, 2020 and simplify the capital treatment of mortgage servicing assets, certain deferred tax assets, investments in unconsolidated financial institutions and minority interests for banking organizations.

Our risk-based capital ratios, tier 1 capital ratios and leverage ratios decreased for both SVB Financial and Silicon Valley Bank as of September 30, 2020, compared to December 31, 2019. The decrease in capital ratios is primarily driven by increases in our risk-weighted, and average, assets, partially offset by net income. The increases in risk-weighted assets was driven by increases in our loan and fixed income investment security portfolios. The increase in average assets was driven by increases in fixed income investments and cash and cash equivalents, as well as loan growth. 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, 2020 and December 31, 2019:

	SVB Financial		Bank	
Non-GAAP tangible common equity and tangible assets (Dollars in thousands, except ratios)	**September 30, 2020**	**December 31, 2019**	**September 30, 2020**	**December 31, 2019**
GAAP SVBFG stockholders' equity	$ 7,792,935	$ 6,470,307	$ 6,104,361	$ 5,034,095
Less: preferred stock	340,138	340,138	—	—
Less: intangible assets	183,203	187,240	—	—
Tangible common equity	$ 7,269,594	$ 5,942,929	$ 6,104,361	$ 5,034,095
GAAP total assets	$ 96,916,771	$ 71,004,903	$ 95,012,287	$ 69,563,817
Less: intangible assets	183,203	187,240	—	—
Tangible assets	$ 96,733,568	$ 70,817,663	$ 95,012,287	$ 69,563,817
Risk-weighted assets	$ 54,738,028	$ 46,577,485	$ 51,792,822	$ 44,502,150
Non-GAAP tangible common equity to tangible assets	7.52 %	8.39 %	6.42 %	7.24 %
Non-GAAP tangible common equity to risk-weighted assets	13.28	12.76	11.79	11.31

The tangible common equity to tangible assets ratio decreased for SVBFG and the Bank during the nine months ended September 30, 2020. The tangible common equity to tangible assets ratio decreased as a result of the growth in our period-end assets due to increases in cash and cash equivalents and the fixed income investment security portfolio.

The tangible common equity to risk weighted assets ratio increased for SVBFG and the Bank during the nine months ended September 30, 2020. The tangible common equity to risk-weighted assets ratio increased as a result of increase in equity due to unrealized gains on AFS securities and unrealized gains due to the termination of our interest rate swap cash flow hedge contracts during the first quarter of 2020. The growth in period-end risk-weighted assets was primarily due to increases in cash and cash equivalents and an increase in fixed income investments.

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 15 — "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 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 15 — "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.

Historically, client deposits have 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, 2020, our period-end total deposit balances were $84.8 billion, compared to $61.8 billion at December 31, 2019.

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

We have certain facilities in place to enable us to access short-term borrowings on a secured and unsecured basis. Our secured facilities include collateral pledged to the FHLB of San Francisco and the discount window at the FRB (using both fixed income securities and loans as collateral). Our unsecured facility consists of our uncommitted federal funds lines. As of September 30, 2020, collateral pledged to the FHLB of San Francisco was comprised primarily of fixed income investment securities and loans and had a carrying value of $6.6 billion, of which $5.5 billion was available to support additional borrowings. As of September 30, 2020, collateral pledged to the discount window at the FRB was comprised of fixed income investment securities and had a carrying value of $0.9 billion, all of which was unused and available to support additional borrowings. Our total unused and available borrowing capacity for our uncommitted federal funds lines totaled $1.9 billion at September 30, 2020. Our total unused and available borrowing capacity under our master repurchase agreements with various financial institutions totaled $3.3 billion at September 30, 2020.

In connection with our participation in the PPP under the CARES Act as discussed, we considered participating in the Federal Reserve's Paycheck Protection Program Lending Facility ("PPPLF"). The PPPLF was established to allow participating institutions to facilitate lending under the PPP and extends credit to eligible PPP loan originators on a non-recourse basis, taking PPP loans as collateral at face value. Ultimately, we were able to extend credit to PPP borrowers without relying on the PPPLF. Additionally, interim final capital rules issued by federal bank regulatory agencies have neutralized the regulatory capital effects of participating in the PPP, in that loans outstanding are assessed a zero percent risk weight for regulatory capital purposes.

On a stand-alone basis, SVB Financial's primary liquidity channels include dividends from the Bank, its portfolio of liquid assets, and its ability to raise debt and capital. For the three months ended September 30, 2020, no dividend was paid to SVB Financial, and for the nine months ended September 30, 2020, $50.0 million was paid. 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 2019 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, 2020 and 2019. For further details, see our "Interim Consolidated Statements of Cash Flows (Unaudited)" under Part I, Item 1 of this report.

	Nine months ended September 30,	
(Dollars in thousands)	**2020**	**2019**
Average cash and cash equivalents	$ 11,977,637	$ 6,250,024
Percentage of total average assets	15.0 %	10.2 %
Net cash provided by operating activities	$ 1,053,291	$ 709,744
Net cash used for investing activities	(15,588,371)	(6,564,776)
Net cash provided by financing activities	23,441,073	9,229,689
Net increase in cash and cash equivalents	$ 8,905,993	$ 3,374,657

Average cash and cash equivalents increased by $5.7 billion, or 91.6 percent, to $12.0 billion for the nine months ended September 30, 2020, compared to $6.3 billion for the comparable 2019 period.

Cash provided by operating activities was $1.1 billion for the nine months ended September 30, 2020, reflective primarily of net income before noncontrolling interests and dividends of $855.5 million and a net increase of $197.8 million in adjustments to reconcile net income to net cash primarily driven by the provision for credit losses.

Cash used for investing activities of $15.6 billion for the nine months ended September 30, 2020 was driven by $18.4 billion in purchases of fixed income investment securities and a $5.2 billion increase in loan balances, partially offset by $2.7 billion in proceeds from the sale of AFS securities and $5.5 billion of proceeds from maturities and principle pay downs from our fixed income investment securities portfolio.

Cash provided by financing activities was $23.4 billion for the nine months ended September 30, 2020, reflective primarily of a $23.0 billion increase in deposits and $0.5 billion increase from the issuance of long-term debt.

Cash and cash equivalents were $15.7 billion and $6.9 billion, respectively, at September 30, 2020 and 2019.

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 and equity price risk (including the effect of competition on product pricing). All these risks are important considerations but are also inherently difficult to predict and to assess the impact of each on simulation results. Consequently, simulations used to analyze the sensitivity of net interest income to changes in interest rates will differ from actual results due to differences in the timing and frequency of rate resets, the 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 the modeled 12-month projection of net interest income from changes in interest rates, structural changes in investment and funding portfolios, loan and deposit activity and current market conditions. Relevant metrics and guidelines, which are approved by the Finance Committee of our Board of Directors and are included in our Interest Rate Risk Policy, are monitored on an ongoing basis.

Interest rate risk is managed 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, such as interest rate swaps, to assist with managing interest rate risk.

We utilize a simulation model to perform sensitivity analysis on the economic value of equity and 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 which is embedded within our balance sheet. Rate sensitivity 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 interest rates regularly.

Model Simulation and Sensitivity Analysis

A specific application of our simulation model involves measurement of the impact of changes in market interest rates on the economic value of equity (“EVE”). EVE is defined as the market value of assets, less the market value of liabilities. Another application of the simulation model measures the impact of changes in market interest rates on net interest income (“NII”) assuming a static balance sheet size and composition as of the period-end reporting date. In the NII simulation, the level of market interest rates as well as the size and composition of the balance sheet are held constant over the simulation horizon. Simulated cash flows during the scenario horizon are assumed to be replaced as they occur, which maintains the balance sheet at its current size and composition. Yield and spread assumptions on cash and investment balances reflect current market rates and the shape of the yield curve. 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 net interest income are principally short-term interest rates and include the following benchmark indexes: (i) the National Prime Rate, (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 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.

During the third quarter of 2020, ALCO approved a modeling change to our Funds Transfer Pricing (“FTP”) model used in the simulation of NII and EVE sensitivity measures. Model changes focused on assumed deposit balance behaviors, which primarily impacted the EVE sensitivity profile. The remaining underlying assumptions in our FTP model for the valuation of loans, investments, and deposits were not changed.

The key deposit assumption change that drives the difference between the EVE metrics in the revised model is the treatment of core balances. Core balances represent the portion of deposits we assume to be present over an extended time period and can be relied upon as a longer-term source of funding. The revised model generally assumes a lower core deposit balance than the previous model leading to a lower duration of deposits. In the previous model, the higher core balance assumption for deposits resulted in a larger liability duration contribution to EVE sensitivity. A lower core deposit balance reflective of the model changes simulates a lower duration of liabilities that contributes to a greater EVE sensitivity compared

to the previous model. Since our non-maturity deposits constitute such a large portion of the balance sheet, any changes to the market value sensitivity profile can have a significant impact on our overall EVE results.

The EVE simulation results using the revised model changes the EVE sensitivity profile from being liability sensitive to being asset sensitive. The EVE sensitivity is greater with the model changes in both the up and down rate shock scenarios. Our December 31, 2019 NII sensitivity results were also affected by this change, but to a lesser degree.

Simulation results presented include an "asymmetric" beta assumption that is applied in the NII and EVE simulation models for interest-bearing deposits. This reflects management expectations that deposit repricing behavior in a falling rate environment would be different than repricing behavior in a rising rate environment. This model assumes the overall beta for interest-bearing deposits in a falling rate environment would be approximately 60 percent. That is, overall changes in interest-bearing deposit rates would be approximately 60 percent of the change in short-term market rates. The deposit beta assumption for an increasing rate environment is 50 percent. These repricing assumptions are reflected as changes in interest expense on interest-bearing deposit balances.

The following table presents our EVE and NII sensitivity exposure related to an instantaneous and sustained parallel shift in market interest rates of 100 and 200 basis points ("bps") at September 30, 2020 and December 31, 2019. Net Interest Income sensitivity and the modeled Economic Value of Equity for December 31, 2019 has been revised to reflect the revised model assumptions for comparability purposes.

Change in interest rates (bps) (Dollars in thousands)	Estimated EVE	Estimated Increase/(Decrease) in EVE		Estimated NII	Estimated Increase/(Decrease) in NII	
		Amount	Percent		Amount	Percent
September 30, 2020:						
+200	$ 9,759,888	$ (2,974,849)	(23.4) %	$ 2,598,515	$ 556,572	27.3 %
+100	11,314,703	(1,420,034)	(11.2)	2,310,317	268,374	13.1
—	12,734,737	—	—	2,041,943	—	—
-100	14,039,442	1,304,705	10.2	2,017,397	(24,546)	(1.2)
-200	14,134,314	1,399,577	11.0	2,011,461	(30,482)	(1.5)
December 31, 2019: (as revised)						
+200	$ 7,269,359	$ (1,509,966)	(17.2) %	$ 2,588,319	$ 523,423	25.3 %
+100	8,039,360	(739,965)	(8.4)	2,326,428	261,532	12.7
—	8,779,325	—	—	2,064,896	—	—
-100	9,254,622	475,297	5.4	1,789,625	(275,271)	(13.3)
-200	9,779,377	1,000,052	11.4	1,514,354	(550,542)	(26.7)

Economic Value of Equity

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

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

Our base EVE as of September 30, 2020 increased $4.0 billion from December 31, 2019, driven by overall balance sheet growth and a significant decrease in market rates since the first quarter of 2020. For the period ended September 30, 2020, compared to December 31, 2019, cash balances and fixed income investments in our AFS and HTM portfolios increased by $8.9 billion and $11.0 billion, respectively, while loan balances increased by $5.2 billion. Funding for these assets came

primarily from growth of $23.0 billion in total deposits, which consisted of a $16.7 billion and $6.3 billion increase in noninterest bearing and interest-bearing accounts, respectively. The mix of noninterest bearing and interest-bearing deposits to total deposits remained relatively unchanged at September 30, 2020, compared to December 31, 2019.

Rapid deposit growth has exceeded the pace of our loan growth, and as a result, a significant amount of excess deposits not used to fund loan growth have contributed to the growth of our cash and investments balances. Much of the investment portfolio is held in fixed rate MBS and CMOs which generally have a higher market value sensitivity than loans or cash. Thus, under an upward rate shock scenario, the market value of investments changes more than the market value of deposits resulting in a negative EVE sensitivity in those scenarios.

Due to the sudden decrease in market rates that occurred in March 2020, EVE sensitivity measures in the -100 and -200 bps rate shock scenarios do not represent the full magnitude of those rate shocks because we assume that U.S. Federal Fund rates are floored at zero. As a result, the September 30, 2020 EVE sensitivity of the -100 and -200 bps rate shock scenarios are similar.

The modeling assumption change described above fundamentally changed the view of deposits from a market value perspective, which results in an asset sensitive EVE risk profile. However, continued balance sheet growth combined with a lower rate environment are also contributing factors to the overall change in EVE sensitivity.

12-Month Net Interest Income Simulation

NII sensitivity is measured as the percentage change in projected 12-month net interest income earned in +/-100 and +/-200 basis point interest rate shock scenarios compared to a base scenario where balances and interest rates are held constant over the forecast horizon. At September 30,2020, NII sensitivity was 13.1 percent in the +100 bps interest rate scenario, compared to 12.7 percent at December 31, 2019. Our NII sensitivity in the +200 bps interest rate shock scenario was 27.3 percent compared to 25.3 percent at December 31, 2019. NII sensitivity in the -100 bps scenario of negative 1.2 percent was lower at September 30, 2020, compared to a negative 13.3 percent at December 31, 2019. The -200 bps scenario currently indicates a lower percentage change in NII of negative 1.5 percent at September 30, 2020, compared to negative 26.7 percent at December 31, 2019. However, as noted above, the -100 and -200 bps scenarios are not complete rate shocks in this rate environment, since rates are assumed to be floored at zero. The September 30, 2020 NII sensitivity percentages are inclusive of the realized income or expense associated with interest rate swaps that were partially unwound reflective of the macro hedging process initiated in 2019 to reduce the impact of decreasing rates on NII. The changes in NII sensitivity are primarily the result of the changes in balance sheet composition described previously, combined with the impact of hedges in the respective parallel rate shock scenarios.

Our base case static 12-month NII forecast at September 30, 2020 decreased compared than December 31, 2019 by $23 million, primarily driven by the growth in the balance sheet that has taken place year-to-date combined with an overall relatively lower rate environment, reflective of the decrease in the Fed Funds rate during March 2020, compared to last year. Specifically, a large portion of the loan portfolio is indexed to the Prime rate, which decreased 150 bps due to actions undertaken by the Federal Reserve in March of 2020 to mitigate a possible economic downturn. The adverse impact of changes in interest rates on NII was partially tempered to a certain degree by continued growth in the loan portfolio, as well as continued balance sheet growth as previously described. The adverse impact of changes in interest rates on NII was tempered by continued growth in the balance sheet.

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

The 12-month NII simulations include repricing assumptions on our interest-bearing deposit products which we set at our discretion based on client needs and our overall funding mix. Repricing of interest-bearing deposits impacts estimated interest expense.

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

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

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

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

Changes in Internal Control

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

Beginning January 1, 2020, we adopted and implemented ASC 326, CECL and have implemented changes to our processes, systems and control activities related to the modeling and recognition of our allowance for credit loss estimates. The key changes to our processes and control activities included data management, economic forecasting, modeling, qualitative framework, governance and gathering of information provided for disclosures.

PART II–OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Please refer to Note 18 — "Legal Matters" of the "Notes to Interim Consolidated Financial Statements (unaudited)" under Part I, Item 1 of this report.

ITEM 1A. RISK FACTORS

With the exception of the additional risk factor due to ongoing outbreak of COVID-19 below, there are no material changes to the risk factors set forth in our 2019 Annual Report on Form 10-K.

Our business, financial condition, liquidity, capital and results of operations have been, and will likely continue to be, adversely affected by the COVID-19 pandemic.

The COVID-19 pandemic has created significant economic and financial disruptions that have adversely affected, and are likely to continue to adversely affect, our business, financial condition, liquidity, capital and results of operations. We remain unable to predict the extent to which the COVID-19 pandemic will continue to negatively affect our business, financial condition, liquidity, capital and results of operations. The extent of any continued or future adverse effects of the COVID-19 pandemic will depend on future developments, which are highly uncertain and outside our control, including the scope and duration of the pandemic, the direct and indirect impact of the pandemic on our employees, clients, customers, counterparties and service providers, as well as other market participants, actions taken by governmental authorities and other third parties in response to the pandemic, and the scope and duration of future phases or outbreaks, or seasonal or other resurgences, of the disease.

The COVID-19 pandemic has contributed to, among other things (i) increased unemployment and decreased consumer confidence and business generally, leading to an increased risk of delinquencies, defaults and foreclosures; (ii) sudden and significant declines, and significant increases in volatility, in financial markets; (iii) ratings downgrades, credit deterioration and defaults in many industries; (iv) significant draws on credit lines as clients seek to increase liquidity; (v) significant reductions in the targeted federal funds rate; and (vi) heightened cybersecurity, information security and operational risks as a result of work-from-home arrangements and the current environment, including increased fraudulent activity. In addition, we also face an increased risk of client disputes, litigation and governmental and regulatory scrutiny as a result of the effects of COVID-19 on market and economic conditions, actions that governmental authorities take in response to those conditions, and our implementation of and participation in special financial relief programs, such as the Paycheck Protection Program ("PPP"). Moreover, we have focused resources and management attention towards managing the impacts of the COVID-19 pandemic, and we have and likely will have to continue to prioritize managing these impacts over certain growth initiatives and other investments in the near term.

We are prioritizing the safety of our employees. During the first quarter of 2020, we moved to a work-from-home plan, prohibited all business travel, postponed or moved online all SVB-hosted events, and enabled remote access to our systems. Although, our work-from-home plan has been effective thus far, we may experience negative effects of a prolonged work-from-home arrangement, such as increasing risks of systems access or connectivity issues, cybersecurity or information security breaches, or imbalances between work and home life, which may lead to reduced productivity and/or significant disruptions in our business operations. We are also continuing to provide support for our workforce related to technology, physical working conditions, work/life balance and remote collaboration. If these support measures are not effective over a prolonged period, our employees or business may not operate effectively. Moreover, we are developing a plan for employees to eventually return to work in our offices, the manner and timing of which are unclear. Our return to office plan will be subject to a variety of complex considerations including, among others, international, federal, state and local government and health organization guidance, health and safety implications (including potential health testing requirements), employee needs, and the practical requirements of potential office reconfigurations or a phased return. It is also possible that our current extended work-from-home model may affect or change our prior work-in-the-office model, as we may allow an increase in remote working practices.

Many of our counterparties and third-party service providers have also been, and may further be, affected by "stay-at-home" orders, market volatility and other factors that increase their risks of business disruption or that may otherwise affect their ability to perform under the terms of any agreements with us or provide essential services. As a result, our operational and other risks are generally expected to increase until the pandemic subsides.

During the third quarter, we continued to provide special financial assistance to support certain clients who are experiencing financial hardships related to the COVID-19 pandemic, including offering certain venture-backed companies, Private Bank, Wine and other clients the opportunity to temporarily defer their scheduled loan principal payments. We

continue to engage with our clients to understand client needs, and we may implement additional assistance or other relief to supporting clients across various sectors and life stages. Additionally, we participated as a lender in the PPP under CARES Act and the U.K. CBILS and CLBILS, and may participate in other government relief programs in the U.S. or internationally. These government programs are complex and our participation in any of these programs may lead to governmental, regulatory and other scrutiny, litigation and negative publicity and reputation damage for us and our customers who participate. For example, like many other participating banks, we have been named in various lawsuits regarding the right to agent fees under the PPP. Overall, these relief measures, whether our own programs or our participation in government programs, are new programs for us (with new or revised regulatory guidance for the government programs that may be issued at different times throughout the process) and we may not be successful in implementing or administering the programs as intended. Further, the extent to which these programs are successful in assisting our clients is uncertain. These relief programs are temporary in nature, as the PPP, as currently designed, provides one-time relief, and our loan payment deferral programs expire during the second half of the year (certain of our programs ended in the third quarter with the remaining ending by year end). Our clients may experience financial difficulties without the continued support from these programs. If these relief measures are not effective, or if these relief measures are effective for only a limited period and our clients experience delayed financial hardship, there may be an adverse effect on our revenue and results of operations, including increased provisions in our allowance for credit losses, higher rates of default and increased credit losses in future periods.

Certain industries where the Company has credit exposure, including the technology, life science/healthcare and premium wine industries, have experienced, and are expected to continue to experience, significant operational and financial challenges as a result of COVID-19. As examples, many of our early-stage clients have limited cash on hand with limited or no financing sources available. Although these challenges have been somewhat offset by relief programs and decreased cash utilization, many of these companies may experience difficulties sustaining their businesses over time. In addition, our premium wine industry clients have and may continue to be impacted by the loss of restaurant and winery sales and have needed to alter their sales strategies to offset these declines, which may or may not be successful. These negative effects resulted in a number of clients making higher than usual draws on outstanding lines of credit, which may negatively affect our liquidity if economic conditions persist. The effects of COVID-19 may also cause our clients to be unable to pay their loans as they come due or decrease the value of collateral, such as accounts receivable, which we expect would cause significant increases in our credit losses. For certain early-stage and mid-stage clients, repayment of loans is dependent upon receipt of additional financing from venture capitalists or others, or in some cases, upon a successful sale to a third party, public offering or other form of liquidity or “exit” event. Further, many of our private equity/venture capital loans are dependent on the payment of capital calls or management fees by underlying limited partner investors in funds managed by private equity and venture capital firm clients. The effects of the COVID-19 pandemic have caused certain client valuations to drop, reduced the rate of financing or other “exit” events and impaired the ability of investors to meet their financial obligations to our clients, all of which has had and may continue to have an adverse effect on certain of our clients’ ability to repay their loans to us.

In connection with negotiated 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, life science and healthcare industries subject to applicable regulatory limits. We have also made investments through SVB Financial, SVB Leerink and our SVB Capital family of funds in venture capital funds and direct investments in companies, many of which are required to be carried at fair value or are impacted by changes in fair value. Due to the negative effects of the COVID-19 pandemic as well as recent declines, and significant increases in volatility, in financial markets, the value of these assets has decreased, and may continue to decrease (potentially in a significant manner). Additionally, because valuations of private companies are inherently uncertain, may fluctuate over short periods of time and may be based on estimates, our determinations of fair value for private companies may differ materially from the values that would have been used if a ready market for these securities existed.

The effects of the COVID-19 pandemic led to a significant slowdown in IPO and M&A activity in many industries. Although there was strong capital markets activity in the healthcare and life sciences sector in the third quarter of 2020, a decline in this activity in future quarters could lead to decreased revenues of SVB Leerink, our investment banking business, as such revenues stem primarily from underwriting and advisory fees associated with capital markets and M&A transactions. The IPO and M&A slowdown in other industries, including the technology industry, also impacts our ability to monetize and realize gains from our equity warrant assets and other nonmarketable securities. Additionally, a slowdown in overall private equity and venture capital investment levels may reduce the need for our clients to borrow from our capital call lines of credit, which are typically utilized by our private equity and venture capital fund clients to make investments prior to receipt of capital called from their respective limited partners.

Our earnings and cash flows are dependent to a large degree on net interest income (the difference between interest income from loans and investments and interest expense on deposits and borrowings). Net interest income is significantly affected by market rates of interest. The significant reductions to the federal funds rate have led to a decrease in the rates and yields on U.S. Treasury securities, in some cases declining below zero. If interest rates are reduced further in response to COVID-19, we expect that our net interest income will decline, perhaps significantly. The overall effect of lower interest rates

cannot be predicted at this time and depends on future actions the Federal Reserve may take to increase or reduce the targeted federal funds rate in response to the COVID-19 pandemic, and resulting economic conditions. Our net interest income is also impacted by our loan volume. If our loan levels were to decline, our net interest income would also be negatively impacted. Specifically, PPP loans, of which we had $1.8 billion as of September 30, 2020, will be eligible to be forgiven during the second half of the year. Although the ultimate timing and amount of loans forgiven is uncertain and depends on when borrowers apply and how long the SBA takes to process forgiveness applications, we currently estimate that 10% of PPP loans will be forgiven by year end.

Our core fee income has been and may continue to be negatively affected by decreasing business activity due to the COVID-19 pandemic. For example, credit card activity and fees have declined, and may continue to decline in the future. Foreign exchange fees and letters of credit and standby letters of credit fees may also decline if the negative effect on business activity persists for a prolonged period of time. Additionally, our deposit levels may fluctuate during the current environment. Although our deposit levels grew during the second and third quarters of 2020, it is difficult to predict client liquidity in a challenging economic environment, as clients may increase their draws on their lines of credit to bolster their cash positions, or clients may not be able to obtain additional financing which may lead to the depletion of their cash positions. Declines in client deposit levels may negatively affect our liquidity, as well as our net interest income.

The effects of the COVID-19 pandemic on economic and market conditions have increased demands on our liquidity as we meet our clients' needs. In addition, these adverse developments may negatively affect our capital and leverage ratios. We have temporarily suspended our stock repurchases and will reevaluate the program once the economic environment is more stable. We will continue to exercise prudent capital management and monitor the business environment.

Governmental authorities worldwide have taken unprecedented measures to stabilize the markets and support economic growth. The success of these measures is unknown and they may not be sufficient to address the negative effects of COVID-19 or avert severe and prolonged reductions in economic activity.

Other negative effects of COVID-19 that may impact our business, financial condition, liquidity, capital and results of operations cannot be predicted at this time, but it is likely that our business, financial condition, liquidity, capital and results of operations will continue to be adversely affected until the pandemic subsides and the U.S. economy begins to recover. Further, the COVID-19 pandemic may also have the effect of heightening many of the other risks described in the section entitled "Risk Factors" in our most recent Annual Report on Form 10-K and any subsequent Quarterly Report on Form 10-Q. Although the effects of the pandemic remain uncertain, for the fourth quarter of 2020, we currently expect growth in average on-balance sheet deposits and average loans and lower core fees. While credit metrics have been stable to date, we continue to monitor our portfolio vigilantly, in light of continued economic uncertainty, fading government stimulus and expiring deferral programs. Additionally, volatile equity markets, IPO and M&A activity may impact investment banking and market-sensitive revenues. Even after the pandemic subsides, it is possible that the U.S. and other major economies will continue to experience a prolonged recession, which we expect would materially and adversely affect our business, financial condition, liquidity, capital and results of operations.

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

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

Stock repurchase activity during the three months ended September 30, 2020 was as follows:

Period ended	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced programs	Maximum dollar value that may yet be purchased under the programs (1)
July 31, 2020	—	$ —	—	$ —
August 31, 2020	—	—	—	—
September 30, 2020	—	—	—	—
Total	—	$ —	244,223	$ 289,979,534

(1) On October 24, 2019, the Company announced that its Board of Directors had authorized a $350 million common stock repurchase program pursuant to which the Company may, from time to time and on or before the program's expiration date, repurchase shares of its outstanding common stock in the open market, in privately-negotiated transactions, or otherwise, subject to applicable laws and regulations. The stock repurchase program expired on October 29, 2020. The

Company paused its share repurchase program and expects to consider resuming repurchases when conditions warrant and subject to board approval of a new repurchase authority.

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 - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL 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
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)					X

Note: Other instruments defining the rights of holders of the Company's long-term debt are omitted pursuant to Section(b)(4)(iii) of Item 601 of Regulation S-K. The Company hereby agrees to furnish copies of these instruments to the Securities and Exchange Commission upon request.

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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 5, 2020

/s/ DANIEL BECK

Daniel Beck
Chief Financial Officer
(Principal Financial Officer)

SVB Financial Group

Date: November 5, 2020

/s/ KAREN HON

Karen Hon
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 5, 2020

/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 5, 2020

/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, 2020, (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 5, 2020

/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, 2020, (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 5, 2020

/s/ DANIEL BECK

Daniel Beck
Chief Financial Officer
(Principal Financial Officer)