Section 1: 10-Q (10-Q)

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended September 30, 2018

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: 001-35385

STERLING BANCORP

(Exact Name of Registrant as Specified in its Charter)

Delaware	**80-0091851**
(State or Other Jurisdiction of Incorporation or Organization)	**(IRS Employer ID No.)**
400 Rella Boulevard, Montebello, New York	**10901**
(Address of Principal Executive Office)	**(Zip Code)**

(845) 369-8040

(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 twelve 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, if any, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large accelerated filer ☒ 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 ☒

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

Classes of Common Stock	Shares outstanding as of November 1, 2018
$0.01 per share	224,427,793

STERLING BANCORP AND SUBSIDIARIES
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Part I - FINANCIAL INFORMATION
Item 1. Financial Statements

STERLING BANCORP AND SUBSIDIARIES
Consolidated Balance Sheets (Unaudited)
(Dollars in thousands, except share and per share data)

	September 30, 2018	December 31, 2017
ASSETS:		
Cash and due from banks	$ 533,984	$ 479,906
Securities:		
Available for sale, at fair value	3,843,244	3,612,072
Held to maturity, at amortized cost (fair value of $2,746,080 and $2,863,909 at September 30, 2018 and December 31, 2017, respectively)	2,842,728	2,862,489
Total securities	6,685,972	6,474,561
Loans held for sale	31,042	5,246
Portfolio loans	20,533,214	20,008,983
Allowance for loan losses	(91,365)	(77,907)
Portfolio loans, net	20,441,849	19,931,076
Federal Home Loan Bank (“FHLB”) and Federal Reserve Bank (“FRB”) stock, at cost	351,455	284,112
Accrued interest receivable	109,377	94,098
Premises and equipment, net	289,794	321,722
Goodwill	1,609,772	1,579,891
Other intangible assets, net	135,409	153,191
Bank owned life insurance	660,279	651,638
Other real estate owned	22,735	27,095
Other assets	389,597	357,005
Total assets	$ 31,261,265	$ 30,359,541
LIABILITIES AND STOCKHOLDERS’ EQUITY		
LIABILITIES:		
Deposits	$ 21,456,057	$ 20,538,204
FHLB borrowings	4,429,110	4,510,123
Repurchase agreements	22,888	30,162
Senior Notes	200,972	278,209
Subordinated Notes	172,885	172,716
Mortgage escrow funds	96,952	122,641
Other liabilities	444,098	467,308
Total liabilities	26,822,962	26,119,363
Commitments and Contingent liabilities (See Note 16. “Commitments and Contingencies”)		
STOCKHOLDERS’ EQUITY:		
Preferred stock (par value $0.01 per share; 10,000,000 shares authorized; 135,000 shares issued and outstanding at September 30, 2018 and December 31, 2017)	138,627	139,220
Common stock (par value $0.01 per share; 310,000,000 shares authorized at September 30, 2018 and December 31, 2017; 229,872,925 shares issued at September 30, 2018 and December 31, 2017; 225,446,089 and 224,782,694 shares outstanding at September 30, 2018 and December 31, 2017, respectively)	2,299	2,299
Additional paid-in capital	3,773,164	3,780,908
Treasury stock, at cost (4,426,836 shares at September 30, 2018 and 5,090,231 at December 31, 2017)	(51,973)	(58,039)
Retained earnings	694,861	401,956
Accumulated other comprehensive loss, net of tax benefit of $(45,332) at September 30, 2018 and $(17,083) at December 31, 2017	(118,675)	(26,166)
Total stockholders’ equity	4,438,303	4,240,178
Total liabilities and stockholders’ equity	$ 31,261,265	$ 30,359,541

See accompanying notes to consolidated financial statements.

STERLING BANCORP AND SUBSIDIARIES
Consolidated Income Statements (Unaudited)
(Dollars in thousands, except share and per share data)

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Interest and dividend income:				
Loans and loan fees	$ 257,211	$ 119,898	$ 746,079	$ 336,308
Securities taxable	29,765	15,141	85,856	40,536
Securities non-taxable	15,244	8,542	45,959	23,951
Other earning assets	6,805	2,111	17,382	5,160
Total interest and dividend income	309,025	145,692	895,276	405,955
Interest expense:				
Deposits	35,974	13,392	88,645	33,805
Borrowings	29,102	12,227	82,098	30,029
Total interest expense	65,076	25,619	170,743	63,834
Net interest income	243,949	120,073	724,533	342,121
Provision for loan losses	9,500	5,000	35,500	14,000
Net interest income after provision for loan losses	234,449	115,073	689,033	328,121
Non-interest income:				
Deposit fees and service charges	6,333	3,309	20,319	9,893
Accounts receivable management / factoring commissions and other fees	5,595	4,764	16,292	12,670
Bank owned life insurance	3,733	1,320	11,591	4,342
Loan commissions and fees	4,142	2,819	12,114	8,643
Investment management fees	1,943	271	5,889	825
Net loss on sale of securities	(56)	(21)	(5,902)	(274)
Gain on sale of fixed assets	—	1	11,800	1
Other	2,455	1,525	8,617	4,342
Total non-interest income	24,145	13,988	80,720	40,442
Non-interest expense:				
Compensation and benefits	54,823	31,727	165,662	93,893
Stock-based compensation plans	3,115	1,969	9,304	5,602
Occupancy and office operations	16,558	8,583	51,956	25,550
Information technology	10,699	2,512	32,412	7,402
Amortization of intangible assets	5,865	2,166	17,782	6,582
FDIC insurance and regulatory assessments	6,043	2,310	16,885	6,232
Other real estate owned expense, net	1,497	894	1,635	2,682
Merger-related expense	—	4,109	—	9,002
Charge for asset write-downs, retention and severance	—	—	13,132	603
Other	13,173	8,347	39,680	25,076
Total non-interest expense	111,773	62,617	348,448	182,624
Income before income tax expense	146,821	66,444	421,305	185,939
Income tax expense	27,171	21,592	88,542	59,620
Net income	$ 119,650	$ 44,852	$ 332,763	$ 126,319
Preferred stock dividend	1,993	—	5,988	—
Net income available to common stockholders	$ 117,657	$ 44,852	$ 326,775	$ 126,319
Weighted average common shares:				
Basic	225,088,511	135,346,791	224,969,121	135,276,634
Diluted	225,622,895	135,950,160	225,504,463	135,895,513
Earnings per common share:				
Basic	$ 0.52	$ 0.33	$ 1.45	$ 0.93

Diluted	0.52	0.33	1.45	0.93

See accompanying notes to consolidated financial statements.

STERLING BANCORP AND SUBSIDIARIES

Consolidated Statements of Comprehensive Income (Unaudited)

(Dollars in thousands)

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Net income	$ 119,650	$ 44,852	$ 332,763	$ 126,319
Other comprehensive (loss) income, before tax:				
Change in unrealized holding (losses) gains on securities available for sale	(27,083)	4,209	(128,496)	20,374
Reclassification adjustment for net realized losses included in net income	56	21	5,902	274
Accretion of net unrealized loss on securities transferred to held to maturity	225	238	686	726
Change in the actuarial loss of defined benefit plan and post-retirement benefit plans	415	10	1,150	74
Total other comprehensive (loss) income, before tax	(26,387)	4,478	(120,758)	21,448
Deferred tax benefit (expense) related to other comprehensive (loss) income	7,293	(1,769)	33,378	(8,472)
Other comprehensive (loss) income, net of tax	(19,094)	2,709	(87,380)	12,976
Comprehensive income	$ 100,556	$ 47,561	$ 245,383	$ 139,295

See accompanying notes to consolidated financial statements.

STERLING BANCORP AND SUBSIDIARIES

Consolidated Statements of Changes in Stockholders' Equity (Unaudited)

(Dollars in thousands, except share and per share data)

	Number of common shares	Preferred stock	Common stock	Additional paid-in capital	Treasury stock	Retained earnings	Accumulated other comprehensive (loss) income	Total stockholders' equity
Balance at January 1, 2017	135,257,570	$ —	$ 1,411	$1,597,287	$ (66,188)	$ 349,308	$ (26,635)	$ 1,855,183
Net income	—	—	—	—	—	39,067	—	39,067
Other comprehensive income	—	—	—	—	—	—	2,914	2,914
Stock option & other stock transactions, net	40,253	—	—	49	553	(109)	—	493
Restricted stock awards, net	306,612	—	—	(7,043)	3,589	3,846	—	392
Cash dividends declared ($0.07 per common share)	—	—	—	—	—	(9,436)	—	(9,436)
Balance at March 31, 2017	135,604,435	—	1,411	1,590,293	(62,046)	382,676	(23,721)	1,888,613
Net income	—	—	—	—	—	42,400	—	42,400
Other comprehensive income	—	—	—	—	—	$ —	7,353	7,353
Stock option & other stock transactions, net	71,395	—	—	49	980	$ (298)	—	731
Restricted stock awards, net	(17,604)	—	—	1,957	(510)	$ 293	—	1,740
Cash dividends declared ($0.07 per common share)	—	—	—	—	—	(9,454)	—	(9,454)
Balance at June 30, 2017	135,658,226	—	1,411	1,592,299	(61,576)	415,617	(16,368)	1,931,383
Net income	—	—	—	—	—	44,852	—	44,852
Other comprehensive income	—	—	—	—	—	—	2,709	2,709
Stock option & other stock transactions, net	6,950	—	—	48	94	(29)	—	113
Restricted stock awards, net	142,368	—	—	(1,595)	1,808	1,667	—	1,880
Cash dividends declared ($0.07 per common share)	—	—	—	—	—	(9,457)	—	(9,457)
Balance at September 30, 2017	135,807,544	$ —	$ 1,411	$1,590,752	$ (59,674)	$ 452,650	$ (13,659)	$ 1,971,480

STERLING BANCORP AND SUBSIDIARIES

Consolidated Statements of Changes in Stockholders' Equity (Unaudited)
(Dollars in thousands, except share and per share data)

	Number of common shares	Preferred stock	Common stock	Additional paid-in capital	Treasury stock	Retained earnings	Accumulated other comprehensive (loss) income	Total stockholders' equity
Balance at January 1, 2018	224,782,694	$ 139,220	$ 2,299	$3,780,908	$ (58,039)	$ 401,956	$ (26,166)	$ 4,240,178
Net income	—	—	—	—	—	98,872	—	98,872
Other comprehensive (loss)	—	—	—	—	—	—	(47,749)	(47,749)
Stock option & other stock transactions, net	28,794	—	—	2	375	(46)	—	331
Restricted stock awards, net	654,778	—	—	(14,630)	6,562	8,078	—	10
Cash dividends declared ($0.07 per common share)	—	—	—	—	—	(15,693)	—	(15,693)
Cash dividends declared ($16.25 per preferred share)	—	(195)	—	—	—	(1,999)	—	(2,194)
Reclassification of the stranded income tax effects from the enactment of the Tax Cuts and Jobs Act from accumulated other comprehensive (loss)	—	—	—	—	—	5,129	(5,129)	—
Balance at March 31, 2018	225,466,266	139,025	2,299	3,766,280	(51,102)	496,297	(79,044)	4,273,755
Net income	—	—	—	—	—	114,241	—	114,241
Other comprehensive (loss)	—	—	—	—	—	—	(20,537)	(20,537)
Stock option & other stock transactions, net	7,500	—	—	2	91	(18)	—	75
Restricted stock awards, net	(3,512)	—	—	3,223	(258)	168	—	3,133
Cash dividends declared ($0.07 per common share)	—	—	—	—	—	(15,739)	—	(15,739)
Cash dividends declared ($16.25 per preferred share)	—	(197)	—	—	—	(1,996)	—	(2,193)
Balance at June 30, 2018	225,470,254	138,828	2,299	3,769,505	(51,269)	592,953	(99,581)	4,352,735
Net income	—	—	—	—	—	119,650	—	119,650
Other comprehensive (loss)	—	—	—	—	—	—	(19,094)	(19,094)
Stock option & other stock transactions, net	13,500	—	—	2	164	(10)	—	156
Restricted stock awards, net	(37,665)	—	—	3,657	(868)	—	—	2,789
Cash dividends declared ($0.07 per common share)	—	—	—	—	—	(15,739)	—	(15,739)
Cash dividends declared ($16.25 per preferred share)	—	(201)	—	—	—	(1,993)	—	(2,194)
Balance at September 30, 2018	225,446,089	$ 138,627	$ 2,299	$3,773,164	$ (51,973)	$ 694,861	$ (118,675)	$ 4,438,303

See accompanying notes to consolidated financial statements.

STERLING BANCORP AND SUBSIDIARIES
Consolidated Statements of Cash Flows (Unaudited)
(Dollars in thousands)

	Nine months ended September 30,	
	2018	2017
Cash flows from operating activities:		
Net income	$ 332,763	$ 126,319
Adjustments to reconcile net income to net cash provided by operating activities:		
Provisions for loan losses	35,500	14,000
Net (gain) loss from write-downs and sales of other real estate owned	(796)	1,647
Depreciation of premises and equipment	15,214	6,639
Asset write-downs, retention and severance compensation and other restructuring charges	13,132	603
Amortization of intangible assets	17,782	6,582
Amortization of low income housing tax credits	3,732	414
Net loss on sale of securities	5,902	274
Net gain on loans held for sale	(25)	(952)
Net gain on sale of premises and equipment	(11,800)	(1)
Net amortization of premiums on securities	29,759	16,635
Amortization of premium on certificates of deposit	(4,850)	—
Net accretion of purchase discount and amortization of net deferred loan costs	(85,129)	(10,515)
Net accretion of debt issuance costs and amortization of premium on borrowings	(1,081)	410
Restricted stock compensation expense	9,299	5,456
Stock option compensation expense	5	146
Originations of loans held for sale	(52,919)	(5,159)
Proceeds from sales of loans held for sale	27,148	48,000
Increase in cash surrender value of bank owned life insurance	(11,591)	(4,442)
Deferred income tax expense (benefit)	45,589	(1,933)
Other adjustments (principally net changes in other assets and other liabilities)	(79,631)	(16,760)
Net cash provided by operating activities	288,003	187,363
Cash flows from investing activities:		
Purchases of securities:		
Available for sale	(753,638)	(1,017,426)
Held to maturity	(140,976)	(619,649)
Proceeds from maturities, calls and other principal payments on securities:		
Available for sale	271,558	164,598
Held to maturity	135,327	64,158
Proceeds from sales of securities available for sale	117,810	15,247
Proceeds from sales of securities held to maturity	254	—
Portfolio loan originations, net	10,619	(900,269)
Portfolio loans purchased	(37,668)	(94,912)
Proceeds from sale of loans held for investment	—	28,990
Purchases of FHLB and FRB stock, net	(67,343)	(56,178)
Proceeds from sales of other real estate owned	16,786	5,182
Purchases of premises and equipment	(16,369)	(5,699)
Proceeds from bank owned life insurance	2,950	50
Proceeds from sale of premises and equipment	35,261	—
Purchases of low income housing tax credits	(3,655)	(8,260)
Cash paid for acquisition, net	(484,385)	—
Net cash (used in) investing activities	(913,469)	(2,424,168)

STERLING BANCORP AND SUBSIDIARIES
Consolidated Statements of Cash Flows (Unaudited)
(Dollars in thousands)

	Nine months ended September 30,	
	2018	2017
Cash flows from financing activities:		
Net increase in transaction, savings and money market deposits	$ 786,541	$ 992,573
Net increase (decrease) in certificates of deposit	136,162	(17,394)
Net (decrease) increase in short-term FHLB borrowings	(555,000)	200,000
Advances of term FHLB borrowings	2,975,000	1,975,000
Repayments of term FHLB borrowings	(2,500,000)	(950,000)
Repayment of Senior Notes	(77,000)	—
Net (decrease) increase in other borrowings	(7,274)	171,761
Net (decrease) increase in mortgage escrow funds	(25,689)	5,576
Proceeds from stock option exercises	556	1,193
Cash dividends paid - common stock	(47,171)	(28,347)
Cash dividends paid - preferred stock	(6,581)	—
Net cash provided by financing activities	679,544	2,350,362
Net decrease in cash and cash equivalents	54,078	113,557
Cash and cash equivalents at beginning of period	479,906	293,646
Cash and cash equivalents at end of period	$ 533,984	$ 407,203
Supplemental cash flow information:		
Interest payments	$ 165,306	$ 57,357
Income tax payments	23,445	67,625
Real estate acquired in settlement of loans	11,630	4,907
Loans transferred from held for investment to held for sale	—	28,990
Acquisitions:		
Non-cash assets acquired:		
Total loans, net	$ 442,884	$ —
Goodwill	36,094	—
Premises and equipment, net	379	—
Other assets	7,071	—
Total non-cash assets acquired	486,428	—
Liabilities assumed:		
Other liabilities	4,884	—
Total liabilities assumed	4,884	—
Net non-cash assets acquired	481,544	—
Cash and cash equivalents received in acquisitions	20,508	—
Total consideration paid	$ 502,052	$ —

See accompanying notes to consolidated financial statements.

(1) Basis of Financial Statement Presentation

(a) Nature of Operations

Sterling Bancorp (the "Company") is a Delaware corporation, a bank holding company and a financial holding company headquartered in Montebello, New York that owns all of the outstanding shares of common stock of Sterling National Bank (the "Bank"), its principal subsidiary. The Bank is a full-service regional bank specializing in the delivery of services and solutions to business owners, their families and consumers within the communities it serves through teams of dedicated and experienced relationship managers.

(b) Basis of Presentation

The consolidated financial statements in this Quarterly Report on Form 10-Q include the accounts of the Company and all other entities in which the Company has a controlling financial interest. All significant intercompany balances and transactions have been eliminated in consolidation. The accounting and financial reporting policies the Company follows conform, in all material respects, to accounting principles generally accepted in the United States ("GAAP") and to general practices within the banking industry, which include regulatory reporting instructions.

The consolidated financial statements in this Quarterly Report on Form 10-Q have not been audited by an independent registered public accounting firm, but, in the opinion of management, reflect all adjustments necessary for a fair presentation of the Company's financial position and results of operations. All such adjustments were of a normal and recurring nature. The consolidated financial statements have been prepared in accordance with GAAP and with the instructions to Form 10-Q adopted by the Securities and Exchange Commission (the "SEC"). Accordingly, the financial statements do not include all of the information and footnotes required by GAAP for complete financial statements and should be read in conjunction with our consolidated financial statements, and notes thereto, for the year ended December 31, 2017, included in our Annual Report on Form 10-K, as filed with the SEC on March 1, 2018 (the "2017 Form 10-K"). Operating results for the interim periods disclosed herein are not necessarily indicative of the results that may be expected for a full year or any future period. Certain items in prior financial statements have been reclassified to conform to the current presentation. These reclassifications had no impact on previously reported net income.

(c) Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income, expense and contingencies at the date of the financial statements. Actual results could differ significantly from these estimates, particularly the allowance for loan losses and the status of contingencies, and are subject to change.

(d) Adoption of New Accounting Standards

The Company adopted the following new accounting standards effective January 1, 2018:

Accounting Standards Codification ("ASC") Topic 606, *Revenue from Contracts with Customers* (the "New Revenue Standard"), (i) creates a single framework for recognizing revenue from contracts with customers that fall within its scope and (ii) revises when it is appropriate to recognize a gain (loss) from the transfer of non-financial assets, such as other real estate owned ("OREO"). The Company adopted the New Revenue Standard using the modified retrospective method applied to all contracts not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under the New Revenue Standard, while prior period amounts continue to be reported in accordance with legacy GAAP. The adoption of the New Revenue Standard did not result in a significant change to the accounting for any in-scope revenue streams. As such, no cumulative effect adjustment was recorded. The majority of the Company's revenues come from interest income and other sources, including loans and securities, that are outside the scope of the New Revenue Standard. The Company's services that fall within the scope of the New Revenue Standard are primarily included within non-interest income in the consolidated income statements and are recognized as revenue as the Company satisfies its obligation to the customer. Services within the scope of the New Revenue Standard include deposit fees and services charges, accounts receivable management / factoring commissions and other fees, investment management fees and the sale of OREO, which is included within OREO, net expense. See Note 13. "Non-Interest Income and Other Non-Interest Expense" for further discussion on the Company's accounting policies for revenue sources within the scope of the New Revenue Standard.

Accounting Standards Update ("ASU") No. 2016-01, *Financial Instruments - Overall (Subtopic 825-10): Recognition of Financial Assets and Financial Liabilities* (the "New Fair Value Standard"), makes targeted amendments to the guidance for recognition, measurement, presentation and disclosure of financial instruments. The New Fair Value Standard requires equity investments to be measured at fair value with changes in fair value recognized in net income; however, the Company owned no assets subject to this

portion of the New Fair Value Standard. The New Fair Value Standard also emphasizes the existing requirement to use exit prices to measure fair value for disclosure purposes and clarifies that entities should not make use of a practicability exception in determining the fair value of loans. As a result of the adoption of the New Fair Value Standard, the Company modified its calculation used to estimate the fair value of portfolio loans. See Note 17. "Fair Value Measurements" for further discussion of the Company's methodology. The New Fair Value Standard had no impact to the consolidated balance sheets or income statements.

ASU No. 2017-07, *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* (the "New Retirement Standard"), requires employers to present the service cost component of the net periodic benefit cost in the same income statement line item as other employee compensation costs arising from services rendered during the period. The other components of net benefit cost, including interest cost, expected return on plan assets, amortization of prior service cost/credit and actuarial gain/loss, and settlement and curtailment effects, are presented as a component of other non-interest expense. The adoption of this standard resulted in the reclassification of $328 from compensation and benefits to other non-interest expense for the nine months ended September 30, 2017.

ASU No. 2018-02, *Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income"* (the "AOCI Standard"), allows a reclassification from accumulated other comprehensive income ("AOCI") to retained earnings for the stranded tax effects caused by the revaluation of estimated deferred taxes resulting from the enactment of the Tax Cuts and Jobs Act of 2017. As a result of the adoption of the AOCI Standard the Company reduced AOCI and increased retained earnings by $5,129 in the nine months ended September 30, 2018 related to unrealized losses on securities available for sale, securities transferred to held to maturity and a net actuarial loss on defined benefit retirement plans. As a result of the adoption of the AOCI standard, the Company will release such income tax effects only when the entire portfolio to which the underlying items are liquidated, sold or extinguished. The adoption of the AOCI Standard did not impact total stockholders' equity or the consolidated income statements for any period.

(2) Acquisitions

Advantage Funding Management Co., Inc. ("Advantage Funding")

On April 2, 2018, the Bank acquired 100% of the outstanding common stock of Advantage Funding (the "Advantage Funding Acquisition"). The total consideration in the transaction was $502,052 and was paid in cash on the closing date. Advantage Funding is a provider of commercial vehicle and transportation financing services based in Lake Success, NY. Advantage Funding had total outstanding loans and leases of $457,638 on the acquisition date consisting mainly of fixed rate assets. The fair value of these loans was $442,844. The Bank paid a premium on the gross loans and leases receivable of 4.5% or $20,300. In the nine months ended September 30, 2018, we recorded a $4,396 restructuring charge consisting mainly of professional fees, retention and severance compensation, systems integration expense and facilities consolidation. This charge is included in charge for asset write-downs, retention and severance on the consolidated income statement. The Advantage Funding Acquisition is consistent with our strategy of growing commercial loans and increasing the proportion of commercial loans in our loan portfolio. The operations of the business will be fully integrated into our equipment finance business line.

Astoria Merger

On October 2, 2017, Astoria Financial Corporation ("Astoria") merged with and into the Company (the "Astoria Merger"). Under the terms of the Astoria Merger agreement, Astoria shareholders received 0.875 shares of the Company's common stock for each share of Astoria common stock, which resulted in the issuance of 88,829,776 shares of the Company's common stock. Based on the Company's closing stock price per share of $24.65 on September 29, 2017, the aggregate consideration was $2,189,687, which included cash in lieu of fractional shares. Consistent with the Company's strategy, the primary reason for the Astoria Merger was the expansion of the Company's geographic footprint in the Greater New York metropolitan region, including Long Island.

The assets acquired and liabilities assumed were accounted for under the acquisition method of accounting. The assets and liabilities, both tangible and intangible, were recorded at their fair values as of October 2, 2017 based on management's best estimate using the information available as of the Astoria Merger date. The Astoria Merger resulted in the recognition of loans of $9,209,398, deposits of $9,044,061 and goodwill of $883,291.

Accounting guidance identifies the measurement period for the Astoria Merger as the period that is required to identify and measure the fair value of the identifiable assets acquired and the liabilities assumed. The measurement period ends when the Company has all of the information that the Company arranged to obtain and that is known to be obtainable. The measurement period ended October 2, 2018. During the third quarter of 2018 the Company completed the final tax returns related to Astoria's business and operations

through October 1, 2017. After completion of these tax returns, the Company reduced income tax balances and goodwill by $6,214, which finalized all purchase accounting adjustments for the Astoria Merger.

(3) Securities

A summary of amortized cost and estimated fair value of securities as of September 30, 2018 and December 31, 2017 is presented below. The term "MBS" refers to mortgage-backed securities and the term "CMOs" refers to collateralized mortgage obligations. Both of these terms are further defined in Note 17. "Fair Value Measurements".

	September 30, 2018							
	Available for Sale				Held to Maturity			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrecognized gains	Gross unrecognized losses	Fair value
Residential MBS:								
Agency-backed	$ 2,303,793	$ 2	$ (96,604)	$ 2,207,191	$ 326,950	$ 33	$ (13,656)	$ 313,327
CMOs/Other MBS	603,692	2	(27,642)	576,052	29,015	—	(1,328)	27,687
Total residential MBS	2,907,485	4	(124,246)	2,783,243	355,965	33	(14,984)	341,014
Other securities:								
Federal agencies	338,764	—	(21,031)	317,733	58,960	—	(440)	58,520
Corporate	512,221	408	(9,303)	503,326	68,563	391	(1,045)	67,909
State and municipal	244,267	135	(5,460)	238,942	2,340,990	1,350	(81,727)	2,260,613
Other	—	—	—	—	18,250	29	(255)	18,024
Total other securities	1,095,252	543	(35,794)	1,060,001	2,486,763	1,770	(83,467)	2,405,066
Total securities	$ 4,002,737	$ 547	$ (160,040)	$ 3,843,244	$ 2,842,728	$ 1,803	$ (98,451)	$ 2,746,080

	December 31, 2017							
	Available for Sale				Held to Maturity			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrecognized gains	Gross unrecognized losses	Fair value
Residential MBS:								
Agency-backed	$ 2,171,044	$ 1,570	$ (21,965)	$ 2,150,649	$ 355,013	$ 978	$ (2,504)	$ 353,487
CMOs/Other MBS	656,514	31	(7,142)	649,403	33,496	26	(760)	32,762
Total residential MBS	2,827,558	1,601	(29,107)	2,800,052	388,509	1,004	(3,264)	386,249
Other securities:								
Federal agencies	409,322	—	(9,326)	399,996	58,640	949	—	59,589
Corporate	147,781	1,421	(976)	148,226	56,663	1,255	(103)	57,815
State and municipal	264,310	1,380	(1,892)	263,798	2,342,927	12,396	(10,900)	2,344,423
Other	—	—	—	—	15,750	83	—	15,833
Total other securities	821,413	2,801	(12,194)	812,020	2,473,980	14,683	(11,003)	2,477,660
Total securities	$ 3,648,971	$ 4,402	$ (41,301)	$ 3,612,072	$ 2,862,489	$ 15,687	$ (14,267)	$ 2,863,909

The amortized cost and estimated fair value of securities at September 30, 2018 are presented below by contractual maturity. Actual maturities may differ from contractual maturities because issuers may have the right to call or prepay obligations. Residential MBS are shown separately since they are not due at a single maturity date.

	September 30, 2018			
	Available for sale		Held to maturity	
	Amortized cost	Fair value	Amortized cost	Fair value
Remaining period to contractual maturity:				
One year or less	$ 22,244	$ 22,260	$ 92,954	$ 92,982
One to five years	207,237	204,204	115,470	114,545
Five to ten years	759,223	732,965	476,895	467,936
Greater than ten years	106,548	100,572	1,801,444	1,729,603
Total securities with a stated maturity date	1,095,252	1,060,001	2,486,763	2,405,066
Residential MBS	2,907,485	2,783,243	355,965	341,014
Total securities	$ 4,002,737	$ 3,843,244	$ 2,842,728	$ 2,746,080

Sales of securities for the periods indicated below were as follows:

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
Available for sale:				
Proceeds from sales	$ —	$ 5,015	$ 117,810	$ 15,247
Gross realized gains [1]	—	1	82	7
Gross realized losses [1]	(3)	(22)	(5,910)	(281)
Income tax benefit on realized net losses	(1)	(7)	(1,224)	(89)
Held to maturity: [2]				
Proceeds from sale	$ —	$ —	$ 254	$ —
Gross realized loss [1]	(53)	—	(74)	—
Income tax expense on realized loss	(11)	—	(15)	—

[1] Gross realized gains and losses includes securities called prior to maturity.
[2] In the nine months ended September 30, 2018, the Company sold a security that was held to maturity due to a decline in the credit rating and other evidence of deterioration of the issuer's creditworthiness.

At September 30, 2018 and December 31, 2017, there were no holdings of securities of any one issuer in an amount greater than 10% of stockholders' equity, other than the U.S. federal government and its agencies.

The following table summarizes securities available for sale with unrealized losses, segregated by the length of time in a continuous unrealized loss position for the periods presented below:

	Continuous unrealized loss position					
	Less than 12 months		12 months or longer		Total	
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses
Available for sale						
September 30, 2018						
Residential MBS:						
Agency-backed	$ 1,110,789	$ (38,095)	$ 1,095,722	$ (58,509)	$ 2,206,511	$ (96,604)
CMOs/Other MBS	543,311	(26,005)	32,546	(1,637)	575,857	(27,642)
Total residential MBS	1,654,100	(64,100)	1,128,268	(60,146)	2,782,368	(124,246)
Other securities:						
Federal agencies	204,358	(11,154)	113,375	(9,877)	317,733	(21,031)
Corporate	355,696	(6,520)	55,695	(2,783)	411,391	(9,303)
State and municipal	144,619	(2,703)	77,621	(2,757)	222,240	(5,460)
Total other securities	704,673	(20,377)	246,691	(15,417)	951,364	(35,794)
Total securities	$ 2,358,773	$ (84,477)	$ 1,374,959	$ (75,563)	$ 3,733,732	$ (160,040)
December 31, 2017						
Residential MBS:						
Agency-backed	$ 1,349,217	$ (10,550)	$ 486,948	$ (11,415)	$ 1,836,165	$ (21,965)
CMOs/Other MBS	605,200	(6,064)	36,107	(1,078)	641,307	(7,142)
Total residential MBS	1,954,417	(16,614)	523,055	(12,493)	2,477,472	(29,107)
Other securities:						
Federal agencies	243,476	(1,955)	156,520	(7,371)	399,996	(9,326)
Corporate	65,056	(397)	15,268	(579)	80,324	(976)
State and municipal	97,307	(757)	56,324	(1,135)	153,631	(1,892)
Total other securities	405,839	(3,109)	228,112	(9,085)	633,951	(12,194)
Total securities	$ 2,360,256	$ (19,723)	$ 751,167	$ (21,578)	$ 3,111,423	$ (41,301)

The following table summarizes securities held to maturity with unrecognized losses, segregated by the length of time in a continuous unrecognized loss position for the periods presented below:

	Continuous unrecognized loss position					
	Less than 12 months		12 months or longer		Total	
	Fair value	Unrecognized losses	Fair value	Unrecognized losses	Fair value	Unrecognized losses
Held to maturity						
September 30, 2018						
Residential MBS:						
Agency-backed	$ 200,871	$ (7,022)	$ 110,986	$ (6,634)	$ 311,857	$ (13,656)
CMOs/Other MBS	3,333	(69)	24,354	(1,259)	27,687	(1,328)
Total residential MBS	204,204	(7,091)	135,340	(7,893)	339,544	(14,984)
Other securities:						
Federal agencies	58,520	(440)	—	—	58,520	(440)
Corporate	47,519	(1,045)	—	—	47,519	(1,045)
State and municipal	1,482,745	(51,225)	637,296	(30,502)	2,120,041	(81,727)
Other	10,745	(255)	—	—	10,745	(255)
Total other securities	1,599,529	(52,965)	637,296	(30,502)	2,236,825	(83,467)
Total securities	$ 1,803,733	$ (60,056)	$ 772,636	$ (38,395)	$ 2,576,369	$ (98,451)
December 31, 2017						
Residential MBS:						
Agency-backed	$ 136,679	$ (572)	$ 74,303	$ (1,932)	$ 210,982	$ (2,504)
CMOs/Other MBS	10,314	(129)	20,160	(631)	30,474	(760)
Total residential MBS	146,993	(701)	94,463	(2,563)	241,456	(3,264)
Other securities:						
Corporate	16,560	(103)	—	—	16,560	(103)
State and municipal	860,536	(5,310)	393,200	(5,590)	1,253,736	(10,900)
Total other securities	877,096	(5,413)	393,200	(5,590)	1,270,296	(11,003)
Total securities	$ 1,024,089	$ (6,114)	$ 487,663	$ (8,153)	$ 1,511,752	$ (14,267)

At September 30, 2018, a total of 372 available for sale securities were in a continuous unrealized loss position for less than 12 months and 237 available for sale securities were in a continuous unrealized loss position for 12 months or longer. At September 30, 2018, a total of 575 held to maturity securities were in a continuous unrealized loss position for less than 12 months and 206 held to maturity securities were in a continuous unrealized loss position for 12 months or longer. Declines in the fair value of held to maturity and available for sale securities below their cost that are deemed to be other than temporary are reflected in earnings as realized losses to the extent the impairment is related to credit losses. The amount of the impairment related to other factors is recognized in other comprehensive income. In estimating other than temporary impairment ("OTTI") losses, management considers, among other things: (i) the length of time and the extent to which the fair value has been less than cost; (ii) the financial condition and near-term prospects of the issuer; and (iii) the intent and ability of the Company to retain its investment in the issuer for a period of time sufficient to allow for any anticipated recovery in cost.

Management has the ability and intent to hold the securities classified as held to maturity in the table above until they mature, at which time the Company anticipates it will receive full value for the securities. Furthermore, as of September 30, 2018, management did not have the intent to sell any of the securities classified as available for sale in the table above and believes that it is more likely than not that the Company will not have to sell any such securities before a recovery of cost. Any unrealized losses are largely due to increases in market interest rates over the yields available at the time the underlying securities were purchased. The fair value is expected to recover as the securities approach their maturity date or repricing date or if market yields for such investments decline. Management does not believe any of the securities are impaired due to reasons related to credit quality. As of September 30, 2018, management believes the impairments detailed in the table above are temporary.

Securities pledged for borrowings at the FHLB and other institutions, and securities pledged for municipal deposits and other purposes, were as follows for the periods presented below:

	September 30, 2018	December 31, 2017
Available for sale securities pledged for borrowings, at fair value	$ 19,743	$ 10,225
Available for sale securities pledged for municipal deposits, at fair value	651,439	323,341
Held to maturity securities pledged for borrowings, at amortized cost	39,443	35,047
Held to maturity securities pledged for municipal deposits, at amortized cost	1,686,889	1,182,674
Total securities pledged	$ 2,397,514	$ 1,551,287

(4) Portfolio Loans

The composition of the Company’s loan portfolio, excluding loans held for sale, was the following for the periods presented below:

	September 30, 2018	December 31, 2017
Commercial:		
Commercial and industrial (“C&I”):		
Traditional C&I	$ 2,037,556	$ 1,979,448
Asset-based lending	868,047	797,570
Payroll finance	235,734	268,609
Warehouse lending	864,063	723,335
Factored receivables	270,002	220,551
Equipment financing	1,161,435	679,541
Public sector finance	807,193	637,767
Total C&I	6,244,030	5,306,821
Commercial mortgage:		
Commercial real estate	4,457,485	4,138,864
Multi-family	4,827,172	4,859,555
Acquisition, development & construction (“ADC”)	265,676	282,792
Total commercial mortgage	9,550,333	9,281,211
Total commercial	15,794,363	14,588,032
Residential mortgage	4,421,520	5,054,732
Consumer	317,331	366,219
Total portfolio loans	20,533,214	20,008,983
Allowance for loan losses	(91,365)	(77,907)
Total portfolio loans, net	$ 20,441,849	$ 19,931,076

Total portfolio loans include net deferred loan origination fees of $5,892 and $4,813 at September 30, 2018 and December 31, 2017, respectively.

At September 30, 2018 and December 31, 2017, the Company pledged residential mortgage and commercial real estate loans of $8,548,416 and $9,123,601, respectively, to the FHLB as collateral for certain borrowing arrangements. See Note 8. "Borrowings".

The following tables set forth the amounts and status of the Company's loans, troubled debt restructurings ("TDRs") and non-performing loans at September 30, 2018 and December 31, 2017:

	September 30, 2018					
	Current	30-59 days past due	60-89 days past due	90+ days past due	Non-accrual	Total
Traditional C&I	$ 1,987,436	$ 5,634	$ 479	$ 2,546	$ 41,461	$ 2,037,556
Asset-based lending	860,329	—	—	—	7,718	868,047
Payroll finance	234,749	—	756	—	229	235,734
Warehouse lending	864,063	—	—	—	—	864,063
Factored receivables	270,002	—	—	—	—	270,002
Equipment financing	1,135,922	11,835	3,714	—	9,964	1,161,435
Public sector finance	807,193	—	—	—	—	807,193
Commercial real estate	4,422,756	329	2,856	4,400	27,144	4,457,485
Multi-family	4,822,883	19	569	—	3,701	4,827,172
ADC	265,676	—	—	—	—	265,676
Residential mortgage	4,330,083	12,217	6,116	266	72,838	4,421,520
Consumer	296,816	4,213	1,347	134	14,821	317,331
Total portfolio loans	$ 20,297,908	$ 34,247	$ 15,837	$ 7,346	$ 177,876	$ 20,533,214
Total TDRs included above	$ 39,393	$ 57	$ 367	$ 418	$ 37,112	$ 77,347
Non-performing loans:						
Loans 90+ days past due and still accruing					$ 7,346	
Non-accrual loans					177,876	
Total non-performing loans					$ 185,222	

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	December 31, 2017					
	Current	30-59 days past due	60-89 days past due	90+ days past due	Non-accrual	Total
Traditional C&I	$ 1,940,387	$ 1,232	$ 187	$ —	$ 37,642	$ 1,979,448
Asset-based lending	797,570	—	—	—	—	797,570
Payroll finance	268,609	—	—	—	—	268,609
Warehouse lending	723,335	—	—	—	—	723,335
Factored receivables	220,551	—	—	—	—	220,551
Equipment financing	667,083	1,143	3,216	—	8,099	679,541
Public sector finance	637,767	—	—	—	—	637,767
Commercial real estate	4,104,173	8,403	4,131	437	21,720	4,138,864
Multi-family	4,853,677	595	834	—	4,449	4,859,555
ADC	278,587	—	—	—	4,205	282,792
Residential mortgage	4,925,996	22,416	6,038	324	99,958	5,054,732
Consumer	350,502	4,364	974	95	10,284	366,219
Total portfolio loans	$ 19,768,237	$ 38,153	$ 15,380	$ 856	$ 186,357	$ 20,008,983
Total TDRs included above	$ 13,175	$ 389	$ —	$ —	$ 29,325	$ 42,889
Non-performing loans:						
Loans 90+ days past due and still accruing					$ 856	
Non-accrual loans					186,357	
Total non-performing loans					$ 187,213	

The following table provides additional analysis of the Company's non-accrual loans at September 30, 2018 and December 31, 2017:

	September 30, 2018		December 31, 2017	
	Recorded investment total non-accrual loans	Unpaid principal balance non-accrual loans	Recorded investment total non-accrual loans	Unpaid principal balance non-accrual loans
Traditional C&I	$ 41,461	$ 49,199	$ 37,642	$ 37,853
Asset-based lending	7,718	7,718	—	—
Payroll finance	229	229	—	—
Equipment financing	9,964	13,203	8,099	8,099
Commercial real estate	27,144	32,214	21,720	25,739
Multi-family	3,701	3,959	4,449	4,705
ADC	—	—	4,205	4,205
Residential mortgage	72,838	84,315	99,958	113,002
Consumer	14,821	16,966	10,284	12,096
Total	$ 177,876	$ 207,803	$ 186,357	$ 205,699

There were no non-accrual ADC, warehouse lending, factored receivables or public sector finance loans at September 30, 2018. There were no non-accrual asset-based lending, payroll finance, warehouse lending, factored receivables or public sector finance loans at December 31, 2017.

When the ultimate collectibility of the total principal of an impaired loan is in doubt and the loan is on non-accrual status, all payments are applied to principal, under the cost recovery method. When the ultimate collectibility of the total principal of an impaired loan is

not in doubt and the loan is on non-accrual status, contractual interest is credited to interest income when received, under the cash basis method.

At September 30, 2018 and December 31, 2017, the recorded investment of residential mortgage loans that were in the process of foreclosure was $52,087 and $76,712, respectively, which is included in non-accrual residential mortgage loans above.

The following table sets forth loans evaluated for impairment by segment and the allowance evaluated by segment at September 30, 2018:

	Loans evaluated by segment				Allowance evaluated by segment		
	Individually evaluated for impairment	Collectively evaluated for impairment	PCI loans[1]	Total loans	Individually evaluated for impairment	Collectively evaluated for impairment	Total allowance for loan losses
Traditional C&I	$ 40,909	$ 1,987,707	$ 8,940	$ 2,037,556	$ —	$ 14,716	$ 14,716
Asset-based lending	18,573	849,474	—	868,047	—	6,828	6,828
Payroll finance	—	235,734	—	235,734	—	2,183	2,183
Warehouse lending	—	864,063	—	864,063	—	2,685	2,685
Factored receivables	—	270,002	—	270,002	—	1,508	1,508
Equipment financing	2,394	1,159,041	—	1,161,435	—	11,153	11,153
Public sector finance	—	807,193	—	807,193	—	1,444	1,444
Commercial real estate	37,739	4,390,799	28,947	4,457,485	—	31,468	31,468
Multi-family	1,688	4,814,697	10,787	4,827,172	—	7,682	7,682
ADC	—	265,676	—	265,676	—	1,876	1,876
Residential mortgage	2,332	4,322,621	96,567	4,421,520	—	6,800	6,800
Consumer	8,050	300,518	8,763	317,331	—	3,022	3,022
Total portfolio loans	$ 111,685	$ 20,267,525	$ 154,004	$ 20,533,214	$ —	$ 91,365	$ 91,365

[1] The Company acquired loans for which there was, at acquisition, both evidence of deterioration of credit quality since origination and the probability, at acquisition, that all contractually required payments would not be collected. These loans are classified as purchased credit impaired loans (“PCI loans”).

The following table sets forth loans evaluated for impairment by segment and the allowance evaluated by segment at December 31, 2017:

	Loans evaluated by segment				Allowance evaluated by segment		
	Individually evaluated for impairment	Collectively evaluated for impairment	PCI loans	Total loans	Individually evaluated for impairment	Collectively evaluated for impairment	Total allowance for loan losses
Traditional C&I	$ 35,921	$ 1,933,155	$ 10,372	$ 1,979,448	$ —	$ 19,072	$ 19,072
Asset-based lending	—	797,570	—	797,570	—	6,625	6,625
Payroll finance	—	268,609	—	268,609	—	1,565	1,565
Warehouse lending	—	723,335	—	723,335	—	3,705	3,705
Factored receivables	—	220,551	—	220,551	—	1,395	1,395
Equipment financing	5,341	674,200	—	679,541	—	4,862	4,862
Public sector finance	—	637,767	—	637,767	—	1,797	1,797
Commercial real estate	9,663	4,090,143	39,058	4,138,864	—	24,945	24,945
Multi-family	1,597	4,842,898	15,060	4,859,555	—	3,261	3,261
ADC	5,208	277,322	262	282,792	—	1,680	1,680
Residential mortgage	—	4,903,218	151,514	5,054,732	—	5,819	5,819
Consumer	3,132	352,741	10,346	366,219	—	3,181	3,181
Total portfolio loans	$ 60,862	$ 19,721,509	$ 226,612	$ 20,008,983	$ —	$ 77,907	$ 77,907

Management considers a loan to be impaired when, based on current information and events, it is determined that the Company will not be able to collect all amounts due according to the loan contract, including scheduled interest payments. Evaluation of impairment is generally treated the same across all classes of loans on a loan-by-loan basis. Generally loans of $750 or less are evaluated for impairment on a homogeneous pool basis. When management identifies a loan as impaired, the impairment is measured based on the present value of expected future cash flows, discounted at the loan’s effective interest rate, except when the sole remaining source of repayment of the loan is the operation or liquidation of the collateral. In these cases, management uses the current fair value of the collateral, less selling costs when foreclosure or liquidation is probable, instead of discounted cash flows. If management determines that the value of the impaired loan is less than the recorded investment in the loan (net of previous charge-offs, deferred loan fees or costs and unamortized premium or discount), impairment is generally recognized through a charge-off to the allowance for loan losses.

The following table presents the changes in the balance of the accretable yield discount for PCI loans for the three and nine months ended September 30, 2018 and 2017:

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
Balance at beginning of period	$ 21,711	$ 10,877	$ 45,582	$ 11,117
Accretion of income	(4,027)	(2,412)	(10,578)	(4,612)
Reclassification (to) from non-accretable difference	1,056	1,412	(1,192)	3,372
Other, adjustments	—	—	(15,072)	—
Balance at end of period	$ 18,740	$ 9,877	$ 18,740	$ 9,877

Income is not recognized on PCI loans unless the Company can reasonably estimate the cash flows that are expected to be collected over the life of the loan. The balance of PCI loans that were treated under the cost recovery method was $5,363 and $7,992 at September 30, 2018 and December 31, 2017, respectively.

The following table presents loans individually evaluated for impairment, excluding PCI loans, by segment of loans at September 30, 2018 and December 31, 2017:

	September 30, 2018		December 31, 2017	
	Unpaid principal balance	Recorded investment	Unpaid principal balance	Recorded investment
Loans with no related allowance recorded:				
Traditional C&I	$ 54,756	$ 40,909	$ 36,408	$ 35,921
Asset-based lending	18,573	18,573	—	—
Equipment financing	2,394	2,394	5,341	5,341
Commercial real estate	45,150	37,739	10,128	9,663
Multi-family	2,352	1,688	1,597	1,597
ADC	—	—	5,474	5,208
Residential mortgage	2,552	2,332	—	—
Consumer	8,050	8,050	3,132	3,132
Total	$ 133,827	$ 111,685	$ 62,080	$ 60,862

At September 30, 2018 and December 31, 2017, there were no payroll finance, warehouse lending, factored receivables or public sector finance loans that were individually evaluated for impairment.

The Company's policy generally requires a charge-off of the difference between the present value of the cash flows or the net collateral value of the collateral securing the loan and the Company's recorded investment. As a result, there were no impaired loans with an allowance recorded at September 30, 2018 or December 31, 2017.

The following table presents the average recorded investment and interest income recognized related to loans individually evaluated for impairment by segment for the three months ended September 30, 2018 and September 30, 2017:

	For the three months ended					
	September 30, 2018			September 30, 2017		
	QTD average recorded investment	Interest income recognized	Cash-basis interest income recognized	QTD average recorded investment	Interest income recognized	Cash-basis interest income recognized
Loans with no related allowance recorded:						
Traditional C&I	$ 36,731	$ 116	$ —	$ 24,653	$ 8	$ —
Asset-based lending	14,639	123	—	—	—	—
Equipment financing	798	—	—	5,469	—	—
Commercial real estate	27,149	294	—	13,258	95	—
Multi-family	1,768	17	—	—	—	—
ADC	—	—	—	5,611	48	—
Residential mortgage	1,849	—	—	1,060	—	—
Consumer	4,762	—	—	2,356	—	—
Total	$ 87,696	$ 550	$ —	$ 52,407	$ 151	$ —

For the three months ended September 30, 2018 and 2017, there were no payroll finance, warehouse lending, factored receivables or public sector finance loans that were impaired, and there was no cash-basis interest income recognized.

The following table presents the average recorded investment and interest income recognized related to loans individually evaluated for impairment by segment for the nine months ended September 30, 2018 and 2017:

	For the nine months ended					
	September 30, 2018			September 30, 2017		
	YTD average recorded investment	Interest income recognized	Cash-basis interest income recognized	YTD average recorded investment	Interest income recognized	Cash-basis interest income recognized
Loans with no related allowance recorded:						
Traditional C&I	$ 35,935	$ 149	$ —	$ 24,747	$ 22	$ —
Asset-based lending	10,980	347	—	—	—	—
Equipment financing	598	—	—	3,429	—	—
Commercial real estate	22,704	360	—	10,410	271	—
Multi-family	1,726	48	—	—	—	—
ADC	—	—	—	5,562	154	—
Residential mortgage	1,387	—	—	787	—	—
Consumer	4,355	—	—	1,927	—	—
Total	$ 77,685	$ 904	$ —	$ 46,862	$ 447	$ —

For the nine months ended September 30, 2018 and 2017, there were no payroll finance, warehouse lending, factored receivables or public sector finance loans that were impaired, and there was no cash-basis interest income recognized.

Troubled Debt Restructuring ("TDRs")

The following tables set forth the amounts and past due status of the Company's TDRs at September 30, 2018 and December 31, 2017:

	September 30, 2018					
	Current loans	30-59 days past due	60-89 days past due	90+ days past due	Non-accrual	Total
Traditional C&I	$ 449	$ —	$ —	$ 418	$ 25,351	$ 26,218
Asset-based lending	10,855	—	—	—	—	10,855
Equipment financing	3,340	—	—	—	1,181	4,521
Commercial real estate	16,091	—	—	—	2,935	19,026
ADC	434	—	—	—	—	434
Residential mortgage	5,685	—	367	—	2,473	8,525
Consumer	2,539	57	—	—	5,172	7,768
Total	$ 39,393	$ 57	$ 367	$ 418	$ 37,112	$ 77,347

	December 31, 2017					
	Current loans	30-59 days past due	60-89 days past due	90+ days past due	Non-accrual	Total
Traditional C&I	$ 565	$ —	$ —	$ —	$ 21,083	$ 21,648
Equipment financing	898	—	—	—	826	1,724
Commercial real estate	2,921	—	—	—	115	3,036
ADC	1,495	—	—	—	4,205	5,700
Residential mortgage	5,154	336	—	—	2,810	8,300
Consumer	2,142	53	—	—	286	2,481
Total	$ 13,175	$ 389	$ —	$ —	$ 29,325	$ 42,889

There were no payroll finance, warehouse lending, factored receivables, public sector finance or multi-family loans that were TDRs for either period presented above and there were no asset-based lending loans that were TDRs at December 31, 2017. The Company did not have any outstanding commitments to lend additional amounts to customers with loans classified as TDRs as of September 30, 2018 or December 31, 2017.

There were 20 loans modified as a TDR in the nine months ended September 30, 2018. The following table presents loans by segment modified as TDRs that occurred during the first nine months of 2018 and 2017:

	September 30, 2018			September 30, 2017		
		Recorded investment			Recorded investment	
	Number	Pre-modification	Post-modification	Number	Pre-modification	Post-modification
Traditional C&I	2	$ 11,606	$ 10,477	1	$ 23,188	$ 23,188
Asset-based lending	1	12,766	12,766	—	—	—
Equipment financing	4	3,307	3,307	2	3,088	3,088
Commercial real estate	1	12,187	12,187	2	1,724	1,724
ADC	—	—	—	1	797	797
Residential mortgage	11	1,684	1,367	2	552	551
Consumer	1	4,944	4,944	—	—	—
Total TDRs	20	$ 46,494	$ 45,048	8	$ 29,349	$ 29,348

There were no payroll finance, warehouse lending, factored receivables, public sector finance, or multi-family loans modified as TDRs during the first nine months of 2018 or 2017.

During the nine months ended September 30, 2018 or 2017, except for certain TDRs that are included in non-accrual loans, there were no TDRs that experienced a payment default within the twelve months following the modification. A payment default is defined as missing three consecutive monthly payments or being over 90 days past due on a scheduled payment. The asset-based lending loan that was designated as a TDR in 2018 is a borrowing base facility in which the advance rate is determined by the estimated value of loans to third parties used to finance the acquisition of taxi medallions, which are collateral for the facility. This loan has never been delinquent and has continued to perform according to its modified terms at the time of restructuring. TDRs during the periods presented above did not significantly impact the determination of the allowance for loan losses.

(5) Allowance for Loan Losses

Activity in the allowance for loan losses for the three months ended September 30, 2018 and 2017 is summarized below:

	For the three months ended September 30, 2018					
	Beginning balance	Charge-offs	Recoveries	Net charge-offs	Provision / (reversal of)	Ending balance
Traditional C&I	$ 18,075	$ (3,415)	$ 235	$ (3,180)	$ (179)	$ 14,716
Asset-based lending	5,837	—	—	—	991	6,828
Payroll finance	1,658	(2)	5	3	522	2,183
Warehouse lending	2,787	—	—	—	(102)	2,685
Factored receivables	1,321	(18)	2	(16)	203	1,508
Equipment financing	8,841	(829)	85	(744)	3,056	11,153
Public sector finance	1,354	—	—	—	90	1,444
Commercial real estate	26,870	(359)	612	253	4,345	31,468
Multi-family	7,389	(168)	4	(164)	457	7,682
ADC	2,172	—	—	—	(296)	1,876
Residential mortgage	5,917	(114)	5	(109)	992	6,800
Consumer	3,805	(458)	254	(204)	(579)	3,022
Total allowance for loan losses	$ 86,026	$ (5,363)	$ 1,202	$ (4,161)	$ 9,500	$ 91,365
Annualized net charge-offs to average loans outstanding:						0.08%

	For the three months ended September 30, 2017					
	Beginning balance	Charge-offs	Recoveries	Net charge-offs	Provision / (reversal of)	Ending balance
Traditional C&I	$ 15,506	$ (68)	$ 316	$ 248	$ 1,446	$ 17,200
Asset-based lending	2,582	—	1	1	2,192	4,775
Payroll finance	1,287	(188)	1	(187)	1,091	2,191
Warehouse lending	2,435	—	—	—	1,299	3,734
Factored receivables	1,151	(564)	5	(559)	679	1,271
Equipment financing	5,735	(741)	45	(696)	(577)	4,462
Public sector finance	1,887	—	—	—	(535)	1,352
Commercial real estate	25,181	(1,345)	17	(1,328)	(648)	23,205
Multi-family	5,028	—	—	—	(974)	4,054
ADC	920	(5)	—	(5)	399	1,314
Residential mortgage	5,124	(389)	—	(389)	319	5,054
Consumer	3,315	(156)	48	(108)	309	3,516
Total allowance for loan losses	$ 70,151	$ (3,456)	$ 433	$ (3,023)	$ 5,000	$ 72,128
Annualized net charge-offs to average loans outstanding:						0.12%

Activity in the allowance for loan losses for the nine months ended September 30, 2018 and 2017 is summarized below:

	For the nine months ended September 30, 2018					
	Beginning balance	Charge-offs	Recoveries	Net charge-offs	Provision/ (reversal of)	Ending balance
Traditional C&I	$ 19,072	$ (8,818)	$ 674	$ (8,144)	$ 3,788	$ 14,716
Asset-based lending	6,625	—	9	9	194	6,828
Payroll finance	1,565	(316)	34	(282)	900	2,183
Warehouse lending	3,705	—	—	—	(1,020)	2,685
Factored receivables	1,395	(181)	7	(174)	287	1,508
Equipment financing	4,862	(7,505)	347	(7,158)	13,449	11,153
Public sector finance	1,797	—	—	—	(353)	1,444
Commercial real estate	24,945	(4,878)	702	(4,176)	10,699	31,468
Multi-family	3,261	(168)	7	(161)	4,582	7,682
ADC	1,680	(721)	—	(721)	917	1,876
Residential mortgage	5,819	(697)	54	(643)	1,624	6,800
Consumer	3,181	(1,074)	482	(592)	433	3,022
Total allowance for loan losses	$ 77,907	$ (24,358)	$ 2,316	$ (22,042)	$ 35,500	$ 91,365
Annualized net charge-offs to average loans outstanding:						0.15%

	For the nine months ended September 30, 2017					
	Beginning balance	Charge-offs	Recoveries	Net charge-offs	Provision/ (reversal of)	Ending balance
Traditional C&I	$ 12,864	$ (919)	$ 978	$ 59	$ 4,277	$ 17,200
Asset-based lending	3,316	—	5	5	1,454	4,775
Payroll finance	951	(188)	1	(187)	1,427	2,191
Warehouse lending	1,563	—	—	—	2,171	3,734
Factored receivables	1,669	(871)	23	(848)	450	1,271
Equipment financing	5,039	(1,822)	331	(1,491)	914	4,462
Public sector finance	1,062	—	—	—	290	1,352
Commercial real estate	20,466	(2,372)	117	(2,255)	4,994	23,205
Multi-family	4,991	—	—	—	(937)	4,054
ADC	1,931	(27)	269	242	(859)	1,314
Residential mortgage	5,864	(668)	159	(509)	(301)	5,054
Consumer	3,906	(687)	177	(510)	120	3,516
Total allowance for loan losses	$ 63,622	$ (7,554)	$ 2,060	$ (5,494)	$ 14,000	$ 72,128
Annualized net charge-offs to average loans outstanding:						0.08%

Credit Quality Indicators

As part of the ongoing monitoring of the credit quality of the Company's loan portfolio, management tracks certain credit quality indicators, including trends related to (i) the weighted-average risk grade of commercial loans; (ii) the level of classified commercial loans; (iii) the delinquency status of residential mortgage and consumer loans, including home equity lines of credit ("HELOC") and other consumer loans; (iv) net charge-offs; (v) non-performing loans (see details above); and (vi) the general economic conditions in the greater New York metropolitan region. The Company analyzes loans individually by classifying the loans by credit risk, except residential mortgage loans, HELOC and other consumer loans, which are evaluated on a homogeneous pool basis unless the loan balance is greater than $750. This analysis is performed at least quarterly on all graded 7-Special Mention and lower loans. The Company uses the following definitions of risk ratings:

1 and 2 - These grades include loans that are secured by cash, marketable securities or cash surrender value of life insurance policies.

3 - This grade includes loans to borrowers with strong earnings and cash flow that have the ability to service debt. The borrower's assets and liabilities are generally well-matched and are above average quality. The borrower has ready access to multiple sources of funding, including alternatives such as term loans, private equity placements or trade credit.

4 - This grade includes loans to borrowers with above average cash flow, adequate earnings and debt service coverage ratios. The borrower generates discretionary cash flow, assets and liabilities are reasonably matched, and the borrower has access to other sources of debt funding or additional trade credit at market rates.

5 - This grade includes loans to borrowers with adequate earnings and cash flow and reasonable debt service coverage ratios. Overall leverage is acceptable and there is average reliance upon trade credit. Management has a reasonable amount of experience and depth, and owners are willing to invest available outside capital, as necessary.

6 - This grade includes loans to borrowers where there is evidence of some strain, earnings are inconsistent and volatile, and the borrowers' outlook is uncertain. Generally, such borrowers have higher leverage than those with a better risk rating. These borrowers typically have limited access to alternative sources of bank debt and may be dependent upon debt funding for working capital support.

7 - Special Mention (OCC definition) - Other Assets Especially Mentioned are loans that have potential weaknesses which may, if not reversed or corrected, weaken the asset or inadequately protect the Bank's credit position at some future date. Such assets constitute an undue and unwarranted credit risk but not to the point of justifying a classification of "Substandard." The credit risk may be relatively minor yet constitute an unwarranted risk in light of the circumstances surrounding a specific asset.

8 - Substandard (OCC definition) - These loans are inadequately protected by the current sound worth and paying capacity of the obligor or of the collateral pledged, if any. Assets so classified must have a well-defined weakness that jeopardizes the liquidation of the debt. They are characterized by the distinct possibility that the Bank will sustain some losses if the deficiencies are not corrected. Loss potential, while existing in the aggregate amount of substandard assets, does not have to exist in individual assets classified as substandard.

9 - Doubtful (OCC definition) - These loans have all the weakness inherent in one classified as "Substandard" with the added characteristics that the weakness makes collection or liquidation in full, on the basis of currently existing facts, conditions, and values, highly questionable and improbable. The possibility of loss is extremely high, but, because of certain important and reasonably specific pending factors which may work to the advantage and strengthening of the asset, its classification as an estimated loss is deferred until its more exact status may be determined. Pending factors may include a proposed merger, acquisition, liquidating procedures, capital injection, perfecting liens or additional collateral and refinancing plans.

10 - Loss (OCC definition) - These loans are charged-off because they are determined to be uncollectible and unbankable assets. This classification does not indicate that the asset has no absolute recovery or salvage value, but rather it is not practical or desirable to defer writing-off this asset even though partial recovery may be effected in the future. Losses should be taken in the period in which they are determined to be uncollectible.

Loans that are risk-rated 1 through 6, as defined above, are considered to be pass-rated loans. As of September 30, 2018 and December 31, 2017, the risk category of gross loans by segment was as follows:

	September 30, 2018			December 31, 2017		
	Special mention	Substandard	Doubtful	Special mention	Substandard	Doubtful
Traditional C&I	$ 11,662	$ 42,974	$ 2,213	$ 7,453	$ 53,915	$ 746
Asset-based lending	56	42,913	—	30,958	3,835	—
Payroll finance	13,708	15,511	—	15,542	352	—
Factored receivables	778	—	—	187	—	—
Equipment financing	10,593	16,266	—	4,093	9,299	—
Commercial real estate	18,822	52,870	—	40,438	34,529	—
Multi-family	21,201	18,489	—	26,602	14,266	—
ADC	4,096	434	—	4,204	4,639	—
Residential mortgage	6,116	75,803	—	6,038	101,149	—
Consumer	1,440	15,098	6	1,043	10,507	18
Total	$ 88,472	$ 280,358	$ 2,219	$ 136,558	$ 232,491	$ 764

There were no criticized or classified warehouse lending or public sector finance loans for the periods presented. There were no loans rated “loss” at September 30, 2018 or December 31, 2017.

(6) Goodwill and Other Intangible Assets

The balance of goodwill and other intangible assets for the periods presented were as follows:

	September 30, 2018	December 31, 2017
Goodwill	$ 1,609,772	$ 1,579,891
Other intangible assets:		
Core deposits	$ 109,833	$ 126,545
Customer lists	4,972	5,854
Non-compete agreements	104	292
Trade name	20,500	20,500
Total	$ 135,409	$ 153,191

The increase in goodwill at September 30, 2018 compared to December 31, 2017 was due to the Advantage Funding Acquisition. See Note 2. “Acquisitions” for additional information.

The decrease in other intangible assets at September 30, 2018 compared to December 31, 2017 was due to amortization of intangibles.

The estimated aggregate future amortization expense for intangible assets remaining as of September 30, 2018 was as follows:

	Amortization expense
Remainder of 2018	$ 5,863
2019	19,181
2020	16,800
2021	15,104
2022	13,703
2023	12,322
Thereafter	31,936
Total	$ 114,909

(7) Deposits

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

	September 30, 2018	December 31, 2017
Non-interest bearing demand	$ 4,651,369	$ 4,080,742
Interest bearing demand	4,302,725	3,882,064
Savings	2,470,949	2,758,642
Money market	7,460,064	7,377,118
Certificates of deposit	2,570,950	2,439,638
Total deposits	$ 21,456,057	$ 20,538,204

Total municipal deposits were $2,019,893 and $1,585,076 at September 30, 2018 and December 31, 2017, respectively. See Note 3. “Securities” for the aggregate amount of securities that were pledged as collateral for municipal deposits and other purposes.

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

	September 30, 2018	December 31, 2017
Interest bearing demand	$ 17,471	$ 23,820
Money market	779,285	773,804
Money market - reciprocal deposits [(1)]	—	102,259
CDARs[(2)] and ICS[(3)] one way	150,181	204,331
Total brokered deposits	$ 946,937	$ 1,104,214

[1] Section 29 of the Federal Deposit Insurance Act was amended to except a capped amount of reciprocal deposits from treatment as brokered deposits for certain insured depository institutions, including the Bank. As a result, the Bank no longer reports its reciprocal deposits as brokered deposits.

[2] CDARs are deposits generated through the certificate of deposit account registry service.

[3] ICS are deposits generated through the insured cash sweep program.

(8) Borrowings

The Company’s borrowings and weighted average interest rates were as follows for the periods presented:

	September 30, 2018		December 31, 2017	
	Amount	Rate	Amount	Rate
By type of borrowing:				
FHLB borrowings	$ 4,429,110	2.21%	$ 4,510,123	1.69%
Repurchase agreements	22,888	1.19	30,162	0.64
5.50% Senior Notes	—	—	76,805	5.98
3.50% Senior Notes	200,972	3.19	201,404	3.19
Subordinated Notes	172,885	5.45	172,716	5.45
Total borrowings	$ 4,825,855	2.37%	$ 4,991,210	1.96%
By remaining period to maturity:				
Less than one year	$ 2,707,935	2.24%	$ 2,989,093	1.69%
One to two years	1,392,912	2.15	775,714	1.79
Two to three years	552,123	2.58	802,650	2.34
Three to four years	—	—	251,037	2.04
Greater than five years	172,885	5.45	172,716	5.45
Total borrowings	$ 4,825,855	2.37%	$ 4,991,210	1.96%

FHLB borrowings. As a member of the FHLB, the Bank may borrow up to a discounted percentage of the amount of eligible mortgages and securities that have been pledged as collateral under a blanket security agreement. As of September 30, 2018 and December 31, 2017, the Bank had total residential mortgage and commercial real estate loans pledged after discount of $8,548,416 and $9,123,601, respectively. In addition to the pledged mortgages, the Bank had also pledged securities to secure borrowings, which are disclosed in Note 3. “Securities.” As of September 30, 2018, the Bank had unused borrowing capacity at the FHLB of $6,235,781 and may increase its borrowing capacity by pledging securities not required to be pledged for other purposes with a collateral value of approximately $3,578,859.

Repurchase agreements. The Bank enters into sales of securities under agreements to repurchase. These repurchase agreements facilitate the needs of our customers and a portion of our secured short-term funding needs. Securities sold under agreements to repurchase at September 30, 2018 and December 31, 2017 are secured short-term borrowings that mature in one to 45 days and are generally renewed on a continuous basis. Repurchase agreements are stated at the amount of cash received in connection with these transactions. The securities pledged under these repurchase agreements fluctuate in value due to market conditions. The Bank is obligated to promptly transfer additional securities if the market value of the securities falls below the repurchase agreement price. Securities pledged as collateral under repurchase agreements are maintained with our safekeeping agents.

5.50% Senior Notes. On July 2, 2013, the Company issued $100,000 principal amount of 5.50% fixed rate notes, which matured on July 2, 2018. At such date, the Company utilized cash on hand to repay the outstanding principal balance and interest of such notes.

3.50% Senior Notes. On October 2, 2017, in connection with the Astoria Merger, the Company assumed $200,000 principal amount of 3.50% fixed rate senior notes that mature on June 8, 2020 (the “3.50% Senior Notes”). The 3.50% Senior Notes were issued by Astoria on June 8, 2017 through a public offering. The Company recorded the 3.50% Senior Notes at an estimated fair value of 100.76% on the acquisition date, which was based on the quoted market value. The fair value adjustment, with a remaining balance of $972 at September 30, 2018, is being amortized over the remaining maturity using a level-yield methodology, which results in an effective cost of 3.19%.

Subordinated Notes. On March 29, 2016, the Bank issued $110,000 principal amount of 5.25% fixed-to-floating rate subordinated notes (the “Subordinated Notes”) through a private placement at a discount of 1.25%. The cost of issuance was $500. On September 2, 2016, the Bank reopened the Subordinated Notes offering and issued an additional $65,000 principal amount of Subordinated Notes. The Subordinated Notes issued September 2, 2016 are fully fungible with, rank equally in right of payment with, and form a single series with the Subordinated Notes issued in March 2016. The Subordinated Notes issued in September 2016 were issued to the

purchasers at a premium of 0.50% and an underwriters discount of 1.25%. The cost of issuance was $275. At September 30, 2018, the net unamortized discount of all Subordinated Notes was $2,115, which will be accreted to interest expense over the life of the Subordinated Notes, resulting in an effective yield of 5.45%. Interest is due semi-annually in arrears on April 1 and October 1 of each year, until April 1, 2021. From and including April 1, 2021, the Subordinated Notes will bear interest at a floating rate per annum equal to three-month LIBOR plus 3.937%, payable quarterly on January 1, April 1, July 1 and October 1 of each year, beginning on July 1, 2021, through maturity on April 1, 2026 or earlier redemption. The Subordinated Notes are also redeemable by the Bank, in whole or in part, on April 1, 2021 and each interest payment date thereafter. The Subordinated Notes are redeemable in whole at any time upon the occurrence of certain specified events. The Subordinated Notes are unsecured, subordinated obligations of the Bank and are subordinated in right of payment to all of the Bank's existing and future senior indebtedness, including claims of depositors and general creditors. The Subordinated Notes qualify as Tier 2 capital for regulatory purposes. See Note 15. "Stockholders' Equity" for additional information.

Revolving line of credit. Effective September 2, 2018, the Company renewed its $35,000 revolving line of credit facility (the "Credit Facility"). The Credit Facility, which is with another financial institution, matures on September 2, 2019. The balance was zero at September 30, 2018 and December 31, 2017. The use of proceeds are for general corporate purposes. The Credit Facility and accrued interest is payable at maturity, and the Company is required to maintain a zero balance for at least 30 days during its term. Loans under the Credit Facility bear interest at one-month LIBOR plus 1.25%. Under the terms of the Credit Facility, the Company and the Bank must maintain certain ratios related to capital, non-performing assets to capital, reserves to non-performing loans and debt service coverage. The Company and the Bank were in compliance with all requirements of the Credit Facility at September 30, 2018.

(9) Derivatives

The Company has entered into certain interest rate swap contracts that are not designated as hedging instruments. These derivative contracts relate to transactions in which the Company enters into an interest rate swap with a customer while at the same time entering into an offsetting interest rate swap with another financial institution. In connection with each swap transaction, the Company agrees to pay interest to the customer on a notional amount at a variable interest rate and receive interest from the customer on a similar notional amount at a fixed interest rate. At the same time, the Company agrees to pay another financial institution the same fixed interest rate on the same notional amount and receive the same variable interest rate on the same notional amount. The transaction allows the Company's customers to effectively convert a variable rate loan to a fixed rate loan. Because the Company acts as an intermediary for its customers, changes in the fair value of the underlying derivative contracts largely offset each other and do not materially impact results of operations.

The Company has entered into interest rate swap contracts that are both over-the-counter, or OTC, and those that are exchanged on futures markets such as the Chicago Mercantile Exchange ("CME"). At September 30, 2018 and December 31, 2017, the OTC derivatives are included in the financial statements at the gross fair value amount of the asset (included in other assets) and liability (included in other liabilities), which represents the change in the fair value of the contract since inception. Effective for the quarter ended March 31, 2017, the CME amended its rulebook to legally characterize variation margin payments (a payment made based on changes in the fair value of the interest rate swap contracts) as a settlement, referred to as settled-to-market ("STM"). As a result of this change, at September 30, 2018 and December 31, 2017, the Company paid cash as STM in the amount of $15,131 and $3,523, respectively, for the net fair value of its CME interest rate swap contracts with another financial institution. The variation margin payment changes daily, positively or negatively, based on a change in the fair value of the underlying interest rate swap contracts.

The Company does not typically require its commercial customers to post cash or securities as collateral on its program of back-to-back swaps. However, certain language is written into the International Swaps and Derivatives Association agreement and loan documents where, in default situations, the Company is allowed to access collateral supporting the loan relationship to recover any losses suffered on the derivative asset or liability.

Summary information as of September 30, 2018 and December 31, 2017 regarding these derivatives is presented below:

	Notional amount	Average maturity (in years)	Weighted average fixed rate	Weighted average variable rate	Fair value
September 30, 2018					
Included in other assets:					
Third-party interest rate swap	$ 670,460				$ 3,347
Customer interest rate swap	213,651				290
Total	$ 884,111	5.48	4.50%	1 m Libor + 2.24%	$ 3,637
Included in other liabilities:					
Third-party interest rate swap	$ (213,651)				$ (1,369)
Customer interest rate swap	(670,460)				(17,399)
Total	$ (884,111)	5.48	4.50%	1 m Libor + 2.24%	$ (18,768)
December 31, 2017					
Included in other assets:					
Third-party interest rate swap	$ 314,754				$ 1,155
Customer interest rate swap	306,529				3,302
Total	$ 621,283	5.79	4.28%	1 m Libor + 1.94%	$ 4,457
Included in other liabilities:					
Third-party interest rate swap	$ (306,529)				$ (4,718)
Customer interest rate swap	(314,754)				(3,262)
Total	$ (621,283)	5.79	4.28%	1 m Libor + 1.94%	$ (7,980)

(10) Income Taxes

Actual income tax expense differs from the tax computed based on pre-tax income and the applicable statutory Federal tax rate for the following reasons:

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
Income before income tax expense	$ 146,821	$ 66,444	$ 421,305	$ 185,939
Tax at Federal statutory rate of 21% for 2018 and 35% for 2017	30,833	23,253	88,474	65,076
State and local income taxes, net of Federal tax benefit	7,330	2,531	21,284	7,302
Tax exempt interest, net of disallowed interest	(4,970)	(5,213)	(14,435)	(12,487)
Bank owned life insurance income	(861)	(462)	(2,406)	(1,484)
Non-deductible acquisition related costs	—	237	—	1,193
Investments in qualified affordable housing projects	(401)	(139)	(2,903)	(416)
Stock-based compensation benefit	—	(1)	(441)	(807)
FDIC insurance premium limitation	466	—	1,483	—
Other, net	(5,226)	1,386	(2,514)	1,243
Actual income tax expense	$ 27,171	$ 21,592	$ 88,542	$ 59,620
Effective income tax rate	18.5%	32.5%	21.0%	32.1%

Net deferred tax assets totaled $85,431 at September 30, 2018 and $97,333 at December 31, 2017. No valuation allowance was recorded against deferred tax assets as of those dates, based upon management's consideration of historical and anticipated future pre-

tax income, and the reversal periods for the items resulting in deferred tax assets and liabilities. There were no unrecognized tax benefits during any of the reported periods.

Interest and/or penalties related to income taxes are reported as a component of other non-interest expense. Such amounts were not material during the reported periods.

The Company is generally no longer subject to examination by Federal, state and local taxing authorities for fiscal years prior to September 30, 2014.

The Tax Cuts and Jobs Act of 2017 reduced the U.S. federal corporate income tax rate from 35% to 21% effective January 1, 2018. As a result, the Company was required to remeasure, through income tax expense, the Company's deferred tax assets and liabilities using the enacted tax rate at which the deferred items are expected to be recovered or settled. The remeasurement of the Company's net deferred tax assets resulted in additional provisional income tax expense of $40,285 recorded in 2017. During the third quarter of 2018 the Company completed its evaluation of certain aspects of the new tax law, as well as the final tax returns related to Astoria's business and operations through October 1, 2017. After completion of these tax returns, the Company reduced income tax balances and goodwill in the amount of $6,214, which finalized all purchase accounting adjustments for the Astoria Merger.

(11) Stock-Based Compensation

The Company has active stock-based compensation plans, as described below.

The Company's stockholders approved the 2015 Omnibus Equity and Incentive Plan (the "2015 Plan") on May 28, 2015. The 2015 Plan permits the grant of stock options, stock appreciation rights, restricted stock (both time-based and performance-based), restricted stock units, deferred stock and other stock-based awards. The total number of shares that may be awarded under the 2015 Plan is 2,800,000 shares plus the remaining shares available for grant under the stockholder approved 2014 Stock Incentive Plan as of the date of adoption of the 2015 Plan. At September 30, 2018, there were, in aggregate, 2,379,112 shares available for future grant under the 2015 Plan.

Restricted stock awards are granted with a fair value equal to the market price of the Company's common stock at the date of grant. Stock option awards are granted with a strike price that is equal to the market price of the Company's common stock at the date of grant. The restricted stock awards generally vest in equal installments annually on the anniversary date of grant and have total vesting periods ranging from one to five years, while stock options have 10-year contractual terms.

The following table summarizes the activity in the Company's active stock-based compensation plans for the nine months ended September 30, 2018:

		Non-vested stock awards/stock units outstanding		Stock options outstanding	
	Shares available for grant	Number of shares	Weighted average grant date fair value	Number of shares	Weighted average exercise price
Balance at January 1, 2018	3,101,327	1,238,760	$ 20.00	757,867	$ 11.15
Granted	(772,271)	772,271	23.54	—	—
Stock awards vested	—	(341,501)	17.35	—	—
Exercised	—	—	—	(49,794)	11.19
Forfeited	55,356	(50,056)	22.32	(5,300)	13.18
Canceled/expired	(5,300)	—	—	—	13.18
Balance at September 30, 2018	2,379,112	1,619,474	$ 22.08	702,773	$ 11.13
Exercisable at September 30, 2018				701,106	$ 11.12

The total intrinsic value of outstanding in-the-money stock options and outstanding in-the-money exercisable stock options was $7,640 and $7,629, respectively, at September 30, 2018.

The Company uses an option pricing model to estimate the grant date fair value of stock options granted. There were no stock options granted during the nine months ended September 30, 2018 or September 30, 2017.

Stock-based compensation expense is recognized ratably over the requisite service period for all awards. Stock-based compensation expense associated with stock options and non-vested stock awards and the related income tax benefit are presented below:

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
Stock options	$ 2	$ 48	$ 5	$ 146
Non-vested stock awards/performance units	3,113	1,921	9,299	5,456
Total	$ 3,115	$ 1,969	$ 9,304	$ 5,602
Income tax benefit	654	640	1,954	1,821
Proceeds from stock option exercises	154	65	556	1,193

Unrecognized stock-based compensation expense as of September 30, 2018 was as follows:

	September 30, 2018
Stock options	$ —
Non-vested stock awards/performance units	21,289
Total	$ 21,289

The weighted average period over which unrecognized non-vested stock awards/performance units expense is expected to be recognized is 1.67 years.

(12) Pension and Other Post-Retirement Benefits

Total pension and other post-retirement benefits expense is comprised of the following for the periods presented below:

	For the three months ended			
	September 30, 2018		September 30, 2017	
	Pension Benefits	Other Post Retirement Benefits	Pension Benefits	Other Post Retirement Benefits
Service cost	$ —	$ 20	$ —	$ —
Interest cost	2,121	254	—	101
Expected return on plan assets	(3,353)	—	—	—
Net amortization and deferral	—	—	—	8
Net periodic pension and other post-retirement (benefit) expense	$ (1,232)	$ 274	$ —	$ 109

	For the nine months ended			
	September 30, 2018		September 30, 2017	
	Pension Benefits	Other Post Retirement Benefits	Pension Benefits	Other Post Retirement Benefits
Service cost	$ —	$ 62	$ —	$ —
Interest cost	6,364	780	—	302
Expected return on plan assets	(10,058)	—	—	—
Net amortization and deferral	—	—	—	26
Net periodic pension and other post-retirement (benefit) expense	$ (3,694)	$ 842	$ —	$ 328

Total net periodic pension and other post-retirement (benefit) expense is included as a component of other non-interest expense.

The Company's pension benefit plans include all of the assets and liabilities of the Astoria Bank Pension Plan, the Astoria Excess and Supplemental Benefit Plans, the Astoria Directors' Retirement Plan, the Greater New York Savings Bank Directors' Retirement Plan and the Long Island Bancorp Directors' Retirement Plan, which were assumed in the Astoria Merger.

The Company's other post retirement benefit plans include the assumed Astoria Bank Retiree Health Care Plan and the Astoria Bank BOLI plan, along with other non-qualified Supplemental Executive Retirement Plans ("SERPs") that provide certain directors, officers and executives with supplemental retirement benefits.

The Company contributed $41,825 and $13 to fund pension and other post retirement benefits during the three months ended September 30, 2018 and 2017, respectively, and contributed $42,500 and $109 to fund pension and other post retirement benefits during the nine months ended September 30, 2018 and 2017, respectively. Included in the contribution made during the three and nine months ended September 30, 2018 was a payment of $41,510 towards the Astoria Bank Pension Plan unfunded accumulated benefit obligation. Total pension and other post-retirement benefits plans liabilities were $43,867 and $89,965 at September 30, 2018 and December 31, 2017, respectively, and are included in other liabilities in the consolidated balance sheets.

(13) Non-Interest Income and Other Non-Interest Expense

(a) Non-Interest Income - Revenue from Contracts with Customers

The Company's significant sources of non-interest income are presented on the face of the consolidated income statements, which include all income in the scope of the New Revenue Standard. A description of the Company's revenue streams accounted for under the New Revenue Standard follows:

Deposit fees and service charges. The Company earns fees from its deposit customers mainly for transaction-based, account maintenance, and overdraft services. Transaction-based fees, which includes services such as ATM use fees, stop payment charges, statement rendering, and ACH fees, are recognized at the time the transaction is executed as that is the point in time the Company fulfills the customer's request. Account maintenance fees, which relate primarily to monthly maintenance, are earned over the course of a month, representing the period over which the Company satisfies the performance obligation. Overdraft fees are recognized at the point in time that the overdraft occurs. Service charges on deposits are withdrawn from the customer's account balance.

Accounts receivable management / factoring commissions and other fees. The Company earns these fees / commissions from its payroll finance and factoring businesses, as described below.

Payroll finance. The Company provides financing and back office support services, which includes preparation of payroll, payroll tax payments, billings and collections, for clients in the temporary staffing industry. Upon completion of the back office support services, and as payroll remittances are made on behalf of the client to fund their employee payroll, which typically occurs weekly, the Company recognizes a portion of the total revenue generated as non-interest income. The Company collects invoices directly from the borrower's customers, and retains the amounts billed for the temporary staffing services provided, and remits the remaining funds to the borrower net of amounts advanced, payroll taxes withheld, the Company's fees, and subject to a reserve to offset potential uncollectible balances.

Factored Receivables. The Company provides accounts receivable management services. The purchase of a client's accounts receivable is traditionally known as "factoring" and results in payment by the client of a factoring fee. The factoring fee included in non-interest income represents compensation to the Company for the bookkeeping and collection services provided. The factoring fee, which is non-refundable, is recognized at the time the receivable is assigned to the Company. Other revenue associated with factored receivables includes wire fees, technology fees, field examination fees and UCC fees. All such fees are recognized as income upon receipt, which is when the Company's obligations are provided to the Company's customers.

Investment management fees. The Company earns investment management fees from its contracts with customers to manage assets for investment, and / or to transact on their accounts. Advisory fees are primarily earned over time as the Company provides the contracted monthly or quarterly services and are generally assessed based on a tiered scale of the market value of assets under management at month end. Fees that are transaction based, including trade execution services, are recognized at the point in time that the transaction is executed, *i.e.,* the trade date.

Gains / Losses on sales of OREO. The Company records a gain or loss from the sale of OREO when control of the property transfers to the buyer, which generally occurs at the time of an executed deed. When the Company finances the sale of OREO to the buyer, the Company assesses whether the buyer is committed to perform its obligations under the contract and whether collectability of the transaction price is probable. Once these criteria are met, the OREO asset is derecognized and the gain or loss on sale is recorded upon the transfer of control of the property to the buyer. In determining the gain or loss on the sale, the Company may adjust the transaction price and related gain (loss) on sale if a significant financing component is present.

Contract Balances. A contract asset balance occurs when an entity performs a service for a customer before the customer pays consideration (resulting in a contract receivable) or before payment is due (resulting in a contract asset). A contract liability balance is an entity's obligation to transfer a service to a customer for which the entity has already received payment (or payment is due) from the customer. The Company's non-interest revenue streams are largely based on transactional activity, or standard month-end revenue accruals such as investment management fees based on period-end market values. Consideration is often received immediately or shortly after the Company satisfies its performance obligation and revenue is recognized. The Company does not typically enter into long-term revenue contracts with customers, and therefore, does not experience significant contract balances. As of September 30, 2018 and December 31, 2017, the Company did not have any significant contract balances.

(b) Other Non-Interest Expense

Other non-interest expense items for the three and nine months ended September 30, 2018 and 2017, respectively, are presented in the following table:

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
Other non-interest expense:				
Professional fees	$ 2,866	$ 2,234	$ 9,269	$ 6,917
Advertising and promotion	1,147	649	3,962	2,034
Telephone	1,238	589	4,500	1,705
Operational losses	791	130	2,945	642
Stationery & office supplies	507	170	1,790	641
Insurance & surety bond premium	1,299	841	2,680	2,065
Other	5,325	3,734	14,534	11,072
Total other non-interest expense	$ 13,173	$ 8,347	$ 39,680	$ 25,076

(14) Earnings Per Common Share

The following is a summary of the calculation of earnings per common share ("EPS"):

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
Net income available to common stockholders	$ 117,657	$ 44,852	$ 326,775	$ 126,319
Weighted average common shares outstanding for computation of basic EPS	225,088,511	135,346,791	224,969,121	135,276,634
Common-equivalent shares due to the dilutive effect of stock options and unvested performance share grants[1]	534,384	603,369	535,342	618,879
Weighted average common shares for computation of diluted EPS	225,622,895	135,950,160	225,504,463	135,895,513
EPS:				
Basic	$ 0.52	$ 0.33	$ 1.45	$ 0.93
Diluted	0.52	0.33	1.45	0.93
Weighted average common shares that could be exercised that were anti-dilutive for the period[2]	—	—	—	—

[1] Represents incremental shares computed using the treasury stock method.
[2] Anti-dilutive shares are not included in determining diluted EPS. There were no anti-dilutive shares in the three and nine months ended September 30, 2018 or September 30, 2017.

(15) Stockholders' Equity

(a) Regulatory Capital Requirements

Banks and bank holding companies are subject to various regulatory capital requirements administered by federal banking agencies. Capital adequacy guidelines, and additionally for banks, prompt corrective action regulations, involve quantitative measures of assets, liabilities, and certain off-balance sheet items calculated under regulatory accounting practices. Capital amounts and classifications are also subject to qualitative judgments by regulators about components, risk-weighting, and other factors.

The Basel III Capital Rules became effective for the Company and the Bank on January 1, 2015 (subject to a phase-in period for certain provisions). Quantitative measures established by the Basel III Capital Rules to ensure capital adequacy require the maintenance of minimum amounts and ratios (set forth in the table below) of Common Equity Tier 1 capital (as defined in the regulations), Tier 1 capital (as defined in the regulations) and Total capital (as defined in the regulations) to risk-weighted assets (as defined in the regulations, "RWA"), and of Tier 1 capital to adjusted quarterly average total assets (as defined in the regulations, the "Tier 1 leverage ratio").

The Company's and the Bank's Common Equity Tier 1 capital consists of common stock and related paid-in capital, net of treasury stock, and retained earnings. In connection with the adoption of the Basel III Capital Rules, we elected to opt-out of the requirement to include most components of accumulated other comprehensive income in Common Equity Tier 1 capital. Common Equity Tier 1 capital for both the Company and the Bank is reduced by goodwill and other intangible assets, net of associated deferred tax liabilities and subject to transition provisions.

Tier 1 capital includes Common Equity Tier 1 capital and additional Tier 1 capital. Total capital includes Tier 1 capital and Tier 2 capital. Tier 2 capital (as defined in the regulations) for both the Bank and the Company includes a permissible portion of the allowance for loan losses and $172,885 and $139,429 of the Subordinated Notes, respectively. During the final five years of the term of the Subordinated Notes, the permissible portion eligible for inclusion in Tier 2 capital decreases by 20% annually.

The Common Equity Tier 1, Tier 1 and Total capital ratios are calculated by dividing the respective capital amounts by RWA. RWA is calculated based on regulatory requirements and includes total assets, excluding goodwill and other intangible assets, allocated by risk weight category, and certain off-balance-sheet items, among other items.

The Tier 1 leverage ratio is calculated by dividing Tier 1 capital by adjusted quarterly average total assets, which excludes goodwill and other intangible assets, among other items. When fully phased-in on January 1, 2019, the Basel III Capital Rules will require the Company and the Bank to maintain: (i) a minimum ratio of Common Equity Tier 1 capital to RWA of at least 4.5%, plus a 2.5% “capital conservation buffer” (which is added to the 4.5% Common Equity Tier 1 capital ratio as that buffer is phased in, effectively resulting in a minimum ratio of Common Equity Tier 1 capital to RWA of at least 7.0% upon full implementation); (ii) a minimum ratio of Tier 1 capital to RWA of at least 6.0%, plus the capital conservation buffer (which is added to the 6.0% Tier 1 capital ratio as that buffer is phased in, effectively resulting in a minimum Tier 1 capital ratio of 8.5% upon full implementation); (iii) a minimum ratio of Total capital (that is, Tier 1 plus Tier 2) to RWA of at least 8.0%, plus the capital conservation buffer (which is added to the 8.0% total capital ratio as that buffer is phased in, effectively resulting in a minimum total capital ratio of 10.5% upon full implementation); and (iv) a minimum Tier 1 leverage ratio of 4.0%.

The implementation of the capital conservation buffer began on January 1, 2016 at the 0.625% level and effective January 1, 2018, increased to the 1.875% level and will be phased-in over a four-year period (increasing by 0.625% on each subsequent January 1, until it reaches 2.5% on January 1, 2019). The Basel III Capital Rules also provide for a “countercyclical capital buffer” that is applicable to only certain covered institutions and does not have any current applicability to the Company or the Bank.

The aforementioned capital conservation buffer is designed to absorb losses during periods of economic stress. Banking institutions with a ratio of Common Equity Tier 1 capital to RWA above the minimum but below the conservation buffer (or below the combined capital conservation buffer and countercyclical capital buffer, when the latter is applied) will face constraints on dividends, equity repurchases and compensation based on the amount of the shortfall.

The following tables present actual and required capital ratios as of September 30, 2018 and December 31, 2017 for the Company and the Bank under the Basel III Capital Rules. The minimum required capital amounts presented include the minimum required capital levels as of September 30, 2018 and December 31, 2017 based on the phase-in provisions of the Basel III Capital Rules and the minimum required capital levels as of January 1, 2019 when the Basel III Capital Rules have been fully phased-in. Capital levels required to be considered well-capitalized are based upon prompt corrective action regulations, as amended to reflect the changes under the Basel III Capital Rules.

	Actual		Minimum capital required - Basel III phase-in schedule		Minimum capital required - Basel III fully phased-in		Required to be considered well-capitalized	
	Capital amount	Ratio	Capital amount	Ratio	Capital amount	Ratio	Capital amount	Ratio
September 30, 2018								
Common equity tier 1 to RWA:								
Sterling National Bank	$ 2,970,656	14.23%	$ 1,330,866	6.375%	$ 1,461,343	7.00%	$ 1,356,961	6.50%
Sterling Bancorp	2,710,568	12.97	1,332,021	6.375	1,462,611	7.00	N/A	N/A
Tier 1 capital to RWA:								
Sterling National Bank	2,970,656	14.23%	1,644,011	7.875%	1,774,488	8.50%	1,670,106	8.00%
Sterling Bancorp	2,849,195	13.64	1,645,438	7.875	1,776,028	8.50	N/A	N/A
Total capital to RWA:								
Sterling National Bank	3,235,560	15.50%	2,061,538	9.875%	2,192,015	10.50%	2,087,633	10.00%
Sterling Bancorp	3,080,643	14.74	2,063,327	9.875	2,193,917	10.50	N/A	N/A
Tier 1 leverage ratio:								
Sterling National Bank	2,970,656	10.10%	1,176,278	4.00%	1,176,278	4.00%	1,470,347	5.00%
Sterling Bancorp	2,849,195	9.68	1,177,205	4.00	1,177,205	4.00	N/A	N/A

	Actual		Minimum capital required - Basel III phase-in schedule		Minimum capital required - Basel III fully phased-in		Required to be considered well-capitalized	
	Capital amount	Ratio	Capital amount	Ratio	Capital amount	Ratio	Capital amount	Ratio
December 31, 2017								
Common equity tier 1 to RWA:								
Sterling National Bank	$ 2,770,381	13.95%	$ 1,142,247	5.75%	$ 1,390,561	7.00%	$ 1,291,236	6.50%
Sterling Bancorp	2,458,449	12.37	1,143,045	5.75	1,391,534	7.00	N/A	N/A
Tier 1 capital to RWA:								
Sterling National Bank	2,770,381	13.95%	1,440,224	7.25%	1,688,539	8.50%	1,589,213	8.00%
Sterling Bancorp	2,597,669	13.07	1,441,231	7.25	1,689,719	8.50	N/A	N/A
Total capital to RWA:								
Sterling National Bank	3,021,658	15.21%	1,837,527	9.25%	2,085,842	10.50%	1,986,516	10.00%
Sterling Bancorp	2,818,404	14.18	1,838,812	9.25	2,087,300	10.50	N/A	N/A
Tier 1 leverage ratio:								
Sterling National Bank	2,770,381	10.10%	1,097,449	4.00%	1,097,449	4.00%	1,371,811	5.00%
Sterling Bancorp	2,597,669	9.39	1,106,977	4.00	1,106,977	4.00	N/A	N/A

The Bank and the Company are subject to the regulatory capital requirements administered by the FRB, and, for the Bank, the Office of the Comptroller of the Currency. Regulatory authorities can initiate certain mandatory actions if the Bank or the Company fails to meet the minimum capital requirements, which could have a direct material effect on our financial statements. As of September 30, 2018, and December 31, 2017, the most recent regulatory notifications categorized the Company and the Bank as well capitalized under the regulatory framework for prompt corrective action. There are no conditions or events since that notification that management believes have changed the classification.

(b) Dividend Restrictions

The Company is mainly dependent on dividends from the Bank to provide funds for the payment of dividends to stockholders and to provide for other cash requirements. Banking regulations may limit the amount of dividends that may be paid. Approval by regulatory authorities is required if the effect of dividends declared would cause the regulatory capital of the Bank to fall below specified minimum levels. Approval is also required if dividends declared exceed the net profits for that fiscal year combined with the retained net profits for the preceding two fiscal years. Under the foregoing dividend restrictions and while maintaining its "well-capitalized" status, at September 30, 2018, the Bank had capacity to pay aggregate dividends of up to $324,008 to the Company without prior regulatory approval.

(c) Stock Repurchase Plans

From time to time, the Company's Board of Directors has authorized stock repurchase plans. The Company may purchase up to 10,000,000 common shares, which represents 4.4% of our shares outstanding at September 30, 2018. Repurchases may be made at management's discretion through open market purchases and block trades in accordance with SEC and regulatory requirements. Any common shares purchased will be held as Treasury stock and made available for general corporate purposes. There were no shares repurchased under the repurchase program during the nine months ended September 30, 2018 or September 30, 2017.

(16) Commitments and Contingencies

(a) Off-Balance Sheet Financial Instruments

In the normal course of business, the Company enters into various transactions, which, in accordance with GAAP, are not included in its consolidated balance sheets. The Company enters into these transactions to meet the financing needs of its customers. These transactions include commitments to extend credit and standby letters of credit, which involve, to varying degrees, elements of credit risk and interest rate risk in excess of the amounts recognized in the consolidated balance sheets. The Company minimizes its exposure to losses under these commitments by subjecting them to credit approval and monitoring procedures.

The Company enters into contractual commitments to extend credit, normally with fixed expiration dates or termination clauses, at specified rates and for specific purposes. Substantially all of the Company's commitments to extend credit are contingent upon customers maintaining specific credit standards at the time of loan funding. Standby letters of credit are written conditional commitments issued by the Company to guarantee the performance of a customer to a third-party. In the event the customer does not perform in accordance with the terms of the agreement with the third-party, the Company would be required to fund the commitment. The maximum potential amount of future payments the Company could be required to make is represented by the contractual amount of the commitment. If the commitment were funded, the Company would be entitled to seek recovery from the customer. Based on the Company's credit risk exposure assessment of its standby letter of credit arrangements, the arrangements contain security and debt covenants similar to those contained in loan agreements.

The contractual or notional amounts of these instruments, which reflect the extent of the Company's involvement in particular classes of off-balance sheet financial instruments, are summarized as follows:

	September 30, 2018	December 31, 2017
Loan origination commitments	$ 372,047	$ 510,135
Unused lines of credit	1,359,953	1,195,656
Letters of credit	289,877	166,824

(b) Lease Commitments

The Company leases certain premises and equipment under operating leases with terms expiring through January 2034. Included in occupancy and office operations expense was net rent expense of $4,572 and $1,874 during the three months ended September 30, 2018 and 2017, respectively. Net rent expense was $13,972 and $6,263 for the nine months ended September 30, 2018 and 2017, respectively. Future minimum lease payments due under non-cancelable operating leases at September 30, 2018 were as follows:

Remainder of 2018	$ 4,863
2019	17,817
2020	16,577
2021	13,878
2022	10,007
2023	8,163
2024 and thereafter	22,158
	$ 93,463

(c) Litigation

The Company and the Bank are involved in a number of judicial proceedings concerning matters arising from their business activities. These include routine legal proceedings arising in the ordinary course of business. These proceedings also include actions brought against the Company and the Bank with respect to corporate matters and transactions in which the Company and the Bank are or were involved.

There can be no assurance as to the ultimate outcome of a legal proceeding; however, the Company and the Bank have generally denied liability in all significant litigation pending against them and intend to defend vigorously each case, other than matters that are determined appropriate to be settled. The Company and the Bank accrue a liability for legal claims when payments associated with the claims become probable and the costs can be reasonably estimated. The actual costs of resolving legal claims may be substantially higher or lower than the amounts accrued for those claims.

(17) Fair Value Measurements

Fair value is the exchange price that would be received for an asset or paid to transfer a liability (exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. There are three levels of inputs that may be used to measure fair values:

Level 1 Inputs – Unadjusted quoted prices in active markets for identical assets and liabilities that the reporting entity has the ability to access at the measurement date.

Level 2 Inputs – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. These might include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (such as interest rates, volatilities, prepayment speeds, credit risk, etc.) or inputs that are derived principally from, or corroborated by, market data by correlation or other means.

Level 3 Inputs – Unobservable inputs for determining the fair value of assets or liabilities that reflect an entity's own assumptions about the assumptions that market participants would use in pricing the assets or liabilities.

In general, fair value is based on quoted market prices, when available. If quoted market prices in active markets are not available, fair value is based on internally developed models that primarily use, as inputs, observable market-based parameters. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value. These adjustments may include amounts to reflect counterparty credit quality and the Company's creditworthiness, among other items, as well as unobservable parameters. Any such valuation adjustments are applied consistently over time. The Company's valuation methodologies may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. While management believes the Company's valuation methodologies are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date. Furthermore, the reported fair value amounts have not been comprehensively revalued since the presentation dates; therefore, estimates of fair value after the balance sheet date may differ significantly from the amounts presented herein. A more detailed description of the valuation methodologies used for assets and liabilities measured at fair value is set forth below. Transfers between levels of the fair value hierarchy are recognized on the actual date of the event or circumstances that caused the transfer, which usually coincide with the Company's monthly and/or quarterly valuation process.

Investment Securities Available for Sale
The majority of the Company's available for sale investment securities are reported at fair value utilizing Level 2 inputs. For these securities, the Company obtains fair value measurements from an independent pricing service. The fair value measurements consider observable data that may include dealer quotes, market spreads, cash flows, the U.S. Treasury yield curve, live trading levels, trade execution data, market consensus prepayment speeds, credit information and the securities' terms and conditions, among other things.

The Company reviews the prices supplied by the independent pricing service, as well as their underlying pricing methodologies, for reasonableness and to ensure such prices are aligned with traditional pricing matrices. In general, the Company does not purchase investment securities that have a complicated structure. The Company's entire portfolio consists of traditional investments, nearly all of which are mortgage pass-through securities, state and municipal general obligation or revenue bonds, U.S. agency bullet and callable securities and corporate bonds. Pricing for such instruments is fairly generic and is easily obtained. From time to time, the Company validates, on a sample basis, prices supplied by the independent pricing service by comparison to prices obtained from third-party sources or derived using internal models.

As of September 30, 2018, management does not believe any of our securities are OTTI; however, management reviews all of the Company's securities on at least a quarterly basis to assess whether impairment, if any, is OTTI.

Derivatives
The fair values of derivatives are based on valuation models using current market terms (including interest rates and fees), the remaining terms of the agreements, and the creditworthiness of the counterparty as of the measurement date (Level 2 inputs). The Company's derivatives consist of interest rate swaps. See Note 9. "Derivatives" for additional information.

STERLING BANCORP AND SUBSIDIARIES
Notes to Consolidated Financial Statements (Unaudited)
(Dollars in thousands, except share and per share data)

A summary of such investment securities available for sale and derivatives at September 30, 2018 and December 31, 2017, respectively, measured at estimated fair value on a recurring basis, is as follows:

	September 30, 2018			
	Fair value	Level 1 inputs	Level 2 inputs	Level 3 inputs
Assets:				
Investment securities available for sale:				
Residential MBS[1]:				
Agency-backed	$ 2,207,191	$ —	$ 2,207,191	$ —
CMOs[2]/Other MBS	576,052	—	576,052	—
Total residential MBS	2,783,243	—	2,783,243	—
Other securities:				
Federal agencies	317,733	—	317,733	—
Corporate	503,326	—	503,326	—
State and municipal	238,942	—	238,942	—
Total other securities	1,060,001	—	1,060,001	—
Total available for sale securities	3,843,244	—	3,843,244	—
Swaps	3,637	—	3,637	—
Total assets	$ 3,846,881	$ —	$ 3,846,881	$ —
Liabilities:				
Swaps	$ (18,768)	$ —	$ (18,768)	$ —
Total liabilities	$ (18,768)	$ —	$ (18,768)	$ —

[1] Residential MBS are debt securities whose cash flows come from residential mortgage and consumer loans, such as mortgages and HELOCs. A residential MBS is comprised of a pool of mortgage loans created by financial institutions, including governmental agencies. The cash flows from each mortgage loan included in the pool are structured through a special purpose entity into various classes and tranches, which then issue securities backed by those cash flows to investors.

[2] CMOs are debt securities that are collateralized by a specific pool of residential mortgage loans, in which the issuer of the CMOs can direct the payments of principal and interest received on the underlying collateral to achieve specific investor cash flow objectives. The Bank generally acquires planned-amortization class securities and CMOs with a sequential pay structure in order to manage the duration and extension risk inherent in these securities.

	December 31, 2017			
	Fair value	Level 1 inputs	Level 2 inputs	Level 3 inputs
Assets:				
Investment securities available for sale:				
Residential MBS:				
Agency-backed	$ 2,150,649	$ —	$ 2,150,649	$ —
CMOs/Other MBS	649,403	—	649,403	—
Total residential MBS	2,800,052	—	2,800,052	—
Federal agencies	399,996	—	399,996	—
Corporate bonds	148,226	—	148,226	—
State and municipal	263,798	—	263,798	—
Total other securities	812,020	—	812,020	—
Total available for sale securities	3,612,072	—	3,612,072	—
Swaps	4,457	—	4,457	—
Total assets	$ 3,616,529	$ —	$ 3,616,529	$ —
Liabilities:				
Swaps	$ 7,980	$ —	$ 7,980	$ —
Total liabilities	$ 7,980	$ —	$ 7,980	$ —

The following categories of financial assets are not measured at fair value on a recurring basis, but are subject to fair value adjustments in certain circumstances.

Impaired Loans

Loans that meet certain criteria are evaluated individually for impairment. Generally, loans less than $750 are evaluated for impairment on a pooled basis. Impairment amounts are generally based on the fair value of the underlying collateral supporting the loan and, as a result, the carrying value of the loan less the calculated impairment amount applicable to that loan does not necessarily represent the fair value of the loan. Real estate collateral is valued using independent appraisals or other indications of value based on recent comparable sales of similar properties or assumptions generally observable by market participants. However, due to the substantial judgment applied and limited volume of activity as compared to other assets, fair value of the underlying collateral is based on Level 3 inputs. Estimates of fair value used for collateral supporting commercial loans generally are based on assumptions not observable in the market place and are also based on Level 3 inputs. Impaired loans are remeasured at least quarterly and their carrying values are adjusted as needed. Impaired loans subject to non-recurring fair value measurements were $111,685 and $60,862 at September 30, 2018 and December 31, 2017, respectively. Changes in fair value recognized as a charge-off on loans held by the Company were $10,477 and $542 for the nine months ended September 30, 2018 and 2017, respectively.

When an impaired loan is collateral dependent, the Company charges-off the difference between the recorded investment in the loan and the appraised value less cost to sell. A discount for estimated costs to dispose of the asset and overall marketability is used when estimating the amount of impairment.

A summary of the classes with impaired loans at September 30, 2018 and December 31, 2017, respectively, is set forth below:

	September 30, 2018			
	Fair value	Level 1 inputs	Level 2 inputs	Level 3 inputs
Traditional C&I	$ 30,895	$ —	$ —	$ 30,895
Commercial real estate	11,160	—	—	11,160
Multi-family	1,236	—	—	1,236
Residential mortgage	769	—	—	769
Total impaired loans measured at fair value	$ 44,060	$ —	$ —	$ 44,060

	December 31, 2017			
	Fair value	Level 1 inputs	Level 2 inputs	Level 3 inputs
Traditional C&I	$ 114	$ —	$ —	$ 114
Commercial real estate	782	—	—	782
Total impaired loans measured at fair value	$ 896	$ —	$ —	$ 896

Mortgage Servicing Rights

Mortgage servicing rights are carried at the lower of cost or estimated fair value. The fair value of mortgage servicing rights is estimated using a discounted cash flow model that is prepared by an independent third-party valuation provider and is performed on a quarterly basis. The significant assumptions, which are assumptions we believe other market participants would use, include the following: market discount rates, prepayment speeds, servicing revenue, the cost of servicing and loan default rates. The market discount rates and prepayment speeds are considered by management to be two of the most significant inputs into the determination of the estimated fair value. Due to the significant judgment involved, the determination of estimated fair value of mortgage servicing rights relies upon Level 3 inputs.

At September 30, 2018, the assumption for constant prepayment rates ("CPR") ranged from 8.68 to 19.23, with a weighted average CPR of 9.28, and the assumption for market discount rate ranged from 9.06% to 20.00%, with a weighted average market discount rate of 9.54%. At December 31, 2017, the CPR assumption ranged from 9.79 to 16.76, with a weighted average CPR of 10.30, and the assumption for market discount rate ranged from 9.50% to 20.00%, with a weighted average market discount rate of 9.90%. The fair value of mortgage servicing rights at September 30, 2018 and December 31, 2017 was $11,564 and $10,363, respectively.

Other Real Estate Owned

OREO is initially recorded at fair value less costs to sell when acquired, which establishes a new cost basis. When an asset is acquired, the excess of the recorded investment in the loan over the fair value less cost to sell is charged to the allowance for loan losses. These assets are subsequently accounted for at the lower of cost or fair value less cost to sell and are primarily comprised of commercial and residential real estate property. If the fair value declines, a write-down is recorded in other real estate owned expense, net on the consolidated income statements. Fair value is generally determined using appraisals or other indications of value based on comparable sales of similar properties or assumptions generally observable in the marketplace. Adjustments are routinely made in the appraisal process by independent appraisers for differences between comparable sales and income data available (in the case of income producing properties). The fair value is derived using Level 3 inputs. Appraisals are reviewed by the Company's credit department and an external loan review consultant and verified by officers in the Company's credit administration area.

At September 30, 2018 and December 31, 2017, appraisals were discounted by 22.0%, which considers estimated costs to sell and overall marketability of the properties. OREO subject to non-recurring fair value measurement was $22,735 and $27,095 at September 30, 2018 and December 31, 2017, respectively. There were $553 and $1,737 of write-downs related to changes in fair value for OREO held by the Company during the nine months ended September 30, 2018 and September 30, 2017, respectively.

Fair Value of Financial Instruments

Fair values for financial instruments must be estimated by management using techniques such as discounted cash flow analysis and comparison to similar instruments. These estimates are highly subjective and require judgments regarding significant matters, such as the amount and timing of future cash flows and the selection of discount rates that appropriately reflect market and credit risks. Changes in these judgments often have a material effect on the fair value estimates. Since these estimates are made as of a specific point in time, they are susceptible to material near-term changes. Fair values disclosed in accordance with ASC Topic 825 do not reflect any premium or discount that could result from the sale of a large volume of a particular financial instrument, nor do they reflect possible tax ramifications or estimated transaction costs.

The following is a summary of the carrying amounts and estimated fair value of financial assets and liabilities (none of which were held for trading purposes) as of September 30, 2018:

	September 30, 2018			
	Carrying amount	Level 1 inputs	Level 2 inputs	Level 3 inputs
Financial assets:				
Cash and cash equivalents	$ 533,984	$ 533,984	$ —	$ —
Securities available for sale	3,843,244	—	3,843,244	—
Securities held to maturity	2,842,728	—	2,746,081	—
Loans held for sale	31,042	—	31,042	—
Portfolio loans, net	20,441,849	—	—	20,317,154
Accrued interest receivable on securities	43,934	—	43,934	—
Accrued interest receivable on loans	65,443	—	—	65,443
FHLB stock and FRB stock	351,455	—	—	—
Swaps	3,637	—	3,637	—
Financial liabilities:				
Non-maturity deposits	(18,885,107)	(18,885,107)	—	—
Certificates of deposit	(2,570,950)	—	(2,532,989)	—
FHLB borrowings	(4,429,110)	—	(4,403,358)	—
Other borrowings	(22,888)	—	(22,886)	—
Senior Notes	(200,972)	—	(199,370)	—
Subordinated Notes	(172,885)	—	(172,061)	—
Mortgage escrow funds	(96,952)	—	(87,766)	—
Accrued interest payable on deposits	(1,905)	—	(1,905)	—
Accrued interest payable on borrowings	(14,284)	—	(14,284)	—
Swaps	(18,768)	—	(18,768)	—

Effective January 1, 2018, with the adoption of the New Fair Value Standard, the fair value of portfolio loans, net is determined using an exit price methodology. The exit price methodology continues to be based on a discounted cash flow analysis, in which projected cash flows are based on contractual cash flows adjusted for prepayments for certain loan types (*e.g.* residential mortgage loans and multi-family loans) and the use of a discount rate based on expected relative risk of the cash flows. The discount rate selected considers loan type, maturity date, a liquidity premium, cost to service, and cost of capital, which is a Level 3 fair value estimate. In 2017, the fair value estimate of portfolio loans, net was determined using an entrance price methodology based only on the discounted methodology outlined above.

The following is a summary of the carrying amounts and estimated fair value of financial assets and liabilities (none of which were held for trading purposes) as of December 31, 2017:

	December 31, 2017			
	Carrying amount	Level 1 inputs	Level 2 inputs	Level 3 inputs
Financial assets:				
Cash and cash equivalents	$ 479,906	$ 479,906	$ —	$ —
Securities available for sale	3,612,072	—	3,612,072	—
Securities held to maturity	2,862,489	—	2,863,909	—
Loans held for sale	5,246	—	5,246	—
Portfolio loans, net	19,931,076	—	—	19,903,231
Accrued interest receivable on securities	34,652	—	34,652	—
Accrued interest receivable on loans	59,446	—	—	59,446
FHLB stock and FRB stock	284,112	—	—	—
Swaps	4,457	—	4,457	—
Financial liabilities:				
Non-maturity deposits	(18,098,566)	(18,098,566)	—	—
Certificates of deposit	(2,439,638)	—	(2,412,495)	—
FHLB borrowings	(4,510,123)	—	(4,496,184)	—
Other borrowings	(30,162)	—	(30,160)	—
Senior Notes	(278,209)	—	(278,968)	—
Subordinated Notes	(172,716)	—	(179,619)	—
Mortgage escrow funds	(122,641)	—	(117,050)	—
Accrued interest payable on deposits	(1,103)	—	(1,103)	—
Accrued interest payable on borrowings	(9,649)	—	(9,649)	—
Swaps	(7,980)	—	(7,980)	—

(18) Accumulated Other Comprehensive Loss

Components of accumulated other comprehensive loss were as follows as of the dates shown below:

	September 30, 2018	December 31, 2017
Net unrealized holding loss on available for sale securities	$ (159,493)	$ (36,899)
Related income tax benefit	44,084	14,575
Available for sale securities, net of tax	(115,409)	(22,324)
Net unrealized holding loss on securities transferred to held to maturity	(3,741)	(4,426)
Related income tax benefit	1,034	1,748
Securities transferred to held to maturity, net of tax	(2,707)	(2,678)
Net unrealized holding loss on retirement plans	(773)	(1,924)
Related income tax benefit	214	760
Retirement plans, net of tax	(559)	(1,164)
Accumulated other comprehensive loss	$ (118,675)	$ (26,166)

The following table presents the changes in each component of accumulated other comprehensive loss for the three months ended September 30, 2018 and 2017:

	Net unrealized holding (loss) gain on available for sale securities	Net unrealized holding (loss) gain on securities transferred to held to maturity	Net unrealized holding (loss) gain on retirement plans	Total
For the three months ended September 30, 2018				
Balance beginning of the period	$ (95,852)	$ (2,870)	$ (859)	$ (99,581)
Other comprehensive loss before reclassification	(19,613)	—	—	(19,613)
Amounts reclassified from accumulated other comprehensive loss	56	163	300	519
Total other comprehensive (loss) income	(19,557)	163	300	(19,094)
Balance at end of period	$ (115,409)	$ (2,707)	$ (559)	$ (118,675)
For the three months ended September 30, 2017				
Balance beginning of the period	$ (12,704)	$ (2,969)	$ (695)	$ (16,368)
Other comprehensive gain before reclassification	2,538	—	—	2,538
Amounts reclassified from accumulated other comprehensive loss	21	144	6	171
Total other comprehensive income	2,559	144	6	2,709
Balance at end of period	$ (10,145)	$ (2,825)	$ (689)	$ (13,659)
Location in consolidated income statements where reclassification from accumulated other comprehensive loss is included	Net loss on sale of securities	Interest income on securities	Other non-interest expense	

The following table presents the changes in each component of accumulated other comprehensive loss for the nine months ended September 30, 2018 and 2017:

	Net unrealized holding (loss) gain on available for sale securities	Net unrealized holding (loss)gain on securities transferred to held to maturity	Net unrealized holding (loss) gain on retirement plans	Total
For the nine months ended September 30, 2018				
Balance beginning of the period	$ (22,324)	$ (2,678)	$ (1,164)	$ (26,166)
Reclassification of the stranded income tax effects from the enactment of the Tax Cuts and Jobs Act of 2017 from accumulated other comprehensive loss	(4,376)	(525)	(228)	(5,129)
Other comprehensive loss before reclassification	(94,611)	—	—	(94,611)
Amounts reclassified from accumulated other comprehensive loss	5,902	496	833	7,231
Total other comprehensive (loss) income	(93,085)	(29)	605	(92,509)
Balance at end of period	$ (115,409)	$ (2,707)	$ (559)	$ (118,675)
For the nine months ended September 30, 2017				
Balance beginning of the period	$ (22,637)	$ (3,264)	$ (734)	$ (26,635)
Other comprehensive gain before reclassification	12,218	—	—	12,218
Amounts reclassified from AOCI	274	439	45	758
Total other comprehensive income	12,492	439	45	12,976
Balance at end of period	$ (10,145)	$ (2,825)	$ (689)	$ (13,659)
Location in consolidated income statements where reclassification from AOCI is included	Net loss on sale of securities	Interest income on securities	Other non-interest expense	

(19) Recently Issued Accounting Standards Not Yet Adopted

ASU 2016-02,*"Leases (Topic 842)."* ASU 2016-02 amends existing lease accounting guidance, including the requirement to recognize most lease arrangements on the balance sheet. The adoption of this standard will result in the Company recognizing a right-of-use asset representing its rights to use the underlying asset for the lease term with an offsetting lease liability. ASU 2016-02 is effective for the company on January 1, 2019. ASU 2016-02 requires a modified retrospective approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. In July 2018, ASU 2018-11 *"Leases (Topic 842) Targeted Improvements"* which, among other things, provides an additional transition method that would allow entities to not apply the guidance in ASU 2016-02 in the comparative periods presented in the financial statements and instead recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. The Company is implementing a third-party vendor solution to assist in the application of the new lease standard. The Company has aggregated a list of all leases, and if the standard would have been effective at September 30, 2018, it would not have had an impact on any borrowings or financial covenants that are relevant to the Company. Management estimates the increase in assets from the recognition of a right-of-use asset will be approximately $90 million to $110 million and that the impact to the Bank's and the Company's regulatory capital ratios would be a decrease of approximately five to seven basis points, which would be due to an increase in total assets and risk-weighted assets, given our lease arrangements for financial centers and other locations. The Company currently intends to apply certain practical expedients provided under ASU 2016-02 in which we will not reassess whether any expired or existing contracts are or contain leases, the lease classification for any expired or existing leases, and initial direct costs for any existing leases. We also do not expect to apply the recognition requirements of ASU 2016-02 to any short-term leases.

ASU 2016-13, *"Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments."* ASU 2016-13 amends current guidance on the impairment of financial instruments. ASU 2016-13 adds an impairment model known as the current expected credit loss ("CECL") model that is based on expected losses rather than incurred losses. For the Company, the CECL

model will apply mainly to held-to-maturity investment securities, loans and loan commitments. ASU 2016-13 will be effective for the Company for fiscal years beginning after December 15, 2019, and the Company is permitted to early adopt the new guidance for fiscal years beginning after December 15, 2018. ASU 2016-13 will significantly change the accounting for credit impairments. The new guidance will require the Company to modify current processes and systems for establishing the allowance for loan losses and OTTI to ensure they comply with the requirements of the new standard. The Company engaged a nationally recognized accounting firm to assist management in performing an implementation readiness assessment. The Company has made significant progress since 2017 as disclosed in the 2017 Form 10-K. In 2018, we are focusing on several areas including mitigation of gaps in data, and we anticipate being in a position to test our CECL models and methodology by the end of the fourth quarter of 2018. The Company is unable to estimate the impact of adopting ASU 2016-13 at this time; however, it currently anticipates the allowance for loan losses in the aggregate will be greater under the CECL model compared to the current incurred loss model and that the composition of the loan and securities portfolio, as well as the status of the economic environment, will be significant factors that impact the balance at date of adoption.

ASU 2017-08, *"Premium Amortization on Purchased Callable Debt Securities."* ASU 2017-08 shortens the amortization period for the premium on certain purchased callable debt securities to the earliest call date. Today, entities generally amortize the premium over the contractual life of the security. The new guidance does not change the accounting for purchased callable debt securities held at a discount as discounts continue to be amortized to maturity. ASU No. 2017-08 is effective for the Company on January 1, 2019. The guidance includes a modified retrospective transition approach under which a cumulative-effect adjustment will be made to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. The Company currently anticipates that impact of adoption will not be significant to its financial statements.

ASU 2017-12, *"Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities."* ASU 2017-12 make certain targeted improvements to simplify the application of the hedge accounting guidance in GAAP. The amendments in this update better align an entity's risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. To meet that objective, the amendments expand and refine hedge accounting for both non-financial and financial risk components and align the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements. This update also includes certain targeted improvements to ease the application of current guidance related to the assessment of hedge effectiveness. Prior to the issuance of this updated, GAAP contained specific requirements for initial and ongoing quantitative hedge effectiveness testing and strict requirements for specialized effective testing methods that allowed an entity to forgo quantitative hedge effectiveness assessments for qualifying relationships. ASU 2017-12 is effective for the Company on January 1, 2019, and the Company anticipates using the modified retrospective method. The Company is in the process of reviewing its state and municipal and MBS investment securities portfolios to determine if it will reclassify securities from the held to maturity portfolio to the available for sale portfolio. The Company has not yet identified a population of specific securities to be reclassified and does not anticipate that the reclassification will have a material impact on its capital position.

ASU 2018-13, *"Fair Value Measurement (Topic 820) - Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement."* ASU 2018-13 modifies the disclosure requirements on fair value measurements in Topic 820. The amendments in this update remove disclosures that no longer are considered cost beneficial, clarify the specific requirements of certain disclosures, and add disclosure requirements identified as relevant. ASU 2018-13 will be effective for the Company on January 1, 2020, with early adoption permitted, and is not expected to have a significant impact on our financial statements.

ASU 2018-14, *"Compensation - Retirement Benefits-Defined Benefit Plans-General (Subtopic 715-20)."* ASU 2018-14 amends and modifies the disclosure requirements for employers that sponsor defined benefit pension or other post-retirement plans. The amendments in this update remove disclosures that no longer are considered cost beneficial, clarify the specific requirements of certain disclosures, and add disclosure requirements identified as relevant. ASU 2018-14 will be effective for us on January 1, 2021, with early adoption permitted, and is not expected to have a significant impact on our financial statements.

ASU 2018-15, *"Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40) - Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract."* ASU 2018-15 clarifies certain aspects of ASU 2015-05, *"Customer's Accounting for Fees Paid in a Cloud Computing Arrangement,"* which was issued in April 2015. Specifically, ASU 2018-15 aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). ASU 2018-15 does not affect the accounting for the service element of a hosting arrangement that is a service contract. ASU 2018-15 will be effective for us on January 1, 2020, with early adoption permitted, and is not expected to have a significant impact on our financial statements.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

Sterling Bancorp ("we," "our" and "us") makes statements in this report, and we may from time to time make other statements, regarding our outlook or expectations for earnings, revenues, expenses and/or other financial, business or strategic matters regarding or affecting us that are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. Forward-looking statements are typically identified by words such as "believe," "expect," "anticipate," "intend," "outlook," "target," "estimate," "forecast," "project," by future conditional verbs such as "will," "should," "would," "could" or "may," or by variations of such words or by similar expressions. These statements are not historical facts, but instead represent our current expectations, plans or forecasts and are based on the beliefs and assumptions of management and the information available to management at the time that these disclosures were prepared.

Forward-looking statements are subject to numerous assumptions, risks (both known and unknown) and uncertainties, and other factors which change over time. Forward-looking statements speak only as of the date they are made. We do not assume any duty and do not undertake to update our forward-looking statements. Because forward-looking statements are subject to assumptions, risks, uncertainties, and other factors, actual results or future events could differ, possibly materially, from those that we anticipated in our forward-looking statements, and future results could differ materially from our historical performance.

The factors described herein in Part II. Item 1A. Risk Factors or otherwise described in our filings with the SEC, provide examples of risks, uncertainties and events that may cause our actual results to differ materially from the expectations expressed in our forward-looking statements, including, but not limited to:

- difficulties and delays in integrating our and Astoria's businesses or fully realizing cost savings and other benefits, and business disruption following the Astoria Merger;
- difficulties and delays in integrating Advantage Funding into our business and business disruption following the Advantage Funding Acquisition;
- our ability to successfully implement growth and strategic initiatives, to increase revenues faster than we grow expenses, and to integrate and fully realize cost savings and other benefits we estimate in connection with acquisitions and limit business disruption arising therefrom;
- a deterioration in general economic conditions, either nationally, internationally, or in our market areas, including extended declines in real estate markets and constrained financial markets;
- oversight of the Bank by the Consumer Financial Protection Bureau;
- adverse publicity, regulatory actions or litigation with respect to us or other well-known financial services companies and the financial services industry in general and a failure to satisfy regulatory standards;
- our ability to make accurate assumptions and judgments about an appropriate level of allowance for loan losses and the collectability of our loan portfolio, including changes in the level and trend of loan delinquencies and write-offs that may lead to increased losses and non-performing assets in our loan portfolio, result in our allowance for loan losses not being adequate to cover actual losses, and/or require us to materially increase our reserves;
- our ability to manage changes in market interest rates, which could adversely affect our financial condition and results of operations;
- our use of estimates in determining the fair value of certain of our assets, which estimates may prove to be incorrect and result in significant declines in valuation;
- our ability to capitalize on our substantial investments in our information technology and operational infrastructure and systems;
- the effects of, and changes in, laws and regulations (including laws and regulations concerning banking and taxes) with which we and the Bank must comply;
- changes in other economic, competitive, governmental, regulatory and technological factors affecting our markets, operations, pricing, products, services and fees; and
- our success at managing the risks involved in the foregoing and managing our business.

These risks and uncertainties should be considered in evaluating forward-looking statements, and undue reliance should not be placed on such statements.

General
The following Management's Discussion and Analysis of Financial Condition and Results of Operations is intended to assist the reader in understanding our financial condition and results of operations. The following discussion and analysis should be read in conjunction with our unaudited consolidated financial statements and the accompanying notes included in Part I, Item 1 of this report and with our audited consolidated financial statements, including the accompanying notes, and Management's Discussion and Analysis of Financial Condition and Results of Operations included in our 2017 Form 10-K. Operating results discussed herein are not necessarily indicative of the results of any future period.

Tax equivalent adjustments are the result of increasing income from tax exempt securities by an amount equal to the federal taxes that would be paid if the income were fully taxable based on a 21.0% effective income tax rate for 2018, and a 35.0% effective income tax rate for 2017.

Dollar amounts in tables and the accompanying discussion that follows are stated in thousands, except for share and per share amounts and ratios.

Overview and Management Strategy
The Bank operates as a regional bank providing a broad offering of deposit, lending and wealth management products to commercial, consumer and municipal clients in our market area.

Our primary strategic objective is to drive positive operating leverage, which we believe will allow us to generate sustainable growth in revenues and earnings over time. We define operating leverage as the ratio of growth in adjusted total revenue divided by growth in adjusted total operating expenses (a reconciliation of non-GAAP financial measures is included beginning on page 71). To achieve this goal, we focus on the following initiatives:

- Target specific "high value" client segments and geographic markets in which we have competitive advantages.
- Deploy a single point of contact, relationship-based distribution strategy through our commercial banking teams and financial centers.
- Continuously expand and refine our delivery and distribution channels by rationalizing our investments in businesses that do not meet our risk-adjusted return targets and re-allocating our capital and resources to hiring commercial banking teams and growing other businesses that are in-line with our commercial banking strategy.
- Maximize efficiency through a technology enabled, low-cost operating platform and by controlling operating costs.
- Create a high productivity culture through differentiated compensation programs based on a pay-for-performance philosophy.
- Maintain strong risk management systems and proactively manage enterprise risk.

The Bank targets the following geographic markets: (i) the New York Metro Market, which includes Manhattan and Long Island; and (ii) the New York Suburban Market, which includes Rockland, Orange, Sullivan, Ulster, Putnam and Westchester Counties in New York and Bergen County in New Jersey. The Bank also originates loans and deposits in select markets nationally through our asset-based lending, payroll finance, warehouse lending, factored receivables, equipment finance and public sector finance businesses (collectively, our commercial finance businesses). We believe the Bank operates in an attractive footprint that presents us with significant opportunities to execute our strategy of targeting small and middle market commercial clients and affluent consumers.

We deploy a team-based distribution strategy in which clients are served by a focused and experienced group of relationship managers who are responsible for all aspects of the client relationship and delivery of our products and services. While the Astoria Merger resulted in substantial growth in 2017, our commercial banking teams also generated significant originations of loans and deposits. As of September 30, 2018, we had 35 commercial banking teams and 113 full service financial centers. We currently anticipate that we will increase our number of commercial banking teams by three to five annually and will reduce our financial centers as we continue to execute our real estate and financial center consolidation strategy.

Recent Developments
On April 2, 2018, we completed the Advantage Funding Acquisition in an all cash transaction. Advantage Funding, formerly a wholly-owned subsidiary of Macquaire Bank Limited, was a leading provider of commercial vehicle and transportation financing services based in Lake Success, NY. At the acquisition date, Advantage Funding had total outstanding loans and leases of $457.6 million with a diversified client base across various industry sectors and geographic markets nationwide. Advantage Funding is

being integrated into our established national equipment finance platform, which, on a combined basis, had $1.2 billion of loans and leases outstanding as of September 30, 2018.

Our earnings performance for the third quarter of 2018 included reported net income available to common stockholders of $117,657, or $0.52 per diluted share, and adjusted net income available to common stockholders of $114,273, or $0.51 per diluted share. This represents growth of 162.3% in reported net income available to common stockholders and 138.7% in adjusted net income available to common stockholders, respectively, over the same period a year ago. The reported EPS growth was 57.6%, and the adjusted EPS growth was 45.7%, respectively, over the same period a year ago. Results for the third quarter of 2018 reflect the ongoing execution of our commercial banking strategy, the substantial progress we have made on the integration of the Astoria Merger, and our ability to execute opportunistic transactions such as the Advantage Funding Acquisition. In the third quarter of 2018, our reported operating efficiency ratio was 41.7% and our adjusted operating efficiency ratio was 38.9%. Our continued growth, diversification of our business and improved operating efficiency resulted in a reported return on average tangible assets of 1.59% and an adjusted return on average tangible assets of 1.55%, and a reported return on average tangible common stockholders' equity of 18.63% and an adjusted return on average tangible common stockholders' equity of 18.09% in the third quarter of 2018. Adjusted net income available to common stockholders, adjusted diluted EPS, reported operating efficiency ratio, adjusted operating efficiency ratio, reported return on average tangible assets, adjusted return on average tangible assets, reported return on average tangible common equity and adjusted return on average tangible common stockholders' equity are non-GAAP financial measures that are reconciled to our GAAP results beginning on page 71.

A significant component of our strategy includes repositioning our earning assets to create a more optimal balance sheet. As of September 30, 2018, our total loan portfolio was $20.5 billion, of which 21.5% consisted of residential mortgage loans, most of which we acquired in the Astoria Merger. The residential mortgage portfolio declined $633,212 in the first nine months of 2018 and we anticipate it will continue to run-off at approximately $200 - $250 million per quarter. We intend to replace the run-off of residential loans with more diversified commercial loans originated through our commercial banking teams, our commercial finance business lines, and through acquisitions. By the end of the fourth quarter of 2019, we are targeting a loan composition of approximately 45% C&I loans, which includes our traditional C&I and our commercial finance business lines, 45% commercial real estate loans, which includes multi-family and ADC loans, and 10% residential mortgage and consumer loans, which includes HELOCs and other personal loans. To accelerate the transition of our loan portfolio, we will continue to evaluate potential acquisitions of commercial finance loan portfolios and other assets that meet our risk-adjusted return criteria, similar to the Advantage Funding Acquisition. As potential acquisition opportunities arise, we may reduce or divest a portion of our residential mortgage loans and investment securities to accelerate the transition of our balance sheet and loan portfolio to the target mix highlighted above. We are evaluating a potential sale of approximately $1.5 billion of residential mortgage loans; however, we have not yet entered into a definitive agreement to do so, and we have not yet identified specific loans that may be sold. We do not anticipate recording a significant gain or loss on sale as we anticipate the carrying value of the residential mortgages approximates fair value, as the carrying value continues to include fair value purchase accounting adjustments recorded at the closing of the Astoria Merger. The Company intends to initially utilize the proceeds from a potential sale of residential mortgage loans to reduce borrowings in anticipation of completing potential acquisitions as outlined above.

As mentioned above, we have made significant progress on the integration of the employees, systems and facilities that we acquired and assumed in the Astoria Merger. As we previously announced, we intend to consolidate between 25 to 30 financial centers through the fourth quarter of 2019. In the first nine months of 2018, we consolidated 15 financial centers, which reduced our total number of financial centers to 113, and have announced the consolidation of seven additional financial centers in the fourth quarter of 2018. In addition, we are also executing a back-office real estate consolidation strategy, which included the sale of Astoria's headquarters facility located in Lake Success, NY and the consolidation of two back-office locations in Long Island. We will reinvest a portion of the operating expense savings generated by these consolidations and reduction in our real estate footprint into hiring three to five additional commercial banking teams and our ongoing investment in risk management systems and personnel. We currently anticipate achieving an annual operating expense run-rate, excluding the impact of amortization of intangible assets, of approximately $425.0 million for the full year 2018 and an operating leverage ratio of 2 - 3x. Comparing our results in the third quarter of 2018 to the same quarter a year ago, we generated positive operating leverage of 2.7x, which is on the high end of our targeted range. We anticipate that our ability to generate positive operating leverage will allow us to improve profitability and result in growth in earnings and EPS.

Critical Accounting Policies

Our accounting and reporting policies are prepared in accordance with GAAP and conform to general practices within the banking industry. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. While we base estimates on historical experience, current information and other factors deemed to be relevant, actual results could differ from those estimates. We consider accounting estimates to be critical to reported financial results if (i) the accounting estimate requires management to make assumptions about matters that are highly uncertain; and (ii) different estimates that management reasonably

could have used for the accounting estimate in the current period, or changes in the accounting estimate that are reasonably likely to occur from period to period, could have a material impact on our financial statements. Accounting policies related to the allowance for loan losses, business combinations, goodwill, trade names and other intangible assets, and deferred income taxes are considered to be critical, as these policies involve considerable subjective judgment and estimation by management. For additional information regarding critical accounting policies, refer to Note 1. "Basis of Financial Statement Presentation" in the notes to consolidated financial statements included elsewhere in this report and the sections captioned "Critical Accounting Policies" and "Allowance for Loan Losses" in Management's Discussion and Analysis of Financial Condition and Results of Operations included in the 2017 Form 10-K. There have been no significant changes in our application of critical accounting policies for the nine months ended September 30, 2018.

Financial Impact of Recent Acquisitions

The balances of Astoria were included in our balance sheet as of October 2, 2017, and the operating results of Astoria were included in our results of operations from that day forward.

The balances of Advantage Funding were included in our balance sheet as of April 2, 2018, and the operating results of Advantage Funding were included in our results of operations from that day forward.

Selected financial condition data, statement of operations data, per share data, performance ratios, capital ratios, and asset quality data and ratios for the comparable periods are presented as follows:

	At or for the three months ended September 30,		At or for the nine months ended September 30,	
	2018	2017	2018	2017
End of period balances:				
Total securities	$ 6,685,972	$ 4,515,650	$ 6,685,972	$ 4,515,650
Portfolio loans	20,533,214	10,493,535	20,533,214	10,493,535
Total assets	31,261,265	16,780,097	31,261,265	16,780,097
Non-interest bearing deposits	4,651,369	3,134,359	4,651,369	3,134,359
Interest bearing deposits	16,804,688	7,909,079	16,804,688	7,909,079
Total deposits	21,456,057	11,043,438	21,456,057	11,043,438
Borrowings	4,825,855	3,453,783	4,825,855	3,453,783
Stockholders' equity	4,438,303	1,971,480	4,438,303	1,971,480
Tangible common stockholders' equity[1]	2,554,495	1,215,190	2,554,495	1,215,190
Average balances:				
Total securities	$ 6,774,712	$ 3,916,076	$ 6,710,104	$ 3,543,776
Total loans[2]	20,386,994	10,186,414	20,123,704	9,754,768
Total assets	31,036,026	15,661,514	30,686,808	14,802,911
Non-interest bearing deposits	4,174,908	3,042,392	4,036,303	3,134,621
Interest bearing deposits	16,940,446	7,648,614	16,822,651	7,254,884
Total deposits and mortgage escrow	21,115,354	10,691,006	20,858,954	10,389,505
Borrowings	5,052,752	2,779,143	5,029,411	2,301,036
Stockholders' equity	4,397,823	1,955,252	4,316,455	1,913,072
Tangible common stockholders' equity[1]	2,506,198	1,197,754	2,430,260	1,153,282
Selected operating data:				
Total interest and dividend income	$ 309,025	$ 145,692	$ 895,276	$ 405,955
Total interest expense	65,076	25,619	170,743	63,834
Net interest income	243,949	120,073	724,533	342,121
Provision for loan losses	9,500	5,000	35,500	14,000
Net interest income after provision for loan losses	234,449	115,073	689,033	328,121
Total non-interest income	24,145	13,988	80,720	40,442
Total non-interest expense	111,773	62,617	348,448	182,624
Income before income tax expense	146,821	66,444	421,305	185,939
Income tax expense	27,171	21,592	88,542	59,620
Net income	$ 119,650	$ 44,852	$ 332,763	$ 126,319
Per share data:				
Reported basic EPS (GAAP)	$ 0.52	$ 0.33	$ 1.45	$ 0.93
Reported diluted EPS (GAAP)	0.52	0.33	1.45	0.93
Adjusted diluted EPS[1] (non-GAAP)	0.51	0.35	1.48	0.98
Dividends declared per common share	0.07	0.07	0.21	0.21
Book value per share	19.07	14.52	19.07	14.52
Tangible book value per common share[1]	11.33	8.95	11.33	8.95

See legend on following page.

	At or for the three months ended September 30,		At or for the nine months ended September 30,	
	2018	2017	2018	2017
Common shares outstanding:				
Shares outstanding at period end	225,446,089	135,807,544	225,446,089	135,807,544
Weighted average shares basic	225,088,511	135,346,791	224,969,121	135,276,634
Weighted average shares diluted	225,622,895	135,950,160	225,504,463	135,895,513
Other data:				
Full time equivalent employees at period end	1,959	992	1,959	992
Financial centers at period end	113	40	113	40
Performance ratios:				
Return on average assets	1.50%	1.14%	1.42%	1.14%
Return on average equity	10.61	9.10	10.12	8.83
Reported return on average tangible assets[1]	1.59	1.19	1.51	1.20
Adjusted return on average tangible assets[1]	1.55	1.27	1.54	1.27
Reported return on average TCE[1]	18.63	14.86	17.98	14.64
Adjusted return on average TCE[1]	18.09	15.85	18.33	15.50
Reported operating efficiency[1]	41.7	46.7	43.3	47.7
Adjusted operating efficiency[1]	38.9	40.6	39.1	42.1
Net interest margin-GAAP	3.48	3.29	3.53	3.35
Net interest margin-tax equivalent[3]	3.54	3.42	3.59	3.48
Capital ratios (Company):				
Tier 1 leverage ratio	9.68%	8.42%	9.68%	8.42%
Common equity Tier 1 capital ratio	12.97	8.42	12.97	8.42
Tier 1 risk-based capital ratio	13.64	10.27	13.64	10.27
Total risk-based capital ratio	14.74	12.15	14.74	12.15
Tangible equity to tangible assets	9.12	7.58	9.12	7.58
Tangible common equity to tangible assets[1]	8.65	7.58	8.65	7.58
Regulatory capital ratios (Bank):				
Tier 1 leverage ratio	10.10%	8.54%	10.10%	8.54%
Tier 1 risk-based capital ratio and common equity Tier 1 capital ratio	14.23	10.41	14.23	10.41
Total risk-based capital ratio	15.50	12.41	15.50	12.41
Asset quality data and ratios:				
Allowance for loan losses	$ 91,365	$ 72,128	$ 91,365	$ 72,128
Non-performing loans (“NPLs”)	185,222	69,452	185,222	69,452
Non-performing assets (“NPAs”)	207,957	81,149	207,957	81,149
Net charge-offs	4,161	3,023	22,042	5,494
NPAs to total assets	0.67%	0.48%	0.67%	0.48%
NPLs to total loans[4]	0.90	0.66	0.90	0.66
Allowance for loan losses to non-performing loans	49.33	103.85	49.33	103.85
Allowance for loan losses to total loans[4]	0.44	0.69	0.44	0.69
Annualized net charge-offs to average loans	0.08	0.12	0.15	0.08

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[1] See a reconciliation of as reported financial measures to as adjusted (non-GAAP) financial measures beginning on page 71 below under the caption “Supplemental Reporting of Non-GAAP Financial Measures.” TCE is tangible common stockholders’ equity.

[2] Includes loans held for sale but excludes the allowance for loan losses.

[3] Tax equivalent basis represents interest income earned on municipal securities divided by the applicable Federal tax rate of 21% for 2018 and 35% for 2017.

[4] Total loans excludes loans held for sale.

Results of Operations

For the three months ended September 30, 2018, we reported net income available to common stockholders of $117,657, or $0.52 per diluted common share, compared to net income available to common stockholders of $44,852, or $0.33 per diluted common share, for the three months ended September 30, 2017. The change in our results between the periods was mainly due to the following:

- the closing of the Astoria Merger on October 2, 2017;
- loans and deposits originated by our commercial banking teams and financial centers; and
- the closing of the Advantage Funding Acquisition on April 2, 2018.

For the nine months ended September 30, 2018, we reported net income available to common stockholders of $326,775, or $1.45 per diluted common share, compared to net income available to common stockholders of $126,319, or $0.93 per diluted common share, for the nine months ended September 30, 2017. The change in our results between the periods was mainly due to the same factors as discussed above.

Details of the changes in the various components of net income available to common stockholders are further discussed below.

Net Interest Income is the difference between interest income on earning assets, such as loans and securities, and interest expense on liabilities, such as deposits and borrowings, which are used to fund those assets. Net interest income is our largest source of revenue, representing 91.0% and 89.6% of total revenue in the three months ended September 30, 2018 and 2017, respectively. Net interest margin is the ratio of taxable equivalent net interest income to average earning assets for the period. The level of interest rates and the volume and mix of earning assets and interest bearing liabilities impact net interest income and net interest margin.

We are primarily funded by core deposits. Given our greater proportion of certificates of deposit after the Astoria Merger, we modified our definition of core deposits to include certificates of deposit in the first quarter of 2018. Core deposits include retail, commercial and municipal transaction, money market and savings accounts and certificates of deposit and exclude brokered deposits except for reciprocal brokered deposits through the Promontory Interfinancial Network, including Insured Cash Sweep (“ICS”) and CDAR balances. As of September 30, 2018, we considered 95.3% of our total deposits to be core deposits compared to 88.3% at September 30, 2017. Non-interest bearing demand deposits were $4,651,369 of our total deposits at September 30, 2018, compared to $3,134,359 at September 30, 2017. We believe that our low cost deposit funding base, combined with the continued transition of our loan portfolio and earning assets, will have a positive impact on our net interest income and net interest margin over time in a scenario in which market interest rates continue to increase.

The following tables set forth average balance sheets, interest, average yields and costs, and certain other information for the periods indicated. All average balances are daily average balances. Non-accrual loans were included in the computation of average balances, but have been reflected in the table as loans carrying a zero yield. The yields set forth below include the effect of deferred fees, discounts and premiums that are amortized or accreted to interest income or expense.

	For the three months ended September 30,					
	2018			2017		
	Average balance	Interest	Yield/Rate	Average balance	Interest	Yield/Rate
Interest earning assets:						
Traditional C&I and commercial finance loans	$ 6,102,184	$ 81,296	5.29%	$ 4,564,517	$ 58,395	5.08%
Commercial real estate (includes multi-family)	9,170,117	107,292	4.64	4,443,142	47,336	4.23
ADC	252,710	4,115	6.46	229,242	4,197	7.26
Commercial loans	15,525,011	192,703	4.92	9,236,901	109,928	4.72
Consumer loans	330,061	4,651	5.59	262,693	2,891	4.37
Residential mortgage loans	4,531,922	59,857	5.28	686,820	7,079	4.12
Total net loans[1]	20,386,994	257,211	5.01	10,186,414	119,898	4.67
Securities taxable	4,193,910	29,765	2.82	2,483,718	15,141	2.42
Securities tax exempt	2,580,802	19,296	2.99	1,432,358	13,141	3.67
Interest earning deposits	278,450	1,038	1.48	202,650	462	0.90
FRB and FHLB stock	359,777	5,767	6.36	165,980	1,649	3.94
Total securities and other earning assets	7,412,939	55,866	2.99	4,284,706	30,393	2.81
Total interest earning assets	27,799,933	313,077	4.47	14,471,120	150,291	4.12
Non-interest earning assets	3,236,093			1,190,394		
Total assets	$ 31,036,026			$ 15,661,514		
Interest bearing liabilities:						
Interest bearing demand deposits	$ 4,286,278	$ 9,717	0.90%	$ 2,298,645	$ 3,701	0.64%
Savings deposits[2]	2,678,662	1,651	0.24	825,620	925	0.44
Money market deposits	7,404,208	16,547	0.89	3,889,780	6,897	0.70
Certificates of deposit	2,571,298	8,059	1.24	634,569	1,869	1.17
Total interest bearing deposits	16,940,446	35,974	0.84	7,648,614	13,392	0.69
Senior Notes	201,894	1,619	3.21	76,664	1,143	5.96
Other borrowings	4,678,011	25,129	2.13	2,529,854	8,733	1.37
Subordinated Notes	172,847	2,354	5.45	172,625	2,351	5.45
Total borrowings	5,052,752	29,102	2.29	2,779,143	12,227	1.75
Total interest bearing liabilities	21,993,198	65,076	1.17	10,427,757	25,619	0.97
Non-interest bearing deposits	4,174,908			3,042,392		
Other non-interest bearing liabilities	470,097			236,113		
Total liabilities	26,638,203			13,706,262		
Stockholders' equity	4,397,823			1,955,252		
Total liabilities and stockholders' equity	$ 31,036,026			$ 15,661,514		
Net interest rate spread[3]			3.30%			3.15%
Net interest earning assets[4]	$ 5,806,735			$ 4,043,363		
Net interest margin - tax equivalent		248,001	3.54%		124,672	3.42%
Less tax equivalent adjustment		(4,052)			(4,599)	
Net interest income		$ 243,949			$ 120,073	
Ratio of interest earning assets to interest bearing liabilities	126.4%			138.8%		

See legend on following page.

	For the nine months ended September 30,					
	2018			2017		
	Average balance	Interest	Yield/Rate	Average balance	Interest	Yield/Rate
Interest earning assets:						
Traditional C&I and commercial finance loans	$ 5,653,784	$ 220,175	5.21%	$ 4,205,530	159,213	5.06%
Commercial real estate (includes multi-family)	9,113,324	318,583	4.67	4,344,338	136,451	4.20
ADC	255,894	11,216	5.86	239,336	10,639	5.94
Commercial loans	15,023,002	549,974	4.89	8,789,204	306,303	4.66
Consumer loans	345,216	14,174	5.49	270,550	9,095	4.49
Residential mortgage loans	4,755,486	181,931	5.10	695,014	20,911	4.01
Total net loans[1]	20,123,704	746,079	4.96	9,754,768	336,309	4.61
Securities taxable	4,108,186	85,856	2.79	2,215,923	40,535	2.45
Securities tax exempt	2,601,918	58,176	2.98	1,327,853	36,846	3.70
Interest earning deposits	292,096	2,649	1.21	202,073	1,018	0.67
FRB and FHLB stock	341,380	14,733	5.77	145,647	4,142	3.80
Total securities and other earning assets	7,343,580	161,414	2.94	3,891,496	82,541	2.84
Total interest earning assets	27,467,284	907,493	4.42	13,646,264	418,850	4.10
Non-interest earning assets	3,219,524			1,156,647		
Total assets	$ 30,686,808			$ 14,802,911		
Interest bearing liabilities:						
Interest bearing demand deposits	$ 4,085,595	$ 22,269	0.73%	$ 2,075,434	$ 8,946	0.58%
Savings deposits[2]	2,836,805	4,674	0.22	813,136	2,741	0.45
Money market deposits	7,378,522	40,327	0.73	3,766,428	17,350	0.62
Certificates of deposit	2,521,729	21,375	1.13	599,886	4,767	1.06
Total interest bearing deposits	16,822,651	88,645	0.70	7,254,884	33,804	0.62
Senior Notes	252,455	7,147	3.79	76,581	3,427	5.98
Other borrowings	4,604,165	67,891	1.97	2,051,881	19,552	1.27
Subordinated Notes	172,791	7,060	5.45	172,574	7,050	5.45
Total borrowings	5,029,411	82,098	2.18	2,301,036	30,029	1.74
Total interest bearing liabilities	21,852,062	170,743	1.04	9,555,920	63,833	0.89
Non-interest bearing deposits	4,036,303			3,134,621		
Other non-interest bearing liabilities	481,988			199,298		
Total liabilities	26,370,353			12,889,839		
Stockholders' equity	4,316,455			1,913,072		
Total liabilities and stockholders' equity	$ 30,686,808			$ 14,802,911		
Net interest rate spread[3]			3.38%			3.21%
Net interest earning assets[4]	$ 5,615,222			$ 4,090,344		
Net interest margin - tax equivalent		736,750	3.59%		355,017	3.48%
Less tax equivalent adjustment		(12,217)			(12,896)	
Net interest income		$ 724,533			$ 342,121	
Ratio of interest earning assets to interest bearing liabilities	125.7%			142.8%		

[1] Includes the effect of net deferred loan origination fees, amortization of premiums, accretion of discounts and costs and non-accrual loans. Interest includes prepayment fees and late charges.

2 Includes club accounts and interest bearing mortgage escrow balances.

3 Net interest rate spread represents the difference between the tax equivalent yield on average interest earning assets and the cost of average interest bearing liabilities.

4 Net interest earning assets represents total interest earning assets less total interest bearing liabilities.

The following tables present the dollar amount of changes in interest income (on a fully tax equivalent basis) and interest expense for the major categories of our interest earning assets and interest bearing liabilities for the periods indicated. Information is provided for each category of interest earning assets and interest bearing liabilities with respect to (i) changes attributable to changes in volume (*i.e.,* changes in average balances multiplied by the prior period average rate); and (ii) changes attributable to changes in rate (*i.e.,* changes in average rate multiplied by prior period average balances). For purposes of this table, changes attributable to both rate and volume, which cannot be segregated, have been allocated proportionately to the change due to volume and the change due to rate.

	For the three months ended September 30, 2018 vs 2017		
	Increase / (Decrease) due to		Total increase / (decrease)
	Volume	Rate	
Interest earning assets:			
Traditional C&I and commercial finance loans	$ 20,398	$ 2,503	$ 22,901
Commercial real estate (includes multi-family)	54,949	5,007	59,956
ADC	405	(487)	(82)
Commercial loans	75,752	7,023	82,775
Consumer loans	843	917	1,760
Residential mortgage loans	50,250	2,527	52,777
Total loans	126,845	10,467	137,312
Securities taxable	11,794	2,831	14,625
Securities tax exempt	8,988	(2,833)	6,155
Interest earning deposits	212	364	576
FRB and FHLB stock	2,699	1,419	4,118
Total interest earning assets	150,538	12,248	162,786
Interest bearing liabilities:			
Interest bearing demand deposits	4,093	1,923	6,016
Savings deposits[1]	1,297	(570)	727
Money market deposits	7,421	2,230	9,651
Certificates of deposit	6,071	119	6,190
Total interest bearing deposits	18,882	3,702	22,584
Senior Notes	1,199	(723)	476
Other borrowings	9,978	6,417	16,395
Subordinated Notes	3	—	3
Total borrowings	11,180	5,694	16,874
Total interest bearing liabilities	30,062	9,396	39,458
Change in tax equivalent net interest income	120,476	2,852	123,328
Less tax equivalent adjustment	3,088	(4,905)	(1,817)
Change in net interest income	$ 117,388	$ 7,757	$ 125,145

See legend on next page.

	For the nine months ended September 30, 2018 vs 2017		
	Increase / (Decrease) due to		Total increase / (decrease)
	Volume	Rate	
Interest earning assets:			
Traditional C&I and commercial finance loans	$ 56,131	$ 4,832	$ 60,963
Commercial real estate (includes multi-family)	165,283	16,849	182,132
ADC	723	(146)	577
Commercial loans	222,137	21,535	243,672
Consumer loans	2,810	2,269	5,079
Residential mortgage loans	153,861	7,159	161,020
Total loans	378,808	30,963	409,771
Securities taxable	38,986	6,336	45,322
Securities tax exempt	29,623	(8,294)	21,329
Interest earning deposits	581	1,050	1,631
FRB and FHLB stock	7,642	2,948	10,590
Total interest earning assets	455,640	33,003	488,643
Interest bearing liabilities:			
Interest bearing demand deposits	10,516	2,807	13,323
Savings deposits[1]	3,925	(1,992)	1,933
Money market deposits	19,390	3,587	22,977
Certificates of deposit	16,273	335	16,608
Total interest bearing deposits	50,104	4,737	54,841
Senior Notes	5,384	(1,664)	3,720
Other borrowings	33,685	14,654	48,339
Subordinated Notes	10	—	10
Total borrowings	39,079	12,990	52,069
Total interest bearing liabilities	89,183	17,727	106,910
Change in tax equivalent net interest income	366,457	15,276	381,733
Less tax equivalent adjustment	8,216	(8,895)	(679)
Change in net interest income	$ 358,241	$ 24,171	$ 382,412

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[1] Includes club accounts and interest bearing mortgage escrow balances.

Tax equivalent net interest income increased $123,328 to $248,001 for the three months ended September 30, 2018, compared to $124,672 for the three months ended September 30, 2017. The increase was mainly due to an increase in average interest earning assets of $13,328,813, or 92.1%, due to the Astoria Merger, organic originations of loans and deposits and the Advantage Funding Acquisition. Also contributing to the increase in net interest income was an increase in accretion income on acquired loans, which was $26,574 for the three months ended September 30, 2018 compared to $3,397 for the three months ended September 30, 2017. The tax equivalent net interest margin increased 12 basis points to 3.54% from 3.42% in the third quarter of 2017. The yield on interest earning assets was 4.47% compared to 4.12% for the three months ended September 30, 2017, which was mainly due to the increase in accretion income on acquired loans. The percentage of loans to average earning assets increased to 73.3% from 70.4% for the three months ended September 30, 2017. The cost of interest bearing liabilities increased to 1.17% for the three months ended September 30, 2018 compared to 0.97% for the three months ended September 30, 2017, which was due mainly to higher interest rates paid on deposits and borrowings due to increases in market interest rates.

Tax equivalent net interest income increased $381,733 to $736,750 for the nine months ended September 30, 2018, compared to $355,017 for the nine months ended September 30, 2017. The increase was mainly due to an increase in average interest earning assets of $13,821,020, or 101.3% and was mainly due to the Astoria Merger, organic growth and the Advantage Funding Acquisition. The tax equivalent net interest margin increased 11 basis points to 3.59% for the nine months ended September 30,

2018 from 3.48% in the nine months ended September 30, 2017. The increase was mainly due to additional accretion income on acquired loans. Accretion income was $84,925 for the nine months ended September 30, 2018 compared to $9,767 for the nine months ended September 30, 2017. The yield on interest earning assets was 4.42% compared to 4.10% for the nine months ended September 30, 2017, which was mainly due to the increase in accretion income on acquired loans. The percentage of loans to average earning assets increased to 73.3% from 71.5% for the nine months ended September 30, 2017. The cost of interest bearing liabilities increased to 1.04% for the nine months ended September 30, 2018 compared to 0.89% for the nine months ended September 30, 2017, mainly due to increases in market interest rates between the periods.

The average balance of loans outstanding increased $10,200,580, or 100.1%, for the three months ended September 30, 2018, compared to the three months ended September 30, 2017. The increase was mainly due to the Astoria Merger, organic growth generated by our commercial banking teams and the Advantage Funding Acquisition. The average yield on loans was 5.01% compared to 4.67% in the comparable year ago period. The increase in the yield on loans was mainly due to the increase in accretion income on acquired loans.

The average balance of loans outstanding increased $10,368,936, or 106.3%, in the nine months ended September 30, 2018, compared to the nine months ended September 30, 2017. The increase was mainly due to the Astoria Merger, organic growth generated by our commercial banking teams and the Advantage Funding Acquisition. The average yield on loans was 4.96% in the nine months ended September 30, 2018 compared to 4.61% in the comparable year ago period. The increase was mainly due to the increase in accretion income on acquired loans.

Interest income on traditional C&I and commercial finance loans increased $22,901 and was $81,296 for the three months ended September 30, 2018 compared to $58,395 for the three months ended September 30, 2017. This increase was mainly due to organic loan growth and the Advantage Funding Acquisition. The yield on traditional C&I and commercial finance loans increased to 5.29% compared to 5.08% for the three months ended September 30, 2017. The increase in yield was mainly due to repricing of floating rate loans to higher levels given increases in market interest rates.

Interest income on traditional C&I and commercial finance loans increased $60,963 and was $220,175 in the nine months ended September 30, 2018 compared to $159,213 for the three months ended September 30, 2017. This increase was mainly due to organic loan growth and the Advantage Funding Acquisition. The yield on traditional C&I and commercial finance loans increased to 5.21% compared to 5.06% in the nine months ended September 30, 2017. The increase in yield was mainly due to repricing of floating rate loans to higher rates given increases in market interest rates.

Interest income on commercial real estate loans and multi-family loans increased $59,956 to $107,292 for the three months ended September 30, 2018 compared to $47,336 for the three months ended September 30, 2017. The increase was mainly due to loans acquired in the Astoria Merger. The yield on commercial real estate and multi-family loans was 4.64% compared to 4.23% for the three months ended September 30, 2017. The increase in yield was mainly due to an increase of $12,605 in accretion income on acquired commercial real estate and multi-family loans.

Interest income on commercial real estate loans and multi-family loans increased $182,132 to $318,583 in the nine months ended September 30, 2018 compared to $136,451 for the three months ended September 30, 2017. The increase was mainly due to loans acquired in the Astoria Merger. The yield on commercial real estate and multi-family loans was 4.67% compared to 4.20% in the nine months ended September 30, 2017. The increase in yield was mainly due to an increase of $38,092 in accretion income on acquired commercial real estate and multi-family loans.

Interest income on residential mortgage loans increased $52,778 to $59,857 for the three months ended September 30, 2018 compared to $7,079 for the three months ended September 30, 2017. The increase was mainly due to the Astoria Merger, which resulted in an increase of $3,845,102 in the average balance of residential mortgage loans. In addition, the yield on residential mortgage loans increased to 5.28% compared to 4.12% for the three months ended September 30, 2017, mainly due to the increase in accretion income on acquired residential mortgage loans of $12,885.

Interest income on residential mortgage loans increased $161,020 to $181,931 in the nine months ended September 30, 2018 compared to $20,911 for the three months ended September 30, 2017. The increase was mainly due to the Astoria Merger, which resulted in an increase of $4,060,472 in the average balance of residential mortgage loans. In addition, the yield on residential mortgage loans increased to 5.10% compared to 4.01% for the nine months ended September 30, 2017, mainly due to the increase in accretion income on acquired residential mortgage loans of $40,005.

Tax equivalent interest income on securities increased $20,779 to $49,061 for the three months ended September 30, 2018, compared to $28,282 for the three months ended September 30, 2017. This was mainly the result of an increase of $2,858,636 in the average balance of securities between the periods. The tax equivalent yield on securities was unchanged at 2.87%, as the reduction

in tax equivalent interest income, which assumed a 35% federal tax rate in 2017 compared to a 21% federal tax rate in 2018, was offset by higher market rates of interest on securities. The average balance of tax exempt securities grew to $2.6 billion, compared to $1.4 billion in the third quarter of 2017.

Tax equivalent interest income on securities increased $66,651 to $144,032 in the nine months ended September 30, 2018, compared to $77,381for the three months ended September 30, 2017. This was mainly the result of an increase of $3,166,328 in the average balance of securities between the periods. The tax equivalent yield on securities was 2.87% in the nine months ended September 30, 2018, compared to 2.92% in the nine months ended September 30, 2017. The decrease in tax equivalent yield on securities was due to the change in the assumed federal tax rate between the periods.

Average deposits increased $10,424,348 to $21,115,354 in the three months ended September 30, 2018, compared to $10,691,006. Average interest bearing deposits increased $9,291,832 compared to the third quarter of 2017. Average non-interest bearing deposits increased to $4,174,908 in the three months ended September 30, 2018, compared to $3,042,392 in the three months ended September 30, 2017. These increases were mainly due to the Astoria Merger and organic growth generated by our commercial banking teams and financial centers. The average cost of interest bearing deposits was 0.84% compared to 0.69% in the third quarter of 2017. The average cost of total deposits was 0.68% compared to 0.50% in the third quarter of 2017. The increase in the cost of deposits was mainly due to the increase in market interest rates and the competitive environment.

Average deposits increased $10,469,449 and were $20,858,954 in the nine months ended September 30, 2018, compared to $10,389,505. Average interest bearing deposits increased $9,567,767 in the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017. Average non-interest bearing deposits increased $901,682 and were $4,036,303 in the nine months ended September 30, 2018, compared to $3,134,621 in the nine months ended September 30, 2017. These increases were mainly due to the Astoria Merger and organic growth generated by our commercial banking teams and financial centers. The average cost of interest bearing deposits was 0.70% in the nine months ended September 30, 2018 compared to 0.62% in the nine months ended September 30, 2017. The average cost of total deposits was 0.57% in the nine months ended September 30, 2018 compared to 0.44% in the nine months ended September 30, 2017. The increase in the cost of deposits was mainly due to the same factors discussed in the three-month period.

Average borrowings increased $2,273,609 to $5,052,752 in the three months ended September 30, 2018, compared to $2,779,143 in the same period a year ago. The increase in average borrowings was mainly used to fund the increase in average earning assets, including growth in loans and investment securities. The average cost of borrowings was 2.29% for the third quarter of 2018, compared to 1.75% for the third quarter of 2017. Market interest rates on borrowings have increased in the last 12 months, which was the main factor contributing to the increase in the cost of borrowings.

Average borrowings increased $2,728,375 to $5,029,411 in the nine months ended September 30, 2018, compared to $2,301,036 in the same period a year ago. The increase in average borrowings was mainly used to fund the increase in average loan balances and investment securities. The average cost of borrowings was 2.18% for the nine months ended September 30, 2018 compared to 1.74% in the nine months ended September 30, 2017. The increase was mainly due to the same factors as discussed in the three month period.

Provision for Loan Losses. The provision for loan losses is determined as the amount to be added to the allowance for loan losses after net charge-offs have been deducted to bring the allowance to a level that is our best estimate of probable incurred credit losses inherent in the outstanding loan portfolio. For the three months ended September 30, 2018 and September 30, 2017, the provision for loan losses was $9,500 and $5,000, respectively. For the nine months ended September 30, 2018, the provision for loan losses was $35,500 compared to $14,000 for the nine months ended September 30, 2017. See the section captioned “Delinquent Loans, Troubled Debt Restructuring, Impaired Loans, Other Real Estate Owned and Classified Assets - Provision for Loan Losses” later in this discussion for further analysis of the provision for loan losses.

Non-interest income. The components of non-interest income were as follows for the periods presented below:

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
Deposit fees and service charges	$ 6,333	$ 3,309	$ 20,319	$ 9,893
Accounts receivable management / factoring commissions and other related fees	5,595	4,764	16,292	12,670
Bank owned life insurance	3,733	1,320	11,591	4,342
Loan commissions and fees	4,142	2,819	12,114	8,643
Investment management fees	1,943	271	5,889	825
Net (loss) on sale of securities	(56)	(21)	(5,902)	(274)
Gain on sale of fixed assets	—	1	11,800	1
Other	2,455	1,525	8,617	4,342
Total non-interest income	$ 24,145	$ 13,988	$ 80,720	$ 40,442

Non-interest income was $24,145 for the three months ended September 30, 2018, compared to $13,988 in the same period a year ago. Included in non-interest income is net loss on sale of securities, which was $56 for the three months ended September 30, 2018, compared to $21 for the three months ended September 30, 2017. Net loss on sale of securities is impacted significantly by changes in market interest rates and strategies we use to manage yield, liquidity and interest rate risk, and it is difficult to forecast the amount of net losses or gains consistently. When we analyze the results of our non-interest income, we exclude gains and losses on sales of securities and fixed assets. Excluding net loss on sale of securities and gain on sale of fixed assets, non-interest income was $24,201 compared to $14,009 for the third quarter of 2017. The increase was mainly due to the Astoria Merger.

For the nine months ended September 30, 2018, total non-interest income was $80,720 compared to $40,442 for the same period a year ago. Included in non-interest income for the nine months ended September 30, 2018 was $5,902 of net loss on sale of securities compared to net loss on sale of securities of $274 for the comparable year ago period. In addition, we realized a gain on sale of fixed assets during the nine months ended September 30, 2018 of $11,800 related to the sale of one real estate location acquired in the Astoria Merger. Excluding net loss on sale of securities and gain on sale of fixed assets, non-interest income was $74,822 for the nine months ended September 30, 2018, compared to $40,715 for the nine months ended September 30, 2017. The increase between the periods was mainly due to the Astoria Merger.

Our annualized run-rate of non-interest income excluding securities losses and gain on sale of fixed assets was $100,037 through the nine months ended September 30, 2018. We currently anticipate the main drivers of growth in non-interest income will be other loan fees, loan swap fees, loan syndication fees and deposit fees and service charges generated by commercial treasury management services. Additionally, we continue to evaluate potential acquisitions of commercial finance businesses that are also fee income generators. Changes in the components of non-interest income are discussed below.

Deposit fees and service charges were $6,333 for the third quarter of 2018, which represented a $3,024 increase compared to $3,309 for the same period a year ago. The increase in deposit fees and service charges is mainly due to the Astoria Merger. For the nine months ended September 30, 2018, deposit fees and service charges were $20,319, which represented an increase of $10,426 compared to the same period a year ago, and was mainly due to the Astoria Merger.

Accounts receivable management / factoring commissions and other related fees represents fees generated in our factoring and payroll finance businesses. A portion of the fees generated in the factoring and payroll finance businesses are allocated to interest income on loans and the remainder is recognized as fee income. In our factored receivables business, we receive a nonrefundable factoring fee, which is generally a percentage of the factored receivables or sales volume, and is designed to compensate us for the bookkeeping and collection services provided and, if applicable, the credit review of the client's customer and assumption of customer credit risk. In payroll finance, we provide outsourcing support services for clients in the temporary staffing industry. We generate fee income in exchange for providing full back-office, payroll, tax and accounting services to independently-owned temporary staffing companies. Total fee income in these businesses increased $831, or 17.4%, to $5,595 for the three months ended September 30, 2018, compared to $4,764 for the year ago period. The increase in fees between the periods is mainly due to a change in the allocation of total client revenue between interest income and fee income. Total revenue generated by factored receivables and payroll finance clients, including fee income and interest income, was $12,389 in the third quarter of 2018 compared to $12,294 in the third quarter of 2017. Total fee income in these businesses increased to $16,292 for the nine months ended September 30, 2018, compared to $12,670 for the same period a year ago. The increase in fees was mainly due to the revenue allocation change in 2018.

Bank owned life insurance ("BOLI") income represents the change in the cash surrender value of life insurance policies owned by us. BOLI income was $3,733 for the third quarter of 2018, compared to $1,320 in the same period a year ago, and was $11,591 for the nine months ended September 30, 2018, compared to $4,342 in the same period a year ago. The increase was mainly due to BOLI acquired in the Astoria Merger.

Loan commissions and fees income includes fees on lines of credit, loan servicing fees, loan syndication fees, collateral monitoring, and other loan related fees that are not included in interest income. Loan commissions and fees were $4,142 for the three months ended September 30, 2018, compared to $2,819 for the three months ended September 30, 2017, and were $12,114 for the nine months ended September 30, 2018, compared to $8,643 in the same period a year ago. The increase was mainly due to higher loan syndication fees and other loan fees generated by our commercial banking teams.

Investment management fees represent fees from the sale of mutual funds, annuities and insurance commissions. These revenues were $1,943 in the third quarter of 2018 and $271 in the same period a year ago, and were $5,889 for the first nine months of 2018, compared to $825 in the same period a year ago. We have increased our revenues from the sale of mutual funds, annuities and insurance agency commissions as a result of the Astoria Merger.

Net (loss) on sale of securities represents net losses incurred on the sale of securities from our available for sale investment securities portfolio. We realized a net loss on sale of securities of $56 in the three months ended September 30, 2018 compared to $21 in the three months ended September 30, 2017. We realized a net loss on sale of securities of $5,902 for the nine months ended September 30, 2018, compared to $274 for the same period a year ago. The loss on sale of securities in the nine months ended September 30, 2018 was mainly due to the sale of $117,810 of available for sale securities; the proceeds were used to fund a portion of the purchase of Advantage Funding in April 2018.

Net gain on sale of fixed assets of $11,800 for the nine months ended September 30, 2018 is related to the sale of one real estate location acquired in the Astoria Merger. The sales price was $36,000, which we received in cash. We anticipate fully exiting the location in the first quarter of 2019.

Other non-interest income principally includes fees for loan swaps, safe deposit rentals and foreign exchange fees. Other non-interest income increased $930 to $2,455 for the third quarter of 2018 from $1,525 for the same period a year ago. The increase was mainly due to the Astoria Merger and higher volumes of loan swap originations. Other non-interest income was $8,617 for the nine months ended September 30, 2018, compared to $4,342 for the nine months ended September 30, 2017. The increase was due to the same factors as those discussed for the three-month period.

Non-interest expense. The components of non-interest expense were as follows for the periods presented below:

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
Compensation and benefits	$ 54,823	$ 31,727	$ 165,662	$ 93,893
Stock-based compensation plans	3,115	1,969	9,304	5,602
Occupancy and office operations	16,558	8,583	51,956	25,550
Information technology	10,699	2,512	32,412	7,402
Amortization of intangible assets	5,865	2,166	17,782	6,582
FDIC insurance and regulatory assessments	6,043	2,310	16,885	6,232
Other real estate owned expense, net	1,497	894	1,635	2,682
Merger-related expense	—	4,109	—	9,002
Charge for asset write-downs, retention and severance	—	—	13,132	603
Other non-interest expense	13,173	8,347	39,680	25,076
Total non-interest expense	$ 111,773	$ 62,617	$ 348,448	$ 182,624

Non-interest expense for the three months ended September 30, 2018 was $111,773, a $49,156 increase compared to $62,617 for the three months ended September 30, 2017. For the nine months ended September 30, 2018, non-interest expense was $348,448, an increase of $165,824 compared to $182,624 for the nine months ended September 30, 2017. The increase between the periods was mainly due to the Astoria Merger. Our annualized run-rate of total non-interest expense excluding amortization of intangible assets was $420,178 in the third quarter of 2018. Changes in the components of non-interest expense are discussed below.

Compensation and benefits expense was $54,823 for the three months ended September 30, 2018, compared to $31,727 for the three months ended September 30, 2017. As of September 30, 2018, our full-time equivalent employees were 1,959 compared to 992 at September 30, 2017. For the nine months ended September 30, 2018, compensation and employee benefits expense was $165,662 compared to $93,893 for the nine months ended September 30, 2017. The increase in compensation and employee benefits for the three and nine month periods was mainly due to the Astoria Merger and continued hiring of commercial bankers and risk management personnel.

Stock-based compensation plans expense was $3,115 in the third quarter of 2018, compared to $1,969 in the third quarter of 2017. The increase was due to a greater percentage of compensation paid to our executive management and senior personnel in stock awards to better align the interests of management and employees to those of our stockholders. For the nine months ended September 30, 2018, stock-based compensation expense was $9,304 compared to $5,602 for the nine months ended September 30, 2017 and the increase was due to the same factors discussed above. For additional information related to our employee benefit plans and stock-based compensation, see Note 11. “Stock-Based Compensation” in the notes to consolidated financial statements included elsewhere in this report.

Occupancy and office operations expense was $16,558 in the third quarter of 2018, compared to $8,583 in the third quarter of 2017. At September 30, 2018, we had 113 financial center locations, compared to 40 financial centers at September 30, 2017. For the nine months ended September 30, 2018, occupancy and office operations expense was $51,956, compared to $25,550 for the nine months ended September 30, 2017. The increase was mainly due to the Astoria Merger. We anticipate we will reduce our total number of financial centers over time. In the first nine months of 2018, we consolidated 15 financial centers, two back office facilities, and completed the sale of the Lake Success headquarters. We currently anticipate we will consolidate an additional seven financial centers in the fourth quarter of 2018.

Information technology expense, which mainly includes the cost of our loan and deposit operating systems and contracted service and maintenance associated with other data processing systems, was $10,699 in the third quarter of 2018, compared to $2,512 in the third quarter of 2017. For the nine months ended September 30, 2018, information technology expense was $32,412, compared to $7,402 for the nine months ended September 30, 2017. The increase in information technology expense is mainly due to the Astoria Merger. During the three months ended September 30, 2018, we completed the full integration of Astoria’s legacy deposit systems. We anticipate a reduction in information technology expense of approximately $1,500 per quarter as cost savings from the Astoria systems conversion are realized.

Amortization of intangible assets expense mainly includes amortization of core deposit intangible assets, customer lists and non-compete agreements. Amortization of intangible assets was $5,865 in the three months ended September 30, 2018, compared to $2,166 for the three months ended September 30, 2017. Amortization of intangible assets was $17,782 for the nine months ended September 30, 2018, compared to $6,582 for the nine months ended September 30, 2017. The increase in amortization expense was mainly due to amortization of the core deposit intangible assets recorded in the Astoria Merger. For additional information, see Note 6. “Goodwill and Other Intangible Assets” in the notes to the consolidated financial statements included elsewhere in this report.

FDIC insurance and regulatory assessments expense was $6,043 for the third quarter of 2018, compared to $2,310 for the third quarter of 2017. The increase was mainly due to the Astoria Merger and organic growth in assets. FDIC insurance and regulatory assessments expense was $16,885 for the nine months ended September 30, 2018, compared to $6,232 for the nine months ended September 30, 2017. The increase in the nine month period was due to the same factors as in the three-month period.

Other real estate owned expense, net includes property taxes, maintenance costs, insurance, write-downs (subsequent to any write-down at the time of foreclosure or transfer to OREO), and gains and losses from the disposition of OREO. OREO includes real estate assets that have been foreclosed and owned financial center locations that have been closed and are held for sale. OREO expense, net included the following:

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
(Gain) on sale, net	$ (65)	$ (8)	$ (1,348)	$ (93)
Direct property write-downs	190	444	552	1,737
Rental income	(35)	(10)	(114)	(35)
Property tax	617	437	851	763
Other expenses	790	31	1,694	310
OREO expense, net	$ 1,497	$ 894	$ 1,635	$ 2,682

OREO expense, net was $1,497 for the three months ended September 30, 2018, compared to expense of $894 for the three months ended September 30, 2017. The increase was mainly due to additional OREO properties acquired in the Astoria Merger. OREO expense, net was $1,635 for the nine months ended September 30, 2018, compared to $2,682 for the nine months ended September 30, 2017. In the nine months ended September 30, 2017 we recorded a significant write-down on a residential property, which was subsequently sold during the year. The balance of OREO declined by $4,360 to $22,735 at September 30, 2018 compared to $27,095 at December 31, 2017.

Merger-related expense was $0 in the three and nine months ended September 30, 2018, compared to $4,109 and $9,002 for the three and nine months ended September 30, 2017, respectively. Merger-related expense in 2017 included financial and legal advisory fees in connection with the Astoria Merger.

Charge for asset write-downs, severance and retention expense was $13,132 for the nine months ended September 30, 2018 and was $603 for the nine months ended September 30, 2017. In the nine months ended September 30, 2018, we incurred a charge of $8,736 due to the consolidation and exit of one back-office location which was related to the Astoria Merger. This impairment charge had been identified at the time of the closing of the Astoria Merger; however, the exit of the back-office facility had not met the requirements to record the impairment charge until this reporting period. The balance of the charge recorded in nine months ended September 30, 2018 of $4,396 was related to the Advantage Funding Acquisition. The charge included professional fees, retention and severance, systems integration costs and an impairment of a lease assumed in the transaction. The charge incurred in 2017 was related to the consolidation of two financial centers. There were no such charges in the third quarter of 2018 and 2017.

Other non-interest expense mainly includes professional fees, advertising and promotion, communications and operational losses. Also included in other non-interest expense are loan processing expenses, net benefit of pension and post retirement plans, recruitment fees, taxes not included in income tax expense, travel and client entertainment, and training expense. For the three months ended September 30, 2018, other non-interest expense was $13,173, compared to $8,347 for the three months ended September 30, 2017, and was $39,680 for the nine months ended September 30, 2018, compared to $25,076 for the same period a year ago. The increase was mainly related to the Astoria Merger. See Note 13. “Non-Interest Income and Other Non-Interest Expense” in the notes to the consolidated financial statements included elsewhere in this report for details on significant components.

Income tax expense was $27,171 for the three months ended September 30, 2018 compared to $21,592 for the three months ended September 30, 2017. Based upon the completion of the Astoria short-period tax returns for 2017, and the increasing proportion of non-taxable assets and revenues due to our business mix, our estimated effective tax rate for 2018 decreased to 21.0%. Therefore, we recorded income tax expense at 18.5% for the three months ended September 30, 2018, which resulted in an estimated effective income tax rate of 21.0% for the nine months ended September 30, 2018. Our estimated effective income tax rate was 32.5% in 2017.

Income tax expense was $88,542 for the nine months ended September 30, 2018 and was $59,620 for the nine months ended September 30, 2017, which represented an effective income tax rate of 21.0% and 32.1%, respectively. See Note 10. “Income Taxes” in the notes to the consolidated financial statements included elsewhere in this report for additional information.

Portfolio Loans

The following table sets forth the composition of our loan portfolio, excluding loans held for sale, by type of loan at the periods indicated.

	September 30, 2018		December 31, 2017	
	Amount	%	Amount	%
Commercial:				
C&I:				
Traditional C&I	$ 2,037,556	9.9%	$ 1,979,448	9.9%
Asset-based lending	868,047	4.2	797,570	4.0
Payroll finance	235,734	1.1	268,609	1.3
Warehouse lending	864,063	4.2	723,335	3.6
Factored receivables	270,002	1.3	220,551	1.1
Equipment financing	1,161,435	5.7	679,541	3.4
Public sector finance	807,193	3.9	637,767	3.2
Total C&I	6,244,030	30.4	5,306,821	26.5
Commercial mortgage:				
Commercial real estate	4,457,485	21.7	4,138,864	20.7
Multi-family	4,827,172	23.5	4,859,555	24.3
ADC	265,676	1.3	282,792	1.4
Total commercial mortgage	9,550,333	46.5	9,281,211	46.4
Total commercial	15,794,363	76.9	14,588,032	72.9
Residential mortgage	4,421,520	21.5	5,054,732	25.3
Consumer	317,331	1.5	366,219	1.8
Total portfolio loans	20,533,214	100.0%	20,008,983	100.0%
Allowance for loan losses	(91,365)		(77,907)	
Total portfolio loans, net	$ 20,441,849		$ 19,931,076	

Note the percentages in the table above are rounded to the nearest tenth of a percent.

Overview. Total portfolio loans, net, increased $510,773, to $20,441,849 at September 30, 2018, compared to $19,931,076 at December 31, 2017, as total commercial loans increased $1,206,331 while residential mortgage loans decreased by $633,212, which is consistent with our strategy of transitioning our loan portfolio composition to reduce residential mortgage loans and increase commercial loans.

At September 30, 2018, total C&I loans comprised 30.4% of the total loan portfolio, compared to 26.5% at December 31, 2017. Commercial mortgage loans comprised 46.5% and 46.4% of the total loan portfolio at September 30, 2018 and December 31, 2017, respectively. Residential mortgage loans comprised 21.5% of the total loan portfolio at September 30, 2018, compared to 25.3% at December 31, 2017. Our goal, over time, is for our loan portfolio to consist of 20.0% traditional C&I; 25.0% commercial finance; 45.0% commercial real estate; and 10.0% consumer and residential mortgage loans.

In the nine months ended September 30, 2018, equipment finance loans grew $481,894, which includes the loans acquired in the Advantage Funding acquisition, public sector finance loans grew $169,426, warehouse lending loans grew $140,728, asset based lending loans grew $70,477, traditional C&I loans grew $58,108, and factored receivables grew $49,451 relative to December 31, 2017. These increases were partially offset by s decline of $32,875 in payroll finance loans. The increase in traditional C&I and commercial finance portfolios is a significant component of our growth strategy. The warehouse lending portfolio can experience fluctuations at quarter end mainly due to changes in mortgage refinance activity. The decrease in payroll finance is consistent with performance in prior years, as this business line typically experiences seasonal highs in the fourth quarter of the year.

Commercial real estate loans increased $318,621 in the nine months ended September 30, 2018. Multi-family loans declined in the first nine months of 2018 by $32,383 mainly due to net repayments of multi-family loans acquired in the Astoria Merger. Demand for commercial real estate, including multi-family loans, in the greater New York metropolitan area continues to be strong; however, pricing and loan terms are competitive and our growth in these portfolios has been limited.

ADC loans, which are a component of commercial mortgage loans, declined $17,116 in the nine months ended September 30, 2018. The decrease was due to completion of construction projects, which resulted in the pay-off of a construction loan. We originate construction loans mainly to select clients, mostly within our immediate footprint. Many of our new ADC originations are associated with low income housing tax credits, which are related to our community reinvestment activities.

Residential loans were $4,421,520 at September 30, 2018 compared to $5,054,732 at December 31, 2017. The decline is mainly due to repayments. Included in our residential mortgage portfolio are loans that were originated in 2010 or earlier that are interest-only adjustable rate mortgages ("ARM loans") with terms of up to forty years, which have an initial fixed rate for five, seven or 10 years and convert into one year interest-only ARM loans at the end of the initial fixed rate period. Interest-only ARM loans require the borrower to pay interest only during the first ten years of the loan term, which typically results in a material increase in the borrower's monthly payments upon conversion. After the tenth anniversary of the loan, principal and interest payments are required to amortize the loan over the remaining term. There were $342,531 of interest-only loans and loans that converted to principal amortization status within the past 24 months at September 30, 2018 compared to $599,714 at December 31, 2017.

Delinquent Loans, Troubled Debt Restructuring, Impaired Loans, Other Real Estate Owned and Classified Assets
Past Due, Non-Performing Loans, Non-Performing Assets (Risk Elements). The table below sets forth the amounts and categories of our NPAs at the dates indicated. There were no warehouse lending, factored receivables or public sector finance loans that were non-performing at such dates.

	September 30, 2018	December 31, 2017
Non-accrual loans:		
Traditional C&I	$ 41,461	$ 37,642
Asset-based lending	7,718	—
Payroll finance	229	—
Equipment financing	9,964	8,099
Commercial real estate	27,144	21,720
Multi-family	3,701	4,449
ADC	—	4,205
Residential mortgage	72,838	99,958
Consumer	14,821	10,284
Total non-accrual loans	177,876	186,357
Accruing loans past due 90 days or more	7,346	856
Total NPLs	185,222	187,213
OREO	22,735	27,095
Total NPAs	$ 207,957	$ 214,308
TDRs accruing and not included above	$ 39,817	$ 13,564
Ratios:		
NPLs to total loans	0.90%	0.94%
NPAs to total assets	0.67	0.71

NPAs and NPLs. NPLs include non-accrual loans and accruing loans past due 90 days or more. NPAs include NPLs and OREO. At September 30, 2018, total NPLs declined $1,991 to $185,222 compared to $187,213 at December 31, 2017. Non-accrual loans were $177,876 and loans 90 days past due and still accruing interest which were well secured and in the process of collection were $7,346 as of September 30, 2018. Non-accrual loans declined $8,481 from $186,357 at December 31, 2017. The decline in non-accrual loans was mainly the result of charge-offs and loans transferred to OREO. Loans past due 90 days or more and still accruing increased $6,490 between the periods. This was mainly due to traditional C&I and commercial real estate loans that were in the process of being renewed that reached 90 days past due at September 30, 2018.

TDRs. TDRs still accruing interest income are loans modified for borrowers that have experienced financial difficulties but are performing in accordance with the terms of their loan and were performing prior to the modification. Loan modification concessions may include actions such as an extension of the maturity date or the lowering of interest rates and monthly payments. At September 30, 2018, accruing TDRs were $39,817 compared to $13,564 at December 31, 2017. The increase was mainly due to the designation as a TDR of one asset-based lending relationship, which is a borrowing base facility and one commercial real estate relationship during the nine months ended September 30, 2018. At September 30, 2018, the largest component of TDRs are taxi medallion related loans. At December 31, 2017, performing TDR loans were mainly secured by real estate, and non-accrual TDRS included a

taxi medallion relationship. Total TDRs were $77,347 at September 30, 2018, of which $37,112 were non-accrual. Total TDRs were $42,889 at December 31, 2017, of which $29,325 were non-accrual. The increase in non-accrual TDRs was mainly the result of classifying one taxi medallion relationship as non-accrual when the loan was formally restructured as a TDR, and classifying one HELOC loan as a TDR. TDR balances are detailed in the TDR section of Note 4. “Portfolio Loans” in the notes to the consolidated financial statements included elsewhere in this report. As of September 30, 2018, there were no commitments to lend additional funds to borrowers with loans that have been classified as TDRs.

OREO. Real estate acquired as a result of foreclosure or by deed in lieu of foreclosure is classified as OREO until such time as it is sold. In addition, financial centers that were closed or consolidated that are held for sale are also classified as OREO. When real estate is transferred to OREO, it is recorded at fair value less costs to sell. If the fair value less cost to sell is less than the loan balance, the difference is charged against the allowance for loan losses. If the fair value of a financial center that we hold for sale is less than its prior carrying value, we recognize a charge included in other operating expense to reduce the recorded value of the investment to fair value, less costs to sell. After transfer to OREO, we regularly update the fair value of the properties. Subsequent declines in fair value are charged to current earnings and included in other non-interest expense as part of OREO expense. At September 30, 2018, we had OREO properties with a recorded balance of $22,735, compared to $27,095 at December 31, 2017. The decrease was due to $15,437 in sales and $553 of write-downs to reflect the estimated current sale value of the properties. This was partially offset by OREO additions of $11,630 in the period.

Classification of Assets. Our policies, consistent with regulatory guidelines, provide for the classification of loans and other assets that are considered to be of lesser quality, such as “substandard”, “doubtful”, or “loss” assets. An asset is considered “substandard” if it is inadequately protected by the current net worth and paying capacity of the obligor or of the collateral pledged, if any. “Substandard” assets include those characterized by the distinct possibility that the Bank will sustain some loss if the deficiencies are not corrected. Assets classified as “doubtful” have all of the weaknesses inherent in those classified as “substandard” with the added characteristic that the weaknesses make collection or liquidation in full, on the basis of currently existing facts, conditions, and values, highly questionable and improbable. Assets classified as “loss” are those considered uncollectible and of such little value that their continuance as assets is not warranted and are charged-off. Assets that do not expose us to risk sufficient to warrant classification in one of the aforementioned categories, but which possess potential weaknesses that deserve our close attention, are designated as “special mention”. As of September 30, 2018, we had $88,472 of loans designated as “special mention” compared to $136,558 at December 31, 2017. The decrease in loans designated as “special mention” at September 30, 2018 compared to December 31, 2017 was mainly due to loans that were repaid and loans that were reclassified as substandard.

Our determination as to the classification of our assets and the amount of our loan loss allowance are subject to review by our regulators, which can direct the charge-off of loans and order the establishment of additions to our allowance for loan losses. Management regularly reviews our asset portfolio to determine whether any assets require classification in accordance with applicable regulations. On the basis of management’s review of our assets at September 30, 2018, classified assets consisted of loans of $282,577 and OREO of $22,735. Classified loans were $233,255 and OREO was $27,095 at December 31, 2017. The increase in classified loans in the nine months ended September 30, 2018, includes loans that have been designated TDR, and was mainly due to asset-based loans, one payroll finance loan, equipment finance loans and commercial real estate loans that were downgraded from pass and special mention, which was partially offset by decline in residential mortgage loans due to repayments and loan charge-offs.

Taxi Medallion Loans. At September 30, 2018, we had three taxi medallion relationships that totaled $36,832, or 0.18% of portfolio loans, compared to $45,976, or 0.23% of portfolio loans, at December 31, 2017. The decline in the balance between the periods of $9,144 was mainly due to partial charge-offs of $6,207, to reflect the decline in the value of collateral on two of our taxi medallion relationships, and repayments of $2,937. Our taxi medallion loans are mainly collateralized by New York City taxi medallions, and other corporate and personal collateral of the borrowers. All taxi medallion relationships are classified as TDRs and as substandard loans, and two of the relationships are on non-accrual and totaled $25,978 at September 30, 2018, compared to $33,083 at December 31, 2017. The third relationship, which is a performing asset-based lending TDR, had a balance of $10,855 at September 30, 2018. We continue to closely monitor the collateral values, cash flows and performance of each of these loans and are working with our borrowers to reduce these outstanding balances.

Allowance for Loan Losses. The allowance for loan losses is a reserve established through a provision for loan losses charged to expense, which represents management’s best estimate of probable losses that have been incurred within the existing portfolio of loans. The allowance, in the judgment of management, is necessary to reserve for estimated loan losses and risks inherent in the loan portfolio. Our allowance for loan loss methodology includes allowance allocations calculated in accordance with ASC Topic 310, *“Receivables”* and allowance allocations calculated in accordance with ASC Topic 450, *“Contingencies.”* Accordingly, the methodology is based on historical loss experience by type of credit and internal risk grade, specific homogeneous risk pools and specific loss allocations, with adjustments for current events and conditions. Our process for determining the appropriate level of allowance for loan losses is designed to account for credit deterioration as it occurs. The provision for loan losses reflects loan

quality trends, including the levels of, and trends related to, non-accrual loans, past due loans, potential problem loans, classified and criticized loans and net charge-offs or recoveries and loan documentation exceptions, among other factors. See Note 5. "Allowance for Loan Losses" in the notes to consolidated financial statements included elsewhere in this report for further information regarding the allowance for loan losses.

The allowance for loan losses increased from $77,907 at December 31, 2017 to $91,365 at September 30, 2018, as the provision for loan losses exceeded net charge-offs by $13,458. The allowance for loan losses at September 30, 2018 represented 49.3% of non-performing loans and 0.44% of total portfolio loans. At December 31, 2017, the allowance for loan losses represented 41.6% of non-performing loans and 0.39% of total portfolio loans. Loans acquired in prior merger transactions and acquisitions were recorded with a fair value adjustment as of the acquisition date that included estimated lifetime credit losses and interest rate adjustments, among other factors (the "loan mark"). A substantial portion of portfolio loans covered by the loan mark continue to carry no allowance for loan losses. As a result, we believe our allowance for loan losses to portfolio loans may not be comparable to other banking entities that have not engaged in mergers and acquisitions.

Allocation of Allowance for Loan Losses. The following table sets forth the allowance for loan losses allocated by loan category, the total loan balances by category (excluding loans held for sale), and the percent of loans in each category to total loans at the dates indicated. The allowance for loan losses allocated to each category is not necessarily indicative of future losses in any particular category and does not restrict the use of the allowance to absorb losses in other categories.

	September 30, 2018			December 31, 2017		
	Allowance for loan losses	Loan balance	% of total loans	Allowance for loan losses	Loan balance	% of total loans
Traditional C&I	$ 14,716	$ 2,037,556	9.9%	$ 19,072	$ 1,979,448	9.9%
Asset-based lending	6,828	868,047	4.2	6,625	797,570	4.0
Payroll finance	2,183	235,734	1.1	1,565	268,609	1.3
Warehouse lending	2,685	864,063	4.2	3,705	723,335	3.6
Factored receivables	1,508	270,002	1.3	1,395	220,551	1.1
Equipment financing	11,153	1,161,435	5.7	4,862	679,541	3.4
Public sector finance	1,444	807,193	3.9	1,797	637,767	3.2
Commercial real estate	31,468	4,457,485	21.7	24,945	4,138,864	20.7
Multi-family	7,682	4,827,172	23.5	3,261	4,859,555	24.3
ADC	1,876	265,676	1.3	1,680	282,792	1.4
Residential mortgage	6,800	4,421,520	21.5	5,819	5,054,732	25.3
Consumer	3,022	317,331	1.5	3,181	366,219	1.8
Total	$ 91,365	$ 20,533,214	100.0%	$ 77,907	$ 20,008,983	100.0%

At September 30, 2018, the allocation of the allowance for loan losses increased in the equipment financing portfolio mainly due to $7,158 of net charge-offs, which caused an increase in our trailing loss factor which is a significant component of the overall allowance calculation. The increase in commercial real estate was also attributable to $4,176 of net charge-offs in the period. The decline in the allowance for loan losses applicable to traditional C&I loans was mainly due to the isolation of taxi medallion loans, which we have excluded from the trailing loss factor for traditional C&I loans as all taxi medallion loans are now individually evaluated for impairment.

Impaired Loans. A loan is impaired when it is probable we will be unable to collect all amounts due according to the contractual terms of the loan agreement. Impaired loan values are based on one of three measures: (i) the present value of expected future cash flows discounted at the loan's effective interest rate; (ii) the loan's observable market price; or (iii) the fair value of the collateral if the loan is collateral dependent. If the measure of an impaired loan is less than its recorded investment, our practice is to write-down the loan against the allowance for loan losses so the recorded investment matches the impaired value of the loan. Impaired loans generally include a portion of non-performing loans and accruing and performing TDR loans. At September 30, 2018, we had $111,685 in impaired loans compared to $60,862 at December 31, 2017. The increase was mainly due to loans that were designated as TDR during the period and included one taxi medallion relationship that was placed on non-accrual at the time of restructuring, certain commercial real estate loans that are in workout, and certain residential mortgage loans.

PCI Loans. A PCI loan is an acquired loan that has demonstrated evidence of deterioration in credit quality subsequent to origination. As of September 30, 2018, the balance of PCI loans was $154,004, compared to $226,612 at December 31, 2017 and is mainly comprised of loans acquired in the Astoria Merger. The decline was mainly due to borrower repayments, amounts charged-off against the loan purchase accounting mark, and loans that moved to OREO. At September 30, 2018 and December 31, 2017, we

held $5,363 and $7,992, respectively, of PCI loans, which are accounted for under the cost-recovery method and were included in our non-accrual loan totals above. The decline between the periods was mainly due to borrower repayments. The remaining PCI loans of $148,641 and $218,620 at September 30, 2018 and December 31, 2017, respectively, are accounted for under applicable guidance, which results in an accretable yield that represents the amount of expected cash flows that exceeds the initial investment in the loan. See the tables of loans evaluated for impairment by segment and changes in accretable yield for PCI loans in Note 4. "Portfolio Loans" in the notes to consolidated financial statements included elsewhere in this report for additional information.

Provision for Loan Losses. We recorded $9,500 in loan loss provision for the three months ended September 30, 2018, compared to $5,000 for the three months ended September 30, 2017. Net charge-offs for the three months ended September 30, 2018 were $4,161, or 0.08% of average loans on an annualized basis, compared to net charge-offs of $3,023, or 0.12% of average loans on an annualized basis for the three months ended September 30, 2017. Provision expense for the first nine months of 2018 was $35,500 compared to $14,000 for the nine months ended September 30, 2017. The increase in provision expense was driven mainly by loans acquired in prior mergers and acquisitions that are now subject to our allowance for loan losses, organic loan growth and to changes in loan classifications.

Changes in Financial Condition between September 30, 2018 and December 31, 2017

Total assets increased $901,724, or 3.0%, to $31,261,265 at September 30, 2018, compared to $30,359,541 at December 31, 2017. Components of the change in total assets were:

- Total portfolio loans increased by $524,231, or 2.6%, to $20,533,214 at September 30, 2018, compared to $20,008,983 at December 31, 2017. The increase was due to the Advantage Funding acquisition and organic loan growth, substantially offset by repayments of residential mortgage loans.
- Commercial loans increased by $1,206,331, or 8.3%, to $15,794,363 at September 30, 2018, compared to $14,588,032 at December 31, 2017. The increase was due to the Advantage Funding Acquisition and organic loan growth.
- Residential mortgage loans declined by $633,212 to $4,421,520 at September 30, 2018 compared to $5,054,732 at December 31, 2017. The decline was mainly due to repayments.
- Total investment securities increased by $211,411, or 3.3%, to $6,685,972 at September 30, 2018, compared to $6,474,561 at December 31, 2017. The increase was mainly due to the purchase of corporate securities and tax exempt securities issued by New York State, New York City, other municipal entities in New York, and by other states. Investment securities were 21.4% of total assets at September 30, 2018, compared to 21.3% at December 31, 2017.
- Cash and cash equivalents increased by $54,078 to $533,984 at September 30, 2018, compared to $479,906 at December 31, 2017.
- Other changes in assets included the following:
  - an increase in Federal Reserve Bank of New York ("FRBNY") common stock holdings, which we acquired in the first quarter of 2018 as a result of the Astoria Merger. FRBNY common stock increased $73,726 at September 30, 2018 compared to December 31, 2017.
  - an increase of $25,796 in loans held for sale, which mainly represents originations from our loan syndications team.

Total liabilities increased $703,599, or 2.7%, to $26,822,962 at September 30, 2018, compared to $26,119,363 at December 31, 2017. This increase was mainly due to the following:

- Total deposits increased $917,853, or 4.5%, to $21,456,057 at September 30, 2018, compared to $20,538,204 at December 31, 2017. Our core retail, commercial and municipal transaction, money market, savings accounts and certificates of deposit accounts were $20,448,343, at September 30, 2018, which represented 95.3% of our total deposit balances. The increase in deposits was mainly driven by our commercial banking teams, as several of our recent commercial banking hires are focused on growing deposits, as well as growth in municipal deposits. Municipal deposits, excluding municipal certificates of deposits, increased $434,817 to $2,019,893 at September 30, 2018, compared to $1,585,076 at December 31, 2017.
- FHLB borrowings decreased $81,013, to $4,429,110 at September 30, 2018, compared to $4,510,123 at December 31, 2017. The decrease in FHLB borrowings was mainly the result of growth in core deposits.

Supplemental Reporting of Non-GAAP Financial Measures

The non-GAAP financial measures presented below are used by our management and our Board of Directors on a regular basis in addition to our GAAP results to facilitate the assessment of our financial performance and to assess our performance compared to our annual budget and strategic plans. These non-GAAP financial measures complement our GAAP reporting and are presented below to provide investors, analysts, regulators and others information that we use to manage and evaluate our performance each period. This information supplements our GAAP reported results, and should not be viewed in isolation from, or as a substitute for,

our GAAP results. Accordingly, this financial information should be read in conjunction with our consolidated financial statements, and notes thereto for the quarter ended September 30, 2018, included elsewhere in this report, and the year ended December 31, 2017, included in the 2017 Form 10-K.

	September 30, 2018	September 30, 2017
The following table shows the reconciliation of stockholders' equity to tangible common equity and the tangible common equity ratio [1]:		
Total assets	$ 31,261,265	$ 16,780,097
Goodwill and other intangibles	(1,745,181)	(756,290)
Tangible assets	29,516,084	16,023,807
Stockholders' equity	4,438,303	1,971,480
Preferred stock	(138,627)	—
Goodwill and other intangibles	(1,745,181)	(756,290)
Tangible common stockholders' equity	2,554,495	1,215,190
Common stock outstanding at period end	225,446,089	135,807,544
Common stockholders' equity as a % of total assets	13.75%	11.75%
Book value per common share	$ 19.07	$ 14.52
Tangible common equity as a % of tangible assets	8.65%	7.58%
Tangible book value per common share	$ 11.33	$ 8.95

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See legend beginning on page 73.

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
The following table shows the reconciliation of reported net income and reported EPS (GAAP) to adjusted net income available to common stockholders (non-GAAP) and adjusted diluted EPS (non-GAAP)[2]:				
Income before income tax expense	$ 146,821	$ 66,444	$ 421,305	$ 185,939
Income tax expense	27,171	21,592	88,542	59,620
Net income (GAAP)	119,650	44,852	332,763	126,319
Adjustments:				
Net loss on sale of securities	56	21	5,902	274
Net (gain) on sale of fixed assets	—	—	(11,800)	(1)
Merger-related expense	—	4,109	—	9,002
Charge for asset write-downs, retention and severance	—	—	13,132	603
Amortization of non-compete agreements and acquired customer lists	295	333	883	1,080
Total pre-tax adjustments	351	4,463	8,117	10,958
Adjusted pre-tax income	147,172	70,907	429,422	196,897
Adjusted income tax expense	(30,906)	(23,042)	(90,179)	(63,181)
Adjusted net income (non-GAAP)	116,266	47,865	339,243	133,716
Preferred stock dividend	1,993	—	5,988	—
Adjusted net income available to common stockholders (non-GAAP)	$ 114,273	$ 47,865	$ 333,255	$ 133,716
Weighted average diluted shares	225,622,895	135,950,160	225,504,463	135,895,513
Diluted EPS as reported (GAAP)	$ 0.52	$ 0.33	$ 1.45	$ 0.93
Adjusted diluted EPS (non-GAAP)	0.51	0.35	1.48	0.98

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See legend beginning on page 73.

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
The following table shows the reconciliation of the reported operating efficiency ratio and adjusted operating efficiency ratio [3]:				
Net interest income	$ 243,949	$ 120,073	$ 724,533	$ 342,121
Non-interest income	24,145	13,988	80,720	40,442
Total net revenue	268,094	134,061	805,253	382,563
Tax equivalent adjustment on securities	4,052	4,599	12,217	12,896
Net (gain) on sale of fixed assets	—	—	(11,800)	(1)
Net loss on sale of securities	56	21	5,902	274
Adjusted total revenue (non-GAAP)	272,202	138,681	811,572	395,732
Non-interest expense	111,773	62,617	348,448	182,624
Merger-related expense	—	(4,109)	—	(9,002)
Charge for asset write-downs, retention and severance	—	—	(13,132)	(603)
Amortization of intangible assets	(5,865)	(2,166)	(17,782)	(6,582)
Adjusted non-interest expense (non-GAAP)	$ 105,908	$ 56,342	$ 317,534	$ 166,437
Reported operating efficiency ratio	41.7%	46.7%	43.3%	47.7%
Adjusted operating efficiency ratio (non-GAAP)	38.9	40.6	39.1	42.1

See legend beginning on page 73.

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
The following table shows the reconciliation of reported return on average tangible assets and adjusted return on average tangible assets [4]:				
Average assets	$ 31,036,026	$ 15,661,514	$ 30,686,808	$ 14,802,911
Average goodwill and other intangibles	(1,752,933)	(757,498)	(1,747,141)	(759,790)
Average tangible assets	29,283,093	14,904,016	28,939,667	14,043,120
Net income available to common stockholders	117,657	44,852	326,775	126,319
Net income, if annualized	466,791	177,945	436,897	168,888
Reported return on average tangible assets	1.59%	1.19%	1.51%	1.20%
Adjusted net income (non-GAAP)	$ 114,273	$ 47,865	$ 333,255	$ 133,716
Annualized adjusted net income	453,366	189,899	445,561	178,778
Adjusted return on average tangible assets (non-GAAP)	1.55%	1.27%	1.54%	1.27%

See legend beginning on page 73.

	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
The following table shows the reconciliation of reported return on average tangible common stockholders' equity and adjusted return on average tangible common stockholders' equity [5]:				
Average stockholders' equity	$ 4,397,823	$ 1,955,252	$ 4,316,455	$ 1,913,072
Average preferred stock	(138,692)	—	(139,054)	—
Average goodwill and other intangibles	(1,752,933)	(757,498)	(1,747,141)	(759,790)
Average tangible common stockholders' equity	2,506,198	1,197,754	2,430,260	1,153,282
Net income available to common stockholders	117,657	44,852	326,775	126,319
Net income, if annualized	466,791	177,945	436,897	168,888
Reported return on average tangible common stockholders' equity	18.63%	14.86%	17.98%	14.64%
Adjusted net income (non-GAAP)	$ 114,273	$ 47,865	$ 333,255	$ 133,716
Annualized adjusted net income	453,366	189,899	445,561	178,778
Adjusted return on average tangible common stockholders' equity (non-GAAP)	18.09%	15.85%	18.33%	15.50%

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See legend beginning below.

[1] Common stockholders' equity as a percentage of total assets, book value per common share, tangible common equity as a percentage of tangible assets and tangible book value per common share provides information to help assess our capital position and financial strength. We believe tangible book value measures improve comparability to other banking organizations that have not engaged in acquisitions that have resulted in the accumulation of goodwill and other intangible assets.

[2] Adjusted net income available to common stockholders and adjusted EPS present a summary of our earnings which includes adjustments to exclude certain revenues and expenses (generally associated with discrete merger transactions and non-recurring strategic plans) to help in assessing our recurring profitability. For the purpose of calculating adjusted earnings and adjusted earnings per share, income tax expense is calculated using the estimated effective income tax rate for the full year in effect for the particular period end, as we believe this is a more accurate presentation of run rate income tax expense and earnings.

[3] The reported operating efficiency ratio is a non-GAAP measure calculated by dividing our GAAP non-interest expense by the sum of our GAAP net interest income plus GAAP non-interest income. The adjusted operating efficiency ratio is a non-GAAP measure calculated by dividing non-interest expense adjusted for intangible asset amortization and certain expenses generally associated with discrete merger transactions and non-recurring strategic plans by the sum of net interest income plus non-interest income plus the tax equivalent adjustment on securities income and elimination of the impact of gain or loss on sale of securities. The adjusted operating efficiency ratio is a measure we use to assess our operating performance.

[4] Reported return on average tangible assets and adjusted return on average tangible assets measures provide information to help assess our profitability.

[5] Reported return on average tangible common stockholders' equity and the adjusted return on average tangible common stockholders' equity measures provide information to evaluate the use of our tangible common equity.

Liquidity and Capital Resources

Capital. Stockholders' equity was $4,438,303 as of September 30, 2018, an increase of $198,125 relative to December 31, 2017. The increase was mainly the result of net income available to common stockholders of $326,775. Also contributing was an increase of stock option exercises and stock-based compensation, which totaled $6,494. These increases were offset by a decline in accumulated other comprehensive loss of $87,380, which was primarily due to a change in the fair value of our available for sale securities portfolio, as well as declared dividends of $47,171 on common stock and $6,581 on preferred stock.

We paid dividends of $0.07 per common share in each quarter of 2017 and the first two quarters of 2018. Most recently, our Board of Directors declared a dividend of $0.07 per common share on October 23, 2018, which is payable November 19, 2018 to our holders as of the record date of November 5, 2018. In addition, on October 15, 2018, we paid a dividend of $2,194 on the preferred stock.

Basel III Capital Rules. The Basel III Capital Rules became effective for us on January 1, 2015 (subject to a phase-in period for certain provisions). The rules are discussed in Note 15. “Stockholders’ Equity - Regulatory Capital Requirements” in the notes to consolidated financial statements included elsewhere in this report.

Liquidity. As discussed in our 2017 Form 10-K, our liquidity position is continuously monitored and we make adjustments to the balance between sources and uses of funds as deemed appropriate. Liquidity risk management is an important element in our asset / liability management process. We regularly model liquidity stress scenarios to assess potential liquidity outflows or funding problems resulting from economic activity, volatility in the financial markets, unexpected credit events or other significant occurrences. These scenarios are incorporated into our contingency funding plan, which provides the basis for the identification of our liquidity needs. As of September 30, 2018, management is not aware of any events that are reasonably likely to have a material adverse effect on our liquidity, capital resources or operations. In addition, management is not aware of any regulatory recommendations regarding liquidity, including the Basel III liquidity framework, which, if implemented, would have a material adverse effect on us.

At September 30, 2018, the Bank had $533,984 in cash and cash equivalents on hand and unused borrowing capacity at the FHLB of $6,235,781. In addition, the Bank may purchase federal funds from other institutions and enter into additional repurchase agreements. The Bank had $3,578,859 of securities available to pledge as collateral as of September 30, 2018. The Bank was required to maintain $106,073 of cash on hand or on deposit with the FRB to meet regulatory reserve and clearing requirements at September 30, 2018.

We are a bank holding company and do not conduct operations. Our primary sources of liquidity are dividends received from the Bank and borrowings from outside sources. Banking regulations may limit the amount of dividends that may be paid by the Bank. At September 30, 2018, the Bank had capacity to pay approximately $324,008 of dividends to us and maintain its “well capitalized” status under regulatory guidelines as well as internal capital management policies and procedures. We had cash on hand of $60,176 at September 30, 2018. In October 2018, we received a regularly scheduled quarterly dividend from the Bank which increased our cash on hand. We utilized a portion of this cash to repurchase $17,000 principal amount, plus interest, of our outstanding 3.50% Senior Notes that we acquired in the Astoria Merger and we commenced the announced repurchase of our shares in the open market. Through October 31, 2018 we had purchased 1,020,000 shares of our common stock.

Effective September 2, 2018, we renewed our $35,000 credit facility with another financial institution, which is more fully described in Note 8. “Borrowings” in the notes to consolidated financial statements included elsewhere in this report. The use of proceeds are for general corporate purposes. The credit facility has no outstanding balance and requires us and the Bank to maintain certain ratios related to capital, non-performing assets to capital, reserves to non-performing loans and debt service coverage. We and the Bank were in compliance with all requirements at September 30, 2018.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Management believes that our most significant form of market risk is interest rate risk. The general objective of our interest rate risk management is to determine the appropriate level of risk given our business strategy, and then manage that risk in a manner that is consistent with our policy to limit the exposure of our net interest income to changes in market interest rates. The Bank’s Asset/Liability Management Committee (“ALCO”), which consists of certain members of senior management, evaluates the interest rate risk inherent in certain assets and liabilities, our operating environment, and capital and liquidity requirements, and modifies our lending, investing and deposit gathering strategies accordingly. A committee of our Board of Directors reviews ALCO’s activities and strategies, the effect of those strategies on our net interest margin, and the effect that changes in market interest rates would have on the economic value of our loan and securities portfolios, as well as the intrinsic value of our deposits and borrowings.

Management actively evaluates interest rate risk in connection with our lending, investing, and deposit activities. Management emphasizes the origination of commercial real estate loans, C&I loans, and consumer loans. We also invest in shorter-term securities, which generally have lower yields compared to longer-term investments. Shortening the average maturity of our interest earning assets by increasing our investments in shorter-term loans and securities may help us to better match the maturities and interest rates of our assets and liabilities, thereby reducing the exposure of our net interest income to changes in market interest rates. These strategies may adversely affect net interest income due to lower initial yields on these investments in comparison to longer-term, fixed-rate loans and investments.

Management monitors interest rate sensitivity primarily through the use of a model that simulates net interest income (“NII”) under varying interest rate assumptions. Management also evaluates this sensitivity using a model that estimates the change in our and the Bank’s economic value of equity (“EVE”) over a range of interest rate scenarios. EVE is the present value of expected cash flows from assets, liabilities and off-balance sheet contracts. The model assumes estimated loan prepayment rates, reinvestment rates and deposit decay rates that management believes is reasonable, based on historical experience during prior interest rate changes.

Estimated Changes in EVE and NII. The table below sets forth, as of September 30, 2018, the estimated changes in our (i) EVE that would result from the designated instantaneous changes in the forward rate curves; and (ii) NII that would result from the designated instantaneous changes in the U.S. Treasury yield curve. Computations of prospective effects of hypothetical interest rate changes are based on numerous assumptions including relative levels of market interest rates, loan prepayments and deposit decay, and should not be relied on as indicative of actual results.

Interest rates	Estimated	Estimated change in EVE		Estimated	Estimated change in NII	
(basis points)	EVE	Amount	Percent	NII	Amount	Percent
			(Dollars in thousands)			
+300	$ 4,162,254	$ (782,358)	(15.8)%	$ 1,010,294	$ 32,729	3.3 %
+200	4,481,181	(463,431)	(9.4)	1,004,688	27,123	2.8
+100	4,769,337	(175,275)	(3.5)	994,150	16,585	1.7
0	4,944,612	—	—	977,565	—	—
-100	4,964,471	19,859	0.4	948,055	(29,510)	(3.0)
-200	4,777,086	(167,526)	(3.4)	897,297	(80,268)	(8.2)

The table above indicates that at September 30, 2018, in the event of an immediate 200 basis point increase in interest rates, we would expect to experience a 9.4% decrease in EVE and a 2.8% increase in NII.

Certain shortcomings are inherent in the methodology used in the above interest rate risk measurements. Modeling changes in EVE and NII require making certain assumptions that may or may not reflect the manner in which actual yields and costs respond to changes in market interest rates. The EVE and NII table presented above assumes that the composition of our interest-rate sensitive assets and liabilities existing at the beginning of a period remains constant over the period being measured and, accordingly, the data does not reflect any actions management may undertake in response to changes in interest rates. The table also assumes that a particular change in interest rates is reflected uniformly across the yield curve regardless of the duration to maturity or the re-pricing characteristics of specific assets and liabilities. Accordingly, although the EVE and NII table provides an indication of our sensitivity to interest rate changes at a particular point in time, such measurements are not intended to and do not provide a precise forecast of the effect of changes that market interest rates may have on our net interest income. Actual results will likely differ.

During the third quarter of 2018, the federal funds target rate increased a quarter point to 2.00 - 2.25%. U.S. Treasury yields with two year maturities increased 92 basis points from 1.89% to 2.81% over the nine months ended September 30, 2018, while the yield on U.S. Treasury 10-year notes increased 65 basis points from 2.40% to 3.05% over the same nine month period. The increase in interest rates on longer-term maturities relative to the greater increase in interest rates on short-term maturities resulted in a flatter 2-10 year U.S. Treasury yield curve at September 30, 2018 compared to December 31, 2017. At its September 2018 meeting, the Federal Open Markets Committee (the "FOMC") stated that in determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. However, should economic conditions improve at a faster pace than anticipated, the FOMC could increase the federal funds target rate quicker. This could cause the shorter end of the yield curve to rise disproportionately relative to the longer end, thereby resulting in an even flatter yield curve, which may result in greater margin compression.

Item 4. Controls and Procedures

The Company's management, including the principal executive officer and principal financial officer, evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of the end of the period covered by this report. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective for the purpose of ensuring that the information required to be disclosed in our reports filed with the SEC under the Securities Exchange Act of 1934, as amended, is: (i) recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms; and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Controls

There were no changes in the Company’s internal controls over financial reporting during the three months ended September 30, 2018 that have materially affected, or are reasonably likely to materially affect, the Company’s internal controls over financial reporting.

PART II

Item 1. Legal Proceedings

The "Litigation" section of Note 16. "Commitments and Contingencies" in the notes to consolidated financial statements included in Part I, Item 1 is incorporated herein by reference.

Item 1A. Risk Factors

For information regarding factors that could affect our business, results of operations, financial condition and liquidity, see the risk factors discussed under Part I, Item 1A of our 2017 Form 10-K. There have been no material changes in these risk factors.

The risks described in our 2017 Form 10-K are not the only risks that we encounter. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, results of operations, financial condition and/or liquidity.

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

Not Applicable.

Item 3. Defaults Upon Senior Securities

Not Applicable.

Item 4. Mine Safety Disclosure

Not Applicable.

Item 5. Other Information

Not Applicable.

Item 6. Exhibits

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of the Company (Incorporated by reference to Exhibit 3.1 of the Company's Annual Report on Form 10-K filed herewith)
3.2	Certificate of Designations of 6.50% Non-Cumulative Perpetual Preferred Stock, Series A (Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed on October 2, 2017)
3.3	Amended and Restated Bylaws of the Company (Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed on May 24, 2017)
4.1	Form of Common Stock Certificate of the Company (Incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on November 1, 2013)
4.2	Form of Corporate Governance Agreement (Incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K filed on August 7, 2012)
4.3	Deposit Agreement and specimen receipt attached as Exhibit A thereto, dated as of March 19, 2013, among Astoria Financial Corporation and Computershare, as Depositary, and the holders of depositary receipts (Incorporated by reference to Exhibit 4.3 to the Company's Registration Statement on Form S-4, filed on April 5, 2017)
4.4	First Amendment to the Deposit Agreement, dated as of October 2, 2017, among Sterling Bancorp and Computershare, as Depositary, and the holders of the depositary receipts
4.5	Form of Certificate of 6.50% Non-Cumulative Perpetual Preferred Stock, Series A (Incorporated by reference to Exhibit 4.2 to the Company's Form 8-A12B filed on September 28, 2017)
4.6	Indenture by and between Astoria Financial Corporation, as Issuer, and Wilmington Trust, National Association, as Trustee, dated as of June 8, 2017 for Senior Debt Securities (Incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on October 2, 2017)
4.7	First Supplemental Indenture by and between Astoria Financial Corporation, as Issuer, and Wilmington Trust, National Association, as Trustee, dated as of June 8, 2017 for Senior Debt Securities (Incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K filed on October 2, 2017)
4.8	Second Supplemental Indenture by and between Sterling Bancorp, as Issuer, and Wilmington Trust, National Association, as Trustee, dated as of October 2, 2017 for Senior Debt Securities (Incorporated by reference to Exhibit 4.3 of the Company's Current Report on Form 8-K filed on October 2, 2017)
4.9	Form of Note for Astoria Financial Corporation 3.500% Senior Notes (Incorporated by reference to Exhibit 4.4 of the Company's Current Report on Form 8-K filed on October 2, 2017)
31.1	Certification of the Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
31.2	Certification of the Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
32.0	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith)
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	XBRL Taxonomy Extension Calculation Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

The Company agrees to furnish to the SEC, upon request, any instrument with respect to long-term debt that the Company has not filed as an exhibit pursuant to the exemption provided by Item 601(b)(4)(iii)(A) of Regulation S-K.

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.

Sterling Bancorp

Date: November 2, 2018	By: */s/ Jack Kopnisky* Jack Kopnisky President, Chief Executive Officer and Director (Principal Executive Officer)
Date: November 2, 2018	By: */s/ Luis Massiani* Luis Massiani Senior Executive Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)

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Section 2: EX-3.1 (EXHIBIT 3.1)

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

STERLING BANCORP

(Pursuant to Sections 242 and 245 of the Delaware General Corporation Law
of the State of Delaware)

**(name changed to Provident New York Bancorp 6/29/05;
name changed to Sterling Bancorp 10/31/13)**

Pursuant to Section 242 and Section 245 of the Delaware General Corporation Law, Sterling Bancorp, a Delaware corporation, has adopted this Amended and Restated Certificate of Incorporation ("Certificate of Incorporation") restating, integrating and further amending its Certificate of Incorporation originally filed with the Secretary of State of Delaware on June 30, 2003. This Amended and Restated Certificate of Incorporation (i) has been duly proposed by the directors of the Corporation, (ii) has been duly approved and adopted by the stockholders of the Corporation at a Special Meeting of Stockholders, held on June 13, 2017, at which a quorum of stockholders were present and voting, and (iii) has been duly adopted in accordance with Sections 242 and 245 of the Delaware General Corporation Law.

FIRST: The name of the Corporation is Sterling Bancorp (hereinafter referred to as the "Corporation").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 2711 Centerville Road, Suite 400, in the City of Wilmington, County of New Castle. The name of the registered agent at that address is Corporation Service Company.

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

FOURTH:

A. The total number of shares of all classes of stock that the Corporation shall have authority to issue is three hundred and twenty million (320,000,000) consisting of:

1. Ten million (10,000,000) shares of Preferred Stock, par value one cent ($0.01) per share (the "Preferred Stock"); and

2. Threehundred and ten million (310,000,000) shares of Common Stock, par value one cent ($0.01) per share (the "Common Stock").

B. The Board of Directors is authorized, subject to any limitations prescribed by law, to provide for the issuance of the shares of Preferred Stock in series, and by filing a certificate pursuant to the applicable law of the State of Delaware (such certificate being hereinafter referred to as a "Preferred Stock Designation"), to establish from time to time the number of shares to be included in each such series, and to fix the designation, powers, preferences, and rights of the shares of each such series and any qualifications, limitations or restrictions thereof. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the Common Stock, without a vote of the holders of the Preferred Stock, or of any series thereof, unless a vote of any such holders is required pursuant to the terms of any Preferred Stock Designation.

C. 1. Notwithstanding any other provision of this Certificate of Incorporation or the bylaws of the Corporation, in no event shall any record owner of any outstanding Common Stock which is beneficially owned, directly or indirectly, by a person who, as of any record date for the determination of stockholders entitled to vote on any matter, beneficially owns in excess of 10% of the then-outstanding shares of Common Stock (the "Limit"), be entitled, or permitted to any vote in respect of the shares held in excess of the Limit. The number of votes which may be cast by any record owner by virtue of the provisions hereof in respect of Common Stock beneficially owned by such person owning shares in excess of the Limit shall be a number equal to the total number of votes which a single record owner of all Common Stock owned by such person would be entitled to cast subject to this Section C of this Article FOURTH, multiplied by a fraction, the

numerator of which is the number of shares of such class or series which are both beneficially owned by such person and owned of record by such record owner and the denominator of which is the total number of shares of Common Stock beneficially owned by such person owning shares in excess of the Limit.

2. The following definitions shall apply to this Section C of this Article FOURTH:

(a) "Affiliate" shall have the meaning ascribed to it in Rule 12b-2 of the General Rules and Regulations under the Securities Exchange Act of 1934, as in effect on the date of filing of this Certificate of Incorporation.

(b) "Beneficial ownership" shall be determined pursuant to Rule 13d-3 of the General Rules and Regulations under the Securities Exchange Act of 1934 (or any successor rule or statutory provision), or, if said Rule 13d-3 shall be rescinded and there shall be no successor rule or statutory provision thereto, pursuant to said Rule 13d-3 as in effect on the date of filing of this Certificate of Incorporation; provided, however, that a person shall, in any event, also be deemed the "beneficial owner" of any Common Stock:

(1) which such person or any of its Affiliates beneficially owns, directly or indirectly; or

(2) which such person or any of its Affiliates has (i) the right to acquire (whether such right is exercisable immediately or only after the passage of time), pursuant to any agreement, arrangement or understanding (but shall not be deemed to be the beneficial owner of any voting shares solely by reason of an agreement, contract, or other arrangement with this Corporation to effect any transaction which is described in any one or more clauses of Section A of Article EIGHTH) or upon the exercise of conversion rights, exchange rights, warrants, or options or otherwise, or (ii) sole or shared voting or investment power with respect thereto pursuant to any agreement, arrangement, understanding, relationship or otherwise (but shall not be deemed to be the beneficial owner of any voting shares solely by reason of a revocable proxy granted for a particular meeting of stockholders, pursuant to a public solicitation of proxies for such meeting, with respect to shares of which neither such person nor any such Affiliate is otherwise deemed the beneficial owner); or

(3) which are beneficially owned, directly or indirectly, by any other person with which such first mentioned person or any of its Affiliates acts as a partnership, limited partnership, syndicate or other group pursuant to any agreement, arrangement or understanding for the purpose of acquiring, holding, voting or disposing of any shares of capital stock of this Corporation;

and provided further, however, that (1) no Director or Officer of this Corporation (or any Affiliate of any such Director or Officer) shall, solely by reason of any or all of such Directors or Officers acting in their capacities as such, be deemed, for any purposes hereof, to beneficially own any Common Stock beneficially owned by another such Director or Officer (or any Affiliate thereof), and (2) neither any employee stock ownership plan or similar plan of this Corporation or any subsidiary of this Corporation, nor any trustee with respect thereto or any Affiliate of such trustee (solely by reason of such capacity of such trustee), shall be deemed, for any purposes hereof, to beneficially own any Common Stock held under any such plan. For purposes of computing the percentage of beneficial ownership of Common Stock of a person, the outstanding Common Stock shall include shares deemed owned by such person through application of this subsection but shall not include any other Common Stock which may be issuable by this Corporation pursuant to any agreement, or upon exercise of conversion rights, warrants or options, or otherwise. For all other purposes, the outstanding Common Stock shall include only Common Stock then outstanding and shall not include any Common Stock which may be issuable by this Corporation

pursuant to any agreement, or upon the exercise of conversion rights, warrants or options, or otherwise.

(c) A “person” shall mean any individual, firm, corporation, or other entity.

3. The Board of Directors shall have the power to construe and apply the provisions of this Section C of Article FOURTH and to make all determinations necessary or desirable to implement such provisions, including but not limited to matters with respect to (i) the number of shares of Common Stock beneficially owned by any person, (ii) whether a person is an Affiliate of another, (iii) whether a person has an agreement, arrangement, or understanding with another as to the matters referred to in the definition of beneficial ownership, (iv) the application of any other definition or operative provision of this section to the given facts, or (v) any other matter relating to the applicability or effect of this Section C of Article FOURTH.

4. The Board of Directors shall have the right to demand that any person who is reasonably believed to beneficially own Common Stock in excess of the Limit (or holds of record Common Stock beneficially owned by any person in excess of the Limit) supply the Corporation with complete information as to (i) the record owner(s) of all shares beneficially owned by such person who is reasonably believed to own shares in excess of the Limit, and (ii) any other factual matter relating to the applicability or effect of this Section C of Article FOURTH as may reasonably be requested of such person.

5. Except as otherwise provided by law or expressly provided in this Section C of Article FOURTH, the presence, in person or by proxy, of holders of a majority of the shares of capital stock of the Corporation entitled to vote at the meeting (after giving effect, if required, to the provisions of this Section C of Article FOURTH) shall constitute a quorum at all meetings of the stockholders (unless or except to the extent that the presence of a larger number may be required by law), and every reference in this Certificate of Incorporation to a majority or other proportion of capital stock (or the holders thereof) for purposes of determining any quorum requirement or any requirement for stockholder consent or approval shall be deemed to refer to such majority or other proportion of the votes (or the holders thereof) then entitled to be cast in respect of such capital stock (after giving effect, if required, to the provisions of this Section C of Article FOURTH).

6. Any constructions, applications, or determinations made by the Board of Directors pursuant to this Section C of Article FOURTH in good faith and on the basis of such information and assistance as was then reasonably available for such purpose shall be conclusive and binding upon the Corporation and its stockholders.

7. In the event any provision (or portion thereof) of this Section C of Article FOURTH shall be found to be invalid, prohibited or unenforceable for any reason, the remaining provisions (or portions thereof) of this Section C of Article FOURTH shall remain in full force and effect, and shall be construed as if such invalid, prohibited or unenforceable provision had been stricken herefrom or otherwise rendered inapplicable, it being the intent of this Corporation and its stockholders that such remaining provision (or portion thereof) of this section remain, to the fullest extent permitted by law, applicable and enforceable as to all stockholders, including stockholders owning an amount of stock over the Limit, notwithstanding any such finding.

FIFTH: The following provisions are inserted for the management of the business and the conduct of the affairs of the Corporation, and for further definition, limitation and regulation of the powers of the Corporation and of its Directors and stockholders:

A. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors. In addition to the powers and authority expressly conferred upon them by statute or by this Certificate of Incorporation or the Bylaws of the Corporation, the Directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation.

B. The Directors of the Corporation need not be elected by written ballot unless the Bylaws so provide. Stockholders shall not be permitted to cumulate their votes for the election of Directors.

C. Subject to the rights of any class or series of Preferred Stock of the Corporation, any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly

called annual or special meeting of stockholders of the Corporation and may not be effected by any consent in writing by such stockholders.

D. Special meetings of stockholders of the Corporation may be called (i) by the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directorships (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board for adoption) (the "Whole Board") or (ii) as otherwise provided in the Bylaws.

SIXTH:

A. The number of Directors shall be fixed from time to time exclusively by the Board of Directors pursuant to a resolution adopted by a majority of the Whole Board.

At the 2015 annual meeting of stockholders, and at each annual meeting thereafter, each Director shall be elected to serve for a one-year term expiring at the next annual meeting of stockholders and until his or her successor is elected.

B. Subject to the rights of the holders of any series of Preferred Stock then outstanding, newly created directorships resulting from any increase in the authorized number of Directors or any vacancies in the Board of Directors resulting from death, resignation, retirement, disqualification, removal from office or other cause may be filled only by a majority vote of the Directors then in office, though less than a quorum, and Directors so chosen shall hold office for a term expiring at the next annual meeting of stockholders. No decrease in the number of Directors constituting the Board of Directors shall shorten the term of any incumbent Director.

C. Advance notice of stockholder nominations for the election of Directors and of business to be brought by stockholders before any meeting of the stockholders of the Corporation shall be given in the manner provided in the Bylaws of the Corporation.

D. Subject to the rights of the holders of any series of Preferred Stock then outstanding, any Director, or the entire Board of Directors, may be removed from office at any time, but only by the affirmative vote of the holders of at least 50 percent of the voting power of all of the then - outstanding shares of capital stock of the Corporation entitled to vote generally in the election of Directors (after giving effect to the provisions of Article FOURTH of this Certificate of Incorporation ("Article FOURTH")), voting together as a single class.

SEVENTH: The Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the Corporation. Any adoption, amendment or repeal of the Bylaws of the Corporation by the Board of Directors shall require the approval of the majority of the Whole Board. The stockholders shall also have power to adopt, amend or repeal the Bylaws of the Corporation; provided, however, that, in addition to any vote of the holders of any class or series of stock of the Corporation required by law or by this Certificate of Incorporation, the affirmative vote of the holders of at least 80 percent of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of Directors (after giving effect to the provisions of Article FOURTH), voting together as a single class, shall be required to adopt, amend or repeal any provisions of the Bylaws of the Corporation.

EIGHTH:

A. In addition to any affirmative vote required by law or this Certificate of Incorporation, and except as otherwise expressly provided in this section:

shall require the affirmative vote of the holders of at least 80% of the voting power of the then-outstanding shares of stock of the Corporation entitled to vote in the election of Directors (the "Voting Stock") (after giving effect to the provision of Article FOURTH), voting together as a single class. Such affirmative vote shall be required notwithstanding the fact that no vote may be required, or that a lesser percentage may be specified, by law or by any other provisions of this Certificate of Incorporation or any Preferred Stock Designation or in any agreement with any national securities exchange or otherwise.

The term "Business Combination" as used in this Article EIGHTH shall mean any transaction which is referred to in any one or more of paragraphs 1 through 5 of Section A of this Article EIGHTH.

B. The provisions of Section A of this Article EIGHTH shall not be applicable to any particular Business Combination, and such Business Combination shall require only the affirmative vote of the majority of the outstanding shares of capital stock entitled to vote (after giving effect, if required, to the provisions of Section C of Article FOURTH), or such vote as is required by law or by this Certificate of Incorporation, if, in the case of any Business Combination that does not involve any cash or other consideration being received by the stockholders of the Corporation solely in their capacity as stockholders of the Corporation, the condition specified in the following paragraph 1 is met or, in the case of any other Business Combination, all of the conditions specified in either of the following paragraphs 1 or 2 are met:

A. In addition to any affirmative vote required by law or this Certificate of Incorporation, and except as otherwise expressly provided in this section:

1. any merger or consolidation of the Corporation or any Subsidiary (as hereinafter defined) with (i) any Interested Stockholder (as hereinafter defined) or (ii) any other corporation (whether or not itself an Interested Stockholder) which is, or after such merger or consolidation would be, an Affiliate (as hereinafter defined) of an Interested Stockholder; or

2. any sale, lease, exchange, mortgage, pledge, transfer or other disposition (in one transaction or a series of transactions) to or with any Interested Stockholder, or any Affiliate of any Interested Stockholder, of any assets of the Corporation or any Subsidiary having an aggregate Fair Market Value (as hereinafter defined) equaling or exceeding 25% or more of the combined assets of the Corporation and its Subsidiaries; or

3. the issuance or transfer by the Corporation or any Subsidiary (in one transaction or a series of transactions) of any securities of the Corporation or any Subsidiary to any Interested Stockholder or any Affiliate of any Interested Stockholder in exchange for cash, securities or other property (or a combination thereof) having an aggregate Fair Market Value (as hereinafter defined) equaling or exceeding 25% of the combined Fair Market Value of the then-outstanding common stock of the Corporation and its Subsidiaries, except pursuant to an employee benefit plan of the Corporation or any Subsidiary thereof; or

4. the adoption of any plan or proposal for the liquidation or dissolution of the Corporation proposed by or on behalf of an Interested Stockholder or any Affiliate of an Interested Stockholder; or

5. any reclassification or combination of securities, or recapitalization of the Corporation, or any merger or consolidation of the Corporation with any of its Subsidiaries or any other transaction (whether or not with or into or otherwise involving an Interested Stockholder) which has the effect, directly or indirectly, of increasing the proportional share of the outstanding shares of any class of equity or convertible securities of the Corporation or any Subsidiary which is directly or indirectly owned by an Interested Stockholder or any Affiliate of an Interested Stockholder;

shall require the affirmative vote of the holders of at least 80% of the voting power of the then-outstanding shares of stock of the Corporation entitled to vote in the election of Directors (the "Voting Stock") (after giving effect to the provision of Article FOURTH), voting together as a single class. Such affirmative vote shall be required notwithstanding the fact that no vote may be required, or that a lesser percentage may be specified, by law or by any other provisions of this Certificate of Incorporation or any Preferred Stock Designation or in any agreement with any national securities exchange or otherwise.

The term "Business Combination" as used in this Article EIGHTH shall mean any transaction which is referred to in any one or more of paragraphs 1 through 5 of Section A of this Article EIGHTH.

B. The provisions of Section A of this Article EIGHTH shall not be applicable to any particular Business Combination, and such Business Combination shall require only the affirmative vote of the majority of the outstanding shares of capital stock entitled to vote (after giving effect, if required, to the provisions of Section C of Article FOURTH), or such vote as is required by law or by this Certificate of Incorporation, if, in the case of any Business Combination that does not involve any cash or other consideration being received by the stockholders of the Corporation solely in their capacity as stockholders of the Corporation, the condition specified in the following paragraph 1 is met or, in the case of any other Business Combination, all of the conditions specified in either of the following paragraphs 1 or 2 are met:

1. The Business Combination shall have been approved by two-thirds of the Disinterested Directors (as hereinafter defined).

2. All of the following conditions shall have been met:

(a) The aggregate amount of the cash and the Fair Market Value as of the date of the consummation of the Business Combination of consideration other than cash to be received per share by the holders of Common Stock in such Business Combination shall at least be equal to the higher of the following:

(1) (if applicable) the Highest Per Share Price (as hereinafter defined), including any brokerage commissions, transfer taxes and soliciting dealers' fees, paid by the Interested Stockholder or any of its Affiliates for any shares of Common Stock acquired by it (i) within the two-year period immediately prior to the first public announcement of the proposal of the Business Combination (the "Announcement Date"), or (ii) in the transaction in which it became an Interested Stockholder, whichever is higher.

(2) the Fair Market Value per share of Common Stock on the Announcement Date or on the date on which the Interested Stockholder became an Interested Stockholder (such latter date is referred to in this Article EIGHTH as the “Determination Date”), whichever is higher.

(b) The aggregate amount of the cash and the Fair Market Value as of the date of the consummation of the Business Combination of consideration other than cash to be received per share by holders of shares of any class of outstanding Voting Stock other than Common Stock shall be at least equal to the highest of the following (it being intended that the requirements of this subparagraph (b) shall be required to be met with respect to every such class of outstanding Voting Stock, whether or not the Interested Stockholder has previously acquired any shares of a particular class of Voting Stock):

(1) (if applicable) the Highest Per Share Price (as hereinafter defined), including any brokerage commissions, transfer taxes and soliciting dealers’ fees, paid by the Interested Stockholder for any shares of such class of Voting Stock acquired by it (i) within the two-year period immediately prior to the Announcement Date, or (ii) in the transaction in which it became an Interested Stockholder, whichever is higher;

(2) (if applicable) the highest preferential amount per share to which the holders of shares of such class of Voting Stock are entitled in the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation; and

(3) the Fair Market Value per share of such class of Voting Stock on the Announcement Date or on the Determination Date, whichever is higher.

(c) The consideration to be received by holders of a particular class of outstanding Voting Stock (including Common Stock) shall be in cash or in the same form as the Interested Stockholder has paid for shares of such class of Voting Stock. If the Interested Stockholder has previously paid for shares of any class of Voting Stock with varying forms of consideration, the form of consideration to be received per share by holders of shares of such class of Voting Stock shall be either cash or the form used to acquire the largest number of shares of such class of Voting Stock previously acquired by the Interested Stockholder. The price determined in accordance with subparagraph B.2 of this Article EIGHTH shall be subject to appropriate adjustment in the event of any stock dividend, stock split, combination of shares or similar event.

(d) After such Interested Stockholder has become an Interested Stockholder and prior to the consummation of such Business Combination: (1) except as approved by a majority of the Disinterested Directors, there shall have been no failure to declare and pay at the regular date therefor any full quarterly dividends (whether or not cumulative) on any outstanding stock having preference over the Common Stock as to dividends or liquidation; (2) there shall have been (i) no reduction in the annual rate of dividends paid on the Common Stock (except as necessary to reflect any subdivision of the Common Stock), except as approved by a majority of the Disinterested Directors, and (ii) an increase in such annual rate of dividends as necessary to reflect any reclassification (including any reverse stock split), recapitalization, reorganization or any similar transaction which has the effect of reducing the number of outstanding shares of the Common Stock, unless the failure to so increase such annual rate is approved by a majority of the Disinterested Directors; and (3) neither such Interested Stockholder or any of its Affiliates shall have become the beneficial owner of any additional shares of Voting Stock except as part of the transaction which results in such Interested Stockholder becoming an Interested Stockholder.

(e) After such Interested Stockholder has become an Interested Stockholder, such Interested Stockholder shall not have received the benefit, directly or indirectly (except proportionately as a stockholder), of any loans, advances, guarantees, pledges or other financial assistance or any tax credits or other tax advantages provided by the Corporation, whether in anticipation of or in connection with such Business Combination or otherwise.

(f) A proxy or information statement describing the proposed Business Combination and complying with the requirements of the Securities Exchange Act of 1934 and the rules and regulations thereunder (or any subsequent provisions replacing such Act, rules or regulations) shall be mailed to stockholders of the Corporation at least 30 days prior to the consummation of such Business Combination (whether or not such proxy or information statement is required to be mailed pursuant to such Act or subsequent provisions).

C. For the purposes of this Article EIGHTH:

1. A "Person" shall include an individual, a group acting in concert, a corporation, a partnership, an association, a joint venture, a pool, a joint stock company, a trust, an unincorporated organization or similar company, a syndicate or any other group formed for the purpose of acquiring, holding or disposing of securities.

2. "Interested Stockholder" shall mean any person (other than the Corporation or any holding company or Subsidiary thereof) who or which:

(a) is the beneficial owner, directly or indirectly, of more than 10% of the voting power of the outstanding Voting Stock; or

(b) is an Affiliate of the Corporation and at any time within the two-year period immediately prior to the date in question was the beneficial owner, directly or indirectly, of 10% or more of the voting power of the then-outstanding Voting Stock; or

(c) is an assignee of or has otherwise succeeded to any shares of Voting Stock which were at any time within the two-year period immediately prior to the date in question beneficially owned by an Interested Stockholder, if such assignment or succession shall have occurred in the course of a transaction or series of transactions not involving a public offering within the meaning of the Securities Act of 1933.

3. For purposes of this Article EIGHTH, "beneficial ownership" shall be determined in the manner provided in Section C of Article FOURTH hereof.

4. "Affiliate" and "Associate" shall have the respective meanings ascribed to such terms in Rule 12b-2 of the General Rules and Regulations under the Securities Exchange Act of 1934, as in effect on the date of filing of this Certificate of Incorporation.

5. "Subsidiary" means any corporation of which a majority of any class of equity security is owned, directly or indirectly, by the Corporation; provided, however, that for the purposes of the definition of Interested Stockholder set forth in paragraph 2 of this section, the term "Subsidiary" shall mean only a corporation of which a majority of each class of equity security is owned, directly or indirectly, by the Corporation.

6. "Disinterested Director" means any member of the Board of Directors who is unaffiliated with the Interested Stockholder and was a member of the Board of Directors prior to the time that the Interested Stockholder became

an Interested Stockholder, and any Director who is thereafter chosen to fill any vacancy of the Board of Directors or who is elected and who, in either event, is unaffiliated with the Interested Stockholder and in connection with his or her initial assumption of office is recommended for appointment or election by a majority of Disinterested Directors then on the Board of Directors.

7. "Fair Market Value" means: (a) in the case of stock, the highest closing sales price of the stock during the 30-day period immediately preceding the date in question of a share of such stock on the National Association of Securities Dealers Automated Quotation System or any system then in use, or, if such stock is admitted to trading on a principal United States securities exchange registered under the Securities Exchange Act of 1934, Fair Market Value shall be the highest sales price reported during the 30-day period preceding the date in question, or, if no such quotations are available, the Fair Market Value on the date in question of a share of such stock as determined by the Board of Directors in good faith, in each case with respect to any class of stock, appropriately adjusted for any dividend or distribution in shares of such stock or any stock split or reclassification of outstanding shares of such stock into a greater number of shares of such stock or any combination or reclassification of outstanding shares of such stock into a smaller number of shares of such stock, and (b) in the case of property other than cash or stock, the Fair Market Value of such property on the date in question as determined by the Board of Directors in good faith.

8. Reference to "Highest Per Share Price" shall in each case with respect to any class of stock reflect an appropriate adjustment for any dividend or distribution in shares of such stock or any stock split or reclassification of outstanding shares of such stock into a greater number of shares of such stock or any combination or reclassification of outstanding shares of such stock into a smaller number of shares of such stock.

9. In the event of any Business Combination in which the Corporation survives, the phrase "consideration other than cash to be received" as used in subparagraphs (a) and (b) of paragraph 2 of Section B of this Article EIGHTH shall include the shares of Common Stock and/or the shares of any other class of outstanding Voting Stock retained by the holders of such shares.

D. A majority of the Directors of the Corporation shall have the power and duty to determine for the purposes of this Article EIGHTH, on the basis of information known to them after reasonable inquiry: (a) whether a person is an Interested Stockholder; (b) the number of shares of Voting Stock beneficially owned by any person; (c) whether a person is an Affiliate or Associate of another; and (d) whether the assets which are the subject of any Business Combination have, or the consideration to be received for the issuance or transfer of securities by the Corporation or any Subsidiary in any Business Combination has, an aggregate Fair Market Value equaling or exceeding 25% of the combined Fair Market Value of the common stock of the Corporation and its Subsidiaries. A majority of the Directors shall have the further power to interpret all of the terms and provisions of this Article EIGHTH.

E. Nothing contained in this Article EIGHTH shall be construed to relieve any Interested Stockholder from any fiduciary obligation imposed by law.

F. Notwithstanding any other provisions of this Certificate of Incorporation or any provision of law which might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any particular class or series of the Voting Stock required by law, this Certificate of Incorporation or any Preferred Stock Designation, the affirmative vote of the holders of at least 80 percent of the voting power of all of the then-outstanding shares of the Voting Stock, voting together as a single class, shall be required to alter, amend or repeal this Article EIGHTH.

NINTH: The Board of Directors of the Corporation, when evaluating any offer of another Person (as defined in Article EIGHTH hereof) to (A) make a tender or exchange offer for any equity security of the Corporation, (B) merge or consolidate the Corporation with another corporation or entity or (C) purchase or otherwise acquire all or substantially all of the properties and assets of the Corporation, may, in connection with the exercise of its judgment in determining what is in the best interest of the Corporation and its stockholders, give due consideration to all relevant factors, including, without limitation, the social and economic effect of acceptance of such offer on: the Corporation's present and future customers and employees and those of its Subsidiaries (as defined in Article EIGHTH hereof); the communities in which the Corporation and its Subsidiaries operate or are located; the ability of the Corporation to fulfill its corporate objectives as a savings or bank holding company; and the ability of its subsidiary bank to fulfill its corporate objectives under applicable statutes and regulations.

TENTH:

A. Each person who was or is made a party or is threatened to be made a party to or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (hereinafter a "proceeding"), by reason of the fact that he or she is or was a Director or an Officer of the Corporation or is or was serving at the request of the Corporation as a Director, Officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit plan (hereinafter an "indemnitee"), whether the basis of such proceeding is alleged action in an official capacity as a Director, Officer, employee or agent or in any other capacity while serving as a Director, Officer, employee or agent, shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the Delaware General Corporation Law, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), against all expense, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such indemnitee in connection therewith; provided, however, that, except as provided in Section C hereof with respect to proceedings to enforce rights to indemnification, the Corporation shall indemnify any such indemnitee in connection with a proceeding (or part thereof) initiated by such indemnitee only if such proceeding (or part thereof) was authorized by the Board of Directors of the Corporation.

B. The right to indemnification conferred in Section A of this Article TENTH shall include the right to be paid by the Corporation the expenses incurred in defending any such proceeding in advance of its final disposition (hereinafter an "advancement of expenses"); provided, however, that, if the Delaware General Corporation Law requires, an advancement of expenses incurred by an indemnitee in his or her capacity as a Director or Officer (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the Corporation of an undertaking (hereinafter an "undertaking"), by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal (hereinafter a "final adjudication") that such indemnitee is not entitled to be indemnified for such expenses under this Section or otherwise. The rights to indemnification and to the advancement of expenses conferred in Sections A and B of this Article TENTH shall be contract rights and such rights shall continue as to an indemnitee who has ceased to be a Director, Officer, employee or agent and shall inure to the benefit of the indemnitee's heirs, executors and administrators.

C. If a claim under Section A or B of this Article TENTH is not paid in full by the Corporation within sixty days after a written claim has been received by the Corporation, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be twenty days, the indemnitee may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim. If successful in whole or in part in any such suit, or in a suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the indemnitee shall be entitled to be paid also the expense of prosecuting or defending such suit. In (i) any suit brought by the indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the indemnitee to enforce a right to an advancement of expenses) it shall be a defense that, and (ii) in any suit by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking the Corporation shall be entitled to recover such expenses upon a final adjudication that, the indemnitee has not met any applicable standard for indemnification set forth in the Delaware General Corporation Law. Neither the failure of the Corporation (including its Board of Directors, independent legal counsel, or its stockholders) to have made a determination prior to the commencement of such suit that indemnification of the indemnitee is proper in the circumstances because the indemnitee has met the applicable standard of conduct set forth in the Delaware General Corporation Law, nor an actual determination by the Corporation (including its Board of Directors, independent legal counsel, or its stockholders) that the indemnitee has not met such applicable standard of conduct, shall create a presumption that the indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the indemnitee, be a defense to such suit. In any suit brought by the indemnitee to enforce a right to indemnification or to an advancement of expenses hereunder, or by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article TENTH or otherwise shall be on the Corporation.

D. The rights to indemnification and to the advancement of expenses conferred in this Article TENTH shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, the Corporation's Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested Directors or otherwise.

E. The Corporation may maintain insurance, at its expense, to protect itself and any Director, Officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise against any expense, liability

or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the Delaware General Corporation Law.

F. The Corporation may, to the extent authorized from time to time by the Board of Directors, grant rights to indemnification and to the advancement of expenses to any employee or agent of the Corporation to the fullest extent of the provisions of this Article TENTH with respect to the indemnification and advancement of expenses of Directors and Officers of the Corporation.

ELEVENTH: A Director of this Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a Director, except for liability (i) for any breach of the Director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which the Director derived an improper personal benefit. If the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of Directors, then the liability of a Director of the Corporation shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

Any repeal or modification of the foregoing paragraph by the stockholders of the Corporation shall not adversely affect any right or protection of a Director of the Corporation existing at the time of such repeal or modification.

TWELFTH: The Corporation reserves the right to amend or repeal any provision contained in this Certificate of Incorporation in the manner prescribed by the laws of the State of Delaware and all rights conferred upon stockholders are granted subject to this reservation; provided, however, that, notwithstanding any other provision of this Certificate of Incorporation or any provision of law which might otherwise permit a lesser vote or no vote, but in addition to any vote of the holders of any class or series of the stock of the Corporation required by law or by this Certificate of Incorporation, the affirmative vote of the holders of at least 80 percent of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of Directors (after giving effect to the provisions of Article FOURTH), voting together as a single class, shall be required to amend or repeal this Article TWELFTH, Section C of Article FOURTH, Sections C or D of Article FIFTH, Article SIXTH, Article SEVENTH, Article EIGHTH or Article TENTH.

THIRTEENTH: The name and mailing address of the sole incorporator are as follows:

Name	**Mailing Address**
Edward A. Quint	5335 Wisconsin Avenue, N.W. Suite 400 Washington, D.C. 20015

IN WITNESS WHEREOF, the Corporation has caused this Amended and Restated Certificate of Incorporation to be signed by Jack L. Kopnisky, President and Chief Executive Officer, as of the 13th day of June 2017.

By: /s/ Jack L. Kopnisky
Jack Kopnisky
Its: President and Chief Executive Officer

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Section 3: EX-31.1 (EXHIBIT 31.1)

Exhibit 31.1

Certification of Principal Executive Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jack Kopnisky, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Sterling Bancorp;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over 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 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 2, 2018

By: */s/ Jack Kopnisky*
Jack Kopnisky
President, Chief Executive Officer and Director
(Principal Executive Officer)

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Section 4: EX-31.2 (EXHIBIT 31.2)

Exhibit 31.2

Certification of Principal Financial Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Luis Massiani, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Sterling Bancorp;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over 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 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 2, 2018

By: */s/ Luis Massiani*

Luis Massiani
Senior Executive Vice President
Chief Financial Officer
Principal Accounting Officer
(Principal Financial Officer)

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Section 5: EX-32.0 (EXHIBIT 32.0)

Exhibit 32

Certification of Principal Executive Officer and Principal Financial Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Jack Kopnisky, Chief Executive Officer and Luis Massiani, Chief Financial Officer of Sterling Bancorp (the "Company") each certify in his capacity as an officer of the Company that he has reviewed the Quarterly Report on Form 10-Q for the nine months ended September 30, 2018 and that to the best of his knowledge:

(1) the report fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934; and
(2) the information contained in the report fairly presents, in all material respects, the financial condition and results of operations of the

Company.

Date:	November 2, 2018	By:	*/s/ Jack Kopnisky*
			Jack Kopnisky President, Chief Executive Officer and Director (Principal Executive Officer)
Date:	November 2, 2018	By:	*/s/ Luis Massiani*
			Luis Massiani Senior Executive Vice President Chief Financial Officer Principal Accounting Officer (Principal Financial Officer)

A signed original of this written statement required by Section 906 has been provided to Sterling Bancorp and will be retained by Sterling Bancorp and furnished to the Securities and Exchange Commission or its staff upon request.

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