

CHEMUNG FINANCIAL CORP
Form 10-K
March 13, 2019

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

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 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 0-13888

CHEMUNG FINANCIAL CORPORATION

(Exact name of registrant as specified in its charter)

NEW YORK

16-123703-8

(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification No.)

One Chemung Canal Plaza, Elmira, New York

14901

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: (607) 737-3711

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

Title of each class Name of each exchange on which registered

Common Stock, Par Value \$0.01 Per Share Nasdaq Stock Market, LLC

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

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

YES NO

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES NO

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES NO

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). YES NO

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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 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.

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

Based upon the closing price of the registrant's Common Stock as of June 30, 2018, the aggregate market value of the voting stock held by non-affiliates of the registrant was \$186,370,733.

As of March 12, 2019, there were 4,835,472 shares of Common Stock, \$0.01 par value, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the Annual Meeting of Shareholders to be held on May 9, 2019 are incorporated by reference into Part III, Items 10, 11, 12, 13, and 14 of this Form 10-K.

CHEMUNG FINANCIAL CORPORATION

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SIGNATURES

Some of the information contained in this report concerning the markets and industry in which we operate is derived from publicly available information and from industry sources. Although we believe that this publicly available information and information provided by these industry sources are reliable, we have not independently verified the accuracy of any of this information.

To assist the reader, the Corporation has provided the following list of commonly used abbreviations and terms included in Parts I through IV.

Abbreviations

AFS	Available for sale securities
ALCO	Asset-Liability Committee
AOCI	Accumulated Other Comprehensive Income
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
Bank	Chemung Canal Trust Company
Basel I	The First Basel Accord of the Basel Committee on Banking Supervision
Basel III	The Third Basel Accord of the Basel Committee on Banking Supervision
BHCA	Bank Holding Company Act of 1956
Board of Directors	Board of Directors of Chemung Financial Corporation
BOLI	Bank Owned Life Insurance
CAPM	Capital Asset Pricing Model
CDARS	Certificate of Deposit Account Registry Service
CDO	Collateralized Debt Obligation
CFPB	Consumer Financial Protection Bureau
CFS	CFS Group, Inc.
Corporation	Chemung Financial Corporation
CRA	Community Reinvestment Act
CRM	Chemung Risk Management, Inc.
DIF	Deposit Insurance Fund
Dodd-Frank Act	The Dodd-Frank Wall Street Reform and Consumer Protection Act
ECOA	Equal Credit Opportunity Act
EPS	Earnings per share
Exchange Act	Securities Exchange Act of 1934
FACT Act	Fair and Accurate Credit Transactions Act of 2003
FASB	Financial Accounting Standards Board
FCRA	Fair Credit Reporting Act
FDIA	Federal Deposit Insurance Act
FDIC	Federal Deposit Insurance Corporation
FFIEC	Federal Financial Institution Examination Council
FHLBNY	Federal Home Loan Bank of New York
FICO	Financing Corporation
FINRA	Financial Industry Regulatory Authority
FOFC	Fort Orange Financial Corporation
FRB	Board of Governors of the Federal Reserve System
FRBNY	Federal Reserve Bank of New York
Freddie Mac	Federal Home Loan Mortgage Corporation
FTC	Federal Trade Commission
GAAP	U.S. Generally Accepted Accounting Principles
GLB Act	Gramm-Leach-Bliley Act

HTM	Held to maturity securities
ICS	Insured Cash Sweep Service
IPS	Investment Policy Statement

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LIBOR	London Interbank Offered Rate
MD&A	Management's Discussion and Analysis of Financial Condition and Results of Operations
NAICS	North American Industry Classification System
N/M	Not meaningful
NYSDFS	New York State Department of Financial Services
OCC	Office of the Comptroller of the Currency
OPEB	Other postemployment benefits
OREO	Other real estate owned
OTTI	Other-than-temporary impairment
PCI	Purchased credit impaired
Regulatory Relief Act	The Economic Growth, Regulatory Relief and Consumer Protection Act of 2018
RESPA	Real Estate Settlement Procedures Act
Riegle-Neal Act	Riegle-Neal Interstate Banking and Branching Efficiency Act
ROA	Return on average assets
ROE	Return on average equity
RWA	Risk-weighted assets
SBA	Small Business Administration
SEC	U.S. Securities and Exchange Commission
Security Guidelines	Interagency Guidelines Establishing Information Security Standards
Securities Act	Securities Act of 1933
Sarbanes-Oxley	Sarbanes-Oxley Act of 2002
Tax Act	Tax Cuts and Jobs Act of 2017
TDRs	Troubled debt restructurings
TILA	Truth in Lending Act
TRID Rule	TILA-RESPA Integrated Disclosure Rule
USA PATRIOT Act	Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001
WMG	Wealth Management Group

Terms

Accumulated benefit obligation	An approximate measure of the pension plan liability, which is based on the assumption that the pension plan is to be terminated immediately and does not consider any future salary increases.
Allowance for loan losses to total loans	Represents period-end allowance for loan losses divided by retained loans.
Assets under administration	Represents assets that are beneficially owned by clients and all investment decisions pertaining to these assets are also made by clients.
Assets under management	Represents assets that are managed on behalf of clients.
Basel I	A set of international banking regulations, which set out the minimum capital requirements of financial institutions with the goal of minimizing credit risk. The main focus was mainly on credit risk by creating a bank asset classification system.
Basel III	A comprehensive set of reform measures designed to improve the regulation, supervision, and risk management within the banking sector. The reforms require banks to maintain proper leverage ratios and meet certain capital requirements.
Benefit obligation	Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

Capital Bank

Division of Chemung Canal Trust Company located in the “Capital Region” of New York State and includes the counties of Albany and Saratoga.

Captive insurance company

A company that provides risk-mitigation services for its parent company.

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CDARS	Product involving a network of financial institutions that exchange certificates of deposits among members in order to ensure FDIC insurance coverage on customer deposits above the single institution limit. Using a sophisticated matching system, funds are exchanged on a dollar-for-dollar basis, so that the equivalent of an original deposit comes back to the originating institution.
Collateralized debt obligation	A structured financial product that pools together cash flow-generating assets, such as mortgages, bonds, and loans.
Collateralized mortgage obligations	A type of mortgage-backed security with principal repayments organized according to their maturities and into different classes based on risk. The mortgages serve as collateral and are organized into classes based on their risk profile.
Dodd-Frank Act	The Dodd-Frank Act was enacted on July 21, 2010 and significantly changed the bank regulatory landscape and has impacted and will continue to impact the lending, deposit, investment, trading and operating activities of financial institutions and their holding companies. The Dodd-Frank Act requires various federal agencies to adopt a broad range of new rules and regulations, and to prepare various studies and reports for Congress.
Economic Growth, Regulatory Relief, and Consumer Protection Act	The Economic Growth, Regulatory Relief, and Consumer Protection Act was signed on May, 24 2018 and repeals or modifies certain provisions to the Dodd-Frank Act and will ease certain regulations on all but the largest banks.
Fully taxable equivalent basis	Income from tax-exempt loans and investment securities that have been increased by an amount equivalent to the taxes that would have been paid if this income were taxable at statutory rates; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.
GAAP	Accounting principles generally accepted in the United States of America.
Holding company	Consists of the operations for Chemung Financial Corporation (parent only).
ICS	Product involving a network of financial institutions that exchange interest-bearing money market deposits among members in order to ensure FDIC insurance coverage on customer deposits above the single institution limit. Using a sophisticated matching system, funds are exchanged on a dollar-for-dollar basis, so that the equivalent of an original deposit comes back to the originating institution.
Loans held for sale	Residential real estate loans originated for sale on the secondary market with maturities from 15-30 years.
Long term lease obligation	An obligation extending beyond the current year, which is related to a long term capital lease that is considered to have the economic characteristics of asset ownership.
Mortgage-backed securities	A type of asset-backed security that is secured by a collection of mortgages.
Municipal clients	A political unit, such as a city, town, or village, incorporated for local self-government.
N/A	Data is not applicable or available for the period presented.
N/M	Data is not meaningful in context presented.
Non-GAAP	A calculation not made according to GAAP.
Obligations of state and political subdivisions	An obligation that is guaranteed by the full faith and credit of a state or political subdivision that has the power to tax.
Obligations of U.S. Government	A federally guaranteed obligation backed by the full power of the U.S. government, including Treasury bills, Treasury notes and Treasury bonds.
Obligations of U.S. Government sponsored enterprise obligations	Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.
OREO	Represents real property owned by the Corporation, which is not directly related to its business and is most frequently the result of a foreclosure on real property.

OTTI	Impairment charge taken on a security whose fair value has fallen below the carrying value on the balance sheet and whose value is not expected to recover through the holding period of the security.
PCI loans	Represents loans that were acquired in the Fort Orange Financial Corp. transaction and deemed to be credit-impaired on the acquisition date in accordance with the guidance of FASB.

Political subdivision	A county, city, town, or other municipal corporation, a public authority, or a publicly-owned entity that is an instrumentality of a state or a municipal corporation.
Pre-provision profit/(loss)	Represents total net revenue less non-interest expense, before income tax expense (benefit). The Corporation believes that this financial measure is useful in assessing the ability of a bank to generate income in excess of its provision for credit losses.
Projected benefit obligation	An approximate measure of the pension plan liability, which is based on the assumption that the plan will not terminate in the near future and that employees will continue to work and receive future salary increases.
Regulatory Relief Act	The Regulatory Relief Act was signed on May, 24 2018 and repeals or modifies certain provisions to the Dodd-Frank Act and will ease certain regulations on all but the largest banks.
RWA	Risk-weighted assets, which is used to calculate regulatory capital ratios, consist of on- and off-balance sheet assets that are assigned to one of several broad risk categories and weighted by factors representing their risk and potential for default. On-balance sheet assets are risk-weighted based on the perceived credit risk associated with the obligor or counterparty, the nature of any collateral, and the guarantor, if any. Off-balance sheet assets such as lending-related commitments, guarantees, derivatives and other applicable off-balance sheet positions are risk-weighted by multiplying the contractual amount by the appropriate credit conversion factor to determine the on-balance sheet credit equivalent amount, which is then risk-weighted based on the same factors used for on-balance sheet assets. Risk-weighted assets also incorporate a measure for market risk related to applicable trading assets-debt and equity instruments. The resulting risk-weighted values for each of the risk categories are then aggregated to determine total risk-weighted assets.
SBA loan pools	Business loans partially guaranteed by the SBA.
Securities sold under agreements to repurchase	Sale of securities together with an agreement for the seller to buy back the securities at a later date.
TDR	A TDR is deemed to occur when the Corporation modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.
Trust preferred securities	A hybrid security with characteristics of both subordinated debt and preferred stock which allows for early redemption by the issuer, makes fixed or variable payments, and matures at face value.
Unaudited	Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.
WMG	Provides services as executor and trustee under wills and agreements, and guardian, custodian, trustee and agent for pension, profit-sharing and other employee benefit trusts, as well as various investment, financial planning, pension, estate planning and employee benefit administration services.

PART I

ITEM 1. BUSINESS

General

The Corporation was incorporated on January 2, 1985 under the laws of the State of New York and is headquartered in Elmira, NY. The Corporation was organized for the purpose of acquiring the Bank. The Bank was established in 1833 under the name Chemung Canal Bank, and was subsequently granted a New York State bank charter in 1895. In 1902, the Bank was reorganized as a New York State trust company under the name Elmira Trust Company, and its name was changed to Chemung Canal Trust Company in 1903.

The Corporation became a financial holding company in June 2000. Financial holding company status provided the Corporation with the flexibility to offer an array of financial services, such as insurance products, mutual funds, and brokerage services, which provide additional sources of fee based income and allow the Corporation to better serve its customers. The Corporation established a financial services subsidiary, CFS, in September 2001 which offers non-banking financial services such as mutual funds, annuities, brokerage services, insurance and tax preparation services. The Corporation established a captive insurance subsidiary, CRM,

based in the State of Nevada in May 2016, which insures gaps in commercial coverage and uninsured exposures in the Corporation's current insurance coverages and allows the Corporation to strengthen its overall risk management program.

The Corporation's Board of Directors has concluded that the expansion of the franchise's geographic footprint, an increase in the Bank's earning assets, and the generation of new sources of non-interest income are important components of its strategic plan. Over the last 11 years, the Corporation and the Bank have completed the following transactions to grow the franchise:

On March 14, 2008, the Bank acquired three branches from Manufacturers and Traders Trust Company in the New York counties of Broome and Tioga. At the time of the acquisition, the Bank assumed \$64.4 million in deposits and acquired \$12.6 million in loans.

On May 29, 2009, the Corporation acquired Canton Bancorp, Inc., the holding company of Bank of Canton based in Canton, Pennsylvania. At the time of the merger, Canton Bancorp, Inc. had \$81.1 million in assets, \$58.8 million in loans and \$72.9 million in deposits.

- On April 8, 2011, the Corporation acquired FOFC, the holding company of Capital Bank & Trust Company based in Albany, New York. At the time of the merger, Capital Bank had \$254.4 million in assets, \$170.7 million in loans and \$199.2 million in deposits.

- On November 23, 2013, the Bank completed the acquisition of six branch offices from Bank of America located in Cayuga, Cortland, Seneca, and Tompkins counties in New York. As part of the transaction, the Corporation acquired \$177.7 million in deposits and \$1.2 million in loans.

As a result of these transactions and organic growth, the Corporation had \$1.755 billion in consolidated assets, \$1.312 billion in loans, \$1.569 billion in deposits, and \$165.0 million in shareholders' equity at December 31, 2018.

Growth Strategy

The Corporation's growth strategy is to leverage its expanding branch and digital network in current or new markets to build client relationships and grow loans and deposits. Consistent with the Corporation's community banking model, emphasis is placed on acquiring stable, low-cost deposits, primarily checking account deposits and other low interest-bearing deposits to fund high-quality loans. Expanding the branch network involves branch purchases or opening de novo branches in contiguous markets and acquiring other financial institutions in the Northeast. The Corporation evaluates acquisition targets based on the economic viability of the markets they are in, the degree to which they can be effectively integrated into the Corporation's current operations and the degree to which they are accretive to capital and earnings.

Description of Business

The Corporation, through the Bank and CFS, provides a wide range of financial services, including demand, savings and time deposits, commercial, residential and consumer loans, interest rate swaps, letters of credit, wealth management services, employee benefit plans, insurance products, mutual funds and brokerage services. The Bank derives its income primarily from interest and fees on loans, interest on investment securities, WMG fee income, and fees received in connection with deposit and other services. The Bank's operating expenses are interest expense paid on deposits and borrowings, salaries and employee benefit plans and general operating expenses.

CRM, a wholly-owned subsidiary of the Corporation which was formed and began operations on May 31, 2016, is a Nevada-based captive insurance company which insures against certain risks unique to the operations of the Corporation and its subsidiaries and for which insurance may not be currently available or economically feasible in today's insurance marketplace. CRM pools resources with several other similar insurance company subsidiaries of

financial institutions to spread a limited amount of risk among themselves. CRM is subject to regulations of the State of Nevada and undergoes periodic examinations by the Nevada Division of Insurance.

In order to compete with other financial services companies, the Corporation relies upon personal relationships established with clients by its officers, employees, and directors. The Corporation has maintained a strong community orientation by supporting the active participation of officers and employees in local charitable, civic, school, religious, and community development activities. The Corporation believes that its emphasis on local relationship banking together with a prudent approach to lending are important factors in its success and growth.

Lending Activities

Lending Strategy

The Corporation's objective is to channel deposits gathered locally into high-quality, market-yielding loans without taking unacceptable credit and/or interest rate risk. The Corporation seeks to have a diversified loan portfolio consisting of commercial and agricultural loans, commercial mortgages, residential mortgages, home equity lines of credit and home equity term loans, consumer and indirect auto loans. The Bank operates with a traditional community bank model where the relationship manager possesses credit skills and has significant influence over credit decisions. This creates value since clients and prospects know they are dealing with a decision maker.

Lending Authority

The Board of Directors establishes the lending policies, underwriting standards, and loan approval limits of the Bank. In accordance with those policies, the Board of Directors has designated certain officers to consider and approve loans within their designated authority. These officers exercise substantial authority over credit and pricing decisions, subject to loan committee approval for larger credits. The Bank recognizes that exceptions to the lending policies may occasionally occur and has established procedures for approving exceptions to these policies.

In underwriting loans, primary emphasis is placed on the borrower's financial condition, including ability to generate cash flow to support the debt and other cash expenses. In addition, substantial consideration is given to collateral value and marketability as well as the borrower's character, reputation and other relevant factors. Interest rates charged by the Bank vary with degree of risk, type, size, complexity, repricing frequency, and other relevant factors associated with the loans. Competition from other financial services companies also impacts interest rates charged on loans.

The Corporation has also implemented reporting systems to monitor loan originations, loan quality, concentration of credit, loan delinquencies, non-performing loans, and potential problem loans.

Lending Segments

The Bank segments its loan portfolio into the following major lending categories: (i) commercial and agricultural, (ii) commercial mortgages, (iii) residential mortgages, and (iv) consumer loans.

Commercial and agricultural loans primarily consist of loans to small to mid-sized businesses in the Bank's market area in a diverse range of industries. These loans are of higher risk and typically are made on the basis of the borrower's ability to make repayment from the cash flow of the borrower's business. Further, the collateral securing the loans may depreciate over time, may be difficult to appraise and may fluctuate in value. The credit risk related to commercial loans is largely influenced by general economic conditions and the resulting impact on a borrower's operations or on the value of underlying collateral, if any.

Commercial mortgage loans generally have larger balances and involve a greater degree of risk than residential mortgage loans, and they, therefore, pose higher potential losses on an individual customer basis. Loan repayment is often dependent on the successful operation and management of the properties and/or the businesses occupying the properties, as well as on the collateral securing the loan. Economic events or conditions in the real estate market could have an adverse impact on the cash flows generated by properties securing the Bank's commercial real estate loans and on the value of such properties.

The Bank offers interest rate swaps to certain larger commercial mortgage borrowers. These swaps allow the Bank to originate a mortgage based on short-term LIBOR rates and allow the borrower to swap into a longer term fixed rate. The Bank simultaneously sells an offsetting back-to-back swap to an investment grade national bank so that it does not retain this fixed-rate risk. The swap agreements are free-standing derivatives and are recorded at fair value in the Bank's consolidated balance sheets.

The Bank offers fixed-rate and adjustable-rate residential mortgage loans to individuals with maturities of up to 30 years that are fully amortizing with monthly loan payments. Mortgages are generally underwritten according to U.S. government sponsored enterprise guidelines designated as "A" or "A-" and referred to as "conforming loans". The Bank also originates jumbo loans above conforming loan amounts which generally are consistent with secondary market guidelines for these loans; however, these are typically held for investment. The Bank does not offer subprime mortgage lending program. The Bank's secondary market lending is sold on a servicing-retained basis. Residential mortgage loans are generally made on the basis of the borrower's ability to make repayment from his or her employment and other income, and are secured by real property whose value tends to be more easily ascertainable. Credit risk for these types of loans is generally influenced by general economic conditions, the characteristics of individual borrowers and the nature of the loan collateral.

The consumer loan segment includes home equity lines of credit and home equity loans, which exhibit many of the same risk characteristics as residential mortgages. Indirect and other consumer loans may entail greater credit risk than residential mortgage and home equity loans, particularly in the case of other consumer loans which are unsecured or, in the case of indirect consumer loans, secured by depreciable assets, such as automobiles, recreational vehicles, or boats. In such cases, any repossessed collateral for a defaulted consumer loan may not provide an adequate source of repayment of the outstanding loan balance. In addition, consumer loan collections are dependent on the borrower's continuing financial stability, thus are more likely to be affected by adverse personal circumstances such as job loss, illness, or personal bankruptcy. Furthermore, the application of various federal and state laws, including bankruptcy and insolvency laws, may limit the amount which can be recovered on such loans.

Funding Activities

Funding Strategy

The Corporation's deposit strategy is to fund the Bank with stable, low-cost deposits, primarily checking account deposits and low interest-bearing deposit accounts. A checking account is the driver of a banking relationship and consumers consider the bank where they have their checking account as their primary bank. These customers will typically turn to their primary bank first when in need of other financial services. The Corporation also considers brokered deposits to be an element of its deposit strategy and anticipates that it will continue using brokered deposits as a secondary source of funding to support growth. Borrowings may be used on a short-term basis for liquidity purposes or on a long-term basis to fund asset growth.

Funding Sources

The Corporation's primary sources of funds are deposits, principal and interest payments on loans and securities, borrowings and funds generated from operations of the Bank. The Bank also has access to advances from the FHLBNY, other financial institutions, and the FRBNY. Contractual loan payments are a relatively stable source of funds, while deposit inflows and outflows and loan prepayments are significantly influenced by general market interest rates and economic conditions.

The Corporation considers core deposits, consisting of non-interest-bearing and interest-bearing checking accounts, savings accounts, and insured money market accounts, to be a significant component of its deposits. The Corporation monitors the activity on these core deposits and, based on historical experience and pricing strategy, believes it will continue to retain a large portion of such accounts. The Bank is currently not limited with respect to the rates that it may offer on deposit products. The Bank believes it is competitive in the types of accounts and interest rates it has offered on its deposit products. The Bank regularly evaluates the internal cost of funds, surveys rates offered by competitors, reviews cash flow requirements for lending and liquidity, and executes rate changes when necessary as part of its asset/liability management, profitability and growth strategies.

The flow of deposits is influenced significantly by general economic conditions, changes in prevailing interest rates and competition. The Bank's deposits are obtained predominantly from the areas in which its retail offices are located. The Bank relies primarily on customer service, long-standing relationships and other banking services, including loans and wealth management services, to attract and retain these deposits. However, market interest rates and rates offered by competing financial institutions affect the Bank's ability to attract and retain deposits. The Bank utilizes a combination of traditional media, such as print, television, and radio, as well as digital advertising, such as social media and eBlasts, when advertising its deposit products.

The general objective of the Bank's investment portfolio is to provide liquidity when loan demand is high, and to absorb excess funds when demand is low. The securities portfolio also provides a medium for certain interest risk measures intended to maintain an appropriate balance between interest income from loans and total interest income. The Bank only invests in high-quality investment-grade securities. Investment decisions are made in accordance with the Bank's investment policy and include consideration of risk, return, duration, and portfolio concentrations.

Derivative Financial Instruments

The Bank offers interest rate swaps to commercial loan customers who wish to fix the interest rates on their loans, and the Bank matches these swaps with offsetting swaps with national bank counterparties. These swaps are considered free standing derivatives and are carried at fair value on the consolidated balance sheet in other assets and other liabilities, with gains and losses recorded through other non-interest income. The swaps are not designated as hedging derivatives. Additionally, the Bank participates in risk participation agreements with dealer banks on commercial loans in which it participates. The Bank receives an upfront fee for participating in the credit exposure of the interest rate swap associated with the commercial loan in which it is a participant and the fee received is recognized immediately in other non-interest income. The Bank is exposed to its share of the credit loss equal to the fair value of the interest rate swap in the event of nonperformance by the counterparty of the interest rate swap.

The Bank has a policy for managing its derivative financial instruments, and the policy and program activity are overseen by ALCO. Under the policy, derivative financial instruments with counterparties, who are not customers, are limited to a national financial institution. Cash and/or certain qualified securities are required to serve as collateral when exposures exceed \$100 thousand, with a minimum collateral coverage of \$150 thousand. The credit worthiness of the counterparty is reviewed internally by the Bank's credit department.

Wealth Management Strategy

With \$1.768 billion of assets under management or administration at December 31, 2018, including \$283.0 million of assets held under management or administration for the Corporation, WMG is responsible for the largest component of non-interest income. Wealth management services provided by the Bank include services as executor and trustee under wills and agreements, and guardian, custodian, trustee, and agent for pension, profit-sharing and other employee benefit trusts, as well as various investment, pension, estate planning, and employee benefit administrative services. The Corporation's growth strategy also includes the acquisition of trust businesses to generate new sources of fee income.

The Corporation offers an array of financial services including mutual funds, securities and insurance brokerage, tax preparation, and other services through CFS, its wholly owned subsidiary.

For additional information, including information concerning the results of operations of the Corporation and its subsidiaries, see Management's Discussion and Analysis of Financial Condition and Results of Operations in Part II, Item 7.

There were no material changes in the manner of doing business by the Corporation or its subsidiaries during the fiscal year ended December 31, 2018.

Market Area and Competition

The Bank operates 34 branch offices located in 12 counties in New York and Bradford County in Pennsylvania. Bank branch offices are located in the following New York counties: Chemung, where the Bank is headquartered, Broome, Cayuga, Cortland, Schuyler, Seneca, Steuben, Tioga and Tompkins. The Bank also operates under the name "Capital Bank, a division of Chemung Canal Trust Company," with branch offices located in Albany, Saratoga, and Schenectady counties in New York.

Albany, Saratoga, and Schenectady counties rely heavily on business related to New York State government activities, the nanotechnology industry, and colleges located within these counties. Tompkins County is dominated by the presence of Cornell University and Ithaca College. The world headquarters of Corning Incorporated, the region's

largest employer, is located in Steuben County. The remaining New York counties have a combination of service, small manufacturing and tourism related businesses, with colleges located in Broome, Chemung, and Cortland counties. Bradford County's largest employers are a combination of service and small manufacturing businesses, along with the natural gas industry.

Within all these market areas, the Bank encounters intense competition in the lending and deposit gathering aspects of its business from local, regional and national commercial banks and thrift institutions, credit unions and other providers of financial services, such as brokerage firms, investment companies, insurance companies and internet banking entities. The Bank also competes with non-financial institutions, including retail stores and certain utilities that maintain their own credit programs, as well as governmental agencies that make loans to certain borrowers. Many of these competitors are not subject to regulation as extensive as that affecting the Bank and, as a result, may have a competitive advantage over the Bank in certain respects. This is particularly true of credit unions because their pricing structure is not encumbered by the payment of income taxes.

Similarly, the competition for the Bank's wealth management services is primarily from local offices of national brokerage firms, independent investment advisors, national and regional banks as well as internet based brokerage and advisory firms. The Bank operates full-service wealth management centers in Chemung, Broome, and Albany counties in New York.

Employees

As of December 31, 2018, the Corporation and its subsidiaries employed 374 persons on a full-time equivalent basis. None of the Corporation's employees are covered by collective bargaining agreements. The Corporation provides its employees with a comprehensive benefit program, some of which is contributory. The Corporation believes that its relationship with its employees is good.

Available Information

The SEC maintains a web site at www.sec.gov that contains reports, proxy and information statements, and other information regarding the Corporation. In addition, the Corporation maintains a corporate web site at www.chemungcanal.com. The Corporation makes available free of charge through Bank's web site its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports filed with the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act. These items are available as soon as reasonably practicable after we electronically file or furnish such material with the SEC. The contents of the Bank's web site are not a part of this report. These materials are also available free of charge by written request to: Kathleen S. McKillip, Corporate Secretary, Chemung Financial Corporation, One Chemung Canal Plaza, Elmira, NY 14901.

Supervision and Regulation

The Corporation and the Bank are subject to comprehensive regulation, supervision and examination by regulatory authorities. Numerous statutes and regulations apply to the Corporation's and, to a greater extent, the Bank's operations, including required reserves, investments, loans, deposits, issuances of securities, payments of dividends and establishment of branches. Set forth below is a brief description of some of these laws and regulations. The description does not purport to be complete, and is qualified in its entirety by reference to the text of the applicable laws and regulations.

The Corporation

Bank Holding Company Act

The Corporation is a bank holding company registered with, and subject to regulation and examination by, the FRB pursuant to the BHCA, as amended. The FRB regulates and requires the filing of reports describing the activities of bank holding companies, and conducts periodic examinations to test compliance with applicable regulatory requirements. The FRB has enforcement authority over bank holding companies, including, among other things, the ability to assess civil money penalties, to issue cease and desist or removal orders, and to require a bank holding company to divest subsidiaries.

The Corporation generally may engage in the activities permissible for a bank holding company, which includes banking, managing or controlling banks, performing certain servicing activities for subsidiaries, and engaging in other activities that the FRB has determined to be so closely related to banking as to be a proper incident thereto, as set forth in the FRB's Regulation Y. As the Corporation has elected financial holding company status, it may also engage in a broader range of activities that are determined by the FRB and the Secretary of the Treasury to be financial in nature or incidental to financial activities or, with the prior approval of the FRB, activities that are determined by the FRB to

be complementary to a financial activity and that do not pose a substantial risk to the safety and soundness of depository institutions or the financial system generally.

The BHCA prohibits a bank holding company from acquiring direct or indirect ownership or control of more than 5% of the voting shares of any bank, or increasing such ownership or control of any bank, without the prior approval of the FRB.

Interstate Banking and Branching

Under the Riegle-Neal Act, subject to certain concentration limits and other requirements, adequately capitalized bank holding companies, such as the Corporation, are permitted to acquire banks and bank holding companies located in any state. Any bank that is a subsidiary of a bank holding company is permitted to receive deposits, renew time deposits, close loans, service loans, and receive loan payments as an agent for any other bank subsidiary of that bank holding company. Subject to certain conditions, bank are permitted to acquire branch offices outside of their home states by merging with out-of-state banks, purchasing branches in other states, and establishing de novo branch offices in other states.

In April 2008, banking regulators in the states of New Jersey, New York, and Pennsylvania entered into a Memorandum of Understanding (the "Interstate MOU") to clarify their respective roles, as home and host state regulators, regarding interstate branching activity on a regional basis pursuant to the Riegle-Neal Amendments Act of 1997. The Interstate MOU established the regulatory responsibilities of the respective state banking regulators regarding bank regulatory examinations and is intended to reduce the regulatory burden on state-chartered banks branching within the region by elimination duplicative host state compliance exams.

Under the Interstate MOU, the activities of branches the Bank established in Pennsylvania would be governed by New York state law to the same extent that the Federal law governs the activities of the branch of an out-of-state national bank in such host states. Issues regarding whether a particular host state law is preempted are to be determined in the first instance by the NYSDFS. In the event that the NYSDFS and the applicable host state regulator disagree regarding whether a particular host state law is pre-empted, the NYSDFS and the applicable host state regulator would use their reasonable best efforts to consider all points of view to resolve the disagreement.

New York Law

The Corporation is organized under New York law and is subject to the New York Business Corporation Law, which governs the rights and obligations of directors and shareholders and other corporate matters.

The Corporation is also a bank holding company as defined in the New York Banking Law by virtue of its ownership and control of the Bank. Generally, this means that the NYSDFS must approve the Corporation's acquisition of control of other banking institutions and similar transactions.

Federal Securities Law

The Corporation is subject to the information, reporting, proxy solicitation, insider trading, and other rules contained in the Exchange Act, the disclosure requirements of the Securities Act and the regulations of the SEC thereunder. In addition, the Corporation must comply with the corporate governance and listing standards of the Nasdaq Stock Market to maintain the listing of its common stock on the exchange. These standards include rules relating to a listed company's board of directors, audit committees and independent director oversight of executive compensation, the director nomination process, a code of conduct and shareholder meetings.

The SEC has adopted certain proxy disclosure rules regarding executive compensation and corporate governance, with which the Corporation must comply. They include: (i) disclosure of total compensation of key officers of the Corporation, including disclosure of restricted and unrestricted stock awards compensation; (ii) disclosure regarding any potential conflict of interest of any compensation consultants of the Corporation; (iii) disclosure regarding compensation committee independence and experience, qualifications, skills and diversity of its directors and any director nominees; (iv) "say-on-pay" disclosure; and (v) information relating to the leadership structure of the Corporation's Board of Directors and the Board of Directors' role in the risk management process.

Sarbanes-Oxley

The Corporation is also subject to Sarbanes-Oxley. Sarbanes-Oxley established laws affecting public companies' corporate governance, accounting obligations, and corporate reporting by: (i) creating a federal accounting oversight body; (ii) revamping auditor independence rules; (iii) enacting corporate responsibility and governance measures; (iv) enhancing disclosures by public companies, their directors, and their executive officers; (v) strengthening the powers and resources of the SEC; and (vi) imposing criminal and civil penalties for securities fraud and related wrongful conduct.

The SEC has adopted regulations under Sarbanes-Oxley, including: (i) executive compensation disclosure rules; (ii) standards of independence for directors who serve on the Corporation's audit committee; (iii) disclosure requirements as to whether at least one member of the Corporation's audit committee qualifies as a "financial expert" as defined in SEC regulations; (iv) whether the Corporation has adopted a code of ethics applicable to its chief executive officer, chief financial officer, or those persons performing similar functions; (v) and disclosure requirements regarding the operations of Board of Directors' nominating committees and the means, if any, by which security holders may communicate with directors.

Support of Subsidiary Banks

The Dodd-Frank Act, discussed in the section of this document entitled “Additional Important Legislation and Regulation,” codifies the FRB’s long-standing policy of requiring bank holding companies to act as a source of financial and managerial strength to their subsidiary banks. Accordingly, the Corporation is expected to commit resources to support its banking subsidiaries, including at times when it may not be advantageous for the Corporation to do so.

Capital Distributions

A bank holding company is generally required to give the FRB prior written notice of any purchase or redemption of then outstanding equity securities if the gross consideration for the purchase or redemption, when combined with the net consideration paid for all such purchases or redemptions during the preceding 12 months, is equal to 10% or more of the company’s consolidated net worth. The FRB may disapprove such a purchase or redemption if it determines that the proposal would constitute an unsafe and unsound practice, or would violate any law, regulation, FRB order or directive, or any condition imposed by, or written agreement with, the FRB. There is an exception to this approval requirement for well-capitalized bank holding companies that meet certain other conditions.

The FRB has issued a policy statement regarding capital distributions, including dividends, by bank holding companies. In general, the FRB’s policies provide that dividends should be paid only out of current earnings and only if the prospective rate of earnings retention by the bank holding company appears consistent with the organization’s capital needs, asset quality and overall financial condition. Under applicable laws, the ability of a bank holding company to pay dividends may be restricted if a subsidiary bank becomes undercapitalized. In addition, the FRB has issued guidance which requires consultation with the agency prior to a bank holding company’s payment of dividends or repurchase or redemption of its stock under certain circumstances. These regulatory policies could affect the ability of the Corporation to pay dividends, repurchase its stock or otherwise engage in capital distributions.

The Bank

General

The Bank is a commercial bank chartered under the laws of New York State and is supervised by the NYSDFS. The Bank also is a member bank of the FRB and, therefore, the FRB serves as its primary federal regulator. The FDIC insures the Bank’s deposit accounts up to applicable limits. The Bank must file reports with the FFIEC, the FRB and the FDIC concerning its activities and financial condition and must obtain regulatory approval before commencing certain activities or engaging in transactions such as mergers and other business combinations or the establishment, closing, purchase or sale of branch offices. This regulatory structure gives the regulatory authorities extensive discretion in the enforcement of laws and regulations and the supervision of the Bank.

Loans to One Borrower

The Bank generally may not make a loan or extend credit to a single or related group of borrowers in excess of 15% of its unimpaired capital and surplus. Up to an additional 10% of unimpaired capital and surplus can be lent if the additional amount is fully secured by certain readily marketable collateral. At December 31, 2018, the Bank’s legal lending limit on loans to one borrower was \$25.3 million for loans not fully secured by readily marketable collateral and \$27.9 million for loans secured by readily marketable collateral. The Bank’s internal limit on loans is set at \$15.0 million. At December 31, 2018, the Bank did not have any loans or agreements to extend credit to a single or related group of borrowers in excess of its legal lending limit.

Branching

Subject to the approval of the NYSDFS and FRB, New York-chartered member commercial banks may establish branch offices anywhere within New York State, except in communities having populations of less than 50,000 inhabitants in which another New York-chartered commercial bank or a national bank has its principal office. Additionally, under the Dodd-Frank Act, state-chartered banks may generally branch into other states to the same extent as commercial banks chartered under the laws of that state may branch.

Payment of Dividends

The Bank is subject to substantial regulatory restrictions affecting its ability to pay dividends to the Corporation. Under FRB and NYSDFS regulations, the Bank may not pay a dividend without prior approval of the FRB and the NYSDFS if the total amount of all dividends declared during such calendar year, including the proposed dividend, exceeds the sum of its retained net income to date during the calendar year and its retained net income over the preceding two calendar years. As of December 31, 2018, approximately \$23.5 million was available for the payment of dividends by the Bank to the Corporation without prior approval. The Bank's ability to pay dividends also is subject to the Bank being in compliance with regulatory capital requirements. The Bank is currently in compliance with these requirements.

Federal Reserve System

FRB member banks must maintain, with a Federal Reserve Bank, reserves against their transaction accounts (primarily checking, NOW, and Super NOW accounts) and non-personal time accounts. As of December 31, 2018, the Bank was in compliance with applicable reserve requirements.

Standards for Safety and Soundness

The FRB has adopted guidelines prescribing safety and soundness standards. These guidelines establish general standards relating to capital adequacy, asset quality, management, earnings performance, liquidity and sensitivity to market risk. In evaluating these safety and soundness standards, the FRB considers internal controls and information systems, internal audit systems, loan documentation, credit underwriting, exposure to changes in interest rates, asset growth, compensation, fees, and benefits. In general, the guidelines require appropriate systems and practices to identify and manage the risks and exposures specified in the guidelines. The FRB may order an institution that has been given notice that it is not satisfying these safety and soundness standards to submit a compliance plan, and if an institution fails to do so, the FRB must issue an order directing action to correct the deficiency and may issue an order directing other action. If an institution fails to comply with such an order, the FRB may seek to enforce such order in judicial proceedings and to impose civil money penalties.

Real Estate Lending Standards

The FRB has adopted guidelines that generally require each FRB state member bank to establish and maintain written internal real estate lending standards that are consistent with safe and sound banking practices and appropriate to the size of the bank and the nature and scope of its real estate lending activities. The standards also must be consistent with accompanying FRB guidelines, which include loan-to-value ratios for the different types of real estate loans.

Transactions with Related Parties

The Federal Reserve Act governs transactions between the Bank and its affiliates, specifically the Corporation, CFS, and CRM. In general, an affiliate of the Bank is any company that controls, is controlled by, or is under common control with the Bank. Generally, the Federal Reserve Act limits the extent to which the Bank or its subsidiaries may engage in "covered transactions" with any one affiliate to 10% of the Bank's capital stock and surplus, and contains an aggregate limit of 20% of capital stock and surplus for covered transactions with all affiliates. Covered transactions include loans, asset purchases, the issuance of guarantees, and similar transactions. Certain transactions must be collateralized according to the requirements of the statute. In addition, all covered transactions and other transactions between the Bank and its affiliates must be on terms and conditions that are substantially the same as, or at least as favorable to, the Bank.

Section 22(h) of the Federal Reserve Act and its implementing Regulation O restricts a bank's loans to its directors, executive officers, and principal stockholders ("Insiders"). Loans to Insiders (and their related entities) may not exceed, together with all other outstanding loans to such persons and affiliated entities, the Bank's total capital and surplus. Loans to Insiders above specified amounts must receive the prior approval of the Bank's Board of Directors. The loans must be made on terms that are substantially the same as, and follow credit underwriting procedures that are not less stringent than, those prevailing for comparable transactions with unaffiliated persons and that do not involve more than the normal risk of repayment or present other unfavorable features, except that such Insiders may receive preferential loans made under a benefit or compensation program that is widely available to the Bank's employees and does not give preference to the Insider over the employees. Loans to executive officers are subject to additional restrictions on the types and amounts of permissible loans.

Deposit Insurance

The FDIC insures the deposits of the Bank up to regulatory limits and the deposits are subject to the deposit insurance premium assessments of the DIF. The FDIC currently maintains a risk-based assessment system under which assessment rates vary based on the level of risk posed by the institution to the DIF. Therefore, the assessment rate may change if any of these measurements change.

Assessments for institutions with less than \$10 billion of assets, such as the Bank, are based on financial measures and supervisory ratings derived from statistical modeling estimating the probability of an institution's failure within three years, with institutions deemed less risky paying lower assessments. The assessment range (inclusive of possible adjustments) for institutions of less than \$10 billion in total assets is 1.5 basis points to 30 basis points. The Dodd-Frank Act increased the minimum target DIF ratio from 1.15% of estimated insured deposits to 1.35% of estimated insured deposits. The FDIC was required to seek to achieve the 1.35% ratio by September 30, 2020. The FDIC indicated that the 1.35% ratio was exceeded in November 2018. Insured institutions of less than \$10 billion of assets will receive credits for the portion of their assessments that contributed to the reserve ratio between 1.15% and 1.35%. The Dodd-Frank Act eliminated the 1.5% maximum fund ratio, instead leaving it to the discretion of the FDIC, and the FDIC has exercised that discretion by establishing a long-range fund ratio of 2%.

All institutions with deposits insured by the FDIC are required to pay assessments to fund interest payments on bonds issued by FICO, an agency of the federal government established to recapitalize the former Savings Association Insurance Fund. These assessments will continue until the FICO bonds mature in the third quarter of 2019. The FDIC's FICO assessment authority is separate from its authority to assess risk-based premiums for deposit insurance. The FICO assessment rate is adjusted quarterly to reflect changes in the assessment bases of the fund and is not risk-based by institution. The FICO assessment rate for the third quarter of 2018, due December 28, 2018, was 0.035 basis points, or an annual rate of 0.14 basis points, of the Bank's assessment base, or average total assets less average tangible equity and allowable deductions.

The FDIC has authority to increase insurance assessments. Any material increases would likely have an adverse effect on the operating expenses and results of operations of the Bank and the Corporation. Future insurance assessments cannot be predicted.

Insurance of deposits may be terminated by the FDIC upon a finding that an institution has engaged in unsafe or unsound practices, is in an unsafe or unsound condition to continue operations, or has violated any applicable law, regulation, rule, order or condition imposed in writing. Management of the Bank does not know of any practice, condition, or violation that may lead to termination of the Bank's deposit insurance.

Regulatory Capital Requirements

On October 11, 2013, the FRB approved a final rule that amended the regulatory capital rules for state member banks effective January 1, 2015. The FRB approved the new capital rules in coordination with substantially identical final rules approved by the FDIC and the Office of the Comptroller of the Currency for other types of banking organizations. The revisions make the capital rules consistent with agreements that were reached by Basel III and certain provisions of the Dodd-Frank Act. In general, the capital rules revise regulatory capital definitions and minimum ratios; redefine Tier 1 Capital as two components (common equity Tier 1 capital and additional Tier 1 capital); create a "common equity Tier 1 risk-based capital ratio"; implement a capital conservation buffer; revise prompt corrective action thresholds; and change risk weights for certain assets and off-balance sheet exposures.

The revised capital rules implemented a revised definition of regulatory capital, a new common equity Tier 1 minimum capital requirement of 4.5%, and a higher minimum Tier 1 capital requirement of 6.0% (which is an

increase from 4.0%). Under the rules, the total capital ratio remains at 8.0%, and the minimum leverage ratio (Tier 1 capital to total assets) for all banking organizations, regardless of supervisory rating, is 4.0%. Additionally, under the revised capital rules, in order to avoid limitations on capital distributions, including dividend payments and certain discretionary bonus payments to executive officers, a banking organization must hold a capital conservation buffer composed of common equity Tier 1 capital above its minimum risk-based capital requirements. The buffer is measured relative to risk-weighted assets. The final rules also enhance risk sensitivity and address weaknesses identified by the regulators over recent years with the measure of risk-weighted assets, including through new measures of creditworthiness to replace references to credit ratings, consistent with the requirements of the Dodd-Frank Act. Effective January 1, 2016, the additional capital conservation buffer of 0.625% was added to the minimum requirements for capital adequacy purposes, subject to a multi-year phase-in of an increase of 0.625% each succeeding January 1. The capital conservation buffer has been fully phased-in on January 1, 2019 at 2.5%.

The capital requirements also include changes in the risk-weights of assets to better reflect credit risk and other risk exposures. These include a 150% risk weight (up from 100%) for certain high volatility commercial real estate acquisition, development and construction loans and the unsecured portion of non-residential mortgage loans that are 90 days past due or otherwise on non-accrual status; a 20% (up from 0%) credit conversion factor for the unused portion of a commitment with an original maturity of one year or less that is not unconditionally cancellable; a 250% risk weight (up from 100%) for mortgage servicing rights and deferred tax assets that are not deducted from capital; and increased risk weights (from 0% to up to 600%) for equity exposures.

The Corporation is no longer subject to FRB consolidated capital requirements applicable to bank holding companies, which are similar to those applicable to the Bank, until it reaches \$3.0 billion in assets.

In assessing a state member bank's capital adequacy, the FRB takes into consideration not only these numeric factors but also qualitative factors, and has the authority to establish higher capital requirements for individual banks where necessary. Prompt corrective action regulations provide five classifications: well capitalized, adequately capitalized, undercapitalized, significantly undercapitalized, and critically undercapitalized, although these terms are not used to represent overall financial condition. The Bank, in accordance with its internal prudential standards, targets as its goal the maintenance of capital ratios which exceed these minimum requirements and that are consistent with its risk profile. As of December 31, 2018, the Bank exceeded all regulatory capital ratios necessary to be considered well capitalized.

Notwithstanding the foregoing, pursuant to the Regulatory Relief Act, the FRB proposed a rule that establishes a community bank leverage ratio (tangible equity to average consolidated assets) at 9% for institutions under \$10 billion in assets that such institutions may elect to utilize in lieu of the general applicable risk-based capital requirements under Basel III. Such institutions that meet the community bank leverage ratio and certain other qualifying criteria will automatically be deemed to be well-capitalized. Until the FRB's proposed rule is finalized, the Basel III risk-based and leverage ratios remain in effect.

Prompt Corrective Action

The FDIA requires the federal banking agencies to resolve the problems of insured banks at the least possible loss to the DIF. The FRB has adopted prompt corrective action regulations to carry out this statutory mandate. The FRB's regulations authorize, and in some situations, require, the FRB to take certain supervisory actions against undercapitalized state member banks, including the imposition of restrictions on asset growth and other forms of expansion. The prompt corrective action regulations place state member banks in one of the following five categories based on the bank's capital:

- well capitalized
- adequately capitalized
- undercapitalized
- significantly undercapitalized
- critically undercapitalized

The capital rules described above under "Regulatory Capital Requirements" maintained the existing general structure of the current prompt corrective action framework and increased some of the thresholds for the prompt corrective action capital categories. For example, an adequately capitalized bank is required to maintain a Tier 1 risk-based capital ratio of 6.0%. The rule also introduced the common equity Tier 1 capital ratio as a new prompt corrective action capital category threshold.

As an institution's capital decreases within the three undercapitalized categories listed above, the severity of the action that is authorized or required to be taken by the FRB for state member banks under the prompt corrective action regulations increases. All banks are prohibited from paying dividends or other capital distributions or paying management fees to any controlling person if, following such distribution, the bank would be undercapitalized. The FRB is required to monitor closely the condition of an undercapitalized institution and to restrict the growth of its assets.

An undercapitalized state member bank is required to file a capital restoration plan with the FRB within 45 days (or other timeframe prescribed by the FRB) of the date the bank receives notice that it is within any of the three undercapitalized categories, and the plan must be guaranteed by its parent holding company, subject to a cap on the guarantee that is the lesser of: (i) an amount equal to 5.0% of the bank's total assets at the time it was notified that it became undercapitalized; and (ii) the amount that is necessary to restore the bank's capital ratios to the levels required to be classified as "adequately classified," as those ratios and levels are defined as of the time the bank failed to comply with the plan. If the bank fails to submit an acceptable plan, it is treated as if it were "significantly undercapitalized." Banks that are significantly or critically undercapitalized are subject to a wider range of regulatory requirements and restrictions including, with respect to critically undercapitalized status, the appointment of a receiver or conservator within specified periods of time.

As noted above, the Regulatory Relief Act has eliminated the Basel III requirements for banks with less than \$10.0 billion in assets who elect to follow the community bank leverage ratio once the FRB's rule is finalized. The FRB's proposed rule provides that the Bank will be well-capitalized with a community bank leverage ratio of 9% or greater, adequately capitalized with a community bank leverage ratio of 7.5% or greater, undercapitalized if the Bank's community bank leverage ratio is less than 7.5% and greater than 6% and significantly undercapitalized if the Bank's community bank leverage ratio is less than 6%. The definition of critically undercapitalized is unchanged from the current regulations.

The NYSDFS possesses enforcement power over New York State-chartered banks pursuant to New York law. This includes authority to order a New York State bank to, among other things, cease an apparent violation of law, discontinue unauthorized or unsafe banking practices or maintain prescribed books and accounts. Such orders are enforceable by financial penalties. Upon a finding by the NYSDFS that a bank director or officer has violated any law or regulation or continued unauthorized or unsafe practices in conducting its business after having been notified by the NYSDFS to discontinue such violation or practices, such director or officer may be removed from office after notice and an opportunity to be heard. The NYSDFS also has authority to appoint a conservator or receiver (which may be the FDIC) for a bank under certain circumstances.

Under federal law, the FRB possesses authority to bring enforcement actions against member banks and their "institution-affiliated parties," including directors, officers, employees and, under certain circumstances, a stockholder, attorney, appraiser or accountant. Such enforcement action can occur for matters such as failure to comply with applicable law or regulations or engaging in unsafe or unsound banking practices. Possible enforcement actions range from an informal measure, such as a memorandum of understanding, to formal actions, such as a written agreement, cease and desist order, civil money penalty, capital directive, removal of directors or officers or the appointment of a conservator or receiver. The FRB also possesses authority to bring enforcement actions against bank holding companies, their nonbanking subsidiaries and their "institution-affiliated parties."

Federal Home Loan Bank

The Bank is also a member of the FHLBNY, which provides a central credit facility primarily for member institutions for home mortgage and neighborhood lending. The Bank is subject to the rules and requirements of the FHLBNY, including the requirement to acquire and hold shares of capital stock in the FHLBNY. The Bank was in compliance with the rules and requirements of the FHLBNY at December 31, 2018.

Community Reinvestment Act

Under the federal CRA, the Bank, consistent with its safe and sound operation, must help meet the credit needs of its entire community, including low and moderate income neighborhoods. The FRB periodically assesses the Bank's compliance with CRA requirements. The Bank received a "satisfactory" rating for CRA on its last performance evaluation conducted by the FRB as of June 19, 2017.

Fair Lending and Consumer Protection Laws

The Bank must also comply with the federal Equal Credit Opportunity Act and the New York Executive Law, which prohibit creditors from discrimination in their lending practices on bases specified in these statutes. In addition, the Bank is subject to a number of federal statutes and regulations implementing them, which are designed to protect the general public, borrowers, depositors, and other customers of depository institutions. These include the Bank Secrecy Act, the Truth in Lending Act, the Home Ownership and Equity Protection Act, the Truth in Savings Act, the Home Mortgage Disclosure Act, the Fair Housing Act, the Real Estate Settlement Procedures Act, the Electronic Funds

Transfers Act, the FCRA, the Right to Financial Privacy Act, the Expedited Funds Availability Act, the Flood Disaster Protection Act, the Fair Debt Collection Practices Act, Helping Families Save Their Homes Act, and the Consumer Protection for Depository Institutions Sales of Insurance regulation. The FRB and, in some instances, other regulators, including the U.S. Department of Justice, the FTC, the CFPB and state Attorneys General, may take enforcement action against institutions that fail to comply with these laws.

Prohibitions against Tying Arrangements

Subject to some exceptions, regulations under the BHCA and the Federal Reserve Act prohibits banks from extending credit to or offering any other service, or fixing or varying the consideration for such extension of credit or service, on the condition that the customer obtain some additional service from the bank or its affiliates or not obtain services of a competitor of the bank.

Privacy Regulations

Regulations under the Federal Reserve Act generally require the Bank to disclose its privacy policy. The policy must identify with whom the Bank shares its customers' "nonpublic personal information," at the time of establishing the customer relationship and annually thereafter. In addition, the Bank must provide its customers with the ability to "opt out" of having their personal information shared with unaffiliated third parties and not to disclose account numbers or access codes to non-affiliated third parties for marketing purposes. The Bank's privacy policy complies with Federal Reserve Act regulations.

The USA PATRIOT Act

The Bank is subject to the USA PATRIOT Act, which gives the federal government powers to address terrorist threats through enhanced domestic security measures, expanded surveillance powers, increased information sharing, and broadened anti-money laundering requirements. The USA PATRIOT Act imposes affirmative obligations on financial institutions, including the Bank, to establish anti-money laundering programs which require: (i) the establishment of internal policies, procedures, and controls; (ii) the designation of an anti-money laundering compliance officer; (iii) ongoing employee training programs; (iv) an independent audit function to test the anti-money laundering program; and (v) due diligence of customers who open deposit accounts. The FRB must consider the Bank's effectiveness in combating money laundering when ruling on merger and other applications.

CFS

CFS is subject to supervision by other regulatory authorities as determined by the activities in which it is engaged. Insurance activities are supervised by the NYSDFS, and brokerage activities are subject to supervision by the SEC and FINRA.

CRM

CRM is subject to regulations of the State of Nevada and undergoes periodic examinations by the Nevada Division of Insurance.

Additional Important Legislation and Regulation

The Regulatory Relief Act

On May 24, 2018, the Regulatory Relief Act was enacted, which repeals or modifies certain provisions of the Dodd-Frank Act and eases regulations on all but the largest banks. The Regulatory Relief Act's provisions include, among other things: (i) exempting banks with less than \$10 billion in assets from the ability-to-repay requirements for certain qualified residential mortgage loans held in portfolio; (ii) not requiring appraisals for certain transactions valued at less than \$400,000 in rural areas; (iii) exempting banks that originate fewer than 500 open-end and 500 closed-end mortgages from HMDA's expanded data disclosures; (iv) clarifying that, subject to various conditions, reciprocal deposits of another depository institution obtained using a deposit broker through a deposit placement network for purposes of obtaining maximum deposit insurance would not be considered brokered deposits subject to the FDIC's brokered-deposit regulations; (v) raising eligibility for the 18-month exam cycle from \$1 billion to banks with \$3 billion in assets; (vi) allowing qualifying federal savings banks to elect to operate with National Bank powers; and (vii) simplifying capital calculations by requiring regulators to establish for institutions under \$10 billion in assets a community bank leverage ratio (tangible equity to average consolidated assets) at a percentage not less than 8% and not greater than 10% that such institutions may elect to replace the general applicable risk-based capital requirements for determining well-capitalized status.

The Dodd-Frank Act

The Dodd-Frank Act, enacted on July 21, 2010, significantly changed the bank regulatory landscape and has impacted and will continue to impact the lending, deposit, investment, trading and operating activities of financial institutions and their holding companies. The Dodd-Frank Act requires various federal agencies to adopt a broad range of new rules and regulations, and to prepare various studies and reports for Congress. We have summarized below significant rules adopted by the federal agencies pursuant to the Dodd-Frank Act.

Consumer Financial Protection Bureau Rules

The Dodd-Frank Act created the CFPB, with wide-ranging powers to supervise and enforce consumer protection laws. The CFPB has broad rule-making authority for a wide range of consumer protection laws that apply to all banks and savings institutions, including the authority to prohibit "unfair, deceptive or abusive" acts and practices. The CFPB has examination and enforcement authority over all banks and savings institutions with more than \$10 billion in assets. Smaller institutions continue to be examined by their primary federal regulator as to compliance with consumer protection laws. The Dodd-Frank Act also weakened the federal preemption rules that had been applicable to national banks and federal savings associations, especially with respect to the applicability of state consumer protection laws, and gives state attorneys general certain powers to enforce federal consumer protection regulations.

The CFPB has issued several rules pursuant to the Dodd-Frank Act concerning the regulation of mortgage markets in the U.S. The rules amended several existing regulations, including Regulation Z, which implements the Truth in Lending Act, Regulation X, which implements the Real Estate Settlement Procedures Act and Regulation B, which implements the Equal Credit Opportunity Act. The CFPB has also issued amendments to Regulation P, which governs information privacy and Regulation E, which implements the Electronic Funds Transfers Act. The CFPB may from time to time issue additional amendments or new rules that will affect the Corporation's business practices.

In December 2013, the FRB and the SEC released final rules to implement certain provisions of the Dodd-Frank Act, commonly known as the "Volcker Rule." The Volcker Rule, among other things, prohibits banking entities from engaging in proprietary trading and from sponsoring, having an ownership interest in or having certain relationships with a hedge fund or private equity fund, subject to certain exemptions. At December 31, 2018, the Corporation was not engaged in any activities and it did not have any ownership interests in any funds that are not permitted under the Volcker Rule.

In 2013, the CFPB issued a final rule amending Regulation Z (which implements TILA) and Regulation X (which implements RESPA). In 2015, the CFPB issued a final rule, effective October 3, 2015, specifying mandatory new procedures for the making of these disclosures. The purpose of the new rule, known as the TRID Rule, is to integrate certain disclosures for closed-end credit extended against real property, the appraisal notice required under the ECOA, and the servicing notice required under RESPA in two new forms: a Loan Estimate that must be provided to a consumer within a specified time after receiving his or her application, and a Closing Disclosure that must be provided at least three days before the loan is closed. The TRID Rule generally applies to all lenders, including the Bank, that extended credit to consumers 25 or more times in the preceding or current year.

Securities and Exchange Commission Rules

As discussed above under "Federal Securities Law," pursuant to the Dodd-Frank Act, the SEC issued regulations that provide the shareholders of public companies with an advisory vote on: (i) executive compensation ("say-on-pay"); (ii) the desired frequency of say-on-pay; and (iii) compensation arrangements and understandings in connection with merger transactions, known as "golden parachute" arrangements. Additionally, the SEC has issued regulations effective January 1, 2017 requiring certain companies subject to the reporting rules of the SEC to disclose to shareholders the ratio of compensation of the chief executive officer to the median compensation of employees. The SEC has also adopted corporate governance regulations that provide to shareholders of companies subject to the SEC's proxy rules: (i) the opportunity to nominate directors at a shareholder meeting and to have their nominees included in the company proxy materials sent to all shareholders; and (ii) the ability to use the shareholder proposal process to establish procedures for the inclusion of shareholder director nominations in company proxy materials.

Banking Agency Rules

As discussed above under “Regulatory Capital Requirements,” pursuant to the Dodd-Frank Act, the FRB and the other federal banking agencies established minimum leverage and risk-based capital requirements for insured depository institutions and bank holding companies.

The Dodd-Frank Act directed the federal banking regulators to promulgate rules requiring the reporting of incentive-based compensation and prohibiting excessive incentive-based compensation paid to executives of depository institutions and their holding companies with total assets in excess of \$1.0 billion that encourages excessive risk-taking that could lead to a material financial loss. In April 2011, the FRB, along with other federal banking supervisors, issued a joint notice of proposed rulemaking implementing those requirements.

NYSDFS Cybersecurity Rule

Effective March 1, 2017, the NYSDFS requires New York chartered banks to establish and maintain a cybersecurity program designed to protect consumers and ensure the safety and soundness of the bank. Specifically, NYSDFS requires regulated financial institutions to establish a cybersecurity program; adopt a written cybersecurity policy; designate a Chief Information Security Officer responsible for implementing, overseeing and enforcing its new program and policy; and have policies and procedures designed to ensure the security of information systems and nonpublic information accessible to, or held by, third-parties, along with a variety of other requirements to protect the confidentiality, integrity and availability of information systems.

Gramm-Leach-Bliley Act

Under the privacy and data security provisions of the Financial Modernization Act of 1999, also known as the GLB Act, and rules promulgated thereunder, all financial institutions, including the Corporation, the Bank and CFS are required to establish policies and procedures to restrict the sharing of nonpublic customer data with nonaffiliated parties at the customer's request and to protect customer data from unauthorized access. In addition, the FCRA, as amended by the FACT Act, includes many provisions affecting the Corporation, Bank, and/or CFS including provisions concerning obtaining consumer reports, furnishing information to consumer reporting agencies, maintaining a program to prevent identity theft, sharing of certain information among affiliated companies, and other provisions. For instance, the FCRA requires persons subject to the FCRA to notify their customers if they report negative information about them to a credit bureau or if they are granted credit on terms less favorable than those generally available. The FRB and the FTC have extensive rulemaking authority under the FACT Act, and the Corporation and the Bank are subject to the rules that have been promulgated by the FRB and FTC thereunder, including recent rules regarding limitations on affiliate marketing and implementation of programs to identify, detect and mitigate the risk of identity theft through red flags. The Corporation has developed policies and procedures for itself and its subsidiaries to maintain compliance and believes it is in compliance with all privacy, information sharing and notification provisions of the GLB Act and the FCRA.

The GLB Act and the FCRA also impose requirements regarding data security and the safeguarding of customer information. The Bank is subject to the Security Guidelines, which implement section 501(b) of the GLB Act and section 216 of the FACT Act. The Security Guidelines establish standards relating to administrative, technical, and physical safeguards to ensure the security, confidentiality, integrity and the proper disposal of customer information. The Bank believes it is in compliance with all such standards.

ITEM 1A. RISK FACTORS

The Corporation's business is subject to many risks and uncertainties. Although the Corporation seeks ways to manage these risks and develop programs to control those that management can control, the Corporation ultimately cannot predict the extent to which these risks and uncertainties could affect the Corporation's results. Actual results may differ materially from management's expectations. The following discussion sets forth what the Corporation currently believes could be the most significant factors of which it is currently aware that could affect the Corporation's business, results of operations or financial condition. You should consider all of the following risks together with all of the other information in this Annual Report on Form 10-K.

Economic conditions may adversely affect the Corporation's financial performance.

The Corporation's businesses and results of operation are affected by the financial markets and general economic conditions in the United States, and particularly to adverse conditions in New York and Pennsylvania. Key economic

factors affecting the Corporation include the level and volatility of short-term and long-term interest rates, inflation, home prices, unemployment and under-employment levels, bankruptcies, household income, consumer spending, fluctuations in both debt and equity capital markets and currencies, liquidity of the financial markets, the availability and the cost of capital and credit, investor sentiment, confidence in the financial markets, and the sustainability of economic growth. The deterioration of any of these conditions could adversely affect the Corporation's consumer and commercial businesses, its securities and derivatives portfolios, its level of charge-offs and provision for credit losses, the carrying value of the Corporation's deferred tax assets, its capital levels and liquidity, and the Corporation's results of operations.

A decline or prolonged weakness in business and economic conditions generally or specifically in the principal markets in which the Corporation does business could have one or more of the following adverse effects on the Corporation's business:

- i. a decrease in the demand for loans and other products and services;
- ii. a decrease in the value of the Corporation's loans or other assets secured by consumer or commercial real estate;
- iii. an impairment of certain of the Corporation's intangible assets, such as goodwill; and
- iv. an increase in the number of borrowers and counter-parties who become delinquent, file for protection under bankruptcy laws or default on their loans or other obligations to the Corporation.

For example, in 2018, S&P Global Rating lowered the long-term bond rating of Elmira, New York, the location of the Corporation's headquarters, to junk status due to the city's growing revenue challenges and current weak economy.

Additionally, in light of economic conditions, the Corporation's ability to assess the creditworthiness of its customers may be impaired if the models and approaches that it uses to select, manage and underwrite loans become less predictive of future behaviors. Further, competition in the Corporation's industry may intensify as a result of consolidation of financial services companies in response to adverse market conditions and the Corporation may face increased regulatory scrutiny, which may increase its costs and limit its ability to pursue business opportunities.

Our funding sources may prove insufficient to replace deposits at maturity and support our future growth.

We must maintain sufficient funds to respond to the needs of depositors and borrowers. As a part of our liquidity management, we use a number of funding sources in addition to core deposit growth and repayments and maturities of loans and investments. As we continue to grow, we are likely to become more dependent on these sources, which include Federal Home Loan Bank advances, proceeds from the sale of loans, federal funds purchased and brokered certificates of deposit. Adverse operating results or changes in industry conditions could lead to difficulty or an inability to access these additional funding sources. Our financial flexibility will be severely constrained if we are unable to maintain our access to funding or if adequate financing is not available to accommodate future growth at acceptable interest rates. If we are required to rely more heavily on more expensive funding sources to support future growth, our revenues may not increase proportionately to cover our costs. In this case, our operating margins and profitability would be adversely affected.

Commercial real estate and business loans increase the Corporation's exposure to credit risks.

The FRB and the other federal bank regulatory agencies have promulgated joint guidance on sound risk management practices for financial institutions with concentrations in commercial real estate lending. Under the guidance, a financial institution that, like us, is actively involved in commercial real estate lending should perform a risk assessment to identify concentrations. The purpose of the guidance is to assist banks in developing risk management practices and capital levels commensurate with the level and nature of real estate concentrations. Management employs heightened risk management practices including board and management oversight and strategic planning, development of underwriting standards, risk assessment and monitoring through market analysis and stress testing on commercial real estate loans and real estate concentrations.

At December 31, 2018, the Corporation's portfolio of commercial real estate and business loans totaled \$864.0 million or 65.9% of total loans. The Corporation plans to continue to emphasize the origination of these types of loans, which generally expose the Corporation to a greater risk of nonpayment and loss than residential real estate or consumer loans because repayment of commercial real estate and business loans often depends on the successful operation and income stream of the borrower's business. Additionally, such loans typically involve larger loan balances to single borrowers or groups of related borrowers compared to residential real estate and consumer loans. Also, some of the Corporation's borrowers have more than one commercial loan outstanding. Consequently, an adverse development with respect to one loan or one credit relationship can expose the Corporation to a significantly greater risk of loss

compared to an adverse development with respect to residential real estate and consumer loans. In some instances, the Corporation has originated unsecured commercial loans with certain high net worth individuals who have personally guaranteed such loans. This type of commercial loan has an increased risk of loss if the Corporation is unable to collect repayment through legal action due to personal bankruptcy or other financial limitations of the borrower. The Corporation targets its business lending and marketing strategy towards small to medium-sized businesses. These small to medium-sized businesses generally have fewer financial resources in terms of capital or borrowing capacity than larger entities. If general economic conditions negatively impact these businesses, the Corporation's results of operations and financial condition may be adversely affected.

We are subject to environmental liability risk associated with lending activities.

A significant portion of our loan portfolio is secured by real estate, and we could become subject to environmental liabilities with respect to one or more of these properties. During the ordinary course of business, we may foreclose on and take title to properties securing defaulted loans. In doing so, there is a risk that hazardous or toxic substances could be found on these properties. If hazardous conditions or toxic substances are found on these properties, we may be liable for remediation costs, as well as for personal injury and property damage, civil fines and criminal penalties regardless of when the hazardous conditions or toxic substances first affected any particular property. Environmental laws may require us to incur substantial expenses to address unknown liabilities and may materially reduce the affected property's value or limit our ability to use or sell the affected property. In addition, future laws or more stringent interpretations or enforcement policies with respect to existing laws may increase our exposure to environmental liability. Although we have policies and procedures to perform an environmental review before initiating any foreclosure action on nonresidential real property, these reviews may not be sufficient to detect all potential environmental hazards. The remediation costs and any other financial liabilities associated with an environmental hazard could have a material adverse effect on us.

The Corporation's portfolio of indirect automobile lending exposes it to increased credit risks.

At December 31, 2018, \$149.4 million, or 11.4% of our total loan portfolio, consisted of automobile loans, primarily originated through automobile dealers for the purchase of new or used automobiles. The Corporation serves customers that cover a range of creditworthiness and the required terms and rates are reflective of those risk profiles. Automobile loans are inherently risky as they are often secured by assets that may be difficult to locate and can depreciate rapidly. In some cases, repossessed collateral for a defaulted automobile loan may not provide an adequate source of repayment for the outstanding loan and the remaining deficiency may not warrant further substantial collection efforts against the borrower. Automobile loan collections depend on the borrower's continuing financial stability, and therefore, are more likely to be adversely affected by job loss, divorce, illness, or personal bankruptcy. Additional risk elements associated with indirect lending include the limited personal contact with the borrower as a result of indirect lending through non-bank channels, namely automobile dealers.

The allowance for loan losses may prove to be insufficient to absorb losses in the loan portfolio.

The Corporation's customers may not repay their loans according to the original terms, and the collateral securing the payment of those loans may be insufficient to pay any remaining loan balance. Hence, the Corporation may experience significant loan losses, which could have a material adverse effect on the Corporation's operating results. Management makes various assumptions and judgments about the collectability of its loan portfolio, including the creditworthiness of its borrowers and the value of the real estate and other assets serving as collateral for the repayment of loans. In determining the amount of the allowance for loan losses, management relies on loan quality reviews, past loss experience, and an evaluation of economic conditions, among other factors. If these assumptions prove to be incorrect, the allowance for loan losses may not be sufficient to cover losses inherent in the Corporation's loan portfolio, resulting in additions to the allowance. Material additions to the allowance would materially decrease net income.

The Corporation's emphasis on the origination of commercial loans is one of the more significant factors in evaluating its allowance for loan losses. As the Corporation continues to increase the amount of these loans, additional or increased provisions for loan losses may be necessary, which could result in a decrease in earnings.

The Financial Accounting Standards Board has adopted a new accounting standard that will be effective for the Bank for our first fiscal year beginning after December 15, 2019. This standard, referred to as Current Expected Credit Loss, or CECL, will require financial institutions to determine periodic estimates of lifetime expected credit losses on loans,

and recognize the expected credit losses as allowances for loan losses. This will change the current method of establishing allowances for loan losses that are probable, which may require us to increase our allowance for loan losses, and increase the data we would need to collect and review to determine the appropriate level of our allowance for loan losses.

Bank regulators periodically review the Corporation's allowance for loan losses and may require the Corporation to increase its provision for loan losses or loan charge-offs. Any increase in the allowance for loan losses or loan charge-offs as required by these regulatory authorities could have a material adverse effect on the Corporation's results of operations and/or financial condition.

Changes in interest rates could adversely affect the Corporation's results of operations and financial condition.

The Corporation's results of operations and financial condition are significantly affected by changes in interest rates. The Corporation's financial results depend substantially on net interest income, which is the difference between the interest income that it earns on interest-earning assets and the interest expense paid on interest-bearing liabilities. If the Corporation's interest-bearing liabilities mature or reprice more quickly than its interest-earning assets in a given period as a result of increasing interest rates, net interest income may decrease. Likewise, net interest income may decrease if interest-earning assets mature or reprice more quickly than interest-bearing liabilities in a given period as a result of decreasing interest rates. The Corporation has taken steps to mitigate this risk, such as holding fewer longer-term residential mortgages, as well as investing excess funds in shorter-term investments.

Changes in interest rates also affect the fair value of the Corporation's interest-earning assets and, in particular, its investment securities available for sale. Generally, the fair value of investment securities fluctuates inversely with changes in interest rates. Decreases in the fair value of investment securities available for sale, therefore, could have an adverse effect on its shareholders' equity or earnings if the decrease in fair value is deemed to be other than temporary.

Changes in interest rates may also affect the average life of loans and mortgage-related securities. Increases in interest rates may decrease loan demand and make it more difficult for borrowers to repay adjustable rate loans. Additionally, decreases in interest rates can result in increased prepayments of loans and mortgage-related securities, as borrowers refinance to reduce borrowing costs. Under these circumstances, the Corporation is subject to reinvestment risk to the extent that it is unable to reinvest the cash received from such prepayments at rates that are comparable to the rates on its existing loans and securities.

Municipal deposits are generally more sensitive to interest rates and may require competitive rates at placement and subsequent rollover dates, which may make it more difficult for the Bank to attract and retain public and municipal deposits. Additionally, when municipal deposits exceed FDIC coverage, any amounts not insured under the FDIC must be properly secured through a pledge of eligible securities. The requirement that the Bank collateralize municipal deposits above FDIC insurance may have an adverse effect on the Corporation's liquidity.

Strong competition within the Corporation's industry and market area could limit its growth and profitability.

The Corporation faces substantial competition in all phases of its operations from a variety of different competitors. Future growth and success will depend on the ability to compete effectively in this highly competitive environment. The Corporation competes for deposits, loans and other financial services with a variety of banks, thrifts, credit unions and other financial institutions as well as other entities, which provide financial services. Some of the financial institutions and financial services organizations with which the Corporation competes with are not subject to the same degree of regulation as the Corporation. Many competitors have been in business for many years, have established customer bases, are larger, and have substantially higher lending limits. The financial services industry is also likely to become more competitive as further technological advances enable more companies to provide financial services. These technological advances may diminish the importance of depository institutions and other financial intermediaries in the transfer of funds between parties.

The Corporation's growth strategy may not prove to be successful and its market value and profitability may suffer.

As part of the Corporation's strategy for continued growth, it may open additional branches. New branches do not initially contribute to operating profits due to the impact of overhead expenses and the start-up phase of generating loans and deposits. To the extent that additional branches are opened, the Corporation may experience the effects of higher operating expenses relative to operating income from the new operations, which may have an adverse effect on

the Corporation's levels of net income, return on average equity and return on average assets.

In addition, the Corporation may acquire banks and related businesses that it believes provide a strategic fit with its business, such as the 2011 acquisition of FOFC and the 2013 acquisition of six branches from Bank of America. To the extent that the Corporation grows through acquisitions, it cannot provide assurance that such strategic decisions will be accretive to earnings.

The Corporation operates in a highly regulated environment and may be adversely affected by changes in laws and regulations.

Currently, the Corporation and its subsidiaries are subject to extensive regulation, supervision, and examination by regulatory authorities. For example, the FRB regulates the Corporation, the FRB, the FDIC and the NYSDFS regulate the Bank, and CRM is regulated by the Nevada Division of Insurance. Such regulators govern the activities in which the Corporation and its subsidiaries may engage. These regulatory authorities have extensive discretion in connection with their supervisory and enforcement activities, including the imposition of restrictions on the operation of a bank, the classification of assets by a bank, and the adequacy of a bank's allowance for loan losses. Any change in such regulation and oversight, whether in the form of regulatory policy, regulations, or legislation, could have a material impact on the Corporation and its operations. The Corporation believes that it is in substantial compliance with applicable federal, state and local laws, rules and regulations. As the Corporation's business is highly regulated, the laws, rules and applicable regulations are subject to regular modification and change. There can be no assurance that proposed laws, rules and regulations, or any other law, rule or regulation, will not be adopted in the future, which could make compliance more difficult or expensive or otherwise adversely affect the Corporation's business, financial condition or prospects.

Monetary policies and regulations of the Federal Reserve Board could adversely affect our business, financial condition and results of operations.

In addition to being affected by general economic conditions, our earnings and growth are affected by the policies of the FRB. An important function of the FRB is to regulate the money supply and credit conditions. Among the instruments used by the FRB to implement these objectives are open market purchases and sales of U.S. government securities, adjustments of the discount rate and changes in banks' reserve requirements against bank deposits. These instruments are used in varying combinations to influence overall economic growth and the distribution of credit, bank loans, investments and deposits. Their use also affects interest rates charged on loans or paid on deposits.

The monetary policies and regulations of the FRB have had a significant effect on the operating results of financial institutions in the past and are expected to continue to do so in the future. The effects of such policies upon our business, financial condition and results of operations cannot be predicted.

We are subject to the Community Reinvestment Act and fair lending laws, and failure to comply with these laws could lead to material penalties.

The Community Reinvestment Act ("CRA"), the Equal Credit Opportunity Act, the Fair Housing Act and other fair lending laws and regulations impose nondiscriminatory lending requirements on financial institutions. A successful regulatory challenge to an institution's performance under the CRA or fair lending laws and regulations could result in a wide variety of sanctions, including the required payment of damages and civil money penalties, injunctive relief, imposition of restrictions on mergers and acquisitions activity and restrictions on expansion. Private parties may also have the ability to challenge an institution's performance under fair lending laws in private class action litigation. Such actions could have a material adverse effect on our business, financial condition and results of operations.

Non-compliance with the USA PATRIOT Act, Bank Secrecy Act, or other laws and regulations could result in fines or sanctions.

The USA PATRIOT and Bank Secrecy Acts require financial institutions to develop programs to prevent financial institutions from being used for money laundering and terrorist activities. If such activities are detected, financial institutions are obligated to file suspicious activity reports with the U.S. Treasury's Office of Financial Crimes Enforcement Network. These rules require financial institutions to establish procedures for identifying and verifying

the identity of customers seeking to open new financial accounts. Failure to comply with these regulations could result in fines or sanctions. During the last year, several banking institutions have received large fines for non-compliance with these laws and regulations. While we have developed policies and procedures designed to assist in compliance with these laws and regulations, these policies and procedures may not be effective in preventing violations of these laws and regulations.

The Corporation and Bank have become subject to more stringent capital requirements, which may adversely impact the Corporation's return on equity, require it to raise additional capital, or constrain it from paying dividends or repurchasing shares.

In July 2013, the FRB approved a new rule that substantially amended the regulatory risk-based capital rules applicable to the Corporation, on a consolidated basis, and the Bank, on a stand-alone basis. The final rule implements the "Basel III" regulatory capital reforms and changes required by the Dodd-Frank Act.

The final rule includes new minimum risk-based capital and leverage ratios, which became effective for the Bank on January 1, 2015, and refined the definition of what constitutes "capital" for purposes of calculating these ratios. The minimum capital requirements are: (i) a common equity Tier 1 capital ratio of 4.5%; (ii) a Tier 1 to risk-based assets capital ratio of 6% (increased from 4%); (iii) a total capital ratio of 8% (unchanged from former rules); and (iv) a Tier 1 leverage ratio of 4%. The final rule also established a "capital conservation buffer" of 2.5%, and will result in the following minimum ratios: (i) a common equity Tier 1 capital ratio of 7.0%, (ii) a Tier 1 to risk-based assets capital ratio of 8.5%, and (iii) a total capital ratio of 10.5%. The capital conservation buffer requirement was being phased in beginning in January 2016 at 0.625% of risk-weighted assets and increased each year until being fully implemented in January 2019. An institution is subject to limitations on paying dividends, engaging in share repurchases, and paying discretionary bonuses if its capital level falls below the buffer amount. These limitations establish a maximum percentage of eligible retained income that can be utilized for such actions.

The recently enacted Economic Growth, Regulatory Relief, and Consumer Protection Act (the "Regulatory Relief Act") simplifies capital calculations by requiring the federal regulators to establish for institutions under \$10 billion in assets a community bank leverage ratio (tangible equity to average consolidated assets) at a percentage not less than 8% and not greater than 10% that eligible institutions may choose to elect to replace the general applicable risk-based capital requirements under the Basel III capital rules for such institutions. Such institutions that meet the community bank leverage ratio will automatically be deemed to be well-capitalized under the federal regulator's prompt corrective action framework, although the regulators retain the flexibility to determine that the institution may not qualify for the community bank leverage ratio test based on the institution's risk profile. The federal regulators jointly issued a proposed rule on November 21, 2018, whereby a qualifying community bank organization may elect, but is not required to, use the community bank leverage ratio capital framework, in which case it will be considered well-capitalized so long as its community bank leverage ratio is greater than 9%. Until the federal regulators issue their final rule, the Basel III risk-based and leverage ratios apply.

The application of more stringent capital requirements for the Bank could, among other things, result in lower returns on equity, require the raising of additional capital, and result in regulatory actions constraining them from paying dividends or repurchasing shares if they are unable to comply with such requirements.

Changes in tax rates could adversely affect the Corporation's results of operations and financial condition.

The Corporation is subject to the income tax laws of the United States, its states, and municipalities. The income tax laws of the jurisdictions in which the Corporation operates are complex and subject to different interpretations by the taxpayer and the relevant government taxing authorities. In establishing a provision for income tax expense, the Corporation must make judgments and interpretations about the application of these inherently complex tax laws to its business activities, as well as the timing of when certain items may affect taxable income.

The provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in the Corporation's judgment, their realizability is determined to be more likely than not. The Corporation performs regular reviews to ascertain the realizability of its deferred tax assets. These reviews include the Corporation's estimates and assumptions regarding future taxable income, which incorporates various tax planning strategies.

The Corporation may be adversely affected by recent changes in U.S. tax laws and regulations. Changes in tax laws contained in the Tax Act, which was enacted in December 2017, include a number of provisions that will have an impact on the banking industry, borrowers and the market for single-family residential real estate. Included in this legislation is a reduction of the corporate income tax rate from 35% to 21%. In addition, other changes include (i) a lower limit on the deductibility of mortgage interest on single-family residential mortgage loans,

(ii) the elimination of interest deductions for home equity loans, (iii) a limitation on the deductibility of business interest expense and (iv) a limitation on the deductibility of property taxes and state and local income taxes. These recent changes in the tax laws may have an adverse effect on the market for, and valuation of, residential properties, and on the demand for such loans in the future, and could make it harder for borrowers to make their loan payments. In addition, these recent changes may also have a disproportionate effect on taxpayers in states with high residential home prices and high state and local taxes, such as New York. If home ownership becomes less attractive, demand for mortgage loans could decrease. The value of the properties securing loans in the Corporation's loan portfolio may be adversely impacted as a result of the changing economics of home ownership, which could require an increase in the Corporation's provision for loan losses, which would reduce its profitability and could materially adversely affect the Corporation's business, financial condition and results of operations.

The Corporation is a holding company and depends on its subsidiaries for dividends, distributions and other payments. The Corporation is a legal entity separate and distinct from the Bank and other subsidiaries. Its principal source of cash flow, including cash flow to pay dividends to its shareholders, is dividends from the Bank. There are statutory and regulatory limitations on the payment of dividends by the Bank to the Corporation, as well as by the Corporation to its shareholders. FRB regulations affect the ability of the Bank to pay dividends and other distributions and to make loans to the Corporation. If the Bank is unable to make dividend payments to the Corporation and sufficient capital is not otherwise available, the Corporation may not be able to make dividend payments to its common shareholders.

The Corporation holds certain intangible assets that could be classified as impaired in the future. If these assets are considered to be either partially or fully impaired in the future, its earnings and the book values of these assets would decrease.

The Corporation is required to test its goodwill and core deposit intangible assets for impairment on a periodic basis. The impairment testing process considers a variety of factors, including the current market price of its common stock, the estimated net present value of its assets and liabilities, and information concerning the terminal valuation of similarly situated insured depository institutions. If an impairment determination is made in a future reporting period, its earnings and the book value of these intangible assets would be reduced by the amount of the impairment. If an impairment loss is recorded, it will have little or no impact on the tangible book value of the Corporation's common shares or its regulatory capital levels, but such an impairment loss could significantly restrict the Bank from paying a dividend to the Corporation.

Financial counterparties expose the Corporation to risks.

The Corporation has increased its use of derivative financial instruments, primarily interest rate swaps, which exposes it to financial and contractual risks with counterparty banks. The Corporation maintains correspondent bank relationships, manages certain loan participations, engages in securities transactions, and engages in other activities with financial counterparties that are customary to its industry. Financial risks are inherent in these counterparty relationships.

The Corporation may not be able to attract and retain skilled people.

The Corporation's success depends, in large part, on its ability to attract and retain key people. Competition for the best people in most activities in which the Corporation engages can be intense and it may not be able to hire people or to retain them. A key component of employee retention is providing a fair compensation base combined with the opportunity for additional compensation for above average performance. In this regard, the Corporation uses a stock-based compensation program that aligns the interest of the Corporation's executives and senior managers with the interests of the Corporation, and its shareholders.

The Corporation's compensation practices are designed to be competitive and comparable to those of its peers, however, the unexpected loss of services of one or more of the Corporation's key personnel could have a material adverse impact on the business because it would lose the employees' skills, knowledge of the market, and years of industry experience and may have difficulty promptly finding qualified replacement personnel.

The Corporation's controls and procedures may fail or be circumvented, which may result in a material adverse effect on its business.

Management regularly reviews and updates its internal controls, disclosure controls and procedures, and corporate governance policies and procedures. Any system of controls, however well designed and operated, is based in part on certain assumptions and can provide only reasonable, not absolute, assurances that the objectives of the system are

met.

Our risk management framework may not be effective in mitigating risk and reducing the potential for significant losses.

Our risk management framework is designed to minimize risk and loss to us. We seek to identify, measure, monitor, report and control our exposure to risk, including strategic, market, liquidity, compliance and operational risks. While we use a broad and diversified set of risk monitoring and mitigation techniques, these techniques are inherently limited because they cannot anticipate the existence or future development of currently unanticipated or unknown risks. Recent economic conditions and heightened legislative and regulatory scrutiny of the financial services industry, among other developments, have increased our level of risk. Accordingly, we could suffer losses as a result of our failure to properly anticipate and manage these risks.

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We face significant operational risks because the financial services business involves a high volume of transactions.

We operate in diverse markets and rely on the ability of our employees and systems to process a high number of transactions. Operational risk is the risk of loss resulting from our operations, including but not limited to, the risk of fraud by employees or persons outside our company, the execution of unauthorized transactions by employees, errors relating to transaction processing and technology, breaches of our internal control systems and compliance requirements, and business continuation and disaster recovery. Insurance coverage may not be available for such losses, or where available, such losses may exceed insurance limits. This risk of loss also includes the potential legal actions that could arise as a result of operational deficiencies or as a result of non-compliance with applicable regulatory standards or customer attrition due to potential negative publicity. In the event of a breakdown in our internal control systems, improper operation of systems or improper employee actions, we could suffer financial loss, face regulatory action, and/or suffer damage to our reputation.

The Corporation continually encounters technological change and the failure to understand and adapt to these changes could adversely affect its business.

The banking industry is undergoing rapid technological changes with frequent introductions of new technology-driven products and services. Technology has lowered barriers to entry and made it possible for "non-banks" to offer traditional bank products and services using innovative technological platforms such as Fintech and Blockchain. These "digital banks" may be able to achieve economies of scale and offer better pricing for banking products and services than the Corporation can. The Corporation's future success will depend, in part, on the ability to address the needs of customers by using technology to provide products and services that will satisfy customer demands for convenience as well as to create additional efficiencies in operations. Many competitors have substantially greater resources to invest in technological improvements. There can be no assurance that the Corporation will be able to effectively implement new technology-driven products and services or be successful in marketing such products and services to customers. Failure to successfully keep pace with technological change affecting the financial services industry could have a material adverse impact on the Corporation's business and, in turn, its financial condition and results of operations.

Systems failures or breaches of our network security could subject us to increased operating costs as well as litigation and other liabilities.

Our operations depend upon our ability to protect our computer systems and network infrastructure against damage from physical theft, fire, power loss, telecommunications failure or a similar catastrophic event, as well as from security breaches, denial of service attacks, viruses, worms and other disruptive problems caused by hackers. Any damage or failure that causes an interruption in our operations could have a material adverse effect on our financial condition and results of operations. Computer break-ins, phishing and other disruptions could also jeopardize the security of information stored in and transmitted through our computer systems and network infrastructure, which may result in significant liability to us and may cause existing and potential customers to refrain from doing business with us. Although we, with the help of third-party service providers, intend to continue to implement security technology and establish operational procedures designed to prevent such damage, our security measures may not be successful. In addition, advances in computer capabilities, new discoveries in the field of cryptography or other developments could result in a compromise or breach of the algorithms we and our third-party service providers use to encrypt and protect customer transaction data. A failure of such security measures could have a material adverse effect on our financial condition and results of operations.

It is possible that we could incur significant costs associated with a breach of our computer systems. While we have cyber liability insurance, there are limitations on coverage. Furthermore, cyber incidents carry a greater risk of injury to our reputation. Finally, depending on the type of incident, banking regulators can impose restrictions on our business and consumer laws may require reimbursement of customer losses.

Provisions of the Corporation's certificate of incorporation, bylaws, as well as New York law and certain banking laws, could delay or prevent a takeover of the Corporation by a third party.

Provisions of the Corporation's certificate of incorporation and bylaws, New York law, and state and federal banking laws, including regulatory approval requirements, could delay, defer or prevent a third party from acquiring the Corporation, despite the possible benefit to the Corporation's shareholders, or otherwise adversely affect the market price of the Corporation's common stock. These provisions include: a two-thirds affirmative vote of all outstanding shares of Corporation stock for certain business combinations; a supermajority shareholder vote of 75% of outstanding stock for business combinations involving 10% shareholders; the election of directors to staggered terms of three years; and advance notice requirements for nominations for election to the Corporation's Board of Directors and for proposing matters that shareholders may act on at a shareholder meeting. In addition, the Corporation is subject to New York law, which among other things prohibits the Corporation from engaging in a business combination with any interested stockholder for a period of five years from the date the person became an interested stockholder unless certain conditions are met. These provisions may discourage potential takeover attempts, discouraging bids for the Corporation's common stock at a premium over market price or adversely affect the market price of, and the voting and other rights of the holders of the Corporation's common stock. These provisions could also discourage proxy contests and make it more difficult for shareholders to elect directors other than candidates nominated by the Board of Directors.

The risks presented by acquisitions could adversely affect the Corporation's financial condition and results of operations.

The business strategy of the Corporation has included and may continue to include growth through acquisition from time to time. Any future acquisitions will be accompanied by the risks commonly encountered in acquisitions. These risks may include, among other things: its ability to realize anticipated cost savings, the difficulty of integrating operations and personnel, the loss of key employees, the potential disruption of its or the acquired company's ongoing business in such a way that could result in decreased revenues, the inability of its management to maximize its financial and strategic position, the inability to maintain uniform standards, controls, procedures and policies, and the impairment of relationships with the acquired company's employees and customers as a result of changes in ownership and management.

Severe weather and other natural disasters can affect the Corporation's business.

The Corporation's main office and its branch offices can be affected by natural disasters such as severe storms and flooding. These kinds of events could interrupt the Corporation's operations, particularly its ability to deliver deposit and other retail banking services to its customers and as a result, the Corporation's business could suffer serious harm. While the Corporation maintains adequate insurance against property and casualty losses arising from most natural disasters, and it has successfully overcome the challenges caused by past flooding in Central New York, there can be no assurance that it will be as successful if and when disasters occur.

The Corporation's accounting policies and estimates are critical to how the Corporation reports its financial condition and results of operations, and any changes to such accounting policies and estimates could materially affect how the Corporation reports its financial condition and results of operations.

Management has identified certain accounting policies as being critical because they require management's judgment to ascertain the valuations of assets, liabilities, commitments and contingencies. A variety of factors could affect the ultimate value that is obtained either when earning income, recognizing an expense, recovering an asset, valuing an asset or liability or reducing a liability. The Corporation has established detailed policies and control procedures that are intended to ensure that these critical accounting estimates and judgments are well controlled and applied

consistently. In addition, these policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. Because of the uncertainty surrounding its judgments and the estimates pertaining to these matters, actual outcomes may be materially different from amounts previously estimated. For example, because of the inherent uncertainty of estimates, management cannot provide any assurance that the Bank will not significantly increase its allowance for loan losses if actual losses are more than the amount reserved. Any increase in its allowance for loan losses or loan charge-offs could have a material adverse effect on the Corporation's financial condition and results of operations. In addition, the Corporation cannot guarantee that it will not be required to adjust accounting policies or restate prior financial statements.

Further, from time to time, the FASB and SEC change the financial accounting and reporting standards that govern the preparation of the Corporation's financial statements. These changes can be hard to predict and can materially impact how the Corporation records and reports its financial condition and results of operations. In some cases, the Corporation could be required to apply a new or revised standard retroactively, resulting in its restating prior period financial statements or otherwise adversely affecting its financial condition or results of operations.

Specifically, in June of 2016, FASB issued a new accounting standard, ASU 2016-13, Financial Instruments - Credit Losses (Topic 326) that will substantially change the accounting for credit losses under GAAP. Under GAAP's current standards, credit losses are not reflected in the Corporation's financial statements until it is probable that the credit losses has been incurred. This methodology has the effect of delaying the recognition of credit losses on loans. Under the new credit loss standard, the allowance for credit losses will be an estimate of the "expected" credit losses on loans. The new credit loss standard may have a negative impact on the reporting of results of operations and financial condition of the Corporation. The amendments in this ASU are effective for public companies for fiscal years beginning after December 15, 2019, though entities may adopt the amendments earlier for fiscal years beginning after December 15, 2018.

There may be claims and litigation pertaining to fiduciary responsibility.

From time to time as part of the Corporation's normal course of business, customers make claims and take legal action against the Corporation based on its actions or inactions related to the fiduciary responsibilities of the Wealth Management Group segment. If such claims and legal actions are not resolved in a manner favorable to the Corporation, they may result in financial liability and/or adversely affect the market perception of the Corporation and its products and services. This may also impact customer demand for the Corporation's products and services. Any financial liability or reputation damage could have a material adverse effect on the Corporation's business, which, in turn, could have a material adverse effect on its financial condition and results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

All properties owned or leased by the Bank are considered to be in good condition. For additional information about the Corporation's facilities, including rental expenses, see "Note 5 Premises and Equipment" in Notes to Consolidated Financial Statements in Part IV, Item 15. Exhibits and Financial Statement Schedules of this report. The Corporation holds no real estate in its own name.

Corporate Headquarters
Executive and Administrative Offices
One Chemung Canal Plaza, Elmira, NY 14901

New York

Albany County

*132 State St., Albany, NY 12207
*65 Wolf Rd., Albany, NY 12205
*581 Loudon Rd., Latham, NY 12110
*1365 New Scotland Rd., Slingerlands, NY 12159

Broome County

*127 Court St., Binghamton, NY 13901
*601-635 Harry L. Dr., Johnson City, NY 13790 (Oakdale Mall)^
*100 Rano Blvd., Vestal, NY 13850

Cayuga County

*110 Genesee St., Auburn, NY 13021
185 Grant Ave., Auburn, NY 13021

Chemung County

One Chemung Canal Plaza, Elmira, NY 14901
628 W. Church St., Elmira, NY 14905
437 Maple St., Big Flats, NY 14814
951 Pennsylvania Ave., Elmira, NY 14904
100 W. McCann's Blvd., Elmira Heights, NY 14903
29 Arnot Rd., Horseheads, NY 14845
602 S. Main St., Horseheads, NY 14845
305 E. Water St., Elmira, NY 14901

Cortland County

*1094 State Rte. 222, Cortland, NY 13045

Pennsylvania

Bradford County

5 West Main St., Canton, PA 17724
304 Main St., Towanda, PA 18848
159 Canton St., Troy, PA 16947

CFS Group

One Chemung Canal Plaza, Elmira, NY 14901

* Leased facilities and/or property

Saratoga County

*25 Park Ave., Clifton Park, NY 12065
*3057 Route 50, Saratoga Springs, NY 12866

Schenectady County

*2 Rush St., Schenectady, NY 12305

Schuyler County

318 N. Franklin St., Watkins Glen, NY 14891
303 W. Main St., Montour Falls, NY 14865

Seneca County

54 Fall St., Seneca Falls, NY 13148

Steuben County

*410 West Morris St., Bath, NY 14810
149 West Market St., Corning, NY 14830
243 North Hamilton St., Painted Post, NY 14870

Tioga County

203 Main St., Owego, NY 13827
*1054 State Route 17C, Owego, NY 13827
405 Chemung St., Waverly, NY 14892

Tompkins County

806 W. Buffalo St., Ithaca, NY 14850
304 Elmira Rd., Ithaca, NY 14850
*909 Hanshaw Rd., Ithaca, NY 14850

^ Subsequent to December 31, 2018, the Bank closed this branch location and vacated the property.

Leased Off-Site ATM Locations

Albany Capital Center	Albany, NY
Times Union Center	Albany, NY
Elmira-Corning Regional Airport	Big Flats, NY
Corning Community College	Corning, NY
Elmira College	Elmira, NY
E-Z Food Mart	Elmira, NY
Quality Beverage	Elmira, NY
Collegetown Bagels	Ithaca, NY
Ithaca College	Ithaca, NY
Schuyler Hospital	Montour Falls, NY

ITEM 3. LEGAL PROCEEDINGS

In the normal course of business, there are various outstanding claims and legal proceedings involving the Corporation or its subsidiaries. The Corporation believes that it is not a party to any pending legal, arbitration, or regulatory proceedings that could have a material adverse impact on its financial results or liquidity as of December 31, 2018.

ITEM 4. MINE SAFETY DISCLOSURES

None.

PART II

ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

The Corporation's common stock is traded on the Nasdaq Global Market under the symbol "CHMG."

The table below shows the price ranges for the Corporation's common stock during each of the indicated quarters. The information is based upon the high and low closing sales prices reported by the Nasdaq Global Market.

Common Stock Market Prices and Dividends Paid
During the Past Two Years

December 31, 2018	High	Low	Dividends
4th Quarter	\$44.52	\$38.50	\$ 0.26
3rd Quarter	51.69	41.02	0.26
2nd Quarter	52.99	46.01	0.26
1st Quarter	50.24	42.50	0.26

December 31, 2017	High	Low	Dividends
4th Quarter	\$54.30	\$44.06	\$ 0.26
3rd Quarter	47.10	39.00	0.26
2nd Quarter	41.43	37.05	0.26
1st Quarter	39.50	32.72	0.26

Under New York law, the Corporation may pay dividends on its common stock either: (i) out of surplus, so that the Corporation's net assets remaining after such payment equal the amount of its stated capital, or (ii) if there is no surplus, out of its net profits for the fiscal year in which the dividend is declared and/or the preceding fiscal year. The payment of dividends on the Corporation's common stock is dependent, in large part, upon receipt of dividends from the Bank, which is subject to certain restrictions which may limit its ability to pay the Corporation dividends. See Item 1, "Business – Supervision and Regulation-The Bank-Payment of Dividends" for an explanation of legal limitations on the Bank's ability to pay dividends.

As of February 28, 2019, there were 488 registered holders of record of the Corporation's stock.

The table below sets forth the information with respect to purchases made by the Corporation of our common stock during the quarter ended December 31, 2018:

Period	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced plans or programs	Maximum number of shares that may yet be purchased under the plans or programs
10/01/18-10/31/18	—	\$	—	121,906
11/01/18-11/30/18	—	\$	—	121,906

12/01/18-12/31/18	—	\$	—	121,906
Quarter ended	—	\$	—	121,906
12/31/2018				

On December 19, 2012, the Corporation's Board of Directors approved a stock repurchase plan authorizing the purchase of up to 125,000 shares of the Corporation's outstanding common stock. Purchases may be made from time to time on the open market or in private negotiated transactions and will be at the discretion of management. For the year ended December 31, 2018, no shares had been purchased under this plan. Since inception of the plan, a total of 3,094 shares have been purchased under the plan.

STOCK PERFORMANCE GRAPH

The following graph compares the yearly change in the cumulative total shareholder return on the Corporation's common stock against the cumulative total return of the NASDAQ Stock Market (U.S. Companies), NASDAQ Bank Stocks Index, SNL U.S. Bank NASDAQ, and SNL \$1B - \$5B Bank Index for the period of five years commencing December 31, 2013.

Index	Period Ending					
	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018
Chemung Financial Corporation	100.00	83.96	86.72	118.64	160.93	141.44
NASDAQ Composite	100.00	114.75	122.74	133.62	173.22	168.30
SNL U.S. Bank NASDAQ	100.00	103.57	111.80	155.02	163.20	137.56
SNL Bank \$1B-\$5B	100.00	104.56	117.04	168.38	179.51	157.27

The cumulative total return includes (1) dividends paid and (2) changes in the share price of the Corporation's common stock and assumes that all dividends were reinvested. The above graph assumes that the value of the investment in Chemung Financial Corporation and each index was \$100 on December 31, 2013.

The Total Returns Index for NASDAQ Composite and SNL bank stocks indices were obtained from S&P Global Market Intelligence, New York, NY.

ITEM 6. SELECTED FINANCIAL DATA

The following tables present selected financial data as of and for the years ended December 31, 2018, 2017, 2016, 2015 and 2014. The selected financial data at December 31, 2018, and 2017 and for the three year period ended December 31, 2018 is derived from our audited consolidated financial statements that appear in this annual report on Form 10-K. The other years presented in these tables are derived from audited consolidated financial statements that do not appear in this annual report on Form 10-K. The selected financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited consolidated financial statements and related notes.

SUMMARIZED BALANCE SHEET DATA AT
DECEMBER 31,

(in thousands)	2018	2017	2016	2015	2014
Total assets	\$1,755,343	\$1,707,620	\$1,657,179	\$1,619,964	\$1,524,539
Loans, net of deferred fees	1,311,906	1,311,824	1,200,290	1,168,633	1,121,574
AFS and HTM securities	247,133	296,872	308,107	349,386	286,338
FHLBNY and FRBNY stock	3,138	5,784	4,041	4,797	5,535
Deposits	1,569,237	1,467,446	1,456,343	1,400,295	1,280,014
Securities sold under agreements to repurchase	—	10,000	27,606	28,453	29,652
FHLBNY advances	—	59,700	9,093	33,103	50,140
Long term capital lease obligation	4,304	4,517	4,722	2,873	2,976
Shareholders' equity	165,029	149,813	143,748	137,242	133,628

SUMMARIZED EARNINGS DATA FOR
THE YEARS ENDED DECEMBER 31,

(in thousands)	2018	2017	2016	2015	2014
Net interest income	\$60,480	\$56,987	\$52,329	\$50,642	\$49,568
Provision for loan losses	3,153	9,022	2,437	1,571	3,981
Net interest income after provision for loan losses	57,327	47,965	49,892	49,071	45,587
Wealth management group fee income	9,317	8,804	8,316	8,522	7,747
Service charges on deposit accounts	4,727	4,961	5,089	4,886	5,281
Interchange revenue from debit card transactions	4,040	3,761	4,027	3,307	3,360
Securities gains, net	—	109	987	372	6,869
Change in fair value of equity investments	2,004	80	43	26	29
Other non-interest income	2,986	2,776	2,687	3,334	3,470
Total non-interest income	23,074	20,491	21,149	20,447	26,756
Legal accruals and settlements	989	850	1,200	—	4,250
Merger and acquisition related expenses	—	—	—	—	115
Other non-interest expenses	55,777	52,914	55,410	55,427	56,112
Total non-interest expenses	56,766	53,764	56,610	55,427	60,477
Income before income tax expense	23,635	14,692	14,431	14,091	11,866
Income tax expense	4,009	7,262	4,404	4,658	3,709
Net income	\$19,626	\$7,430	\$10,027	\$9,433	\$8,157

SELECTED PER SHARE DATA ON SHARES OF
COMMON STOCK AT OR FOR THE YEARS ENDED
DECEMBER 31,

	2018	2017	2016	2015	2014	% Change To 2018	Compounded Annual Growth 5 Years		
Earnings per share (1)	\$4.06	\$1.55	\$2.11	\$2.00	\$1.74	161.9 %	9.3	%	
Dividends declared	1.04	1.04	1.04	1.04	1.04	—	0.7	%	
Tangible book value (2) (4)	29.22	26.14	24.89	23.53	22.71	11.8 %	4.5	%	
Book Value	33.99	31.10	30.07	28.96	28.44	9.3 %	3.2	%	
Market price at December 31,	41.31	48.10	36.35	27.50	27.66	(14.1) %	5.5	%	
Common shares outstanding at year end (in thousands) (3)	4,855	4,817	4,781	4,739	4,699	0.8 %	0.7	%	
Weighted average shares outstanding (in thousands)	4,832	4,800	4,762	4,719	4,683	0.7 %	0.7	%	

(1) Earnings per share is computed by dividing net income by the weighted average number of common shares outstanding. There is no difference between basic and diluted earnings per share.

(2) Tangible book value is total shareholders' equity less goodwill and other intangible assets divided by common shares outstanding.

(3) All issuable shares including those related to directors' restricted stock units and directors' stock compensation.

(4) See the GAAP to Non-GAAP reconciliations starting at pages 67-70.

SELECTED RATIOS AT OR FOR THE YEARS
ENDED DECEMBER 31,

	2018	2017	2016	2015	2014
Return on average assets	1.14 %	0.43 %	0.60 %	0.60 %	0.54 %
Return on average equity	12.76 %	4.91 %	7.02 %	6.84 %	5.74 %
Dividend yield at year end	2.52 %	2.16 %	2.86 %	3.78 %	3.76 %
Dividend payout ratio	25.42 %	66.30 %	48.76 %	51.34 %	58.80 %
Total capital to risk adjusted assets (4)	13.14 %	11.82 %	12.14 %	12.26 %	11.84 %
Tier I capital to risk adjusted assets (4)	11.89 %	10.56 %	10.94 %	11.01 %	10.59 %
Tier I leverage ratio (4)	8.79 %	8.02 %	7.81 %	7.83 %	7.78 %
Average equity to average assets	8.96 %	8.83 %	8.57 %	8.74 %	9.43 %
Year-end equity to year-end assets ratio	9.40 %	8.77 %	8.67 %	8.47 %	8.77 %
Loans to deposits	83.60 %	89.40 %	82.42 %	83.46 %	87.62 %
Allowance for loan losses to total loans	1.44 %	1.61 %	1.19 %	1.22 %	1.22 %
Allowance for loan losses to non-performing loans	154.59 %	122.14 %	118.35 %	116.58 %	175.96 %
Non-performing loans to total loans	0.93 %	1.32 %	1.00 %	1.05 %	0.69 %
Non-performing assets to total assets	0.73 %	1.13 %	0.75 %	0.85 %	0.71 %
Net interest rate spread	3.59 %	3.47 %	3.26 %	3.36 %	3.48 %
Net interest margin	3.72 %	3.56 %	3.37 %	3.46 %	3.59 %
Efficiency ratio (unadjusted) (1)	67.94 %	69.39 %	77.04 %	77.97 %	79.24 %
Efficiency ratio (adjusted) (2) (3)	67.22 %	66.60 %	74.43 %	76.18 %	78.75 %

(1) Efficiency ratio (unadjusted) is non-interest bearing expense divided by the total of net interest income plus non-interest income.

(2) Efficiency ratio (adjusted) is non-interest expense less merger and acquisition related expenses less amortization of intangible assets less legal settlement divided by the total of fully taxable equivalent net interest income plus non-interest income less net gain on securities transactions.

(3) See the GAAP to Non-GAAP reconciliations starting at pages 67-70.

(4) Consolidated capital ratios.

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The following tables summarize the Corporation's unaudited net income and basic earnings per share at each quarter end for the years 2018 and 2017:

(in thousands, except per share data) UNAUDITED QUARTERLY DATA	2018			
	Quarter Ended			
	Mar. 31	June 30	Sept. 30	Dec. 31
Interest and dividend income	\$15,669	\$15,869	\$16,136	\$16,879
Interest expense	769	852	1,057	1,395
Net interest income	14,900	15,017	15,079	15,484
Provision (credit) for loan losses (1)	709	2,362	300	(218)
Net interest income after provision (credit) for loan losses	14,191	12,655	14,779	15,702
Total other non-interest income (3)	5,475	5,325	7,381	4,893
Total other non-interest expenses (2)	14,166	14,967	13,428	14,205
Income before income tax expense	5,500	3,013	8,732	6,390
Income tax expense	1,061	486	1,802	660
Net income	\$4,439	\$2,527	\$6,930	\$5,730
Basic and diluted earnings per share	\$0.92	\$0.52	\$1.43	\$1.18

(1) The quarter ended June 30, 2018 included an increase in the historical loss factor due to the charge-off of multiple commercial loans to one borrower in the amount of \$3.6 million.

(2) The quarter ended June 30, 2018 included a \$1.0 million legal settlement. Please refer to Footnote 16 of the audited consolidated financial statements for further discussion.

(3) The quarter ended September 30, 2018 included a \$2.1 million increase in fair value of equity investments recognized as a result of the sale of Visa Class B shares.

(in thousands, except per share data) UNAUDITED QUARTERLY DATA	2017			
	Quarter Ended			
	Mar. 31	June 30	Sept. 30	Dec. 31
Interest and dividend income	\$14,314	\$14,684	\$15,497	\$15,560
Interest expense	820	734	734	780
Net interest income	13,494	13,950	14,763	14,780
Provision for loan losses (3)	1,040	421	1,289	6,272
Net interest income after provision for loan losses	12,454	13,529	13,474	8,508
Total other non-interest income	4,847	5,022	5,166	5,456
Total other non-interest expenses (1)	13,045	14,332	13,276	13,111
Income before income tax expense	4,256	4,219	5,364	853
Income tax expense (2)	1,277	1,263	1,710	3,012
Net income (loss)	\$2,979	\$2,956	\$3,654	\$(2,159)
Basic and diluted earnings (loss) per share	\$0.62	\$0.62	\$0.76	\$(0.45)

(1) The quarter ended June 30, 2017 included a \$0.9 million legal reserve. Please refer to Footnote 16 of the audited consolidated financial statements for further discussion.

(2) The quarter ended December 31, 2017 included a \$2.9 million net deferred tax remeasurement. Please refer to Footnote 12 of the audited consolidated financial statements for further discussion.

(3) The quarter ended December 31, 2017 included \$4.9 million in specific reserves for eight commercial loans to two long-standing relationships in the Southern Tier of New York.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATION

Overview

The following is the MD&A of the Corporation in this Form 10-K at December 31, 2018 and 2017, and for the years ended December 31, 2018, 2017, and 2016. The purpose of this discussion is to focus on information about the financial condition and results of operations of the Corporation. Reference should be made to the accompanying audited consolidated financial statements and footnotes for an understanding of the following discussion and analysis. See the list of commonly used abbreviations and terms on pages 1-4.

The MD&A included in this Form 10-K contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of the Corporation's management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. For a discussion of those risks and uncertainties and the factors that could cause the Corporation's actual results to differ materially from those risks and uncertainties, see Forward-looking Statements below.

The Corporation has been a financial holding company since 2000, and the Bank was established in 1833, CFS in 2001, and CRM in 2016. Through the Bank and CFS, the Corporation provides a wide range of financial services, including demand, savings and time deposits, commercial, residential and consumer loans, interest rate swaps, letters of credit, wealth management services, employee benefit plans, insurance products, mutual funds and brokerage services. The Bank relies substantially on a foundation of locally generated deposits. The Corporation, on a stand-alone basis, has minimal results of operations. The Bank derives its income primarily from interest and fees on loans, interest on investment securities, WMG fee income and fees received in connection with deposit and other services. The Bank's operating expenses are interest expense paid on deposits and borrowings, salaries and employee benefit plans and general operating expenses.

CRM, a wholly-owned subsidiary of the Corporation which was formed and began operations on May 31, 2016, is a Nevada-based captive insurance company that insures against certain risks unique to the operations of the Corporation and its subsidiaries and for which insurance may not be currently available or economically feasible in today's insurance marketplace. CRM pools resources with several other similar insurance company subsidiaries of financial institutions to spread a limited amount of risk among themselves. CRM is subject to regulations of the State of Nevada and undergoes periodic examinations by the Nevada Division of Insurance.

Forward-looking Statements

This discussion contains forward-looking statements within the meaning of Section 27A of the Securities Act, Section 21E of the Exchange Act, and the Private Securities Litigation Reform Act of 1995. The Corporation intends its forward-looking statements to be covered by the safe harbor provisions for forward-looking statements in these sections. All statements regarding the Corporation's expected financial position and operating results, the Corporation's business strategy, the Corporation's financial plans, forecasted demographic and economic trends relating to the Corporation's industry and similar matters are forward-looking statements. These statements can sometimes be identified by the Corporation's use of forward-looking words such as "may," "will," "anticipate," "estimate," "expect," or "intend." The Corporation cannot promise that its expectations in such forward-looking statements will turn out to be correct. The Corporation's actual results could be materially different from expectations because of various factors, including changes in economic conditions or interest rates, credit risk, difficulties in managing the Corporation's growth, competition, changes in law or the regulatory environment, including the Dodd-Frank Act, and changes in general business and economic trends. Information concerning these and other

factors can be found in the Corporation's periodic filings with the SEC, including the discussion under the heading "Item 1A. Risk Factors" of this Form 10-K. The Corporation's quarterly filings are available publicly on the SEC's web site at <http://www.sec.gov>, on the Corporation's web site at <http://www.chemungcanal.com> or by written request to: Kathleen S. McKillip, Corporate Secretary, Chemung Financial Corporation, One Chemung Canal Plaza, Elmira, NY 14901. Except as otherwise required by law, the Corporation undertakes no obligation to publicly update or revise its forward-looking statements, whether as a result of new information, future events or otherwise.

Consolidated Financial Highlights

(in thousands, except per share data)	As of or for the Years Ended			
	December 31, 2018	December 31, 2017	December 31, 2016	
RESULTS OF OPERATIONS				
Interest and dividend income	\$64,553	\$60,055	\$56,168	
Interest expense	4,073	3,068	3,839	
Net interest income	60,480	56,987	52,329	
Provision for loan losses	3,153	9,022	2,437	
Net interest income after provision for loan losses	57,327	47,965	49,892	
Non-interest income	23,074	20,491	21,149	
Non-interest expenses	56,766	53,764	56,610	
Income before income tax expense	23,635	14,692	14,431	
Income tax expense	4,009	7,262	4,404	
Net income	\$19,626	\$7,430	\$10,027	
Basic and diluted earnings per share	\$4.06	\$1.55	\$2.11	
Average basic and diluted shares outstanding	4,832	4,800	4,762	
PERFORMANCE RATIOS				
Return on average assets	1.14	% 0.43	% 0.60	%
Return on average equity	12.76	% 4.91	% 7.02	%
Return on average tangible equity (a)	15.07	% 5.85	% 8.52	%
Efficiency ratio (unadjusted) (g)	67.94	% 69.39	% 77.04	%
Efficiency ratio (adjusted) (a) (b)	67.22	% 66.60	% 74.43	%
Non-interest expense to average assets (a) (c)	3.31	% 3.14	% 3.32	%
Loans to deposits	83.60	% 89.40	% 82.42	%
AVERAGE YIELDS / RATES - Fully Taxable Equivalent				
Yield on loans	4.39	% 4.24	% 4.18	%
Yield on investments	2.19	% 2.08	% 1.83	%
Yield on interest-earning assets	3.96	% 3.75	% 3.61	%
Cost of interest-bearing deposits	0.31	% 0.20	% 0.21	%
Cost of borrowings	2.37	% 2.78	% 3.01	%
Cost of interest-bearing liabilities	0.37	% 0.28	% 0.35	%
Interest rate spread	3.59	% 3.47	% 3.26	%
Net interest margin, fully taxable equivalent	3.72	% 3.56	% 3.37	%
CAPITAL				
Total equity to total assets at end of year	9.40	% 8.77	% 8.67	%
Tangible equity to tangible assets at end of year (a)	8.19	% 7.48	% 7.29	%
Book value per share	\$33.99	\$31.10	\$30.07	
Tangible book value per share (a)	29.22	26.14	24.89	
Year-end market value per share	41.31	48.10	36.35	
Dividends declared per share	1.04	1.04	1.04	

	As of or for the Years Ended			
	December 31, 2018	December 31, 2017	December 31, 2016	
(in thousands, except per share data)				
AVERAGE BALANCES				
Loans (d)	\$1,320,059	\$1,251,225	\$1,194,589	
Interest-earning assets	1,638,803	1,623,948	1,571,513	
Total assets	1,716,992	1,713,233	1,667,184	
Deposits	1,515,658	1,514,457	1,450,520	
Total equity	153,793	151,229	142,906	
Tangible equity (a)	130,256	126,902	117,656	
ASSET QUALITY				
Net charge-offs	\$5,369	\$2,114	\$2,444	
Non-performing loans (e)	12,254	17,324	12,043	
Non-performing assets (f)	12,828	19,264	12,431	
Allowance for loan losses	18,944	21,161	14,253	
Annualized net charge-offs to average loans	0.41	% 0.17	% 0.20	%
Non-performing loans to total loans	0.93	% 1.32	% 1.00	%
Non-performing assets to total assets	0.73	% 1.13	% 0.75	%
Allowance for loan losses to total loans	1.44	% 1.61	% 1.19	%
Allowance for loan losses to non-performing loans	154.59	% 122.14	% 118.35	%

(a) See the GAAP to Non-GAAP reconciliations on pages 67-70.

(b) Efficiency ratio (adjusted) is non-interest expense less merger and acquisition expenses less amortization of intangible assets less legal accruals and settlements divided by the total of fully taxable equivalent net interest income plus non-interest income less net gains on securities transactions.

(c) For the non-interest expense to average assets ratio, non-interest expense does not include legal accruals and settlements. See footnote 15 of the audited consolidated financial statements for further discussion.

(d) Loans include loans held for sale. Loans do not reflect the allowance for loan losses.

(e) Non-performing loans include non-accrual loans only.

(f) Non-performing assets include non-performing loans plus other real estate owned.

(g) Efficiency ratio (unadjusted) is non-interest bearing expense divided by the total of net interest income plus non-interest income.

Executive Summary

This executive summary of the MD&A includes selected information and may not contain all of the information that is important to readers of this Form 10-K. For a complete description of the trends and uncertainties, as well as the risks and critical accounting estimates affecting the Corporation, this Form 10-K should be read in its entirety.

The following table presents selected financial information for the years indicated, and the dollar and percent change (in thousands, except per share and ratio data):

	Years Ended December 31,		Change	Percentage Change	
	2018	2017			
Net interest income	\$60,480	\$56,987	\$3,493	6.1	%
Non-interest income	23,074	20,491	2,583	12.6	%
Non-interest expenses	56,766	53,764	3,002	5.6	%
Pre-provision income	26,788	23,714	3,074	13.0	%
Provision for loan losses	3,153	9,022	(5,869)	(65.1)	%
Income tax expense	4,009	7,262	(3,253)	(44.8)	%
Net income	\$19,626	\$7,430	\$12,196	164.1	%
Basic and diluted earnings per share	\$4.06	\$1.55	\$2.51	161.9	%
Selected financial ratios					
Return on average assets	1.14	% 0.43	%		
Return on average equity	12.76	% 4.91	%		
Net interest margin, fully taxable equivalent	3.72	% 3.56	%		
Efficiency ratio (a)	67.22	% 66.60	%		
Non-interest expense to average assets (a)	3.31	% 3.14	%		

(a) See the GAAP to Non-GAAP reconciliations on pages 67-70.

Net income for the year ended December 31, 2018 was \$19.6 million, or \$4.06 per share, compared with net income of \$7.4 million, or \$1.55 per share, for the prior year. Return on equity for the year ended December 31, 2018 was 12.76%, compared with 4.91% for the prior year. The increase in net income for the year ended December 31, 2018, compared to the prior year, was driven by increases in net interest income and non-interest income, and decreases in the provision for loan losses and income tax expense, partially offset by an increase in non-interest expenses.

Net interest income

Net interest income increased \$3.5 million, or 6.1% in 2018, compared with the prior year. The increase was due primarily to an increase of \$14.9 million in average interest-earning assets and a 16 basis points increase in net interest margin.

Non-interest income

Non-interest income increased \$2.6 million, or 12.6% in 2018, compared to the prior year. The increase was due primarily to an increase in the fair value of equity investments as a result of the sale of Visa Class B shares, WMG fee income, and interchange revenue from debit card transactions, partially offset by a decrease in service charges on deposit accounts.

Non-interest expenses

Non-interest expense increased \$3.0 million, or 5.6% in 2018, compared to the prior year. The increase was due primarily to increases in salaries and wages, net occupancy expenses, data processing expenses, professional services, marketing and advertising expenses, and other real estate owned expenses and a decrease in other components of net periodic pension cost (benefits). For the years ended December 31, 2018 and 2017, non-interest expense to average assets was 3.31% and 3.14%, respectively.

Provision for loan losses

The provision for loan losses decreased \$5.9 million, or 65.1% in 2018, compared to the prior year. The decrease was primarily the result of specific impairments in loans identified as impaired, including \$4.9 million in specific reserves for eight commercial loans to two long-standing relationships in the Southern Tier of New York recorded in 2017, a decrease in volume and loss factors relating to the residential, home equity, and the indirect and consumer portfolios, partially offset by an increase in volume and loss factors in the commercial loan portfolio. Net charge-offs were \$5.4 million in 2018, compared with \$2.1 million for the prior year. The increase in net charge-offs was due primarily to the charge-off of multiple large commercial loans to one borrower for \$3.6 million during the second quarter of 2018.

Income tax expense

Income tax expense decreased \$3.3 million, or 44.8% in 2018, compared to the prior year. The effective tax rate for 2018 decreased to 17.0% compared with 49.4% for the prior year. The decreases in income tax expense the effective tax rate can be attributed to a tax benefit of \$0.4 million recorded in December 2018 and to the estimated \$2.9 million one-time net deferred tax revaluation expense recorded in December 2017, both due to the enactment of the Tax Act. Additionally, the Corporation increased income generated from CCTC Funding Corp., a real estate investment trust subsidiary of the Bank, reducing the Corporation's state income tax expense.

The following table presents selected financial information for the years indicated, and the dollar and percent change (in thousands, except per share and ratio data):

	Years Ended		Change	Percentage Change
	2017	2016		
Net interest income	\$56,987	\$52,329	\$4,658	8.9 %
Non-interest income	20,491	21,149	(658)	(3.1)%
Non-interest expenses	53,764	56,610	(2,846)	(5.0)%
Pre-provision income	23,714	16,868	6,846	40.6 %
Provision for loan losses	9,022	2,437	6,585	270.2 %
Income tax expense	7,262	4,404	2,858	64.9 %
Net income	\$7,430	\$10,027	\$(2,597)	(25.9)%
Basic and diluted earnings per share	\$1.55	\$2.11	\$(0.56)	(26.5)%
Selected financial ratios				
Return on average assets	0.43	% 0.60	%	
Return on average equity	4.91	% 7.02	%	
Net interest margin, fully taxable equivalent	3.56	% 3.37	%	
Efficiency ratio (a)	66.60	% 74.43	%	
Non-interest expense to average assets (a)	3.14	% 3.32	%	

(a) See the GAAP to Non-GAAP reconciliations on pages 67-70.

Net income for the year ended December 31, 2017 was \$7.4 million, or \$1.55 per share, compared with \$10.0 million, or \$2.11 per share, for the prior year. Return on equity for the year ended December 31, 2017 was 4.91%, compared with 7.02% for the prior year. The decrease in net income for the year ended December 31, 2017, compared to the prior year, was driven by increases in provision for loan losses and income tax expenses, partially offset by an increase in net interest income and a reduction in non-interest expenses. Net income in 2017 was impacted by a one-time \$2.9 million reduction of the net deferred tax asset as a result of a revaluation required under GAAP due to the reduction in the corporation Federal income tax rate from 35% to 21% due to the Tax Act.

Net interest income

Net interest income increased \$4.7 million, or 8.9% in 2017, compared with the prior year. The decrease was due primarily to an increase of \$52.4 million in average interest-earning assets, offset by a 19 basis points decline in net interest margin.

Non-interest income

Non-interest income decreased \$0.7 million, or 3.1% in 2017, compared to the prior year. The decrease was due primarily to decreases in service charges on deposit accounts, interchange revenue from debit card transactions, and net gains on securities transactions, offset by increases in WMG fee income and other non-interest income.

Non-interest expense

Non-interest expense decreased \$2.8 million, or 5.0% in 2017, compared to the prior year. The decrease was due primarily to the decreases in pension and other employee benefits, net occupancy, furniture and equipment, professional services, and legal accruals and settlements, partially offset by increases in salaries and other non-interest expense. For the years ended December 31, 2017 and 2016, non-interest expense to average assets was 3.14% and 3.32%, respectively.

Provision for loan losses

The provision for loan losses increased \$6.6 million, or 270.2% in 2017, compared to the prior year. The increase was the result of specific impairments in loans identified as impaired, including \$4.9 million in specific reserves for eight commercial loans to two long-standing relationships in the Southern Tier of New York, volume increases in the commercial and indirect consumer loan portfolios, and an increase in loss factors relating to the indirect and consumer portfolios. Net charge-offs were \$2.1 million in 2017, compared with \$2.4 million for the prior year.

Income tax expense

Income tax expense increased \$2.9 million, or 64.9% in 2017, compared to the prior year. The increase was the result of a \$2.9 million one-time reduction in the Corporation's net deferred asset. GAAP required a tax remeasurement of the Corporation's net deferred tax asset in the period of enactment of the Tax Act. The Tax Act was enacted on December 22, 2017, reducing the corporate Federal income tax rate from 35% to 21% and making other changes to the Federal corporate income tax laws. The additional expense was attributable to the reduction in the carrying value of net deferred tax assets reflecting lower future tax benefits resulting from the lower enacted corporate tax rate.

Consolidated Results of Operations

The following section of the MD&A provides a comparative discussion of the Corporation's Consolidated Results of Operations on a reported basis for the years ended December 31, 2018 and 2017 and for the years ended December 31, 2017 and 2016. For a discussion of the Critical Accounting Policies, Estimates and Risks and Uncertainties that affect the Consolidated Results of Operations, see page 67.

Net Interest Income

The following table presents net interest income for the years indicated, and the dollar and percent change (in thousands):

	Years Ended December 31,		Change	Percentage Change	
	2018	2017			
Interest and dividend income	\$64,553	\$60,055	\$4,498	7.5	%
Interest expense	4,073	3,068	1,005	32.8	%
Net interest income	\$60,480	\$56,987	\$3,493	6.1	%

Net interest income, which is the difference between the interest income earned on interest-earning assets, such as loans and securities and the interest expense accrued on interest-bearing liabilities, such as deposits and borrowings, is

the largest contributor to the Corporation's earnings.

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Net interest income for the year ended December 31, 2018 totaled \$60.5 million, an increase of \$3.5 million, or 6.1%, compared with \$57.0 million for the prior year. Fully taxable equivalent net interest margin was 3.72% for the year ended December 31, 2018 compared with 3.56% for the prior year. The increase in total interest and dividend income in 2018 was due primarily to increases in interest and fees of \$5.0 million from loans and interest income of \$0.2 million from interest-earning deposits, while interest and dividend income from securities decreased \$0.7 million compared to the prior year. The increase in total interest expense in 2018 was due primarily to increases in interest expense of \$1.2 million on deposits and \$0.2 million on borrowed funds, while interest expense on securities sold under agreements to repurchase decreased \$0.3 million, compared to the prior year. Average interest-earning assets increased \$14.9 million in 2018 when compared to the prior year. The average yield on average interest-earning assets increased 21 basis points, while the average cost of interest-bearing liabilities increased nine basis points, as compared to the prior year. The increase in interest and dividend income in 2018 was due primarily to a \$61.6 million increase in the average balance of commercial loans, primarily commercial mortgages, along with a 22 basis points increase in the average yield on commercial loans as a result of the rising interest rate environment, and a \$14.3 million increase in the average balance of consumer loans, compared to the prior year. The increase in interest expense in 2018 was due primarily to an increase in interest rates on interest-bearing deposit accounts, including promotional interest rates on time deposits, offset by a 41 basis points decrease in the average cost on borrowed funds due to the maturity of one \$2.0 million FHLB term advance (3.05% rate) in January and one \$10.0 million repurchase agreement (3.72% rate) in May 2018, as compared to the prior year.

The following table presents net interest income for the years indicated, and the dollar and percent change (in thousands):

	Years Ended		Change	Percentage Change
	2017	2016		
Interest and dividend income	\$60,055	\$56,168	\$3,887	6.9 %
Interest expense	3,068	3,839	(771)	(20.1)%
Net interest income	\$56,987	\$52,329	\$4,658	8.9 %

Net interest income for the year ended December 31, 2017 totaled \$57.0 million, an increase of \$4.7 million, or 8.9%, compared with \$52.3 million for the prior year. Fully taxable equivalent net interest margin was 3.56% for the year ended December 31, 2017 compared with 3.37% for the prior year. The increase in net interest income was due primarily to an increase in interest income from the loan portfolio, primarily from the commercial loan portfolio, as average loan balances increased \$56.6 million in 2017 when compared to the prior year. The increase in net interest margin was a result of the loan and securities portfolios repricing to current markets as interest rates increased in 2017. The average yield on average interest-earning assets increased 14 basis points, while the average cost of interest-bearing liabilities decreased seven basis points. The increase in the average yield of interest-earning assets can be mostly attributed to increases of six and 20 basis points in the average yields of commercial loans and consumer loans, respectively, 13 and 18 basis points in the average yields of taxable and tax-exempt securities, respectively, and 59 basis points in the average yield of interest-earning deposits, partially offset by an 11 basis points decrease in mortgage loans. The decline in the average cost of interest-bearing liabilities can be attributed to a 23 basis points decline in the average cost of borrowings due to the maturity of one \$10.0 million FHLB term advance (4.60% rate) in December 2016 and one \$10.0 million repurchase agreement (4.54% rate) in March 2017.

Average Consolidated Balance Sheet and Interest Analysis

The following table presents certain information related to the Corporation's average consolidated balance sheets and its consolidated statements of income for the years ended December 31, 2018, 2017 and 2016. It also reflects the average yield on interest-earning assets and average cost of interest-bearing liabilities for the years ended

December 31, 2018, 2017 and 2016. For the purpose of the table below, non-accruing loans are included in the daily average loan amounts outstanding. Daily balances were used for average balance computations. Investment securities are stated at amortized cost. Tax equivalent adjustments have been made in calculating yields on obligations of states and political subdivisions, tax-free commercial loans and dividends on equity investments. With the new 21% statutory federal tax rate effective January 1, 2018, the conversion factor to a fully taxable equivalent basis decreased in 2018. The decline had no impact on net income, but caused the net interest margin on a fully taxable equivalent basis to decrease.

AVERAGE CONSOLIDATED BALANCE SHEETS AND NET INTEREST INCOME ANALYSIS

(in thousands)	Year Ended December 31,								
	2018			2017			2016		
	Average Balance	Interest	Yield/Rate	Average Balance	Interest	Yield/Rate	Average Balance	Interest	Yield/Rate
Interest-earning assets:									
Commercial loans	\$853,240	\$39,166	4.59%	\$791,627	\$34,596	4.37%	\$734,628	\$31,682	4.31%
Mortgage loans	191,668	7,197	3.75%	198,783	7,541	3.79%	197,132	7,689	3.90%
Consumer loans	275,151	11,625	4.22%	260,815	10,964	4.20%	262,829	10,512	4.00%
Taxable securities	234,407	4,815	2.05%	270,168	5,510	2.04%	274,401	5,245	1.91%
Tax-exempt securities	51,036	1,414	2.77%	52,227	1,669	3.20%	45,127	1,364	3.02%
Interest-earning deposits	33,301	756	2.27%	50,328	563	1.12%	57,396	307	0.53%
Total interest-earning assets	1,638,803	64,973	3.96%	1,623,948	60,843	3.75%	1,571,513	56,799	3.61%
Non-interest earning assets:									
Cash and due from banks	27,122			25,663			26,708		
Premises and equipment, net	26,024			27,936			29,525		
Other assets	54,831			53,883			51,590		
Allowance for loan losses	(20,534)			(15,066)			(14,771)		
AFS valuation allowance	(9,254)			(3,131)			2,619		
Total assets	\$1,716,992			\$1,713,233			\$1,667,184		
Interest-bearing liabilities:									
Interest-bearing demand deposits	\$156,432	365	0.23%	\$146,999	135	0.09%	\$135,874	136	0.10%
Savings and insured money market deposits	764,420	2,044	0.27%	800,070	1,566	0.20%	752,489	1,457	0.19%
Time deposits	134,837	914	0.68%	132,607	467	0.35%	156,737	577	0.37%
FHLB/BNY advances, securities sold under agreements to repurchase, and other debt	31,590	750	2.37%	32,350	900	2.78%	55,472	1,669	3.01%
Total interest-bearing liabilities	1,087,279	4,073	0.37%	1,112,026	3,068	0.28%	1,100,572	3,839	0.35%
Non-interest bearing liabilities:									
Demand deposits	459,969			434,781			405,420		
Other liabilities	15,951			15,197			18,286		

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Total liabilities	1,563,199	1,562,004	1,524,278
Shareholders' equity	153,793	151,229	142,906
Total liabilities and shareholders' equity	\$1,716,992	\$1,713,233	\$1,667,184
Fully taxable equivalent net interest income	60,900	57,775	52,960
Net interest rate spread (1)	3.59%	3.47%	3.26%
Net interest margin, fully taxable equivalent (2)	3.72%	3.56%	3.37%
Taxable equivalent adjustment	(420)	(788)	(631)
Net interest income	\$60,480	\$56,987	\$52,329

(1) Net interest rate spread is the difference in the average yield on interest-earning assets less the average cost of interest-bearing liabilities.

(2) Net interest margin is the ratio of fully taxable equivalent net interest income divided by average interest-earning assets.

Changes Due to Rate and Volume

Net interest income can be analyzed in terms of the impact of changes in rates and volumes. The table below illustrates the extent to which changes in interest rates and in the volume of average interest-earning assets and interest-bearing liabilities have affected the Corporation's interest income and interest expense during the years indicated. Information is provided in each category with respect to (i) changes attributable to changes in volume (changes in volume multiplied by prior rate); (ii) changes attributable to changes in rates (changes in rates multiplied by prior volume); and (iii) the net changes. For purposes of this table, changes that are not due solely to volume or rate changes have been allocated to these categories based on the respective percentage changes in average volume and rate. Due to the numerous simultaneous volume and rate changes during the years analyzed, it is not possible to precisely allocate changes between volume and rates. In addition, average interest-earning assets include non-accrual loans and taxable equivalent adjustments were made.

RATE/VOLUME ANALYSIS OF NET INTEREST INCOME

(in thousands)	2018 vs. 2017			2017 vs. 2016		
	Total Change	Due to Volume	Due to Rate	Total Change	Due to Volume	Due to Rate
Interest income						
Commercial loans	\$4,570	\$2,775	\$1,795	\$2,914	\$2,471	\$443
Mortgage loans	(344)	(265)	(79)	(148)	65	(213)
Consumer loans	661	608	53	452	(80)	532
Taxable securities	(695)	(722)	27	265	(83)	348
Tax-exempt securities	(255)	(37)	(218)	305	221	84
Interest-earning deposits	193	(239)	432	256	(42)	298
Total interest income	4,130	2,120	2,010	4,044	2,552	1,492
Interest expense						
Interest-bearing demand deposits				230	9	221 (1)
Savings and insured money market deposits				478	(72)	550 109 59 50
Time deposits				447	8	439 (110) (82) (28)
FHLBNY advances, securities sold under agreements to repurchase and other debt				(150)	(20)	(130) (769) (650) (119)
Total interest expense				1,005	(75)	1,080 (771) (661) (110)
Fully taxable equivalent net interest income				\$3,125	\$2,195	\$930 \$4,815 \$3,213 \$1,602

Provision for loan losses

Management performs an ongoing assessment of the adequacy of the allowance for loan losses based upon a number of factors including an analysis of historical loss factors, collateral evaluations, recent charge-off experience, credit quality of the loan portfolio, current economic conditions and loan growth. Based on this analysis, the provision for loan losses for the years ended December 31, 2018, 2017 and 2016 were \$3.2 million, \$9.0 million and \$2.4 million, respectively. The decrease in provision for loan losses in 2018, as compared to 2017, was due to \$4.9 million in specific reserves for eight commercial loans to two long-standing relationships in the Southern Tier of New York recorded in 2017, a decrease in volume and loss factors relating to the residential, home equity, and the indirect and consumer portfolios, partially offset by an increase in volume and loss factors in the commercial loan portfolio. The

increase in provision for loan losses in 2017 as compared to 2016 was due primarily to the \$4.9 million in specific reserves for eight commercial loans to two long-standing relationships in the Southern Tier of New York noted above. Net charge-offs for the years ended December 31, 2018, 2017 and 2016 were \$5.4 million, \$2.1 million and \$2.4 million, respectively.

Non-interest income

The following table presents non-interest income for the years indicated, and the dollar and percent change (in thousands):

	Years Ended December 31,		Change	Percentage Change	
	2018	2017			
WMG fee income	\$9,317	\$8,804	\$513	5.8	%
Service charges on deposit accounts	4,727	4,961	(234)	(4.7)	%
Interchange revenue from debit card transactions	4,040	3,761	279	7.4	%
Net gains on securities transactions	—	109	(109)	(100.0)	%
Change in fair value of equity investments	2,004	80	1,924	2,405.0	%
Net gains on sales of loans held for sale	351	260	91	35.0	%
Net gains on sales of other real estate owned	90	38	52	136.8	%
Income from bank owned life insurance	66	70	(4)	(5.7)	%
CFS fee and commission income	510	646	(136)	(21.1)	%
Other	1,969	1,762	207	11.7	%
Total non-interest income	\$23,074	\$20,491	\$2,583	12.6	%

Total non-interest income for the year ended December 31, 2018 increased \$2.6 million compared to the prior year. The increase was due primarily to increases in the fair value of equity investments, WMG fee income and interchange revenue from debit card transactions, partially offset by a decrease in service charges on deposits accounts.

WMG fee income

WMG fee income increased in 2018 compared to the prior year due to an increase in average assets under management or administration.

Service charges on deposit accounts

Service charges on deposit accounts decreased in 2018 compared to the prior year due to a decrease in overdraft fee income.

Interchange revenue from debit card transactions

Interchange revenue from debit card transactions increased in 2018 compared to the prior year due to an increase in the volume of transactions.

Net gains on securities transactions

Net gains on securities transactions decreased in 2018 compared to the prior year due to there being no sales of securities in 2018.

Change in fair value of equity investments

Change in fair value of equity investments increased in 2018 compared to the prior year due primarily to the increase in the fair value of Visa Class B shares. Subsequent to the change in fair value, the Visa Class B shares were sold

during the third quarter of 2018.

CFS fee and commission income

CFS fee and commission income decreased in 2018 compared to the prior year due to a decrease in transaction activity.

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The following table presents non-interest income for the years indicated, and the dollar and percent change (in thousands):

	Years Ended December 31,		Change	Percentage Change	
	2017	2016			
WMG fee income	\$8,804	\$8,316	\$488	5.9	%
Service charges on deposit accounts	4,961	5,089	(128)	(2.5)	%
Interchange revenue from debit card transactions	3,761	4,027	(266)	(6.6)	%
Net gains on securities transactions	109	987	(878)	(89.0)	%
Change in fair value of equity investments	80	43	37	86.0	%
Net gains on sales of loans held for sale	260	326	(66)	(20.2)	%
Net gains (losses) on sales of other real estate owned	38	21	17	81.0	%
Income from bank owned life insurance	70	73	(3)	(4.1)	%
CFS fee and commission income	646	544	102	18.8	%
Other	1,762	1,723	39	2.3	%
Total non-interest income	\$20,491	\$21,149	\$(658)	(3.1)	%

Total non-interest income for year ended December 31, 2017 decreased \$0.7 million compared to the prior year. The decrease was primarily due to decreases in service charges on deposit accounts, interchange revenue from debit card transactions, and net gains on securities transactions, offset by increases in WMG fee income and CFS fee and commission income.

WMG fee income

WMG fee income decreased in 2017 compared to the prior year due to an increase in assets under management or administration.

Service charges on deposit accounts

Service charges on deposit accounts decreased in 2017 compared to the prior year due to a decrease in overdraft fees.

Interchange revenue from debit card transactions

Interchange revenue from debit card transactions decreased in 2017 compared to the prior year due to the recognition of an incremental volume bonus related to the rebranding of the Bank's credit cards recognized in 2016.

Net gains on securities transactions

Net gains on securities transactions decreased in 2017 compared to the prior year due to the sale of \$14.5 million in U.S. Treasuries and \$25.0 million in obligations of U.S. Government sponsored enterprises in 2016.

CFS fee and commission income

CFS fee and commission income increased in 2017 compared to the prior year due to an increase in fee income.

Non-interest expenses

The following table presents non-interest expenses for the years indicated, and the dollar and percent change (in thousands):

	Years Ended December 31,		Change	Percentage Change	
	2018	2017			
Compensation expenses:					
Salaries and wages	\$22,322	\$21,476	\$846	3.9	%
Pension and other employee benefits	5,524	5,510	14	0.3	%
Other components of net periodic pension cost (benefits)	(770)	(1,234)	464	(37.6)	%
Total compensation expenses	27,076	25,752	1,324	5.1	%
Non-compensation expenses:					
Net occupancy	6,550	6,263	287	4.6	%
Furniture and equipment	2,550	2,828	(278)	(9.8)	%
Data processing	6,997	6,539	458	7.0	%
Professional services	2,169	1,774	395	22.3	%
Legal accruals and settlements	989	850	139	16.4	%
Amortization of intangible assets	734	860	(126)	(14.7)	%
Marketing and advertising	1,181	794	387	48.7	%
Other real estate owned expense	422	110	312	283.6	%
FDIC insurance	1,142	1,236	(94)	(7.6)	%
Loan expense	863	694	169	24.4	%
Other	6,093	6,064	29	0.5	%
Total non-compensation expenses	29,690	28,012	1,678	6.0	%
Total non-interest expenses	\$56,766	\$53,764	\$3,002	5.6	%

Total non-interest expenses for the year ended December 31, 2018 increased \$3.0 million compared with the prior year. The increase was primarily due to increases in compensation and non-compensation expenses.

Compensation expenses

Compensation expenses increased in 2018 compared to the prior year due to an increase in salaries and wages and a decrease in other components of net periodic pension and postretirement cost (benefits). The increase in salaries and wages can be attributed to annual merit increases and an increase in headcount with two denovo branches which opened in 2018. The decrease in other components of net periodic pension cost (benefits) was due primarily to a \$0.8 million charge related to a lump sum settlement to terminated, vested employees in 2018.

Non-compensation expenses

Non-compensation expense increased in 2018 compared to the prior year primarily due to increases in net occupancy, data processing, professional services, marketing and advertising, and other real estate owned expense, offset by a decrease in furniture and equipment expenses. The increase in net occupancy and data processing expenses can be attributed to the two new denovo branches, along with the timing of various projects. The increase in marketing and advertising can be attributed to advertising campaigns related to the opening of the two denovo branches. The increase in other real estate owned expense can be attributed to additional OREO properties acquired during 2017 and 2018.

The following table presents non-interest expense for the years indicated, and the dollar and percent change (in thousands):

	Years Ended		Change	Percentage	
	December 31,			Change	
	2017	2016			
Compensation expenses:					
Salaries and wages	\$21,476	\$20,954	\$522	2.5	%
Pension and other employee benefits	5,510	4,850	660	13.6	%
Other components of net periodic pension cost (benefits)	(1,234)	1,282	(2,516)	(196.3)	%
Total compensation expenses	25,752	27,086	(1,334)	(4.9)	%
Non-compensation expenses:					
Net occupancy	6,263	6,837	(574)	(8.4)	%
Furniture and equipment	2,828	2,967	(139)	(4.7)	%
Data processing	6,539	6,593	(54)	(0.8)	%
Professional services	1,774	2,175	(401)	(18.4)	%
Legal settlements	850	1,200	(350)	(29.2)	%
Amortization of intangible assets	860	986	(126)	(12.8)	%
Marketing and advertising	794	877	(83)	(9.5)	%
Other real estate owned expense	110	180	(70)	(38.9)	%
FDIC insurance	1,236	1,193	43	3.6	%
Loan expense	694	669	25	3.7	%
Other	6,064	5,847	217	3.7	%
Total non-compensation expenses	28,012	29,524	(1,512)	(5.1)	%
Total non-interest expenses	\$53,764	\$56,610	\$(2,846)	(5.0)	%

Total non-interest expenses for the year ended December 31, 2017 decreased \$2.8 million compared with the prior year. The decrease was primarily due to decreases in compensation and non-compensation expenses.

Compensation expenses

Compensation expenses decreased in 2017 compared to the prior year due to a decrease in other components of net periodic pension cost (benefits), offset by increases in salaries and wages and pension and other employee benefits. The decrease in other components of net periodic pension cost (benefits) can be mostly attributed to the freezing of accruals for the pension and post-retirement healthcare plans. The increase in salaries and wages can be attributed to annual merit increases. The increase in pension and other employee benefits can be attributed to increases in healthcare and 401(k) contributions.

Non-compensation expenses

Non-compensation expenses decreased in 2017 compared to the prior year primarily due to decreases in net occupancy, furniture and equipment, professional services and legal accruals and settlements, partially offset by an increase in other non-interest expense. The decrease in net occupancy and furniture and equipment expenses can be attributed to the closure of the branch at 202 East State Street in Ithaca, NY during the second quarter of 2016, offset by exit costs for the branch at 120 Genesee Street in Auburn, NY recognized during the second quarter of 2017. The decrease in professional services can be attributed to professional fees incurred during the formation of CRM in 2016 and legal costs associated with the Fane v. Chemung Canal Trust Company case. The decrease in legal accruals and settlements can be attributed to the creation of a \$1.2 million legal accrual for the Fane v. Chemung Canal Trust

Company case in 2016, compared to a \$0.9 million legal accrual for the same case in 2017. Please refer to Footnote 16 of the audited consolidated financial statements for further discussion of the Fane v. Chemung Canal Trust Company case.

Income tax expense

The following table presents income tax expense and the effective tax rate for the years indicated, and the dollar and percent change (in thousands):

	Years Ended December 31,		Change	Percentage Change
	2018	2017		
Income before income tax expense	\$23,635	\$14,692	\$8,943	60.9 %
Income tax expense	\$4,009	\$7,262	\$(3,253)	(44.8)%
Effective tax rate	17.0	% 49.4	%	

The effective tax rate decreased to 17.0% for the year ended December 31, 2018 compared with 49.4% for the prior year. The decrease in the effective tax rate can be attributed to a tax benefit of \$0.4 million recorded in December 2018 and to the estimated \$2.9 million one-time net deferred tax revaluation expense recorded in December 2017, both due to the enactment of the Tax Act. The effective tax rates for the years ended December 31, 2018 and 2017, excluding the tax benefit and one-time net deferred tax revaluation, were 18.8%¹ and 29.5%², respectively.

The following table presents income tax expense and the effective tax rate for the years indicated, and the dollar and percent change (in thousands):

	Years Ended December 31,		Change	Percentage Change
	2017	2016		
Income before income tax expense	\$14,692	\$14,431	\$261	1.8 %
Income tax expense	\$7,262	\$4,404	\$2,858	64.9 %
Effective tax rate	49.4	% 30.5	%	

The effective tax rate increased to 49.4% for the year ended December 31, 2017 compared with 30.5% for the prior year. The increase in the effective tax rate can be attributed to the \$2.9 million one-time reduction in the net deferred tax asset as a result of the remeasurement required under GAAP due to the enactment of the Tax Act. The effective tax rate for the year ended December 31, 2017, excluding one-time net deferred tax asset revaluation, was 29.5%².

¹ (\$4,009 income tax expense + 445 revaluation of net deferred tax expense) / \$23,635 income before income tax expense.

² (\$7,262 income tax expense - \$2,927 revaluation of net deferred tax expense) / \$14,692 income before income tax expense.

Financial Condition

The following table presents selected financial information at December 31, 2018 and 2017, and the dollar and percent change (in thousands):

	December 31, 2018	December 31, 2017	Change	Percentage Change
Assets				
Total cash and cash equivalents	\$ 129,972	\$ 30,729	\$99,243	323.0 %
Total investment securities, FHLB, and FRB stock	252,180	304,993	(52,813)	(17.3)%
Loans, net of deferred loan fees				
Loans, net of deferred loan fees	1,311,906	1,311,824	82	— %
Allowance for loan losses	(18,944)	(21,161)	2,217	(10.5)%
Loans, net	1,292,962	1,290,663	2,299	0.2 %
Goodwill and other intangible assets, net				
Goodwill and other intangible assets, net	23,175	23,909	(734)	(3.1)%
Other assets	57,054	57,326	(272)	(0.5)%
Total assets	\$ 1,755,343	\$ 1,707,620	\$47,723	2.8 %
Liabilities and Shareholders' Equity				
Total deposits	\$ 1,569,237	\$ 1,467,446	\$101,791	6.9 %
FHLBNY advances and other debt	4,304	74,217	(69,913)	(94.2)%
Other liabilities	16,773	16,144	629	3.9 %
Total liabilities	1,590,314	1,557,807	32,507	2.1 %
Total shareholders' equity	165,029	149,813	15,216	10.2 %
Total liabilities and shareholders' equity	\$ 1,755,343	\$ 1,707,620	\$47,723	2.8 %

Cash and cash equivalents

The increase in cash and cash equivalents can be mostly attributed to an increase in deposits and a decrease in securities, offset by a decrease in FHLBNY advances and other debt.

Investment securities

The decrease in securities available for sale and held to maturity can be mostly attributed to maturities and calls exceeding new purchases of investment securities.

Loans, net

Total loans remained level with the prior year, however, changes included increases of \$16.1 million in commercial mortgages and \$4.6 million in commercial and agricultural loans, offset by decreases of \$11.7 million in residential mortgages, \$3.7 million in indirect consumer loans, and \$5.2 million in other consumer loans. The increase in the commercial loan portfolio was primarily from the Capital Bank Division and the decrease in other consumer loans can be mostly attributed to a decrease in the indirect automobile loan portfolio.

Goodwill and other intangible assets, net

The decrease in goodwill and other intangible assets, net can be attributed to amortization of other intangible assets. There were no impairments of goodwill or other intangible assets during the years ended December 31, 2018 and

2017.

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Other assets

The decrease in other assets can be mostly attributed to depreciation in premises and equipment and a decrease in the net deferred tax asset, offset by purchases in premises and equipment and an increase in interest rate swap assets.

Deposits

The increase in deposits can be attributed to increases of \$16.8 million in non-interest bearing demand deposit accounts, \$30.6 million in interest-bearing demand deposit accounts, \$24.2 million in money market accounts, and \$31.9 million in time deposits, due to a rate promotion, offset by a decrease of \$1.6 million in savings accounts. The increase in interest-bearing demand deposits was mainly attributable to the Corporation converting its off balance sheet sweep agreement accounts into interest-bearing demand deposits in 2018 which resulted in the onboarding of approximately \$30.0 million in deposits.

FHLBNY advances and other debt

The decrease in FHLBNY advances and other debt can be mostly attributed to an increase in deposits and a decline in securities.

Shareholders' equity

The increase in shareholders' equity was due primarily to an increase in retained earnings of \$14.6 million, which was a result of earnings of \$19.6 million, offset by \$5.0 million in dividends declared during the current year. The increase in accumulated other comprehensive loss of \$1.1 million can be attributed to the decline in the fair market value of the securities portfolio due to rising interest rates. Also, treasury stock decreased \$1.8 million, due to the issuance of shares to the Corporation's employee benefit stock plans and directors' stock plans.

Assets under management or administration

The market value of total assets under management or administration in our WMG was \$1.768 billion, including \$283.0 million of assets held under management or administration for the Corporation, at December 31, 2018 compared with \$1.952 billion, including \$346.8 million of assets held under management or administration for the Corporation, at December 31, 2017, a decrease of \$183.4 million, or 9.4%.

Balance Sheet Comparisons

The table below contains selected average balance sheet information for each year in the five-year period ended December 31, 2018 (in millions):

SELECTED AVERAGE BALANCE SHEET INFORMATION

	2018	2017	2016	2015	2014	% Change 2017 to 2018	Compounded Annual Growth 5 Years	
Average Balance Sheet	2018	2017	2016	2015	2014	2018	Years	
Total assets	\$1,717.0	\$1,713.2	\$1,667.2	\$1,577.8	\$1,506.3	0.2	% 5.6	%
Interest-earning assets (1)	1,638.8	1,623.9	1,571.5	1,477.5	1,399.3	0.9	% 6.3	%
Loans (2)	1,320.1	1,251.2	1,194.6	1,142.0	1,066.4	5.5	% 7.0	%
Investments (3)	318.7	372.7	376.9	335.5	332.9	(14.5)	% 3.6	%
Deposits	1,515.7	1,514.5	1,450.5	1,367.7	1,297.4	0.1	% 6.8	%
Borrowings (4)	31.6	32.4	55.5	56.2	56.7	(2.5)	% (14.6)	%
Shareholders' equity	153.8	151.2	142.9	137.9	142.0	1.7	% 2.7	%

(1) Average interest-earning assets include securities available for sale and securities held to maturity based on amortized cost, loans and loans held for sale net of deferred loan fees, interest-earning deposits, FHLB NY stock, FRB NY stock and federal funds sold. For 2018 and 2017, average interest-earning assets also include equity investments.

(2) Average loans and loans held for sale, net of deferred loan fees.

(3) Average balances for investments include securities available for sale and securities held to maturity, based on amortized cost, FHLB NY stock, FRB NY stock, federal funds sold and interest-earning deposits. For 2018 and 2017, average balances for investments securities also include equity investments.

(4) Average borrowings include FHLB NY advances, securities sold under agreements to repurchase and capitalized lease obligations.

The table below contains selected year-end balance sheet information for each year in the five-year period ended December 31, 2018 (in millions):

SELECTED YEAR-END BALANCE SHEET INFORMATION

	2018	2017	2016	2015	2014	% Change 2017 to 2018	Compounded Annual Growth 5 Years	
Ending Balance Sheet	2018	2017	2016	2015	2014	2018	Years	
Total assets	\$1,755.3	\$1,707.6	\$1,657.2	\$1,620.0	\$1,524.5	2.8	% 7.1	%
Interest-earning assets (1)	1,661.5	1,620.1	1,560.0	1,526.4	1,416.4	2.6	% 7.5	%
Loans (2)	1,312.4	1,312.4	1,200.7	1,169.7	1,122.2	—	% 8.0	%
Allowance for loan losses	18.9	21.2	14.3	14.3	13.7	(10.8)	% 12.7	%
Investments (3)	349.1	307.8	359.3	356.7	294.2	13.4	% 6.0	%
Deposits	1,569.2	1,467.4	1,456.3	1,400.3	1,280.0	6.9	% 8.4	%
Borrowings (4)	4.3	74.2	41.4	64.4	82.8	(94.2)	% (41.0)	%
Shareholders' equity	165.0	149.8	143.7	137.2	133.6	10.1	% 4.7	%

(1) Interest-earning assets include securities available for sale, at estimated fair value and securities held to maturity based on amortized cost, equity investments, loans and loans held for sale net of deferred loan fees, interest-earning deposits, FHLB NY stock, FRB NY stock and federal funds sold.

(2) Loans and loans held for sale, net of deferred loan fees.

(3) Investments include securities available for sale, at estimated fair value, securities held to maturity, at amortized cost, equity investments, FHLB NY stock, FRB NY stock, federal funds sold and interest-earning deposits.

(4) Borrowings include FHLBNY overnight and term advances, securities sold under agreements to repurchase and capitalized lease obligations.

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Cash and Cash Equivalents

Total cash and cash equivalents increased \$99.2 million since December 31, 2017, due to increases of \$5.1 million in cash and due from financial institutions and \$94.1 million in interest-earning deposits in other financial institutions.

Securities

The Corporation's Funds Management Policy includes an investment policy that in general, requires debt securities purchased for the bond portfolio to carry a minimum agency rating of "A". After an independent credit analysis is performed, the policy also allows the Corporation to purchase local municipal obligations that are not rated. The Corporation intends to maintain a reasonable level of securities to provide adequate liquidity and in order to have securities available to pledge to secure public deposits, repurchase agreements and other types of transactions. Fluctuations in the fair value of the Corporation's securities relate primarily to changes in interest rates.

Marketable securities are classified as Available for Sale, while investments in local municipal obligations are generally classified as Held to Maturity. The composition of the available for sale and held to maturity securities portfolios are summarized in the tables below (in thousands):

SECURITIES AVAILABLE FOR SALE

	December 31, 2018		December 31, 2017		December 31, 2016	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Obligations of U.S. Government sponsored enterprises	\$5,489	\$5,472	\$15,492	\$15,491	\$17,300	\$17,455
Mortgage-backed securities, residential and collateralized mortgage obligations	189,111	183,192	224,939	219,909	253,156	245,866
Obligations of states and political subdivisions	44,390	44,152	52,928	53,132	38,843	38,740
Other securities (a)	9,506	9,442	4,588	4,559	817	820
Totals	\$248,496	\$242,258	\$297,947	\$293,091	\$310,116	\$302,881

(a) Other securities consists of corporate bonds and SBA loan pools.

The available for sale segment of the securities portfolio totaled \$242.3 million at December 31, 2018, a decrease of \$50.8 million, or 17.3%, from \$293.1 million at December 31, 2017. The decrease resulted primarily from maturities and calls, which exceeded new purchases.

HELD TO MATURITY SECURITIES

	December 31, 2018		December 31, 2017		December 31, 2016	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Obligations of states and political subdivisions	\$3,020	\$3,020	\$1,946	\$1,946	\$3,725	\$3,931
Time deposits with other financial institutions	1,855	1,838	1,835	1,830	980	981
Totals	\$4,875	\$4,858	\$3,781	\$3,776	\$4,705	\$4,912

The held to maturity segment of the securities portfolio consists of obligations of political subdivisions in the Corporation's market areas. These securities totaled \$4.9 million at December 31, 2018, an increase of \$1.1 million or 28.9%, from \$3.8 million at December 31, 2017, due primarily to new purchases.

Non-marketable equity securities at December 31, 2018 include shares of FRBNY stock and FHLBNY stock, carried at their cost of \$1.7 million and \$1.4 million, respectively. The fair value of these securities is assumed to approximate their cost. The investment in these stocks is regulated by regulatory policies of the respective institutions.

The table below sets forth the carrying amounts and maturities of available for sale and held to maturity debt securities at December 31, 2018 and the weighted average yields of such securities (all yields are calculated on the basis of the amortized cost and weighted for the scheduled maturity of each security, except mortgage-backed securities which are based on the average life at the projected prepayment speed of each security) (in thousands):

MATURITIES AND YIELDS OF AVAILABLE FOR SALE AND HELD TO MATURITY SECURITIES

	Within One Year		After One, But Within Five Years		After Five, But Within Ten Years		After Ten Years	
	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield
Obligations of U.S. Government and U.S. Government sponsored enterprises	\$4,969	1.86%	\$503	3.72%	\$—	N/A	\$—	N/A
Mortgage-backed securities, residential	82	2.65%	121,670	1.92%	56,519	2.35%	4,921	3.20%
Obligations of states and political subdivisions	8,696	2.20%	11,936	2.01%	10,829	2.21%	15,711	2.68%
Time deposits with other institutions	895	2.09%	960	2.24%	—	N/A	—	N/A
Corporate bonds and notes	—	N/A	247	3.73%	—	N/A	—	N/A
SBA loan pools	—	N/A	115	3.83%	—	N/A	9,080	2.90%
Total	\$14,642	2.08%	\$135,431	1.94%	\$67,348	2.33%	\$29,712	2.83%

Management evaluates securities for OTTI on a quarterly basis, and more frequently when economic or market conditions warrant such an evaluation. For the years ended December 31, 2018 and 2017, the Corporation had no OTTI charges.

Loans

The Corporation has reporting systems to monitor: (i) loan originations and concentrations, (ii) delinquent loans, (iii) non-performing assets, including non-performing loans, troubled debt restructurings, other real estate owned, (iv) impaired loans, and (v) potential problem loans. Management reviews these systems on a regular basis.

The table below presents the Corporation's loan composition by type and percentage of total loans at the end of each of the last five years (in thousands):

	LOANS									
	December 31, 2018		2017		2016		2015		2014	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Commercial and agricultural	\$202,854	15.5	\$199,007	15.2	\$176,561	14.7	\$193,233	16.5	\$166,406	14.8
Commercial mortgages	661,170	50.4	644,330	49.1	568,656	47.4	506,478	43.3	452,593	40.4
Residential mortgages	182,724	13.9	194,440	14.8	198,493	16.6	195,778	16.8	196,809	17.5
Indirect consumer loans	149,380	11.4	153,060	11.7	139,572	11.6	151,327	13.0	184,763	16.5
Consumer loans	115,778	8.8	120,987	9.2	117,008	9.7	121,817	10.4	121,003	10.8
Total	\$1,311,906	100.0	\$1,311,824	100.0	\$1,200,290	100.0	\$1,168,633	100.0	\$1,121,574	100.0

Portfolio loans totaled \$1.312 billion at December 31, 2018 and December 31, 2017, however, changes included an increase of

\$20.7 million, or 2.5%, in total commercial loans, offset by decreases in residential mortgages of \$11.7 million or 6.0%, indirect consumer loans of \$3.7 million or 2.4%, and consumer loans of \$5.2 million or 4.3%. The growth in commercial loans was due primarily to an increase in commercial mortgages in the Capital Bank division in the Albany, New York region. The decrease in indirect consumer loans was a result of the Corporation's decision to control the growth of the indirect consumer loan portfolio, primarily automobile loans.

Residential mortgage loans totaled \$182.7 million at December 31, 2018, a decrease of \$11.7 million, or 6.0%, from December 31, 2017. The decrease in residential mortgages was mainly due to the Corporation selling a majority of its originated loans in the fourth quarter of 2018 in the secondary market. In addition, during 2018, \$17.5 million of residential mortgages were sold in the secondary market to Freddie Mac, with an additional \$0.4 million of residential mortgages sold to the State of New York Mortgage Agency.

The Corporation anticipates that future growth in portfolio loans will continue to be in commercial loans, especially within the Capital Bank division of the Bank. The table below presents the Corporation's outstanding loan balance by bank division (in thousands):

LOANS BY DIVISION

	December 31,				
	2018	2017	2016	2015	2014
Chemung Canal Trust Company*	\$603,133	\$630,732	\$636,836	\$683,137	\$724,099
Capital Bank Division	708,773	681,092	563,454	485,496	397,475
Total loans	\$1,311,906	\$1,311,824	\$1,200,290	\$1,168,633	\$1,121,574

*All loans, excluding those originated by the Capital Bank Division.

Loan concentrations are considered to exist when there are amounts loaned to a multiple number of borrowers engaged in similar activities which would cause them to be similarly impacted by changes in economic or other conditions. The Corporation's concentration policy limits consider the volume of commercial loans to any one specific industry, sponsor, and by collateral type and location. In addition, the Corporation's policy limits the volume of non-owner occupied commercial mortgages to four times total risk based capital. At December 31, 2018 and 2017, total non-owner occupied commercial real estate loans divided by total risk based capital was 362.00% and 386.7% respectively.

The Corporation also monitors specific NAICS industry classifications of commercial loans to identify concentrations greater than 10.0% of total loans. At December 31, 2018 and 2017, commercial loans to borrowers involved in the real estate, and real estate rental and leasing businesses were 47.2% and 48.1% of total loans, respectively. No other concentration of loans existed in the commercial loan portfolio in excess of 10.0% of total loans as of December 31, 2018 and 2017.

The table below shows the maturity of only commercial and agricultural loans and commercial mortgages outstanding as of December 31, 2018. Also provided are the amounts due after one year, classified according to fixed interest rates and variable interest rates (in thousands):

LOAN AMOUNTS CONTRACTUALLY DUE AFTER DECEMBER 31, 2018			
Within One Year	After One But Within	After Five Years	Total

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	Five Years			
Commercial and agricultural and commercial mortgages	\$ 106,992	\$ 235,465	\$ 521,567	\$ 864,024
Loans maturing with:				
Fixed interest rates	\$ 23,772	\$ 138,174	\$ 121,612	\$ 283,558
Variable interest rates	83,220	97,291	399,955	580,466
Total	\$ 106,992	\$ 235,465	\$ 521,567	\$ 864,024

Non-Performing Assets

Non-performing assets consist of non-accrual loans, non-accrual troubled debt restructurings and other real estate owned that has been acquired in partial or full satisfaction of loan obligations or upon foreclosure.

Past due status on all loans is based on the contractual terms of the loan. It is generally the Corporation's policy that a loan 90 days past due be placed on non-accrual status unless factors exist that would eliminate the need to place a loan in this status. A loan may also be designated as non-accrual at any time if payment of principal or interest in full is not expected due to deterioration in the financial condition of the borrower. At the time loans are placed on non-accrual status, the accrual of interest is discontinued and previously accrued interest is reversed. All payments received on non-accrual loans are applied to principal. Loans are considered for return to accrual status when they become current as to principal and interest and remain current for a period of six consecutive months or when, in the opinion of management, the Corporation expects to receive all of its contractual principal and interest. In the case of non-accrual loans where a portion of the loan has been charged off, the remaining balance is kept in non-accrual status until the entire principal balance has been recovered.

The following table summarizes the Corporation's non-performing assets, excluding purchased credit impaired loans (in thousands):

NON-PERFORMING ASSETS

December 31,	2018	2017	2016	2015	2014	
Non-accrual loans	\$6,305	\$11,389	\$7,649	\$7,821	\$6,798	
Non-accrual troubled debt restructurings	5,949	5,935	4,394	4,411	980	
Total non-performing loans	12,254	17,324	12,043	12,232	7,778	
Other real estate owned	574	1,940	388	1,530	3,065	
Total non-performing assets	\$12,828	\$19,264	\$12,431	\$13,762	\$10,843	
Ratio of non-performing loans to total loans	0.93	% 1.32	% 1.00	% 1.05	% 0.69	%
Ratio of non-performing assets to total assets	0.73	% 1.13	% 0.75	% 0.85	% 0.71	%
Ratio of allowance for loan losses to non-performing loans	154.59	% 122.14	% 118.35	% 116.58	% 175.96	%
Accruing loans past due 90 days or more (1)	\$19	\$29	\$13	\$18	\$1,454	
Accruing troubled debt restructurings (1)	\$816	\$1,728	\$5,839	\$7,609	\$8,705	

(1) These loans are not included in nonperforming assets above.

The table below shows interest income on non-accrual and troubled debt restructured loans for the indicated years ended December 31 (in thousands):

INTEREST INCOME ON NON-ACCRUAL AND TROUBLED DEBT
RESTRUCTURED LOANS

	2018	2017	2016
Interest income that would have been recorded under original terms	\$812	\$630	\$657
Interest income recorded during the year	\$61	\$153	\$312

Non-Performing Loans

Non-performing loans totaled \$12.3 million at December 31, 2018, or 0.93% of total loans, compared with \$17.3 million at December 31, 2017, or 1.32% of total loans. The decrease in non-performing loans at December 31, 2018 as compared to December 31, 2017 was primarily due to decreases of \$3.2 million in non-accruing commercial and industrial loans, \$1.0 million in non-accruing commercial mortgages and \$0.5 million in non-accruing residential

mortgages. The decrease in non-accruing commercial and industrial loans was due primarily to the charge-off of multiple large commercial loans to one borrower for \$3.6 million during the second quarter of 2018. Non-performing assets, which are comprised of non-performing loans and other real estate owned, was \$12.8 million, or 0.73% of total assets, at December 31, 2018, compared with \$19.3 million, or 1.13% of total assets, at December 31, 2017.

The recorded investment in accruing loans past due 90 days or more totaled less than \$0.1 million at December 31, 2018, consistent with the prior year.

There were no PCI loans as of December 31, 2018. Not included in non-performing loan totals are \$0.8 million of acquired loans which the Corporation has identified as PCI loans at December 31, 2017. The PCI loans are accounted for under separate accounting guidance, ASC Subtopic 310-30, "Receivables - Loans and Debt Securities Acquired with Deteriorated Credit Quality".

Troubled Debt Restructurings

The Corporation works closely with borrowers that have financial difficulties to identify viable solutions that minimize the potential for loss. In that regard, the Corporation modified the terms of select loans to maximize their collectability. The modified loans are considered TDRs under current accounting guidance. Modifications generally involve short-term deferrals of principal and/or interest payments, reductions of scheduled payment amounts, interest rates or principal of the loan, and forgiveness of accrued interest. As of December 31, 2018 and 2017, the Corporation had \$6.0 million of non-accrual TDRs. As of December 31, 2018, the Corporation had \$0.8 million of accruing TDRs compared with \$1.7 million as of December 31, 2017.

Impaired Loans

A loan is classified as impaired when, based on current information and events, it is probable that the Corporation will be unable to collect both the principal and interest due under the contractual terms of the loan agreement. The unpaid principal balance of impaired loans at December 31, 2018 totaled \$8.8 million, including TDRs of \$6.8 million, compared to \$14.1 million at December 31, 2017, including TDRs of \$7.7 million. Not included in the impaired loan totals at December 31, 2017, are acquired loans which the Corporation has identified as PCI loans, as these loans are accounted for under ASC Subtopic 310-30 as noted under the above discussion of non-performing loans. The decrease in impaired loans was primarily in the commercial loan segment of the loan portfolio related to the charge-off of multiple large commercial loans to one borrower for \$3.6 million during the second quarter of 2018. Included in the recorded investment of impaired loans at December 31, 2018, are loans totaling \$3.7 million for which impairment allowances of \$2.2 million have been specifically allocated to the allowance for loan losses. As of December 31, 2017, the impaired loan total included \$8.1 million of loans for which specific impairment allowances of \$5.9 million were allocated to the allowance for loan losses. The decrease in the amount of impaired loans for which specific allowances were allocated to the allowance for loan losses was due primarily to the charge-off of multiple large commercial loans to one borrower for \$3.6 million during the second quarter of 2018.

The majority of the Corporation's impaired loans are secured and measured for impairment based on collateral evaluations. It is the Corporation's policy to obtain updated appraisals, by independent third parties, on loans secured by real estate at the time a loan is determined to be impaired. An impairment measurement is performed based upon the most recent appraisal on file to determine the amount of any specific allocation or charge-off. In determining the amount of any specific allocation or charge-off, the Corporation will make adjustments to reflect the estimated costs to sell the property. Upon receipt and review of the updated appraisal, an additional measurement is performed to determine if any adjustments are necessary to reflect the proper provisioning or charge-off. Impaired loans are reviewed on a quarterly basis to determine if any changes in credit quality or market conditions would require any additional allocation or recognition of additional charge-offs. Real estate values in the Corporation's market area have been holding steady. Non-real estate collateral may be valued using (i) an appraisal, (ii) net book value of the collateral per the borrower's financial statements, or (iii) accounts receivable aging reports, that may be adjusted based on management's knowledge of the client and client's business. If market conditions warrant, future appraisals are obtained for both real estate and non-real estate collateral.

Allowance for Loan Losses

The allowance is an amount that management believes will be adequate to absorb probable incurred losses on existing loans. The allowance is established based on management's evaluation of the probable inherent losses in our portfolio in accordance with GAAP, and is comprised of both specific valuation allowances and general valuation allowances.

A loan is classified as impaired when, based on current information and events, it is probable that the Corporation will be unable to collect both the principal and interest due under the contractual terms of the loan agreement. Specific valuation allowances are established based on management's analyses of individually impaired loans. Factors considered by management in determining impairment include payment status, evaluations of the underlying collateral, expected cash flows, and the probability of collecting scheduled principal and interest payments when due. Loans that experience insignificant payment delays and payment shortfalls generally are not classified as impaired. Management determines the significance of payment delays and payment shortfalls on a case-by-case basis, taking into consideration all of the circumstances surrounding the loan and the borrower, including the length of the delay, the reasons for the delay, the borrower's prior payment record, and the amount of the shortfall in relation to the principal and interest owed. If a loan is determined to be impaired and is placed on non-accrual status, all future payments received are applied to principal and a portion of the allowance is allocated so that the loan is reported, net, at the present value of estimated future cash flows using the loan's existing rate or at the fair value of collateral if repayment is expected solely from the collateral.

The general component covers non-impaired loans and is based on historical loss experience adjusted for current factors. Loans not impaired but classified as substandard and special mention use a historical loss factor on a rolling five year history of net losses. For all other unclassified loans, the historical loss experience is determined by portfolio class and is based on the actual loss history experienced by the Corporation over the most recent two years. This actual loss experience is supplemented with other qualitative factors based on the risks present for each portfolio class. These qualitative factors include consideration of the following: (1) lending policies and procedures, including underwriting standards and collection, charge-off and recovery policies, (2) national and local economic and business conditions and developments, including the condition of various market segments, (3) loan profiles and volume of the portfolio, (4) the experience, ability, and depth of lending management and staff, (5) the volume and severity of past due, classified and watch-list loans, non-accrual loans, troubled debt restructurings, and other modifications (6) the quality of the Bank's loan review system and the degree of oversight by the Bank's Board of Directors, (7) collateral related issues: secured vs. unsecured, type, declining valuation environment and trend of other related factors, (8) the existence and effect of any concentrations of credit, and changes in the level of such concentrations, (9) the effect of external factors, such as competition and legal and regulatory requirements, on the level of estimated credit losses in the Bank's current portfolio and (10) the impact of the global economy.

The allowance for loan losses is increased through a provision for loan losses charged to operations. Loans are charged against the allowance for loan losses when management believes that the collectability of all or a portion of the principal is unlikely. Management's evaluation of the adequacy of the allowance for loan losses is performed on a quarterly basis and takes into consideration such factors as the credit risk grade assigned to the loan, historical loan loss experience and review of specific impaired loans. While management uses available information to recognize losses on loans, future additions to the allowance may be necessary based on changes in economic conditions. In addition, various regulatory agencies, as an integral part of their examination process, periodically review the Corporation's allowance for loan losses. Such agencies may require the Corporation to recognize additions to the allowance based on their judgments about information available to them at the time of their examination.

The allowance for loan losses was \$18.9 million at December 31, 2018, compared to \$21.2 million at December 31, 2017. The decrease in the allowance for loan losses can be mostly attributed to a decrease in specific impairments related to the charge-off of multiple commercial loans to one borrower for \$3.6 million, offset by an increase in volume and loss factors relating to the commercial loan portfolio. The ratio of allowance for loan losses to total loans was 1.44% at December 31, 2018 and 1.61% at December 31, 2017, respectively. Net charge-offs for the years ended December 31, 2018 and 2017 were \$5.4 million and \$2.1 million, respectively.

The table below summarizes the Corporation's allocation of the allowance for loan losses and percent of loans by category to total loans for each year in the five-year period ended December 31, 2018 (in thousands):

ALLOCATION OF ALLOWANCE FOR LOAN LOSSES

Balance at end of year applicable to:	2018	%	2017	%	2016	%	2015	%	2014	%
Commercial and agricultural	\$5,383	15.5	\$6,976	15.2	\$1,589	14.7	\$1,831	16.5	\$1,460	14.8
Commercial mortgages	8,184	50.4	8,514	49.1	7,270	47.4	7,112	43.3	6,326	40.4
Residential mortgages	1,226	13.9	1,316	14.8	1,523	16.6	1,464	16.8	1,572	17.5
Consumer loans	4,151	20.2	4,355	20.9	3,871	21.3	3,853	23.4	4,328	27.3
	\$18,944	100.0	\$21,161	100.0	\$14,253	100.0	\$14,260	100.0	\$13,686	100.0

The table below summarizes the Corporation's loan loss experience for each year in the five-year period ended December 31, 2018 (in thousands, except ratio data):

SUMMARY OF LOAN LOSS EXPERIENCE

	Years Ended December 31,					
	2018	2017	2016	2015	2014	
Allowance for loan losses at beginning of year	\$21,161	\$14,253	\$14,260	\$13,686	\$12,776	
Charge-offs:						
Commercial and agricultural	3,644	96	217	186	444	
Commercial mortgages	213	419	911	104	2,229	
Residential mortgages	226	225	65	47	97	
Consumer loans	1,836	1,831	1,637	1,294	1,508	
Total	5,919	2,571	2,830	1,631	4,278	
Recoveries:						
Commercial and agricultural	47	109	92	96	385	
Commercial mortgages	3	5	10	131	156	
Residential mortgages	5	30	—	—	32	
Consumer loans	494	313	284	407	634	
Total	549	457	386	634	1,207	
Net charge-offs	5,370	2,114	2,444	997	3,071	
Provision charged to operations	3,153	9,022	2,437	1,571	3,981	
Allowance for loan losses at end of year	\$18,944	\$21,161	\$14,253	\$14,260	\$13,686	
Ratio of net charge-offs during year to average loans outstanding	0.41	% 0.17	% 0.20	% 0.09	% 0.29	%
Ratio of allowance for loan losses to total loans outstanding	1.44	% 1.61	% 1.19	% 1.22	% 1.22	%

Net charge-offs for the year ended December 31, 2018 were \$5.4 million compared with \$2.1 million for the year ended December 31, 2017. The ratio of net charge-offs to average loans outstanding was 0.41% for 2018 compared to 0.17% for 2017. The increase in net charge-offs can be attributed to the charge-off of multiple large commercial loans to one borrower for \$3.6 million during the second quarter of 2018.

Other Real Estate Owned

At December 31, 2018, OREO totaled \$0.6 million compared to \$1.9 million at December 31, 2017. The decrease in other real estate owned was due primarily to nine commercial properties being sold throughout 2018 in the amount of \$1.6 million.

Deposits

The table below summarizes the Corporation's deposit composition by segment at December 31, 2018, 2017, and 2016, and the dollar and percent change from December 31, 2017 to December 31, 2018 and December 31, 2016 to December 31, 2017 (in thousands):

DEPOSITS

	December 31,			Percentage Change from Prior Year	
	2018	2017	2016	2018	2017
Non-interest-bearing demand deposits	\$484,433	\$467,610	\$417,812	3.6 %	11.9 %
Interest-bearing demand deposits	179,603	149,026	136,826	20.5 %	8.9 %
Insured money market accounts	537,948	513,782	548,963	4.7 %	(6.4)%
Savings deposits	217,027	218,666	208,636	(0.7)%	4.8 %
Time deposits	150,226	118,362	144,106	26.9 %	(17.9)%
Total	\$1,569,237	\$1,467,446	\$1,456,343	6.9 %	0.8 %

Deposits totaled \$1.569 billion at December 31, 2018, compared with \$1.467 billion at December 31, 2017, an increase of \$101.8 million, or 6.9%. At December 31, 2018, demand deposit and money market accounts comprised 76.6% of total deposits compared with 77.0% at December 31, 2017. The growth in deposits was attributable to increases of \$16.8 million in non-interest bearing demand deposits, \$30.6 million in interest-bearing demand deposits, \$24.2 million in money market accounts, and \$31.9 million in time deposits, due to a rate promotion, offset by a decrease of \$1.6 million in savings accounts. The increase in interest-bearing demand deposits was mainly attributable to the Corporation converting its off balance sheet sweep agreement accounts into interest-bearing demand deposits during 2018 which resulted in the onboarding of approximately \$30.0 million in deposits.

At December 31, 2018, public funds deposits totaled \$306.5 million compared to \$299.5 million at December 31, 2017. The Corporation has developed a program for the retention and management of public funds deposits. These deposits are from public entities, such as school districts and municipalities. There is a seasonal component to public deposit levels associated with annual tax collections. Public funds deposits will increase at the end of the first and third quarters. Public funds deposit accounts above the FDIC insured limit are collateralized by municipal bonds and eligible government and government agency securities such as those issued by the FHLB, Fannie Mae, and Freddie Mac.

The table below summarizes the Corporation's public funds deposit composition by segment (in thousands):

Public Funds:	December 31,			
	2018	2017	2016	
Non-interest-bearing demand deposits	\$12,070	\$11,229	\$7,929	
Interest-bearing demand deposits	52,767	44,796	44,366	
Insured money market accounts	225,630	225,756	233,745	
Savings deposits	11,598	11,249	9,378	
Time deposits	4,408	6,497	10,840	
Total public funds	\$306,473	\$299,527	\$306,258	
Total deposits	\$1,569,237	\$1,467,446	\$1,456,343	
Percentage of public funds to total deposits	19.5	% 20.4	% 21.0	%

As of December 31, 2018, the aggregate amount of the Corporation's outstanding certificates of deposit in amounts greater than or equal to \$100,000 was \$58.8 million. The table below presents the Corporation's scheduled maturity of those certificates as of December 31, 2018 (in thousands):

	December 31, 2018
3 months or less	\$ 5,794
Over 3 through 6 months	6,933
Over 6 through 12 months	9,673
Over 1 year to 3 years	16,778
Over 3 years	19,646
	\$ 58,824

The table below presents the Corporation's deposits balance by bank division (in thousands):

DEPOSITS BY DIVISION

	December 31,				
	2018	2017	2016	2015	2014
Chemung Canal Trust Company*	\$ 1,328,658	\$ 1,264,883	\$ 1,249,870	\$ 1,219,282	\$ 1,119,377
Capital Bank Division	240,579	202,563	206,473	181,013	160,637
Total deposits	\$ 1,569,237	\$ 1,467,446	\$ 1,456,343	\$ 1,400,295	\$ 1,280,014

*All deposits, excluding those originated by the Capital Bank Division.

In addition to consumer, commercial and public deposits, other sources of funds include brokered deposits. The recently enacted Regulatory Relief Act changed the definition of brokered deposits, such that subject to certain conditions, reciprocal deposits of another depository institution obtained through a deposit placement network for purposes of obtaining maximum deposit insurance would not be considered brokered deposits subject to the FDIC's brokered-deposit regulations. This will apply to the Corporation's participation in the CDARS and ICS programs. The CDARS and ICS programs involve a network of financial institutions that exchange funds among members in order to ensure FDIC insurance coverage on customer deposits above the single institution limit. Using a sophisticated matching system, funds are exchanged on a dollar-for-dollar basis, so that the equivalent of an original deposit comes back to the originating institution. The Corporation had no deposits obtained through brokers as of December 31, 2018 and 2017. Deposits obtained through the CDARS and ICS programs were \$193.6 million and \$187.7 million as of December 31, 2018 and 2017, respectively.

The Corporation's deposit strategy is to fund the Bank with stable, low-cost deposits, primarily checking account deposits and other low interest-bearing deposit accounts. A checking account is the driver of a banking relationship and consumers consider the bank where they have their checking account as their primary bank. These customers will typically turn to their primary bank first when in need of other financial services. Strategies that have been developed and implemented to generate these deposits include: (i) acquire deposits by entering new markets through denovo branching, (ii) an annual checking account marketing campaign, (iii) training branch employees to identify and meet client financial needs with Bank products and services, (iv) link business and consumer loans to a primary checking account at the Bank, (v) aggressively promote direct deposit of client's payroll checks or benefit checks and (vi) constantly monitor the Corporation's pricing strategies to ensure competitive products and services.

The Corporation also considers brokered deposits to be an element of its deposit strategy and anticipates that it will use brokered deposits as a secondary source of funding to support growth.

Information regarding deposits is included in Note 7 to the consolidated financial statements appearing elsewhere in this report.

Borrowings

There were no outstanding FHLBNY advances at December 31, 2018 compared with \$59.7 million at December 31, 2017. During 2018, FHLBNY overnight advances decreased \$57.7 million and FHLBNY term advances decreased \$2.0 million. FHLBNY overnight advances decreased due to an increase in deposits and a decrease in securities available for sale.

For each of the three years ended December 31, 2018, 2017 and 2016, respectively, the average outstanding balance of borrowings that mature in one year or less did not exceed 30% of shareholders' equity.

Information regarding securities sold under agreements to repurchase and FHLBNY advances is included in Footnotes 8 and 9 to the audited consolidated financial statements appearing elsewhere in this report. The following is a summary of securities sold under agreements to repurchase as of and for the years ended December 31, 2018, 2017 and 2016 (in thousands):

	2018	2017	2016
Balance at December 31	\$—	\$10,000	\$27,606
Maximum month-end balance	\$10,000	\$25,718	\$30,497
Average balance during year	\$3,644	\$14,207	\$29,120

The following is a summary of FHLBNY overnight advances as of and for the years ended December 31, 2018, 2017, and 2016 (in thousands):

	2018	2017	2016
Balance at December 31	\$—	\$57,700	\$—
Maximum month-end balance	\$76,500	\$57,700	\$29,700
Average balance during year	\$23,539	\$5,534	\$3,187

The following is a summary of FHLBNY term advances as of and for the years ended December 31, 2018, 2017, and 2016. The carrying amount includes the advance plus purchase accounting adjustments that are amortized over the term of the advance (in thousands):

	2018	2017	2016
Balance at December 31	\$ —	\$2,000	\$9,093
Maximum month-end balance	\$ —	\$9,084	\$19,194
Average balance during year	\$ 5	\$7,998	\$18,874

Derivatives

The Corporation offers interest rate swap agreements to qualified commercial loan customers. These agreements allow the Corporation's customers to effectively fix the interest rate on a variable rate loan by entering into a separate agreement. Simultaneous with the execution of such an agreement with a customer, the Corporation enters into a matching interest rate swap agreement with an unrelated third party provider, which allows the Corporation to continue to receive the variable rate under the loan agreement with the customer. The agreement with the third party is not designated as a hedge contract, therefore changes in fair value are recorded through other non-interest income. Assets and liabilities associated with the agreements are recorded in other assets and other liabilities on the balance sheet. Gains and losses are recorded as other non-interest income. The Corporation is exposed to credit loss equal to the fair value of the interest rate swaps, not the notional amount of the derivatives, in the event of nonperformance by the counterparty to the interest rate swap agreements. Additionally, the swap agreements are free-standing derivatives and are recorded at fair value in the Corporation's consolidated balance sheets, which typically involves a day one gain. Since the terms of the two interest rate swap agreements are identical, the income statement impact to the Corporation is limited to the day one gain and an allowance for credit loss exposure, in the event of nonperformance. The Corporation recognized \$0.2 million for both the years ended December 31, 2018 and 2017.

The Corporation also participates in the credit exposure of certain interest rate swaps in which it participates in the related commercial loan. The Corporation receives an upfront fee for participating in the credit exposure of the interest rate swap and recognizes the fee to other non-interest income immediately. The Corporation is exposed to its share of the credit loss equal to the fair value of the derivatives in the event of nonperformance by the counter-party of the interest rate swap. The Corporation determines the fair value of the credit loss exposure using historical losses of the loan category associated with the credit exposure.

Information regarding derivatives is included in Note 11 to the consolidated financial statements appearing elsewhere in this report.

Shareholders' Equity

Total shareholders' equity was \$165.0 million at December 31, 2018, compared with \$149.8 million at December 31, 2017, an increase of \$15.2 million, or 10.2%. The increase in retained earnings of \$14.6 million was due primarily to earnings of \$19.6 million offset by \$5.0 million in dividends declared during the year. The increase in accumulated other comprehensive loss of \$1.1 million can be attributed to the decrease in the fair market value of the securities portfolio as a result of an increase in interest rates. Also, treasury stock decreased \$1.8 million, due to the issuance of shares to the Corporation's employee benefit stock plans and directors' stock plans. Total shareholders' equity to total assets ratio was 9.40% at December 31, 2018 compared with 8.77% at December 31, 2017. Tangible equity to tangible assets ratio increased to 8.19% at December 31, 2018, from 7.48% at December 31, 2017.

The Bank is subject to capital adequacy guidelines of the Federal Reserve which establish a framework for the classification of financial institutions into five categories: well-capitalized, adequately capitalized, undercapitalized, significantly undercapitalized and critically undercapitalized. As of December 31, 2018, the Bank's capital ratios were in excess of those required to be considered well-capitalized under regulatory capital guidelines. A comparison the Bank's actual capital ratios to the ratios required to be adequately or well-capitalized at December 31, 2018 and 2017, is included in Footnote 19 to the consolidated financial statements appearing elsewhere in this report. For more information regarding current capital regulations see Part I—"Business-Supervision and Regulation-Regulatory Capital Requirements."

Cash dividends declared during 2018 totaled \$5.0 million, or \$1.04 per share, and cash dividends declared during 2017 and 2016 totaled \$4.9 million, or \$1.04 per share. Dividends declared during 2018 amounted to 25.42% of net income compared to 66.30%, and 48.76% of net income for 2017 and 2016, respectively. Management seeks to continue generating sufficient capital internally, while continuing to pay dividends to the Corporation's shareholders.

When shares of the Corporation become available in the market, the Corporation may purchase them after careful consideration of the Corporation's liquidity and capital positions. Purchases may be made from time to time on the open market or in privately negotiated transactions at the discretion of management. On December 19, 2012, the Board of Directors approved a stock repurchase plan under which the Corporation may repurchase up to 125,000 shares. No shares were purchased under the plan in 2018 and 2017. The Corporation has purchased 3,094 shares at a total cost of \$93,000 under the plan since its inception.

Off-balance Sheet Arrangements

In the normal course of operations, the Corporation engages in a variety of financial transactions that, in accordance with GAAP are not recorded in the financial statements. The Corporation is also a party to certain financial instruments with off balance sheet risk such as commitments under standby letters of credit, unused portions of lines of credit, commitments to fund new loans, interest rate swaps, and risk participation agreements. The Corporation's policy is to record such instruments when funded. These transactions involve, to varying degrees, elements of credit, interest rate and liquidity risk. Such transactions are generally used by the Corporation to manage clients' requests for funding and other client needs.

The table below shows the Corporation's off-balance sheet arrangements as of December 31, 2018 (in thousands):
COMMITMENT MATURITY BY PERIOD

	Total	2019	2020 - 2021	2022 - 2023	2024 and thereafter
Standby letters of credit	\$ 16,161	\$ 14,254	\$ 1,540	\$ 367	\$ —

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Unused portions of lines of credit (1)	142,654	142,654	—	—	—
Commitments to fund new loans	27,170	27,170	—	—	—
Total	\$185,985	\$184,078	\$1,540	\$367	\$ —

(1) Not included in this total are unused portions of home equity lines of credit, credit card lines and consumer overdraft protection lines of credit, since no contractual maturity dates exist for these types of loans. Commitments to outside parties under these lines of credit were \$50.2 million, \$13.1 million and \$7.5 million, respectively, at December 31, 2018.

Contractual Obligations

The table below shows the Corporation's contractual obligations under long-term agreements as of December 31, 2018 (in thousands). Note references are to the Notes of the Consolidated Financial Statements:

CONTRACTUAL OBLIGATIONS

	Total	Payments Due by Period			
		2019	2020 - 2021	2022 - 2023	2024 and thereafter
Time Deposits (Note 7)	\$150,226	\$71,350	\$41,598	\$34,217	\$ 3,061
FHLBNY advances (Note 9)	—	—	—	—	—
Securities sold under agreements to repurchase (Note 8)	—	—	—	—	—
Operating leases (Note 5)	7,909	897	1,774	1,390	3,848
Capital leases (Note 5)	5,552	367	764	782	3,639
Data processing services and other	1,925	1,231	537	157	—
Total (1)	\$165,612	\$73,845	\$44,673	\$36,546	\$ 10,548

(1) Not included in the above total is the Corporation's obligation regarding the Pension Plan and Other Benefit Plans. Please refer to Part IV Item 15 Note 13 for information regarding these obligations at December 31, 2018.

Liquidity

Liquidity management involves the ability to meet the cash flow requirements of deposit clients, borrowers, and the operating, investing and financing activities of the Corporation. The Corporation uses a variety of resources to meet its liquidity needs. These include short term investments, cash flow from lending and investing activities, core-deposit growth and non-core funding sources, such as time deposits of \$100,000 or more, securities sold under agreements to repurchase and other borrowings.

The Corporation is a member of the FHLBNY which allows it to access borrowings which enhance management's ability to satisfy future liquidity needs. Based on available collateral and current advances outstanding, the Corporation was eligible to borrow up to a total of \$112.6 million and \$73.5 million at December 31, 2018 and 2017, respectively. The Corporation also had a total of \$28.0 million of unsecured lines of credit with four different financial institutions, all of which were available at December 31, 2018. The Corporation had a total of \$38.0 million of unsecured lines of credit with five different financial institutions, all of which was available at December 31, 2017.

Consolidated Cash Flows Analysis

The table below summarizes the Corporation's cash flows for the years indicated (in thousands):

CONSOLIDATED SUMMARY OF CASH FLOWS

(in thousands)	Years Ended	
	December 31, 2018	2017
Net cash provided by operating activities	\$27,772	\$23,645
Net cash provided (used) by investing activities	43,919	(106,642)
Net cash provided by financing activities	27,552	39,564
Net increase (decrease) in cash and cash equivalents	\$99,243	\$(43,433)

Operating activities

The Corporation believes cash flows from operations, available cash balances and its ability to generate cash through short- and long-term borrowings are sufficient to fund the Corporation's operating liquidity needs.

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Cash provided by operating activities in years ended December 31, 2018 and 2017 predominantly resulted from net income after non-cash operating adjustments.

Investing activities

Cash provided by investing activities during the year ended December 31, 2018 predominantly resulted from calls, maturities, and principal collected on securities available for sale, offset by purchases of securities available for sale and a net increase in loans. Cash used in investing activities during the year ended December 31, 2017 predominantly resulted from purchases of securities available for sale and a net increase in loans, offset by sales, calls, maturities, and principal collected on securities available for sale.

Financing activities

Cash provided by financing activities during the year ended December 31, 2018 resulted from an increase in deposits, offset by the repayment of FHLBNY overnight advances, FHLBNY term advances and securities sold under agreements to repurchase. Cash provided by financing activities during the year ended December 31, 2017 predominantly resulted from an increase in deposits and FHLBNY overnight advances, offset by the repayment of FHLBNY term advances and securities sold under agreements to repurchase.

Capital Resources

The Bank is subject to regulatory capital requirements administered by federal banking agencies. Capital adequacy guidelines and 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. Failure to meet capital requirements can initiate regulatory action. The final rules implementing Basel III rules became effective for the Bank on January 1, 2015 with full compliance with all of the requirements being phased in over a multi-year schedule, and fully phased in by January 1, 2019. Under Basel III rules, the Bank must hold a capital conservation buffer above the adequately capitalized risk-based capital ratios. The capital conservation buffer was phased in from 0.0% for 2015 to 2.50% by 2019. The capital conservation buffer for 2018 was 1.875%. The net unrealized gain or loss on available for sale securities and changes in the funded status of the defined benefit pension plan and other benefit plans are not included in computing regulatory capital.

Pursuant to the Regulatory Relief Act, the FRB proposed a rule that establishes a community bank leverage ratio (tangible equity to average consolidated assets) at 9% for institutions under \$10 billion in assets that such institutions may elect to utilize in lieu of the general applicable risk-based capital requirements under Basel III. Such institutions that meet the community bank leverage ratio and certain other qualifying criteria will automatically be deemed to be well-capitalized. Until the FRB's proposed rule is finalized, the Basel III risk-based and leverage ratios remain in effect.

Prompt corrective action regulations provide five classifications: well capitalized, adequately capitalized, undercapitalized, significantly undercapitalized, and critically undercapitalized, although these terms are not used to represent overall financial condition. If adequately capitalized, regulatory approval is required to accept brokered deposits. If undercapitalized, capital distributions are limited, as is asset growth and expansion, and capital restoration plans are required. Management believes that, as of December 31, 2017, the Corporation and the Bank met all capital adequacy requirements to which they were subject. Management believes that, as of December 31, 2018, the Bank met all capital adequacy requirements to which it was subject. At December 31, 2018, the Corporation is no longer subject to FRB consolidated capital requirements applicable to bank holding companies, which are similar to those applicable to the Bank, until it reaches \$3.0 billion in assets.

As of December 31, 2018, the most recent notification from the Federal Reserve Bank of New York categorized the Bank as well capitalized under the regulatory framework for prompt corrective action. To be categorized as well capitalized the Bank must maintain minimum total risk-based, Tier 1 risk-based, common equity Tier 1 risk-based and Tier 1 leverage ratios as set forth in the table below. There have been no conditions or events since that notification that management believes have changed the Bank's capital category.

The regulatory capital ratios as of December 31, 2018 and 2017 were calculated under Basel III rules. There is no threshold for well-capitalized status for bank holding companies.

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The Corporation's and the Bank's actual and required regulatory capital ratios were as follows (in thousands, except ratio data):

	Actual		Minimal Capital Adequacy		Minimal Capital Adequacy with Capital Buffer		To Be Well Capitalized Under Prompt Corrective Action Provisions	
	Amount	Ratio	Amount	Ratio	Amount	Ratio	Amount	Ratio
As of December 31, 2018								
Total Capital (to Risk Weighted Assets):								
Consolidated	\$169,416	13.14%	N/A	N/A	N/A	N/A	N/A	N/A
Bank	\$162,536	12.62%	\$103,039	8.00%	\$127,189	9.875%	\$128,799	10.00%
Tier 1 Capital (to Risk Weighted Assets):								
Consolidated	\$153,263	11.89%	N/A	N/A	N/A	N/A	N/A	N/A
Bank	\$146,401	11.37%	\$77,280	6.00%	\$101,429	7.875%	\$103,039	8.00%
Common Equity Tier 1 Capital (to Risk Weighted Assets):								
Consolidated	\$153,263	11.89%	N/A	N/A	N/A	N/A	N/A	N/A
Bank	\$146,401	11.37%	\$57,960	4.50%	\$82,110	6.375%	\$83,720	6.50%
Tier 1 Capital (to Average Assets):								
Consolidated	\$153,263	8.79%	N/A	N/A	N/A	N/A	N/A	N/A
Bank	\$146,401	8.41%	\$69,598	4.00%	N/A	N/A	\$86,998	5.00%
As of December 31, 2017								
Total Capital (to Risk Weighted Assets):								
Consolidated	\$153,020	11.82%	\$103,527	8.00%	\$119,703	9.250%	N/A	N/A
Bank	\$146,129	11.31%	\$103,390	8.00%	\$119,545	9.250%	\$129,238	10.00%
Tier 1 Capital (to Risk Weighted Assets):								
Consolidated	\$136,660	10.56%	\$77,645	6.00%	\$93,821	7.250%	N/A	N/A
Bank	\$129,881	10.05%	\$77,543	6.00%	\$93,697	7.250%	\$103,390	8.00%
Common Equity Tier 1 Capital (to Risk Weighted Assets):								
Consolidated	\$136,660	10.56%	\$58,234	4.50%	\$74,410	5.750%	N/A	N/A
Bank	\$129,881	10.05%	\$58,157	4.50%	\$74,312	5.750%	\$84,004	6.50%
Tier 1 Capital (to Average Assets):								
Consolidated	\$136,660	8.02%	\$68,200	4.00%	N/A	N/A	N/A	N/A
Bank	\$129,881	7.63%	\$68,045	4.00%	N/A	N/A	\$85,057	5.00%

Dividend Restrictions

The Corporation's principal source of funds for dividend payments is dividends received from the Bank. Banking regulations limit the amount of dividends that may be paid without prior approval of regulatory agencies. Under these regulations, the amount of dividends that may be paid in any calendar year is limited to the current year's net income, combined with the retained net income of the preceding two years, subject to the capital requirements in the table

above. At December 31, 2018, the Bank could, without prior approval, declare dividends of approximately \$23.5 million.

Adoption of New Accounting Standards

For a discussion of the impact of recently issued accounting standards, please see Note 1 to the Corporation's consolidated financial statements which begins on page F-10.

Critical Accounting Policies, Estimates and Risks and Uncertainties

Critical accounting policies include the areas where the Corporation has made what it considers to be particularly difficult, subjective or complex judgments concerning estimates, and where these estimates can significantly affect the Corporation's financial results under different assumptions and conditions. The Corporation prepares its financial statements in conformity with GAAP. As a result, the Corporation is required to make certain estimates, judgments and assumptions that it believes are reasonable based upon the information available at that time. These estimates, judgments and assumptions affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the years presented. Actual results could be different from these estimates.

Management considers the accounting policy relating to the allowance for loan losses to be a critical accounting policy given the uncertainty in evaluating the level of the allowance required to cover probable incurred credit losses inherent in the loan portfolio, and the material effect that such judgments can have on the Corporation's results of operations. While management's current evaluation of the allowance for loan losses indicates that the allowance is adequate, under adversely different conditions or assumptions the allowance would need to be increased. For example, if historical loan loss experience significantly worsened or if current economic conditions significantly deteriorated, additional provisions for loan losses would be required to increase the allowance. In addition, the assumptions and estimates used in the internal reviews of the Corporation's non-performing loans and potential problem loans, and the associated evaluation of the related collateral coverage for these loans, has a significant impact on the overall analysis of the adequacy of the allowance for loan losses. Real estate values in the Corporation's market area did not increase dramatically in the prior several years, and, as a result, any declines in real estate values have been modest. While management has concluded that the current evaluation of collateral values is reasonable under the circumstances, if collateral evaluations were significantly lowered, the Corporation's allowance for loan losses policy would also require additional provisions for loan losses.

Explanation and Reconciliation of the Corporation's Use of Non-GAAP Measures

The Corporation prepares its Consolidated Financial Statements in accordance with GAAP; these financial statements appear on pages F-3 through F-9. That presentation provides the reader with an understanding of the Corporation's results that can be tracked consistently from year-to-year and enables a comparison of the Corporation's performance with other companies' GAAP financial statements.

In addition to analyzing the Corporation's results on a reported basis, management uses certain non-GAAP financial measures, because it believes these non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the Corporation and, therefore, facilitate a comparison of the Corporation with the performance of its competitors. Non-GAAP financial measures used by the Corporation may not be comparable to similarly named non-GAAP financial measures used by other companies.

The SEC has adopted Regulation G, which applies to all public disclosures, including earnings releases, made by registered companies that contain "non-GAAP financial measures." Under Regulation G, companies making public disclosures containing non-GAAP financial measures must also disclose, along with each non-GAAP financial measure, certain additional information, including a reconciliation of the non-GAAP financial measure to the closest comparable GAAP financial measure and a statement of the Corporation's reasons for utilizing the non-GAAP

financial measure as part of its financial disclosures. The SEC has exempted from the definition of “non-GAAP financial measures” certain commonly used financial measures that are not based on GAAP. When these exempted measures are included in public disclosures, supplemental information is not required. The following measures used in this Report, which are commonly utilized by financial institutions, have not been specifically exempted by the SEC and may constitute "non-GAAP financial measures" within the meaning of the SEC's rules, although we are unable to state with certainty that the SEC would so regard them.

Fully Taxable Equivalent Net Interest Income and Net Interest Margin

Net interest income is commonly presented on a tax-equivalent basis. That is, to the extent that some component of the institution's net interest income, which is presented on a before-tax basis, is exempt from taxation (e.g., is received by the institution as a result of its holdings of state or municipal obligations), an amount equal to the tax benefit derived from that component is added to the actual before-tax net interest income total. This adjustment is considered helpful in comparing one financial institution's net interest income to that of other institutions or in analyzing any institution's net interest income trend line over time, to correct any analytical distortion that might otherwise arise from the fact that financial institutions vary widely in the proportions of their portfolios that are invested in tax-exempt securities, and that even a single institution may significantly alter over time the proportion of its own portfolio that is invested in tax-exempt obligations. Moreover, net interest income is itself a component of a second financial measure commonly used by financial institutions, net interest margin, which is the ratio of net interest income to average interest-earning assets. For purposes of this measure as well, fully taxable equivalent net interest income is generally used by financial institutions, as opposed to actual net interest income, again to provide a better basis of comparison from institution to institution and to better demonstrate a single institution's performance over time. The Corporation follows these practices.

(in thousands, except ratio data)	As of or for the Years Ended		
	December 31, 2018	December 31, 2017	December 31, 2016
NET INTEREST MARGIN - FULLY TAXABLE EQUIVALENT			
Net interest income (GAAP)	\$60,480	\$56,987	\$52,329
Fully taxable equivalent adjustment	420	788	631
Fully taxable equivalent net interest income (non-GAAP)	\$60,900	\$57,775	\$52,960
Average interest-earning assets (GAAP)	\$1,638,803	\$1,623,948	\$1,571,513
Net interest margin - fully taxable equivalent (non-GAAP)	3.72	% 3.56	% 3.37

Efficiency Ratio

The unadjusted efficiency ratio is calculated as non-interest expense divided by total revenue (net interest income and non-interest income). The adjusted efficiency ratio is a non-GAAP financial measure which represents the Corporation's ability to turn resources into revenue and is calculated as non-interest expense divided by total revenue (fully taxable equivalent net interest income and non-interest income), adjusted for one-time occurrences and amortization. This measure is meaningful to the Corporation, as well as investors and analysts, in assessing the Corporation's productivity measured by the amount of revenue generated for each dollar spent.

(in thousands, except ratio data)	As of or for the Years Ended		
	December 31, 2018	December 31, 2017	December 31, 2016
EFFICIENCY RATIO			
Net interest income (GAAP)	\$60,480	\$56,987	\$52,329
Fully taxable equivalent adjustment	420	788	631
Fully taxable equivalent net interest income (non-GAAP)	\$60,900	\$57,775	\$52,960
Non-interest income (GAAP)	\$23,074	\$20,491	\$21,149
Less: changes in fair value of equity investments	(2,093)	—	—
Less: net (gains) losses on security transactions	—	(109)	(987)
Adjusted non-interest income (non-GAAP)	\$20,981	\$20,382	\$20,162
Non-interest expense (GAAP)	\$56,766	\$53,764	\$56,610
Less: amortization of intangible assets	(734)	(860)	(986)
Less: legal accruals and settlements	(989)	(850)	(1,200)
Adjusted non-interest expense (non-GAAP)	\$55,043	\$52,054	\$54,424
Efficiency ratio (unadjusted)	67.94	% 69.39	% 77.04
Efficiency ratio (adjusted)	67.22	% 66.60	% 74.43

Tangible Equity and Tangible Assets (Year-End)

Tangible equity, tangible assets, and tangible book value per share are each non-GAAP financial measures. Tangible equity represents the Corporation's stockholders' equity, less goodwill and intangible assets. Tangible assets represents the Corporation's total assets, less goodwill and other intangible assets. Tangible book value per share represents the Corporation's equity divided by common shares at year-end. These measures are meaningful to the Corporation, as well as investors and analysts, in assessing the Corporation's use of equity.

(in thousands, except per share and ratio data)	As of or for the Years Ended		
	December 31, 2018	December 31, 2017	December 31, 2016
TANGIBLE EQUITY AND TANGIBLE ASSETS (YEAR END)			
Total shareholders' equity (GAAP)	\$165,029	\$149,813	\$143,748
Less: intangible assets	(23,175)	(23,909)	(24,769)
Tangible equity (non-GAAP)	\$141,854	\$125,904	\$118,979
Total assets (GAAP)	\$1,755,343	\$1,707,620	\$1,657,179
Less: intangible assets	(23,175)	(23,909)	(24,769)
Tangible assets (non-GAAP)	\$1,732,168	\$1,683,711	\$1,632,410
Total equity to total assets at end of year (GAAP)	9.40	% 8.77	% 8.67
Book value per share (GAAP)	\$33.99	\$31.10	\$30.07

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Tangible equity to tangible assets at end of year (non-GAAP)	8.19	% 7.48	% 7.29	%
Tangible book value per share (non-GAAP)	\$29.22	\$26.14	\$24.89	

Tangible Equity (Average)

Average tangible equity and return on average tangible equity are each non-GAAP financial measures. Average tangible equity represents the Corporation's average stockholders' equity, less average goodwill and intangible assets for the year. Return on average tangible equity measures the Corporation's earnings as a percentage of average tangible equity. These measures are meaningful to the Corporation, as well as investors and analysts, in assessing the Corporation's use of equity.

	As of or for the Years Ended			
	December 31, 2018	December 31, 2017	December 31, 2016	
(in thousands, except ratio data)				
TANGIBLE EQUITY (AVERAGE)				
Total average shareholders' equity (GAAP)	\$153,793	\$151,229	\$142,906	
Less: average intangible assets	(23,537)	(24,327)	(25,250)	
Average tangible equity (non-GAAP)	\$130,256	\$126,902	\$117,656	
Return on average equity (GAAP)	12.76	% 4.91	% 7.02	%
Return on average tangible equity (non-GAAP)	15.07	% 5.85	% 8.52	%

Adjustments for Certain Items of Income or Expense

In addition to disclosures of certain GAAP financial measures, including net income, EPS, ROA, and ROE, we may also provide comparative disclosures that adjust these GAAP financial measures for a particular year by removing from the calculation thereof the impact of certain transactions or other material items of income or expense occurring during the year, including certain nonrecurring items. The Corporation believes that the resulting non-GAAP financial measures may improve an understanding of its results of operations by separating out any such transactions or items that may have had a disproportionate positive or negative impact on the Corporation's financial results during the particular year in question. In the Corporation's presentation of any such non-GAAP (adjusted) financial measures not specifically discussed in the preceding paragraphs, the Corporation supplies the supplemental financial information and explanations required under Regulation G.

	As of or for the Years Ended			
	December 31, 2018	December 31, 2017	December 31, 2016	
(in thousands, except per share and ratio data)				
NON-GAAP NET INCOME				
Reported net income (loss) (GAAP)	\$19,626	\$7,430	\$10,027	
Net changes in fair value of investments (net of tax)	(1,559)	—	—	
Net (gains) losses on security transactions (net of tax)	—	(68)	(614)	
Legal accruals and settlements (net of tax)	737	528	747	
Remeasurement of net deferred tax asset	(445)	2,927	—	
Net income (non-GAAP)	\$18,359	\$10,817	\$10,160	
Average basic and diluted shares outstanding	4,832	4,800	4,762	
Reported basic and diluted earnings (loss) per share (GAAP)	\$4.06	\$1.55	\$2.11	
Reported return on average assets (GAAP)	1.14	% 0.43	% 0.60	%
Reported return on average equity (GAAP)	12.76	% 4.91	% 7.02	%

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Basic and diluted earnings per share (non-GAAP)	\$3.80	\$2.25	\$2.13	
Return on average assets (non-GAAP)	1.07	% 0.63	% 0.61	%
Return on average equity (non-GAAP)	11.94	% 7.15	% 7.11	%

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ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

Management considers interest rate risk to be the most significant market risk for the Corporation. Market risk is the risk of loss from adverse changes in market prices and rates. Interest rate risk is the exposure to adverse changes in the net income of the Corporation as a result of changes in interest rates.

The Corporation's primary earnings source is net interest income, which is affected by changes in the level of interest rates, the relationship between rates, the impact of interest rate fluctuations on asset prepayments, the level and composition of deposits and liabilities, and credit quality of interest-earning assets.

The Corporation's objectives in its asset and liability management are to maintain a strong, stable net interest margin, to utilize its capital effectively without taking undue risks, to maintain adequate liquidity, and to reduce vulnerability of its operations to changes in interest rates. The Corporation's ALCO has the strategic responsibility for setting the policy guidelines on acceptable exposure to interest rate risk. These guidelines contain specific measures and limits regarding the risks, which are monitored on a regular basis. The ALCO is made up of the Chief Executive Officer, the Chief Financial Officer, the Asset Liability Management Officer, and other officers representing key functions.

Interest rate risk is the risk that net interest income will fluctuate as a result of a change in interest rates. It is the assumption of interest rate risk, along with credit risk, that drives the net interest margin of a financial institution. For that reason, the ALCO has established tolerance limits based upon a 200-basis points change in interest rates, with appropriate floors set for interest-bearing liabilities. At December 31, 2018, it is estimated that an immediate 200-basis point decrease in interest rates would negatively impact the next 12 months net interest income by 12.38% and an immediate 200-basis point increase would positively impact the next 12 months net interest income by 7.71%. Both are within the Corporation's policy guideline of 15%. Given the overall low level of current interest rates and the unlikely event of a 200-basis point decline from this point, management additionally modeled an immediate 100-basis point decline and an immediate 300-basis point increase in interest rates. When applied, it is estimated that an immediate 100-basis point decline in interest rates would negatively impact the next 12 months net interest income by 4.64% and an immediate 300-basis point increase would positively impact the next 12 months net interest income by 11.49%.

A related component of interest rate risk is the expectation that the market value of the Corporation's capital account will fluctuate with changes in interest rates. This component is a direct corollary to the earnings-impact component: an institution exposed to earnings erosion is also exposed to shrinkage in market value. At December 31, 2018, it is estimated that an immediate 200-basis point decrease in interest rates would negatively impact the market value of the Corporation's capital account by 13.65% and an immediate 200-basis point increase in interest rates would positively impact the market value by 8.21%. Both are within the Corporation's policy guideline of 15%. Management also modeled the impact to the market value of the Corporation's capital with an immediate 100-basis point decline and an immediate 300-basis point increase in interest rates, based on the current interest rate environment. When applied, it is estimated that an immediate 100-basis point decrease in interest rates would negatively impact the market value of the Corporation's capital account by 5.10% and an immediate 300-basis point increase in interest rates would positively impact the market value by 11.61%.

Management does recognize the need for certain hedging strategies during periods of anticipated higher fluctuations in interest rates and the Funds Management Policy provides for limited use of certain derivatives in asset liability management.

Credit Risk

The Corporation manages credit risk consistent with state and federal laws governing the making of loans through written policies and procedures; loan review to identify loan problems at the earliest possible time; collection procedures (continued even after a loan is charged off); an adequate allowance for loan losses; and continuing education and training to ensure lending expertise. Diversification by loan product is maintained through offering commercial loans, 1-4 family mortgages, and a full range of consumer loans.

The Corporation monitors its loan portfolio carefully. The Loan Committee of the Corporation's Board of Directors is designated to receive required loan reports, oversee loan policy, and approve loans above authorized individual and Senior Loan Committee lending limits. The Senior Loan Committee, consisting of the President and Chief Executive Officer, Chief Financial Officer and Treasurer (non-voting member), Chief Risk Officer (non-voting member), Business Client Division Manager, Retail Client Division Manager, Retail Loan Manager, Senior Commercial Real Estate Lender, and Commercial Loan Managers, implements the Board-approved loan policy.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The financial statements listed in Part IV, Item 15 are filed as part of this report and appear on pages F-1 through F-69.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. CONTROLS AND PROCEDURES

(a) Evaluation of Disclosure Controls and Procedures

The Corporation's management, with the participation of our Chief Executive Officer, who is the Corporation's principal executive officer, and our Chief Financial Officer and Treasurer, who is the Corporation's principal financial officer, evaluated the effectiveness of the Corporation's disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) promulgated under the Exchange Act) as of December 31, 2018. Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer and Treasurer have concluded that the Corporation's disclosure controls and procedures are effective as of December 31, 2018.

(b) Management's Report on Internal Control over Financial Reporting

We, as members of management of the Corporation, are responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. The Corporation's internal control over financial reporting is a process designed to provide reasonable assurance to the Corporation's management and Board of Directors regarding the reliability of financial reporting and the preparation of the Corporation's financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Corporation, (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America, and that receipts and expenditures of the Corporation are being made only in accordance with authorizations of management and directors of the Corporation, and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Corporation's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate.

As of December 31, 2018 management assessed the effectiveness of the Corporation's internal control over financial reporting based on criteria established in the 2013 Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). The objective of this assessment was to determine whether the Corporation's internal control over financial reporting was effective as of December 31, 2018.

Based on the assessment, we assert that the Corporation maintained effective internal control over financial reporting as of December 31, 2018 based on the specified criteria.

Crowe LLP, an independent registered public accounting firm, which audited the Corporation's 2018 consolidated financial statements included in the Annual Report, has issued an audit report on the effectiveness of the Corporation's internal control over financial reporting.

(c) Changes in Internal Control over Financial Reporting

During the fourth quarter of 2018, there have been no changes in the Corporation's internal control over financial reporting that have materially affected, or that are reasonably likely to material affect, the Corporation's internal control over financial reporting.

/s/ Anders M. Tomson

Anders M. Tomson

President and Chief Executive Officer

March 13, 2019

/s/ Karl F. Krebs

Karl F. Krebs

Chief Financial Officer and Treasurer

March 13, 2019

Item 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information responsive to this Item 10 is incorporated herein by reference to the Corporation's definitive proxy statement for its 2019 Annual Meeting of Shareholders, which will be filed with the SEC within 120 days after the Corporation's 2018 fiscal year end.

ITEM 11. EXECUTIVE COMPENSATION

Information responsive to this Item 11 is incorporated herein by reference to the Corporation's definitive proxy statement for its 2019 Annual Meeting of Shareholders, which will be filed with the SEC within 120 days after the Corporation's 2018 fiscal year end.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT, AND RELATED STOCKHOLDER MATTERS

Information responsive to this Item 12 is incorporated herein by reference to the Corporation's definitive proxy statement for its 2019 Annual Meeting of Shareholders, which will be filed with the SEC within 120 days after the Corporation's 2018 fiscal year end.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information responsive to this Item 13 is incorporated herein by reference to the Corporation's definitive proxy statement for its 2019 Annual Meeting of Shareholders, which will be filed with the SEC within 120 days after the Corporation's 2018 fiscal year end.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information responsive to this Item 14 is incorporated herein by reference to the Corporation's definitive proxy statement for its 2019 Annual Meeting of Shareholders, which will be filed with the SEC within 120 days after the Corporation's 2018 fiscal year end.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) (1) The following consolidated financial statements of the Corporation appear on pages F-1 through F-69 of this report and are incorporated in Part II, Item 8:

Report of Independent Registered Public Accounting Firm-Crowe LLP

Consolidated Financial Statements

Consolidated Balance Sheets as of December 31, 2018 and 2017

Consolidated Statements of Income for the three years ended December 31, 2018

Consolidated Statements of Comprehensive Income for the three years ended December 31, 2018

Consolidated Statements of Shareholders' Equity for the three years ended December 31, 2018

Consolidated Statements of Cash Flows for the three years ended December 31, 2018

Notes to Consolidated Financial Statements

Financial statement schedules have been omitted because they are not applicable or the required information is (2) shown in the Consolidated Financial Statements or the Notes thereto under Item 8, "Financial Statements and Supplementary Data".

(b) The following exhibits are either filed with this Form 10-K or are incorporated herein by reference. The Corporation's Securities Exchange Act file number is 000-13888.

- Exhibit The following exhibits are either filed with this Form 10-K or are incorporated herein by reference. The Corporation's Securities Exchange Act file number is 000-13888.
- 3.1 Certificate of Incorporation of Chemung Financial Corporation dated December 20, 1984 (as incorporated by reference to Exhibit 3.1 to Registrant's Form 10-K for the year ended December 31, 2007 filed with the Commission on March 13, 2008).
 - 3.2 Certificate of Amendment to the Certificate of Incorporation of Chemung Financial Corporation, dated March 28, 1988 (as incorporated by reference to Exhibit 3.2 to Registrant's Form 10-K for the year ended December 31, 2007 filed with the Commission on March 13, 2008).
 - 3.3 Certificate of Amendment to the Certificate of Incorporation of Chemung Financial Corporation, dated May 13, 1998 (as incorporated by reference to Exhibit 3.4 to Registrant's Form 10-K for the year ended December 31, 2005 and filed with the Commission on March 15, 2006).
 - 3.4 Amended and Restated Bylaws of Chemung Financial Corporation, as amended to May 16, 2018 (as incorporated by reference to Exhibit 3.1 to Registrant's Form 8-K filed with the Commission on May 17, 2018).
 - 4.1 Specimen Stock Certificate (filed as Exhibit 4.1 to Registrant's Form 10-K for the year ended December 31, 2002 and incorporated herein by reference).
 - 10.1 Post-Employment Consulting Agreement dated December 20, 2017 between Chemung Canal Trust Company and Ronald M. Bentley, Director (filed as Exhibit 10.1 to Registrant's Form 8-K filed with the SEC on December 22, 2017 and incorporated herein by reference).

- Chemung Financial Corporation 2014 Omnibus Plan and Component Plans (Chemung Financial Corporation Restricted Stock Plan, Chemung Financial Corporation Incentive Compensation Plan, Chemung Financial Corporation Directors' Compensation Plan and Chemung Financial Corporation/Chemung Canal Trust Company Directors' Deferred Fee Plan) (filed as Exhibits 10.1, 10.2, 10.3, 10.4 and 10.5 to Registrant's Form S-8 filed with the SEC on January 27, 2015 and incorporated herein by reference).
- 10.2
- Change of Control Agreement dated December 19, 2018 between Chemung Canal Trust Company and Anders M. Tomson, President and Chief Executive Officer (filed as Exhibit 10.1 to Registrant's Form 8-K filed with the SEC on December 19, 2018 and incorporated herein by reference).
- 10.3
- Change of Control Agreement dated December 19, 2018 between Chemung Canal Trust Company and Karl F. Krebs, Executive Vice President and Chief Financial Officer (filed as Exhibit 10.2 to Registrant's Form 8-K filed with the SEC on December 19, 2018 and incorporated herein by reference).
- 10.4
- Change of Control Agreement dated December 19, 2018 between Chemung Canal Trust Company and Louis C. DiFabio, Executive Vice President (filed as Exhibit 10.3 to Registrant's Form 8-K filed with the SEC on December 19, 2018 and incorporated herein by reference).
- 10.5
- Change of Control Agreement dated December 19, 2018 between Chemung Canal Trust Company and Karen R. Makowski, Executive Vice President and Chief Administration and Risk Officer (filed as Exhibit 10.4 to Registrant's Form 10-K on December 19, 2018 and incorporated herein by reference).
- 10.6
- Change of Control Agreement dated December 19, 2018 between Chemung Canal Trust Company and Thomas W. Wirth, Executive Vice President (filed as Exhibit 10.5 to Registrant's Form 8-K filed with the SEC on December 19, 2018 and incorporated herein by reference).
- 10.7
- Change of Control Agreement dated January 3, 2018 between Chemung Canal Trust Company and Daniel D. Fariello, President of Capital Bank Division (filed as Exhibit 10.1 to Registrant's Form 8-K filed with the SEC on January 8, 2018 and incorporated herein by reference).
- 10.8
- 21 Subsidiaries of the Registrant.*
- 23 Consent of Crowe LLP, Independent Registered Public Accounting Firm.*
- 31.1 Certification of President and Chief Executive Officer of the Registrant pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934.*
- 31.2 Certification of Treasurer and Chief Financial Officer of the Registrant pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934.*
- 32.1 Certification of President and Chief Executive Officer of the Registrant pursuant to Rule 13a-14(b) under the Securities Exchange Act of 1934 and 19 U.S.C. §1350.*
- 32.2 Certification of Treasurer and Chief Financial Officer of the Registrant pursuant to Rule 13a-14(b) under the Securities Exchange Act of 1934 and 19 U.S.C. §1350.*
- 101.INS Instance Document
- 101.SCH XBRL Taxonomy Schema*
- 101.CAL XBRL Taxonomy Calculation Linkbase*
- 101.DEF XBRL Taxonomy Definition Linkbase*
- 101.LAB XBRL Taxonomy Label Linkbase*
- 101.PRE XBRL Taxonomy Presentation Linkbase*
- * Filed herewith.

ITEM 16. 10-K SUMMARY

None.

CHEMUNG FINANCIAL CORPORATION

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Report of Independent Registered Public Accounting Firm

Board of Directors and Shareholders
Chemung Financial Corporation
Elmira, New York

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Chemung Financial Corporation (the "Company") as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework: (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, Chemung Financial Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework: (2013) issued by COSO.

Basis for Opinions

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting, as disclosed in Item 9A. Our responsibility is to express an opinion on these financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Crowe LLP

We have served as the Company's auditor since 2006.

Livingston, New Jersey
March 13, 2019

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CHEMUNG FINANCIAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(in thousands, except share and per share amounts)	DECEMBER 31,	
	2018	2017
ASSETS		
Cash and due from financial institutions	\$33,040	\$27,966
Interest-earning deposits in other financial institutions	96,932	2,763
Total cash and cash equivalents	129,972	30,729
Equity investments, at fair value	1,909	2,337
Securities available for sale, at estimated fair value	242,258	293,091
Securities held to maturity, estimated fair value of \$4,858 at December 31, 2018 and \$3,776 at December 31, 2017	4,875	3,781
FHLB NY and FRB NY Stock, at cost	3,138	5,784
Loans, net of deferred loan fees	1,311,906	1,311,824
Allowance for loan losses	(18,944)	(21,161)
Loans, net	1,292,962	1,290,663
Loans held for sale	502	542
Premises and equipment, net	24,980	26,657
Goodwill	21,824	21,824
Other intangible assets, net	1,351	2,085
Bank owned life insurance	3,048	2,982
Accrued interest and other assets	28,524	27,145
Total assets	\$ 1,755,343	\$ 1,707,620
LIABILITIES AND SHAREHOLDERS' EQUITY		
Deposits:		
Non-interest-bearing	\$484,433	\$467,610
Interest-bearing	1,084,804	999,836
Total deposits	1,569,237	1,467,446
FHLB NY overnight advances	—	57,700
Securities sold under agreements to repurchase	—	10,000
FHLB NY term advances	—	2,000
Long term capital lease obligation	4,304	4,517
Dividends payable	1,254	1,233
Accrued interest payable and other liabilities	15,519	14,911
Total liabilities	1,590,314	1,557,807
Shareholders' equity:		
Common stock, \$0.01 par value per share, 10,000,000 shares authorized; 5,310,076 issued at December 31, 2018 and December 31, 2017	53	53
Additional-paid-in capital	45,820	45,967
Retained earnings	143,129	128,453
Treasury stock, at cost (488,844 shares at December 31, 2018; 559,094	(12,562)	(14,320)

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shares at December 31, 2017)		
Accumulated other comprehensive loss	(11,411)	(10,340)
Total shareholders' equity	165,029	149,813
Total liabilities and shareholders' equity	\$1,755,343	\$1,707,620

See accompanying notes to consolidated financial statements.

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CHEMUNG FINANCIAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME

(in thousands, except per share amounts)	YEARS ENDED		
	DECEMBER 31,		
	2018	2017	2016
Interest and Dividend Income:			
Loans, including fees	\$57,840	\$52,840	\$49,677
Taxable securities	4,804	5,503	5,239
Tax exempt securities	1,153	1,149	945
Interest-earning deposits	756	563	307
Total interest and dividend income	64,553	60,055	56,168
Interest Expense:			
Deposits	3,323	2,168	2,170
Securities sold under agreements to repurchase	137	478	849
Borrowed funds	613	422	820
Total interest expense	4,073	3,068	3,839
Net interest income	60,480	56,987	52,329
Provision for loan losses	3,153	9,022	2,437
Net interest income after provision for loan losses	57,327	47,965	49,892
Non-Interest Income:			
Wealth management group fee income	9,317	8,804	8,316
Service charges on deposit accounts	4,727	4,961	5,089
Interchange revenue from debit card transactions	4,040	3,761	4,027
Net gains on securities transactions	—	109	987
Change in fair value of equity investments	2,004	80	43
Net gain on sales of loans held for sale	351	260	326
Net gains on sales of other real estate owned	90	38	21
Income from bank owned life insurance	66	70	73
Other	2,479	2,408	2,267
Total non-interest income	23,074	20,491	21,149
Non-Interest Expenses:			
Salaries and wages	22,322	21,476	20,954
Pension and other employee benefits	5,524	5,510	4,850
Other components of net periodic pension cost (benefit)	(770)	(1,234)	1,282
Net occupancy expenses	6,550	6,263	6,837
Furniture and equipment expenses	2,550	2,828	2,967
Data processing expense	6,997	6,539	6,593
Professional services	2,169	1,774	2,175
Legal accruals and settlements	989	850	1,200
Amortization of intangible assets	734	860	986
Marketing and advertising expense	1,181	794	877
Other real estate owned expenses	422	110	180
FDIC insurance	1,142	1,236	1,193
Loan expense	863	694	669
Other	6,093	6,064	5,847

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Total non-interest expenses	56,766	53,764	56,610
Income before income tax expense	23,635	14,692	14,431
Income tax expense	4,009	7,262	4,404
Net income	\$19,626	\$7,430	\$10,027
Weighted average shares outstanding	4,832	4,800	4,762
Basic and diluted earnings per share	\$4.06	\$1.55	\$2.11

See accompanying notes to consolidated financial statements.

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CHEMUNG FINANCIAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in thousands)	YEARS ENDED		
	DECEMBER 31,		
	2018	2017	2016
Net income	\$19,626	\$7,430	\$10,027
Other comprehensive income (loss):			
Unrealized holding gains (losses) on securities available for sale	(1,382)	2,523	(6,352)
Reclassification adjustment gains realized in net income	—	(109)	(987)
Net unrealized gains (losses)	(1,382)	2,414	(7,339)
Tax effect	353	(904)	2,773
Net of tax amount	(1,029)	1,510	(4,566)
Change in funded status of defined benefit pension plan and other benefit plans:			
Net gain (loss) arising during the period	(711)	1,001	5,369
Reclassification adjustment for amortization of prior service benefit	(220)	(220)	(427)
Prior service credit	—	—	1,101
Reclassification adjustment for partial pension settlement loss included in pension expense	828	—	—
Reclassification adjustment for amortization of net actuarial losses	318	413	1,595
Total before tax effect	215	1,194	7,638
Tax effect	(55)	(453)	(2,884)
Net of tax amount	160	741	4,754
Total other comprehensive income (loss)	(869)	2,251	188
Comprehensive income	\$18,757	\$9,681	\$10,215

See accompanying notes to consolidated financial statements.

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CHEMUNG FINANCIAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

	Common Stock	Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total
Balances at January 1, 2016	\$ 53	\$ 45,537	\$ 118,973	\$(16,379)	\$ (10,942)	\$ 137,242
Net income	—	—	10,027	—	—	10,027
Other comprehensive income	—	—	—	—	188	188
Restricted stock awards	—	192	—	—	—	192
Distribution of 3,740 shares of treasury stock granted for directors' deferred compensation plan	—	(92)	—	95	—	3
Distribution of 8,249 shares of treasury stock granted for employee restricted stock awards, net	—	(212)	—	212	—	—
Restricted stock units for directors' deferred compensation plan	—	97	—	—	—	97
Cash dividends declared (\$1.04 per share)	—	—	(4,889)	—	—	(4,889)
Distribution of 9,532 shares of treasury stock for directors' compensation	—	19	—	243	—	262
Distribution of 7,661 shares of treasury stock for employee compensation	—	15	—	195	—	210
Sale of 15,308 shares of treasury stock (a)	—	47	—	391	—	438
Repurchase of 612 shares of common stock	—	—	—	(22)	—	(22)
Balances at December 31, 2016	\$ 53	\$ 45,603	\$ 124,111	\$(15,265)	\$ (10,754)	\$ 143,748
Net income	—	—	7,430	—	—	7,430
Other comprehensive income	—	—	—	—	2,251	2,251
Restricted stock awards	—	210	—	—	—	210
Distribution of 2,438 shares of treasury stock granted for directors' deferred compensation plan	—	(51)	—	62	—	11
Distribution of 10,161 shares of treasury stock granted for employee restricted stock awards, net	—	(260)	—	260	—	—
Restricted stock units for directors' deferred compensation plan	—	98	—	—	—	98
Cash dividends declared (\$1.04 per share)	—	—	(4,925)	—	—	(4,925)
Distribution of 7,880 shares of treasury stock for directors' compensation	—	68	—	201	—	269
Distribution of 5,861 shares of treasury stock for employee compensation	—	50	—	150	—	200
Sale of 14,707 shares of treasury stock (a)	—	206	—	376	—	582
Repurchase of 1,159 shares of common stock	—	—	—	(61)	—	(61)
Forfeiture of 1,139 shares of restricted stock awards	—	43	—	(43)	—	—
Reclassification of stranded tax effects in AOCI	—	—	1,837	—	(1,837)	—
Balances at December 31, 2017	\$ 53	\$ 45,967	\$ 128,453	\$(14,320)	\$ (10,340)	\$ 149,813

(continued)

CHEMUNG FINANCIAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

	Common Stock	Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total
Balances at December 31, 2017	\$ 53	\$ 45,967	\$ 128,453	\$(14,320)	\$ (10,340)	\$ 149,813
Cumulative effect of accounting change (b)	—	—	40	—	(202)	(162)
Balances as of January 1, 2018, as adjusted	53	45,967	128,493	(14,320)	(10,542)	149,651
Net income	—	—	19,626	—	—	19,626
Other comprehensive loss	—	—	—	—	(869)	(869)
Restricted stock awards	—	405	—	—	—	405
Distribution of 36,681 shares of treasury stock granted for directors' deferred compensation plan	—	(722)	—	940	—	218
Distribution of 14,425 shares of treasury stock granted for employee restricted stock awards, net	—	(370)	—	370	—	—
Restricted stock units for directors' deferred compensation plan	—	67	—	—	—	67
Cash dividends declared (\$1.04 per share)	—	—	(4,990)	—	—	(4,990)
Distribution of 6,015 shares of treasury stock for directors' compensation	—	147	—	154	—	301
Distribution of 1,784 shares of treasury stock for employee compensation	—	44	—	45	—	89
Sale of 14,081 shares of treasury stock (a)	—	282	—	361	—	643
Repurchase of 2,736 shares of common stock	—	—	—	(112)	—	(112)
Balances at December 31, 2018	\$ 53	\$ 45,820	\$ 143,129	\$(12,562)	\$ (11,411)	\$ 165,029

(a) All treasury stock sales were completed at the prevailing market price with the Chemung Canal Trust Company Profit Sharing, Savings, and Investment Plan which is a defined contribution plan sponsored by the Bank.

(b) Due to implementation of ASC 2016-01. See "Adoption of New Accounting Standards" discussion in Note 1.

See accompanying notes to consolidated financial statements.

CHEMUNG FINANCIAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)	YEARS ENDED DECEMBER		
	31,		
	2018	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income	\$19,626	\$7,430	\$10,027
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization of intangible assets	734	860	986
Deferred income tax (benefit) expense	2,153	4,251	(2,564)
Provision for loan losses	3,153	9,022	2,437
(Gain) loss on disposal of fixed assets	10	29	—
Depreciation and amortization of fixed assets	3,437	3,703	4,205
Amortization of premiums on securities, net	1,304	1,450	1,771
Gains on sales of loans held for sale, net	(351)	(260)	(326)
Proceeds from sales of loans held for sale	18,262	9,722	15,498
Loans originated and held for sale	(17,871)	(9,592)	(14,508)
Net (gains) losses on sale of other real estate owned	(90)	(38)	(21)
Write-downs on OREO	14	43	7
Net change in fair value of equity investments	(2,004)	(80)	(43)
Net gains on securities transactions	—	(109)	(987)
Proceeds from sales of trading assets	2,288	20	99
Purchase of trading assets	(167)	(97)	(96)
(Increase) decrease in other assets	(2,651)	579	(198)
Increase (decrease) in accrued interest payable	84	(62)	1
Expense related to restricted stock units for directors' deferred compensation plan	67	98	97
Expense related to employee stock compensation	89	200	210
Expense related to employee restricted stock awards	405	210	192
Increase (decrease) in other liabilities	(654)	(3,664)	5,427
Income from bank owned life insurance	(66)	(70)	(73)
Net cash provided by operating activities	27,772	23,645	22,141
CASH FLOWS FROM INVESTING ACTIVITIES:			
Proceeds from sales of securities available for sale	—	5,576	40,413
Proceeds from maturities, calls, and principal paydowns on securities available for sale	64,180	46,578	88,875
Proceeds from maturities and principal collected on securities held to maturity	1,316	2,891	2,868
Purchases of securities available for sale	(16,033)	(41,306)	(95,993)
Purchases of securities held to maturity	(2,410)	(1,967)	(3,007)
Purchase of FHLB NY and FRBNY stock	(22,003)	(7,208)	(5,458)
Redemption of FHLB NY and FRBNY stock	24,649	5,465	6,214
Proceeds from sales of fixed assets	—	16	—
Purchases of premises and equipment	(1,770)	(1,482)	(1,696)
Proceeds from sale of other real estate owned	1,709	383	1,568
Net increase in loans	(5,719)	(115,588)	(34,513)
Net cash used by investing activities	43,919	(106,642)	(729)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Net increase in demand deposits, interest-bearing demand accounts, savings accounts, and insured money market accounts	69,927	36,847	78,021
Increase (decrease) in time deposits	31,864	(25,744)	(21,973)
Net decrease in securities sold under agreements to repurchase	(10,000)	(17,606)	(847)

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Net change in FHLBNY overnight advances	(57,700)	57,700	(13,900)
Repayments of FHLBNY long term advances	(2,000)	(7,093)	(10,110)
Payments made on capital lease	(213)	(205)	(186)
Sale of treasury stock	643	582	438
Cash dividends paid	(4,969)	(4,917)	(4,878)
Net cash provided by financing activities	27,552	39,564	26,565
Net increase (decrease) in cash and cash equivalents	99,243	(43,433)	47,977
Cash and cash equivalents, beginning of period	30,729	74,162	26,185
Cash and cash equivalents, end of period	\$ 129,972	\$ 30,729	\$ 74,162

(Continued)

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CHEMUNG FINANCIAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December		
	31,		
	2018	2017	2016
Supplemental disclosure of cash flow information:			
Cash paid during the year for:			
Interest	\$3,989	\$3,130	\$3,838
Income Taxes	\$1,730	\$4,050	\$4,360
Supplemental disclosure of non-cash activity:			
Transfer of loans to other real estate owned	\$267	\$1,940	\$412
Dividends declared, not yet paid	\$1,254	\$1,233	\$1,225
Assets acquired through long term capital lease obligation	\$—	\$—	\$2,035
Repurchase of common stock in lieu of employee payroll taxes	\$(112)	\$(61)	\$(22)
Distribution of treasury stock for directors' deferred compensation plan	\$218	\$11	\$3
Distribution of treasury stock for directors' compensation	\$301	\$269	\$262

See accompanying notes to consolidated financial statements.

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CHEMUNG FINANCIAL CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2018, 2017 and 2016

(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

ORGANIZATION

The Corporation, through its wholly owned subsidiaries, the Bank and CFS Group, Inc., provides a wide range of banking, financing, fiduciary and other financial services to its clients. The Corporation is subject to the regulations of certain federal and state agencies and undergoes periodic examinations by those regulatory agencies.

CRM, a wholly-owned subsidiary of the Corporation which was formed and began operations on May 31, 2016, is a Nevada-based captive insurance company which insures against certain risks unique to the operations of the Corporation and its subsidiaries and for which insurance may not be currently available or economically feasible in today's insurance marketplace. CRM pools resources with several other similar insurance company subsidiaries of financial institutions to spread a limited amount of risk among themselves. CRM is subject to regulations of the State of Nevada and undergoes periodic examinations by the Nevada Division of Insurance.

BASIS OF PRESENTATION

The accompanying consolidated financial statements have been prepared in conformity with GAAP and include the accounts of the Corporation and its subsidiaries. All significant intercompany balances and transactions are eliminated in consolidation.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions based on available information. These estimates and assumptions affect the amounts reported in the financial statements and disclosures provided, and actual results could differ.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents include cash and amounts due from banks and demand interest-bearing deposits with other financial institutions.

Time deposits with other financial institutions are classified as held-to-maturity securities and are not included in cash and cash equivalents.

EQUITY INVESTMENTS

On January 1, 2018, the Corporation adopted ASU 2016-01, an amendment to Recognition and Measurement of Financial Assets and Financial Liabilities (Subtopic 825-10), which requires equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. The adoption of this guidance resulted in a \$40 thousand increase to beginning retained earnings and a \$202 thousand decrease to beginning accumulated other comprehensive income (loss).

Securities that are held to fund a non-qualified deferred compensation plan and securities that have a readily determinable fair market value, are recorded at fair value with changes in fair value and interest and dividend income

included in earnings.

SECURITIES

Management determines the appropriate classification of securities at the time of purchase. If management has the intent and the Corporation has the ability at the time of purchase to hold securities until maturity, they are classified as held to maturity and carried at amortized cost. Securities to be held for indefinite periods of time or not intended to be held to maturity are classified as available for sale and carried at fair value. Unrealized holding gains and losses on securities classified as available for sale are excluded from earnings and are reported as accumulated other comprehensive income (loss) in shareholders' equity, net of the related tax effects, until realized. Realized gains and losses are determined using the specific identification method.

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Management evaluates securities for OTTI on at least a quarterly basis, and more frequently when economic or market conditions warrant such an evaluation. For securities in an unrealized loss position, management considers the extent and duration of the unrealized loss, and the financial condition and near-term prospects of the issuer. Management also assesses whether it intends to sell, or it is more likely than not that it will be required to sell, a security in an unrealized loss position before recovery of its amortized cost basis. If either of the criteria regarding intent or requirement to sell is met, the entire difference between amortized cost and fair value is recognized as impairment through earnings. For debt securities that do not meet the aforementioned criteria, the amount of impairment is split into two components as follows: 1) OTTI related to credit loss, which must be recognized in the income statement and 2) OTTI related to other factors, which is recognized in other comprehensive income. The credit loss is defined as the difference between the present value of the cash flows expected to be collected and the amortized cost basis. For equity securities, the entire amount of impairment is recognized through earnings.

In order to determine OTTI for purchased beneficial interests that, on the purchase date, were not highly rated, the Corporation compares the present value of the remaining cash flows as estimated at the preceding evaluation date to the current expected remaining cash flows. OTTI is deemed to have occurred if there has been an adverse change in the remaining expected future cash flows.

Premiums and discounts are amortized or accreted over the life of the related security as an adjustment of yield using the interest method. Dividend and interest income is recognized when collected.

FEDERAL HOME LOAN BANK AND FEDERAL RESERVE BANK STOCK

The Bank is a member of both the FHLB NY and the FRB NY. FHLB NY members are required to own a certain amount of stock based on the level of borrowings and other factors, while FRB NY members are required to own a certain amount of stock based on a percentage of the Bank's capital stock and surplus. FHLB NY and FRB NY stock are carried at cost and classified as non-marketable equities and periodically evaluated for impairment based on ultimate recovery of par value. Cash dividends are reported as income.

LOANS

Loans are stated at the amount of unpaid principal balance net of deferred loan fees. Additionally, recorded investment in loans includes interest receivable on loans. The Corporation has the ability and intent to hold its loans for the foreseeable future. The Corporation's loan portfolio is comprised of the following segments: (i) commercial and agricultural, (ii) commercial mortgages, (iii) residential mortgages, and (iv) consumer loans.

Commercial and agricultural loans primarily consist of loans to small to mid-sized businesses in the Corporation's market area in a diverse range of industries. These loans are typically made on the basis of the borrower's ability to make repayment from the cash flow of the borrower's business. Commercial mortgage loans are generally non-owner occupied commercial properties or owner occupied commercial real estate with larger balances. Repayment of these loans is often dependent upon the successful operation and management of the properties and the businesses occupying the properties, as well as on the collateral securing the loan. Residential mortgage loans are generally made on the basis of the borrower's ability to make repayment from their employment and other income, but are secured by real property. Consumer loans include home equity lines of credit and home equity loans, which exhibit many of the same characteristics as residential mortgages. Indirect and other consumer loans are typically secured by depreciable assets, such as automobiles or boats, and are dependent on the borrower's continuing financial stability.

Interest on loans is accrued and credited to operations using the interest method. Past due status is based on the contractual terms of the loan. The accrual of interest is generally discontinued and previously accrued interest is reversed when loans become 90 days delinquent. Loans may also be placed on non-accrual status if management

believes such classification is otherwise warranted. All payments received on non-accrual loans are applied to principal. Loans are returned to accrual status when they become current as to principal and interest and remain current for a period of six consecutive months or when, in the opinion of management, the Corporation expects to receive all of its original principal and interest. Loan origination fees and certain direct loan origination costs are deferred and amortized over the life of the loan as an adjustment to yield, using the interest method.

TROUBLED DEBT RESTRUCTURINGS

A TDR is a formally renegotiated loan in which the Bank, for economic or legal reasons related to a borrower's financial difficulties, grants a concession to the borrower that would not have been granted to the borrower otherwise. Not all loans that are restructured as a TDR are classified as non-accrual before the restructuring occurs. Restructured loans can convert from non-accrual to accrual status when said loans have demonstrated performance, generally evidenced by six months of payment performance in accordance with the restructured terms and when, in the opinion of management, the Bank expects to receive all of its contractual principal and interest due under the restructured terms.

TDRs are individually evaluated for impairment and included in the separately identified impairment disclosures. TDRs are measured at the present value of estimated future cash flows using the loan's effective rate at inception. If a TDR is considered to be a collateral dependent loan, the loan is reported, net, at the fair value of the collateral. For TDRs that subsequently default, the Bank determines the amount of the allowance on that loan in accordance with the accounting policy for the allowance for loan losses on loans individually identified as impaired. The Bank incorporates recent historical experience related to TDRs, including the performance of TDRs that subsequently default, into the calculation of the allowance by loan portfolio segment.

ALLOWANCE FOR LOAN LOSSES

The allowance is an amount that management believes will be adequate to absorb probable incurred losses on existing loans. The allowance is established based on management's evaluation of the probable incurred losses in our portfolio in accordance with GAAP, and is comprised of both specific valuation allowances and general valuation allowances.

A loan is classified as impaired when, based on current information and events, it is probable that the Bank will be unable to collect both the principal and interest due under the contractual terms of the loan agreement. Specific valuation allowances are established based on management's analysis of individually impaired loans. Factors considered by management in determining impairment include payment status, evaluations of the underlying collateral, expected cash flows, and the probability of collecting scheduled principal and interest payments when due. Loans that experience insignificant payment delays and payment shortfalls generally are not classified as impaired. Management determines the significance of payment delays and payment shortfalls on a case-by-case basis, taking into consideration all of the circumstances surrounding the loan and the borrower, including the length of the delay, the reasons for the delay, the borrower's prior payment record, and the amount of the shortfall in relation to the principal and interest owed. If a loan is determined to be impaired and is placed on nonaccrual status, all future payments received are applied to principal and a portion of the allowance is allocated so that the loan is reported, net, at the present value of estimated future cash flows using the loan's existing rate or at the fair value of collateral if repayment is expected solely from the collateral.

The general component covers non-impaired loans and is based on historical loss experience adjusted for current factors. Loans not impaired but classified as substandard and special mention use a historical loss factor on a rolling five year history of net losses. For all other unclassified loans, the historical loss experience is determined by portfolio class and is based on the actual loss history experienced by the Bank over the most recent two years. This actual loss experience is supplemented with other qualitative factors based on the risks present for each portfolio class. These qualitative factors include consideration of the following: (1) lending policies and procedures, including underwriting standards and collection, charge-off and recovery policies, (2) national and local economic and business conditions and developments, including the condition of various market segments, (3) loan profiles and volume of the portfolio, (4) the experience, ability, and depth of lending management and staff, (5) the volume and severity of past due, classified and watch-list loans, non-accrual loans, troubled debt restructurings, and other modifications (6) the quality of the Bank's loan review system and the degree of oversight by the Bank's Board of Directors, (7) collateral

related issues: secured vs. unsecured, type, declining valuation environment and trend of other related factors, (8) the existence and effect of any concentrations of credit, and changes in the level of such concentrations, (9) the effect of external factors, such as competition and legal and regulatory requirements, on the level of estimated credit losses in the Bank's current portfolio and (10) the impact of the global economy.

The allowance for loan losses is increased through a provision for loan losses charged to operations. Loans are charged against the allowance for loan losses when management believes that the collectability of all or a portion of the principal is unlikely. Management's evaluation of the adequacy of the allowance for loan losses is performed on a periodic basis and takes into consideration such factors as the credit risk grade assigned to the loan, historical loan loss experience and review of specific impaired loans. While management uses available information to recognize losses on loans, future additions to the allowance may be necessary based on changes in economic conditions.

LOANS HELD FOR SALE

Certain mortgage loans are originated with the intent to sell. The Bank typically retains the right to service the mortgages upon sale. Loans held for sale are recorded at the lower of cost or fair value in the aggregate and are regularly evaluated for changes in fair value. Commitments to sell the loans that are originated for sale are recorded at fair value. If necessary, a valuation allowance is established with a charge to income for unrealized losses attributable to a change in market rates.

CAPITAL LEASES

Capital leases are recorded at the lesser of the present value of future cash outlays using a discounted cash flow, or fair value at the beginning of the lease term. Initially, the capital lease is recorded as a building asset, which is depreciated over the shorter of the term of the lease or the estimated life of the asset, and a corresponding long term lease obligation, which amortizes as payments are made toward the lease. Interest expense is also incurred using the discount rate determined at the beginning of the lease term.

PREMISES AND EQUIPMENT

Land is carried at cost, while buildings, equipment, leasehold improvements and furniture are stated at cost less accumulated depreciation and amortization. Depreciation is charged to current operations under the straight-line method over the estimated useful lives of the assets, which range from 15 to 50 years for buildings and from 3 to 10 years for equipment and furniture. Amortization of leasehold improvements and leased equipment is recognized on the straight-line method over the shorter of the lease term or the estimated life of the asset. Leases of branch offices, which have been capitalized, are included within buildings and depreciated on the straight-line method over the shorter of the lease term or the estimated life of the asset.

BANK OWNED LIFE INSURANCE

BOLI is recorded at the amount that can be realized under the insurance contracts at the balance sheet date, which is the cash surrender value adjusted for other charges or other amounts due that are probable at settlement. Changes in the cash surrender value are recorded in other income.

OTHER REAL ESTATE

Real estate acquired through foreclosure or deed in lieu of foreclosure is recorded at estimated fair value of the property less estimated costs to dispose at the time of acquisition to establish a new carrying value. Write downs from the carrying value of the loan to estimated fair value which are required at the time of foreclosure are charged to the allowance for loan losses. Subsequent adjustments to the carrying values of such properties resulting from declines in fair value are charged to operations in the period in which the declines occur.

INCOME TAXES

The Corporation files a consolidated tax return. Deferred tax assets and liabilities are recognized for future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, and for unused tax loss carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates to apply to taxable income in the years in which temporary differences are expected to be recovered or settled, or the tax loss carry forwards are expected to be utilized. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance, if needed, reduces deferred tax assets to the amount expected to be realized.

A tax position is recognized as a benefit only if it is "more likely than not" that the tax position would be sustained in a tax examination, with a tax examination being presumed to occur. The amount recognized is the largest amount of tax benefit that is greater than 50% likely of being realized on examination. For tax positions not meeting the "more likely than not" test, no tax benefit is recorded.

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WEALTH MANAGEMENT GROUP FEE INCOME

Assets held in a fiduciary or agency capacity for customers are not included in the accompanying consolidated balance sheets, since such assets are not assets of the Corporation. Wealth Management Group income is recognized on the accrual method as earned based on contractual rates applied to the balances of individual trust accounts. The unaudited market value of trust assets under administration total \$1.768 billion, including \$283.0 million of assets held under management or administration for the Corporation, at December 31, 2018 and \$1.952 billion, including \$346.8 million of assets held under management or administration for the Corporation, at December 31, 2017.

POSTRETIREMENT BENEFITS

Pension Plan:

The Chemung Canal Trust Company Pension Plan is a non-contributory defined benefit pension plan. The Pension Plan is a “qualified plan” under the IRS Code and therefore must be funded. Contributions are deposited to the Plan and held in trust. The Plan assets may only be used to pay retirement benefits and eligible plan expenses. The plan was amended such that new employees hired on or after July 1, 2010 would not be eligible to participate in the plan, however, existing participants at that time would continue to accrue benefits.

Under the Plan, pension benefits are based upon final average annual compensation where the annual compensation is total base earnings paid plus 401(k) salary deferrals. Bonuses, overtime, commissions and dividends are excluded. The normal retirement benefit equals 1.2% of final average compensation (highest consecutive five years of annual compensation in the prior ten years) times years of service (up to a maximum of 25 years), plus 1% of average monthly compensation for each additional year of service (up to a maximum of 10 years), plus 0.65% of average monthly compensation in excess of covered compensation for each year of credited service up to 35 years. Covered compensation is the average of the social security taxable wage base in effect for the 35 year period prior to normal social security retirement age. Compensation for purposes of determining benefits under the Plan is reviewed annually.

On October 20, 2016, the Corporation amended its noncontributory defined benefit pension plan (“pension plan”) to freeze future retirement benefits after December 31, 2016. Beginning on January 1, 2017, both the pay-based and service-based component of the formula used to determine retirement benefits in the pension plan were frozen so that participants will no longer earn further retirement benefits. During the fourth quarter of 2018, the Corporation offered terminated, vested employees the option to receive lump sum settlement payments. The effects of these changes are reflected in the pension plan disclosures as of December 31, 2018 and 2017. See Note 13 for further details.

Defined Contribution Profit Sharing, Savings and Investment Plan:

The Corporation also sponsors a 401(K) defined contribution profit sharing, savings and investment plan which covers all eligible employees. The Corporation contributes a non-discretionary 3% of gross annual wages (as defined by the 401(k) plan) for each participant, regardless of the participant’s deferral, in addition to a 50% match up to 6% of gross annual wages. All contributions made on or after January 1, 2017 will vest immediately, while all previous contributions continue vesting on a five-year vesting schedule. The plan's assets consist of Chemung Financial Corporation common stock, as well as other common and preferred stocks, U.S. Government securities, corporate bonds and notes, and mutual funds. The plan’s expense is the amount of non-discretionary and matching contributions and is charged to non-interest expenses in the consolidated statements of income.

Defined Benefit Health Care Plan:

The Corporation sponsors a defined benefit health care plan that provides postretirement medical benefits to employees who meet minimum age and service requirements. This plan was amended effective July 1, 2006. Prior to this amendment, all retirees age 55 or older were eligible for coverage under the Corporation's self-insured health care plan, contributing 40% of the cost of the coverage. Under the amended plan, coverage for Medicare eligible retirees who reside in the Central New York geographic area is provided under a group sponsored plan with Excellus BlueCross BlueShield called Medicare Blue PPO, with the retiree paying 100% of the premium. Excellus BlueCross BlueShield assumes full liability for the payment of health care benefits incurred after July 1, 2006. Current Medicare eligible retirees who reside outside of the Central New York geographic area were eligible for coverage under the Corporation's self-insurance plan through December 31, 2009, contributing 50% of the cost of coverage. Effective January 1, 2010, these out of area retirees were eligible for coverage under a Medicare Supplement Plan C administered by Excellus BlueCross BlueShield, contributing 50% of the premium. Current retirees between the ages of 55 and 65, will continue to be eligible for coverage under the Corporation's self-insured plan, contributing 50% of the cost of the coverage. Employees who retired after July 1, 2006, and become Medicare eligible will only have access to the Medicare Blue PPO plan. Additionally, effective July 1, 2006, dental benefits were eliminated for all retirees. The cost of the plan is based on actuarial computations of current and future benefits for employees, and is charged to non-interest expenses in the consolidated statements of income.

On October 20, 2016, the Corporation amended its defined benefit health care plan to not allow any new retirees into the plan, effective January 1, 2017. The effects of this freeze are reflected in the pension plan disclosures as of December 31, 2018 and 2017. See Note 13.

Executive Supplemental Pension Plan:

U.S. laws place limitations on compensation amounts that may be included under the Pension Plan. The Executive Supplemental Pension Plan was provided to executives in order to produce total retirement benefits, as a percentage of compensation that is comparable to employees whose compensation is not restricted by the annual compensation limit. Pension amounts, which exceed the applicable Internal Revenue Service code limitations, will be paid under the Executive Supplemental Pension Plan.

The Executive Supplemental Pension Plan is a "non-qualified plan" under the Internal Revenue Service Code. Contributions to the Plan are not held in trust; therefore, they may be subject to the claims of creditors in the event of bankruptcy or insolvency. When payments come due under the Plan, cash is distributed from general assets. The cost of the plan is based on actuarial computations of current and future benefits for executives, and is charged to non-interest expense in the consolidated statements of income.

Defined Contribution Supplemental Executive Retirement Plan:

The Defined Contribution Supplemental Executive Retirement Plan is provided to certain executives to motivate and retain key management employees by providing a nonqualified retirement benefit that is payable at retirement, disability, death and certain other events.

The Supplemental Executive Retirement Plan is intended to be an unfunded plan maintained primarily for the purpose of providing deferred compensation benefits for a select group of management or highly compensated employees under Sections 201(2), 301(a)(3) and 401(a)(1) of the Employee Retirement Income Security Act of 1974. The plan's expense is the Corporation's annual contribution plus interest credits.

STOCK-BASED COMPENSATION

Restricted Stock Plan:

The Restricted Stock Plan is designed to align the interests of the Corporation's executives and senior managers with the interests of the Corporation and its shareholders, to ensure the Corporation's compensation practices are competitive and comparable with those of its peers, and to promote the retention of select management-level employees. Under the terms of the Plan, the Corporation may make discretionary grants of restricted shares of the Corporation's common stock to or for the benefit of employees selected to participate in the Plan. Each officer of the Corporation, other than the Corporation's chief executive officer, is eligible to participate in the Plan. Awards are based on the performance, responsibility and contributions of the employee and are targeted at an average of the peer group. The maximum number of shares of the Corporation's common stock that may be awarded as restricted shares to Plan participants may not exceed 15,000 per calendar year. Twenty percent of the restricted stock awarded to a participant vests each year commencing with the first anniversary date of the award and is 100 percent vested on the fifth anniversary date. Except in the case of the participant's death, disability, or in the event of a change in control, the participant's unvested shares of unrestricted stock will be forfeited if the participant leaves the employment of the Bank, or if the participant retires prior to attainment of age 65, unless otherwise waived by the Compensation and Personnel Committee of the Board of Directors. The plan's expense is recognized as compensation expense ratably over the vesting period for the fair value of the award, measured at the grant date. See Note 14 for more information regarding this Plan.

Deferred Directors Fee Plan:

A Deferred Directors Fee Plan for non-employee directors provides that directors may elect to defer receipt of all or any part of their fees. Deferrals are either credited with interest compounded quarterly at the Applicable Federal Rate for short-term debt instruments or converted to units, which appreciate or depreciate, as would an actual share of the Corporation's common stock purchased on the deferral date. Cash deferrals will be paid into an interest bearing account and paid in cash. Units will be paid in shares of common stock. All directors' fees are charged to non-interest expenses in the consolidated statements of income.

Directors' Compensation Plan:

The purpose of the Directors' Compensation Plan is to enable the Corporation to attract and retain persons of exceptional ability to serve as directors and stockholders in enhancing the value of the common stock of the Corporation. The Plan was originally established to provide for the cash payment of an annual retainer and fees to non-employee directors serving on the Board of Directors of the Corporation and the Bank. The Plan was subsequently amended to provide: (i) payment of additional compensation to each non-employee director in shares of the Corporation's common stock in an amount equal to the total cash compensation earned by each non-employee director during the year for service on the Board of Directors of each of the Corporation and the Bank, and for each year of service thereafter, to be distributed from treasury shares in January of the following calendar year; and (ii) payment to the President and CEO of the Corporation and the Bank for his service on the Boards of Directors of the Corporation and the Bank in an amount equal in value to the average cash compensation awarded to non-employee directors who have served twelve (12) months of the previous year. The maximum number of shares of Corporation's common stock that may be granted under the Plan may not exceed 20,000 per year. The Plan provides that the value of a share of common stock granted under the Plan shall be determined as the average of the closing prices of a share of common stock as quoted on the applicable established securities market for each of the prior 30 trading days ending on December 31st of the calendar year. The cost of all cash and stock compensation is charged to non-interest expenses in the consolidated statements of income.

Incentive Compensation Plan:

The purpose of the Incentive Compensation Plan is to attract and retain highly qualified officers and key employees, and to motivate such persons to serve the Corporation and the Bank and to expend maximum effort to improve the business results and earnings of the Corporation by providing to such persons an opportunity to acquire or increase a direct proprietary interest in the operations and future success of the Corporation. To this end, the Incentive Compensation Plan provides for the discretionary grant of cash and/or unrestricted stock, i.e., common stock of the Corporation that is free of any restrictions, such as restrictions on transferability, to select officers and key employees as designated by the Board of Directors in its sole discretion. The maximum number of shares that can be awarded as unrestricted stock under the Incentive Compensation Plan to any individual is 10,000 per calendar year; and the maximum amount that may be earned in cash as an Incentive Award in any calendar year by any individual is \$300,000. The right of any eligible employee to receive a grant of an incentive award, whether in the form of cash or unrestricted stock, is subject to performance standards that are specified by either the Compensation Committee or the Board of Directors. The cost of all cash and unrestricted stock compensation is charged to non-interest expenses in the consolidated statements of income.

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Non-qualified Deferred Compensation Plan:

The Deferred Compensation Plan allows a select group of management and employees to defer all or a portion of their annual compensation to a future date. Eligible employees are generally highly compensated employees and are designated by the Board of Directors from time to time. Investments in the plan are recorded as equity investments and deferred amounts are an unfunded liability of the Corporation. The plan requires deferral elections be made before the beginning of the calendar year during which the participant will perform the services to which the compensation relates. Participants in the Plan are required to elect a form of distribution, either lump sum payment or annual installments not to exceed ten years, and a time of distribution, either a specified age or a specified date. The terms and conditions for the deferral of compensation are subject to the provisions of 409A of the IRS Code. The income from investments is recorded in dividend income and non-interest income in the consolidated statements of income. The cost of the plan is recorded in non-interest expenses in the consolidated statements of income.

GOODWILL AND INTANGIBLE ASSETS

Goodwill resulting from business combinations prior to January 1, 2009 represents the excess of the purchase price over the fair value of the net assets of businesses acquired. Goodwill resulting from business combinations after January 1, 2009, is generally determined as the excess of the fair value of the consideration transferred, plus the fair value of any noncontrolling interests in the acquiree, over the fair value of the net assets acquired and liabilities assumed as of the acquisition date. Goodwill and intangible assets acquired in a purchase business combination and determined to have an indefinite useful life are not amortized, but tested for impairment at least annually. The Corporation has selected December 31 as the date to perform the annual impairment test. Goodwill is the only intangible asset with an indefinite life on our balance sheet. Intangible assets with definite useful lives are amortized over their estimated useful lives to their estimated residual values. The balances are reviewed for impairment on an ongoing basis or whenever events or changes in business circumstances warrant a review of the carrying value. If impairment is determined to exist, the related write-down of the intangible asset's carrying value is charged to operations. Based on these impairment reviews, the Corporation determined that goodwill and other intangible assets were not impaired at December 31, 2018.

The Corporation's intangible assets with definite useful lives resulted from the purchase of the trust business of Partners Trust Bank in May of 2007, the acquisition of FOFC in April 2011 and the acquisition of six branches of Bank of America in November of 2013, with balances of \$1.0 million, \$0.2 million and \$0.2 million, respectively, at December 31, 2018. The intangible assets related to the acquisition of Canton Bancorp, Inc. in May 2009 were fully amortized at December 31, 2016. The intangible assets related to the acquisition of three former M&T Bank branch offices in March 2008 were fully amortized at December 31, 2015. The trust business intangible is being amortized to expense over the expected useful life of 15 years. The identifiable core deposit related to the branch offices in the Bank of America acquisition is being amortized to expense using a 7 year accelerated method. The identifiable core deposit intangible related to the FOFC acquisition is being amortized using a 10 year accelerated method.

SECURITIES SOLD UNDER AGREEMENTS TO REPURCHASE

The Corporation enters into sales of securities under agreements to repurchase. The agreements are treated as financings, and the obligations to repurchase securities sold are reflected as liabilities in the consolidated balance sheets. The amount of the securities underlying the agreements continues to be carried in the Corporation's securities portfolio. The Corporation has agreed to repurchase securities identical to those sold. The securities underlying the agreements are under the Corporation's control.

DERIVATIVES

The Corporation utilizes interest rate swaps with commercial borrowers and third-party counterparties as well as agreements with lead banks in participation loan relationships wherein the Corporation guarantees a portion of the fair value of an interest rate swap entered into by the lead bank. These transactions are accounted for as derivatives. The Company's derivatives are entered into in connection with its asset and liability management activities and not for trading purposes.

The Company does not have any derivatives that are designated as hedges and therefore all derivatives are considered free standing and are recorded at fair value as derivative assets or liabilities on the consolidated balance sheets, with changes in fair value recognized in the consolidated statements of income as non-interest income.

Premiums received when entering into derivative contracts are recognized as part of the fair value of the derivative asset or liability and are carried at fair value with any gain/loss at inception and any changes in fair value reflected in income.

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The Corporation does not typically require its commercial customers to post cash or securities as collateral on its program of back-to-back interest rate swap program. The Corporation may need to post collateral, either cash or certain qualified securities, in proportion to potential increases in unrealized loss positions.

OTHER FINANCIAL INSTRUMENTS

The Corporation is a party to certain other financial instruments with off-balance sheet risk such as unused portions of lines of credit and commitments to fund new loans. The Corporation's policy is to record such instruments when funded.

ADVERTISING COSTS

Costs for advertising products and services or for promoting our corporate image are expensed as incurred.

EARNINGS PER COMMON SHARE

Basic earnings per share is net income divided by the weighted average number of common shares outstanding during the period. Issuable shares including those related to directors' restricted stock units and directors' stock compensation are considered outstanding and are included in the computation of basic earnings per share as they are earned. All outstanding unvested share based payment awards that contain rights to nonforfeitable dividends are considered participating securities for this calculation. Restricted stock awards are grants of participating securities. The impact of the participating securities on earnings per share is not material. Earnings per share information is adjusted to present comparative results for stock splits and stock dividends that occur.

COMPREHENSIVE INCOME (LOSS)

Comprehensive income (loss) consists of net income and other comprehensive income (loss). Other comprehensive income (loss) includes unrealized gains and losses on securities available for sale and changes in the funded status of the Corporation's defined benefit pension plan and other benefit plans, net of the related tax effect, which are also recognized as separate components of equity.

SEGMENT REPORTING

The Corporation has identified separate operating segments and internal financial information is primarily reported and aggregated in two lines of business, banking and wealth management services.

RECLASSIFICATION

Amounts in the prior years' consolidated financial statements are reclassified whenever necessary to conform to the current year's presentation.

RECENT ACCOUNTING PRONOUNCEMENTS

On January 1, 2018, the Corporation adopted ASU 2014-09 Revenue from Contracts with Customers (Topic 606) and all subsequent amendments to the ASU (collectively, "ASU 606"), which creates a single framework for recognizing revenue from contracts with customers that fall within its scope and revises when it is appropriate to recognize a gain (loss) from the transfer of nonfinancial assets, such as OREO. The majority of the Corporation's revenues come from interest income and other sources, including loans, securities, and derivatives that are outside the scope of ASC 606. The Corporation's services that fall within the scope of ASC 606 are presented within non-interest income and are

recognized as revenue as the Corporation satisfies its obligation to the customer. Services within the scope of ASC 606 include service charges on deposits, interchange income, wealth management fees, and the sale of OREO. The amendments allow for one of two transition methods: full retrospective or modified retrospective. The full retrospective approach requires application to all periods presented. The modified retrospective transition requires application to uncompleted contracts at the date of adoption. Periods prior to the date of adoption are not retrospectively revised, but a cumulative effect is recognized at the date of initial application on uncompleted contracts. The Corporation adopted the new revenue guidance using the modified retrospective approach. There was no significant change upon adoption of the standard, as the new standard did not materially change the way the Corporation currently records revenue for its WMG and deposit related fees at the Bank; as such, no cumulative effect adjustment was recorded. Refer to Note 10 - Revenue from Contracts with Customers for further discussion on the Corporation's accounting policies for revenue sources within the scope of ASC 606.

In January 2016, the FASB issued ASU No. 2016-01, an amendment to Recognition and Measurement of Financial Asset and Financial Liabilities (Subtopic 825-10). The objectives of the ASU are to (1) require equity investments to be measured at fair value, with changes in fair value recognized in net income, (2) simplify the impairment assessment of equity investments without readily determinable fair values, (3) eliminate the requirement to disclose methods and significant assumptions used to estimate fair value for financial instruments measured at amortized cost on the balance sheet, (4) require the use of the exit price notion when measuring the fair value of financial instruments, and (5) clarify the need for a valuation allowance on a deferred tax asset related to available-for-sale securities in combination with the entity's other deferred tax assets. The Corporation adopted all provisions of this ASU as of January 1, 2018 using the modified retrospective method. Results for reporting periods beginning after January 1, 2018 are presented under ASC 825, with comparable consolidated balance sheets also reported. The adjustments to opening retained earnings and accumulated other comprehensive loss related to the adoption of ASC 825 are immaterial to the financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). ASU 2016-02 requires companies that lease valuable assets to recognize on their balance sheets the assets and liabilities generated by contracts longer than a year. The amendments in this update are effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2018, though early adoption is permitted. The Corporation adopted the new lease guidance as of January 1, 2019 and evaluated the impact that the adoption of these updates had on its consolidated financial statements. The Corporation believes the implementation of this ASU created a right of use asset of less than \$8.5 million for the Corporation's 15 leased facilities and a related lease obligation of the same amount as of January 1, 2019.

In June 2016, the FASB issued ASU 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. The objective of the ASU is to provide financial statement users with more decision-useful information about the expected credit losses on financial instruments and other commitments to extend credit held by a reporting entity at each reporting date by replacing the incurred loss impairment methodology in current GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to form credit loss estimates. The amendments in this ASU are effective for public companies for fiscal years beginning after December 15, 2019, though entities may adopt the amendments earlier for fiscal years beginning after December 15, 2018. The Corporation is currently evaluating the impact of the adoption of this guidance on its consolidated financial statements. The Corporation anticipates that the adoption of the CECL model will result in an increase to the Corporation's allowance for loan losses. The Corporation has established a committee to oversee the implementation of CECL and has selected a vendor to assist in the implementation process. In 2018 the committee established parameters which will be used in the CECL model with the selected vendor. The Corporation further plans to run its current incurred loss model and a CECL model concurrently for twelve months prior to the adoption of this guidance on January 1, 2020.

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. The objective of the ASU is to reduce the existing diversity in practice relating to eight specific cash flow issues: (1) debt prepayment or debt extinguishment costs, (2) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing, (3) contingent consideration payments made after a business combination, (4) proceeds from the settlement of insurance claims, (5) proceeds from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies, (6) distributions received from equity method investees, (7) beneficial interests in securitization transactions, and (8) separately identifiable cash flows and application of the predominance principal. Results for reporting periods beginning after January 1, 2018 are presented under ASC 230, while prior periods amounts continue to be reported in accordance with legacy GAAP. The adoption of ASU 2016-15 as of January 1, 2018 did not result in a change to how the Corporation accounts for its cash flows.

In January 2017, the FASB issued ASU 2017-04, Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. The objective of the ASU is to simplify the manner in which an entity is required to test goodwill for impairment by eliminating Step 2 from the goodwill impairment test. Additionally, the ASU removes the requirement for any reporting unit with a zero or negative carrying amount to perform a qualitative assessment and, if it fails such qualitative test, to perform Step 2 of the goodwill impairment test. The amendments in this ASU are effective for annual, or any interim, goodwill impairment tests in fiscal years beginning after December 15, 2019. The adoption of the ASU is not expected to have a significant impact on the Corporation's consolidated financial statements.

In March 2017, the FASB issued ASU 2017-07, Compensation - Retirement Benefits (Topic 715) - Improving the Presentation of Net Periodic Cost and Net Periodic Postretirement Benefit Cost. The objective of the ASU was to improve guidance related to the presentation of defined benefit costs in the income statement. Specifically, the ASU required that an employer report the service cost component in the same line item(s) as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations, if one is presented. Additionally, the ASU allows only the service cost component to be eligible for capitalization, when applicable. Results for reporting periods beginning after January 1, 2018 are presented under ASC 715, while prior period amounts continue to be reported in accordance with legacy GAAP, with comparable periods presented retrospectively for the presentation of the service cost and net periodic postretirement benefit cost in the income statement. The Corporation adopted ASU 2017-07 as of January 1, 2018 and elected the practical expedient, which permits employers to use the amounts disclosed in its pension and other postretirement benefit plan note for the prior comparative periods as the estimation for applying retrospective presentation requirements.

In March 2017, the FASB issued ASU 2017-08, Receivables - Nonrefundable Fees and Other Costs (Subtopic 310-20): Premium Amortization on Purchased Callable Debt Securities. The objective of the ASU is to align the amortization period of premiums and discounts to expectations incorporated in market pricing on the underlying securities. The amendment requires that the premium be amortized to the earliest call date, but does not require an accounting change for securities held at a discount; the discount continues to be amortized to maturity. The amendments in this ASU are effective for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2018. The adoption of the ASU is not expected to have a significant impact on the Corporation's consolidated financial statements.

(2) RESTRICTIONS ON CASH AND DUE FROM BANK ACCOUNTS

The Corporation was in compliance with the reserve requirement with the Federal Reserve Bank of New York as of December 31, 2018.

The Corporation also maintains a pre-funded settlement account with a financial institution in the amount of \$1.4 million for electronic funds transaction settlement purposes at December 31, 2018 and 2017.

The Corporation also maintains a collateral restricted account with a financial institution related to the Corporation's interest rate swap program. The account serves as collateral in the event of default on the interest rate swaps with the counterparties. The collateral held at the financial institution was \$550 thousand as of December 31, 2018. There was no collateral held at the financial institution as of December 31, 2017.

(3) SECURITIES

Amortized cost and estimated fair value of securities available for sale at December 31, 2018 and 2017 are as follows (in thousands):

2018		2017	
Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
\$5,489	\$5,472	\$15,492	\$15,491

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Obligations of U.S. Government and U.S. Government sponsored enterprises

Mortgage-backed securities, residential	189,111	183,192	224,939	219,909
Obligations of states and political subdivisions	44,390	44,152	52,928	53,132
Corporate bonds and notes	249	247	249	251
SBA loan pools	9,257	9,195	4,339	4,308
Total	\$248,496	\$242,258	\$297,947	\$293,091

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Gross unrealized gains and losses on securities available for sale at December 31, 2018 and 2017, were as follows (in thousands):

	2018		2017	
	Unrealized Gains	Unrealized Losses	Unrealized Gains	Unrealized Losses
Obligations of U.S. Government and U.S. Government sponsored enterprises	\$10	\$ 27	\$20	\$ 21
Mortgage-backed securities, residential	146	6,065	136	5,166
Obligations of states and political subdivisions	70	308	355	151
Corporate bonds and notes	—	2	2	—
SBA loan pools	—	62	1	32
Total	\$226	\$ 6,464	\$514	\$ 5,370

The amortized cost and estimated fair value of debt securities available for sale are shown below by contractual maturity. Expected maturities may differ from contractual maturities if borrowers have the right to call or prepay obligations with or without call or prepayment penalties. Securities not due at a single maturity date are shown separately (in thousands):

	December 31, 2018	
	Amortized Cost	Fair Value
Within one year	\$11,603	\$11,578
After one, but within five years	11,808	11,754
After five, but within ten years	10,876	10,829
After ten years	15,841	15,710
Mortgage-backed securities, residential	189,111	183,192
SBA loan pools	9,257	9,195
Total	\$248,496	\$242,258

Actual maturities may differ from contractual maturities above because issuers may have the right to call or prepay obligations with or without call or prepayment penalties.

The proceeds from sales and calls of securities resulting in gains or losses are listed below (in thousands):

	2018	2017	2016
Proceeds	\$ —	\$5,576	\$40,413
Gross gains	\$ —	\$109	\$989
Gross losses	\$ —	\$—	\$(2)
Tax expense	\$ —	\$41	\$373

Amortized cost and estimated fair value of securities held to maturity at December 31, 2018 and 2017 are as follows (in thousands):

	2018		2017	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Obligations of states and political subdivisions	\$3,020	\$ 3,020	\$1,946	\$ 1,946
Time deposits with other financial institutions	1,855	1,838	1,835	1,830
Total	\$4,875	\$ 4,858	\$3,781	\$ 3,776

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Gross unrealized gains and losses on securities held to maturity at December 31, 2018 and 2017, were as follows (in thousands):

	2018		2017	
	Unrealized Gains	Unrealized Losses	Unrealized Gains	Unrealized Losses
Obligations of states and political subdivisions	\$ —	\$ —	\$ —	\$ —
Time deposits with other financial institutions	—	17	—	5
Total	\$ —	\$ 17	\$ —	\$ 5

There were no sales of securities held to maturity in 2018 or 2017.

The contractual maturity of securities held to maturity is as follows at December 31, 2018 (in thousands):

	December 31, 2018	
	Amortized Cost	Fair Value
Within one year	\$2,783	\$2,777
After one, but within five years	2,092	2,081
After five, but within ten years	—	—
After ten years	—	—
Total	\$4,875	\$4,858

The following table summarizes the investment securities available for sale with unrealized losses at December 31, 2018 and December 31, 2017 by aggregated major security type and length of time in a continuous unrealized position (in thousands):

	Less than 12 months		12 months or longer		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
2018						
Obligations of U.S. Government and U.S. Government sponsored enterprises	\$—	\$ —	\$4,969	\$ 27	\$4,969	\$ 27
Mortgage-backed securities, residential	—	—	171,481	6,065	171,481	6,065
Obligations of states and political subdivisions	10,868	38	21,345	270	32,213	308
Corporate bonds and notes	247	2	—	—	247	2
SBA loan pools	5,985	17	3,210	45	9,195	62
Total temporarily impaired securities	\$17,100	\$ 57	\$201,005	\$ 6,407	\$218,105	\$ 6,464
2017						
Obligations of U.S. Government and U.S. Government sponsored enterprises	\$14,982	\$ 21	\$—	\$ —	\$14,982	\$ 21
Mortgage-backed securities, residential	83,562	1,013	131,165	\$ 4,153	214,727	5,166
Obligations of states and political subdivisions	20,526	133	271	18	20,797	151
SBA loan pools	3,937	32	—	—	3,937	32
Total temporarily impaired securities	\$123,007	\$ 1,199	\$131,436	\$ 4,171	\$254,443	\$ 5,370

Other-Than-Temporary-Impairment

As of December 31, 2018, the majority of the Corporation's unrealized losses in the investment securities portfolio related to mortgage-backed securities. At December 31, 2018, all of the unrealized losses related to mortgage-backed securities were issued by U.S. government sponsored entities, Fannie Mae and Freddie Mac. Because the decline in fair value is attributable to changes in interest rates and not credit quality, and because the Corporation does not have the intent to sell these securities and it is not likely that it will be required to sell these securities before their anticipated recovery, the Corporation does not consider these securities to be other-than-temporarily impaired at December 31, 2018.

The Corporation's unrealized losses on securities held to maturity related to certificates of deposits. At December 31, 2018, all of the unrealized losses related to certificates of deposit within other financial institutions and were under the FDIC insurance limit of \$250,000. Because the decline in fair value is attributable to changes in interest rates and not credit quality, and because the Corporation does not have the intent to sell these securities and it is not likely that it will be required to see these securities before their anticipated recovery, the Corporation does not consider these securities to be other-than-temporarily impaired at December 31, 2018.

Pledged Securities

The fair value of securities pledged to secure public funds on deposit or for other purposes as required by law was \$212.7 million at December 31, 2018 and \$231.6 million at December 31, 2017.

The table below shows the securities pledged to secure securities sold under agreements to repurchase at December 31, 2018 and 2017 (in thousands):

	2018		2017	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Mortgage-backed securities, residential	\$ —	\$ —	-\$12,082	\$11,798
Total	\$ —	\$ —	-\$12,082	\$11,798

Concentrations

There are no securities of a single issuer (other than securities of U.S. Government sponsored enterprises) that exceed 10% of shareholders' equity at December 31, 2018 or 2017.

Equity Method Investments

The Corporation has an equity investment in Cephaz Capital Partners, L.P. This small business investment company was established for the purpose of providing financing to small businesses in market areas served by the Corporation, including minority-owned small businesses and those that are anticipated to create jobs for the low to moderate income levels in the targeted areas. As of both December 31, 2018 and 2017, this investment totaled \$0.4 million, is included in other assets, and is accounted for under the equity method of accounting.

(4) LOANS AND ALLOWANCE FOR LOAN LOSSES

The composition of the loan portfolio, net of deferred loan fees is summarized as follows (in thousands):

	December 31, December 31,	
	2018	2017
Commercial and agricultural:		
Commercial and industrial	\$ 202,526	\$ 198,463
Agricultural	328	544
Commercial mortgages:		
Construction	54,476	45,558
Commercial mortgages	606,694	598,772
Residential mortgages	182,724	194,440
Consumer loans:		
Credit cards	1,449	1,517
Home equity lines and loans	98,145	100,591
Indirect consumer loans	149,380	153,060
Direct consumer loans	16,184	18,879
Total loans, net of deferred loan fees	1,311,906	1,311,824
Interest receivable on loans	3,703	3,758
Total recorded investment in loans	\$ 1,315,609	\$ 1,315,582

Residential mortgages held for sale as of December 31, 2018 and 2017 totaling \$0.5 million and \$0.5 million, respectively, are not included in the above table.

Residential mortgages totaling \$132.5 million at December 31, 2018 and \$149.7 million at December 31, 2017 were pledged under a blanket collateral agreement for the Corporation's line of credit with the FHLB NY.

The following tables present the activity in the allowance for loan losses by portfolio segment for the years ended December 31, 2018, 2017 and 2016, respectively (in thousands):

Allowance for loan losses	December 31, 2018				Total
	Commercial and Agricultural	Commercial Mortgages	Residential Mortgages	Consumer Loans	
Beginning balance:	\$6,976	\$ 8,514	\$ 1,316	\$ 4,355	\$21,161
Charge Offs:	(3,644)	(213)	(226)	(1,836)	(5,919)
Recoveries:	47	3	5	494	549
Net (charge offs) recoveries	(3,597)	(210)	(221)	(1,342)	(5,370)
Provision	2,004	(120)	131	1,138	3,153
Ending balance	\$5,383	\$ 8,184	\$ 1,226	\$ 4,151	\$18,944

Allowance for loan losses	December 31, 2017				Total
	Commercial and Agricultural	Commercial Mortgages	Residential Mortgages	Consumer Loans	
Beginning balance:	\$1,589	\$ 7,270	\$ 1,523	\$ 3,871	\$14,253
Charge Offs:	(96)	(419)	(225)	(1,831)	(2,571)
Recoveries:	109	5	30	313	457
Net recoveries (charge offs)	13	(414)	(195)	(1,518)	(2,114)
Provision	5,374	1,658	(12)	2,002	9,022

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Ending balance	\$6,976	\$ 8,514	\$ 1,316	\$ 4,355	\$21,161
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	December 31, 2016				
Allowance for loan losses	Commercial and Agricultural	Commercial Mortgages	Residential Mortgages	Consumer Loans	Total
Beginning balance:	\$1,831	\$ 7,112	\$ 1,464	\$ 3,853	\$14,260
Charge Offs:	(217)	(911)	(65)	(1,637)	(2,830)
Recoveries:	92	10	—	284	386
Net recoveries (charge offs)	(125)	(901)	(65)	(1,353)	(2,444)
Provision	(117)	1,059	124	1,371	2,437
Ending balance	\$1,589	\$ 7,270	\$ 1,523	\$ 3,871	\$14,253

The following tables present the balance in the allowance for loan losses and the recorded investment in loans by portfolio segment and based on impairment method as of December 31, 2018 and December 31, 2017 (in thousands):

	December 31, 2018				
Allowance for loan losses	Commercial and Agricultural	Commercial Mortgages	Residential Mortgages	Consumer Loans	Total
Ending allowance balance attributable to loans:					
Individually evaluated for impairment	\$1,743	\$ 446	\$ —	\$ —	\$2,189
Collectively evaluated for impairment	3,640	7,738	1,226	4,151	16,755
Loans acquired with deteriorated credit quality	—	—	—	—	—
Total ending allowance balance	\$5,383	\$ 8,184	\$ 1,226	\$ 4,151	\$18,944

	December 31, 2017				
Allowance for loan losses	Commercial and Agricultural	Commercial Mortgages	Residential Mortgages	Consumer Loans	Total
Ending allowance balance attributable to loans:					
Individually evaluated for impairment	\$5,135	\$ 802	\$ —	\$ —	\$5,937
Collectively evaluated for impairment	1,841	7,683	1,316	4,355	15,195
Loans acquired with deteriorated credit quality	—	29	—	—	29
Total ending allowance balance	\$6,976	\$ 8,514	\$ 1,316	\$ 4,355	\$21,161

	December 31, 2018				
Loans:	Commercial and Agricultural	Commercial Mortgages	Residential Mortgages	Consumer Loans	Total
Loans individually evaluated for impairment	\$2,128	\$ 6,146	\$ 402	\$ 55	\$8,731
Loans collectively evaluated for impairment	201,284	656,842	182,823	265,929	1,306,878
Loans acquired with deteriorated credit quality	—	—	—	—	—
Total ending loans balance	\$203,412	\$ 662,988	\$ 183,225	\$ 265,984	\$1,315,609

Loans:	December 31, 2017				Total
	Commercial and Agricultural	Commercial Mortgages	Residential Mortgages	Consumer Loans	
Loans individually evaluated for impairment	\$6,133	\$ 7,302	\$ 427	\$ 64	\$ 13,926
Loans collectively evaluated for impairment	193,443	638,080	194,510	274,831	1,300,864
Loans acquired with deteriorated credit quality	—	792	—	—	792
Total ending loans balance	\$ 199,576	\$ 646,174	\$ 194,937	\$ 274,895	\$ 1,315,582

The following tables present loans individually evaluated for impairment recognized by class of loans as of December 31, 2018 and December 31, 2017, the average recorded investment and interest income recognized by class of loans as of the years ended December 31, 2018, 2017 and 2016 (in thousands):

	December 31, 2018			December 31, 2017		
	Unpaid Principal Balance	Recorded Investment	Allowance for Loan Losses Allocated	Unpaid Principal Balance	Recorded Investment	Allowance for Loan Losses Allocated
With no related allowance recorded:						
Commercial and agricultural:						
Commercial and industrial	\$ 345	\$ 346	\$ —	\$ 861	\$ 867	\$ —
Commercial mortgages:						
Construction	307	308	—	364	365	—
Commercial mortgages	4,007	3,935	—	4,135	4,138	—
Residential mortgages	424	402	—	450	427	—
Consumer loans:						
Home equity lines and loans	54	55	—	64	64	—
With an allowance recorded:						
Commercial and agricultural:						
Commercial and industrial	1,780	1,782	1,743	5,231	5,266	5,135
Commercial mortgages:						
Commercial mortgages	1,902	1,903	446	2,989	2,799	802
Consumer loans:						
Home equity lines and loans	—	—	—	—	—	—
Total	\$ 8,819	\$ 8,731	\$ 2,189	\$ 14,094	\$ 13,926	\$ 5,937

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	December 31, 2018		December 31, 2017		December 31, 2016	
	Average Recorded Investment	Interest Income Recognized (1)	Average Recorded Investment	Interest Income Recognized (1)	Average Recorded Investment	Interest Income Recognized (1)
With no related allowance recorded:						
Commercial and agricultural:						
Commercial and industrial	\$608	\$ 12	\$706	\$ 35	\$1,010	\$ 42
Commercial mortgages:						
Construction	337	11	830	12	320	14
Commercial mortgages	4,193	21	5,606	78	6,793	240
Residential mortgages	416	7	418	8	366	5
Consumer loans:						
Home equity lines & loans	60	3	74	3	102	5
With an allowance recorded:						
Commercial and agricultural:						
Commercial and industrial	3,043	3	1,170	6	33	—
Commercial mortgages:						
Commercial mortgages	2,315	4	3,751	12	4,749	6
Consumer loans:						
Home equity lines and loans	—	—	144	—	362	—
Total	\$10,972	\$ 61	\$12,699	\$ 154	\$13,735	\$ 312

(1) Cash basis interest income approximates interest income recognized.

The following tables present the recorded investment in non-accrual and loans past due 90 days or more and still accruing by class of loans as of December 31, 2018 and December 31, 2017 (in thousands):

	Non-accrual		Loans Past Due 90 Days or More and Still Accruing	
	2018	2017	2018	2017
Commercial and agricultural:				
Commercial and industrial	\$2,048	\$5,250	\$ 10	\$ 5
Commercial mortgages:				
Construction	109	135	—	—
Commercial mortgages	5,529	6,520	—	—
Residential mortgages	2,655	3,160	—	—
Consumer loans:				
Credit cards	—	—	9	24
Home equity lines and loans	1,183	1,310	—	—
Indirect consumer loans	693	935	—	—
Direct consumer loans	37	14	—	—
Total	\$12,254	\$17,324	\$ 19	\$ 29

The following tables present the aging of the recorded investment in loans as of December 31, 2018 and December 31, 2017 (in thousands):

	December 31, 2018			Total Past Due	Loans Acquired with Deteriorated Credit Quality	Loans Not Past Due	Total
	30 - 59 Days Past Due	60 - 89 Days Past Due	90 Days or More Past Due				
Commercial and agricultural:							
Commercial and industrial	\$284	\$61	\$71	\$416	\$	—\$202,667	\$203,083
Agricultural	16	—	—	16	—	313	329
Commercial mortgages:							
Construction	—	—	—	—	—	54,626	54,626
Commercial mortgages	6,273	158	169	6,600	—	601,762	608,362
Residential mortgages	2,204	516	1,026	3,746	—	179,479	183,225
Consumer loans:							
Credit cards	1	3	9	13	—	1,437	1,450
Home equity lines and loans	279	97	730	1,106	—	97,360	98,466
Indirect consumer loans	1,511	319	436	2,266	—	147,540	149,806
Direct consumer loans	120	53	31	204	—	16,058	16,262
Total	\$10,688	\$1,207	\$2,472	\$14,367	\$	—\$1,301,242	\$1,315,609

	December 31, 2017			Total Past Due	Loans Acquired with Deteriorated Credit Quality	Loans Not Past Due	Total
	30 - 59 Days Past Due	60 - 89 Days Past Due	90 Days or More Past Due				
Commercial and agricultural:							
Commercial and industrial	\$1,689	\$999	\$20	\$2,708	\$ —	\$196,322	\$199,030
Agricultural	—	—	—	—	—	546	546
Commercial mortgages:							
Construction	—	—	—	—	—	45,688	45,688
Commercial mortgages	2,399	115	748	3,262	792	596,432	600,486
Residential mortgages	1,399	939	1,474	3,812	—	191,125	194,937
Consumer loans:							
Credit cards	17	9	24	50	—	1,466	1,516
Home equity lines and loans	265	31	983	1,279	—	99,599	100,878
Indirect consumer loans	1,822	484	581	2,887	—	150,645	153,532
Direct consumer loans	48	28	2	78	—	18,891	18,969
Total	\$7,639	\$2,605	\$3,832	\$14,076	\$ 792	\$1,300,714	\$1,315,582

Troubled Debt Restructurings:

A modification of a loan may result in classification as a TDR when a borrower is experiencing financial difficulty and the modification constitutes a concession. The Corporation offers various types of modifications which may involve a change in the schedule of payments, a reduction in the interest rate, an extension of the maturity date, extending the maturity date at an interest rate lower than the current market rate for new debt with similar risk, requesting additional collateral, releasing collateral for consideration, substituting or adding a new borrower or guarantor, a permanent reduction of the recorded investment in the loan or a permanent reduction of the interest on the loan.

As of December 31, 2018, 2017 and 2016, the Corporation has a recorded investment in TDRs of \$6.8 million, \$7.7 million, and \$10.2 million, respectively. There were specific reserves of \$0.9 million allocated for TDRs at December 31, 2018, and \$0.7 million allocated for December 31, 2017, and \$0.9 million allocated for December 31, 2016. As of December 31, 2018, TDRs totaling \$0.8 million were accruing interest under the modified terms and \$6.0 million were on non-accrual status. As of December 31, 2017, TDRs totaling \$1.7 million were accruing interest under the modified terms and \$6.0 million were on non-accrual status. As of December 31, 2016, TDRs totaling \$5.8 million were accruing interest under the modified terms and \$4.4 million were on non-accrual status. The Corporation has committed no additional amounts as of December 31, 2018, 2017 or 2016, to customers with outstanding loans that are classified as TDRs.

During the years ended December 31, 2018, 2017 and 2016, the terms of certain loans were modified as TDRs. During the year ended December 31, 2018, the modification of the terms of two commercial and industrial term loans included extensions of the maturity dates at stated rates of interest lower than current market rates for new debt with similar risks.

During the year ended December 31, 2017, the modification of the terms of two commercial and industrial loans included a reduction of the scheduled amortized payments for greater than a three month period, the release of collateral related to one of the loans and the extension of a maturity date. Additionally, the modification of the terms of two commercial and industrial term loans and one line of credit included consolidating the loans into one commercial and industrial loan, extending the maturity date by approximately two years and lowering the monthly payment. An additional piece of equipment was taken as collateral but was not considered to be of greater value than the concessions given. The modification of the terms of a commercial mortgage loan included a reduction of the scheduled amortized payments of the loan for greater than a three month period. The modification of the terms of a residential mortgage loan included an extension of the maturity date by approximately five years and a postponement of the scheduled amortized past due payments to the end of loan.

The modification of the terms of a residential mortgage loan during the year ended December 31, 2016 included an extension of the maturity date by thirteen years at a stated interest rate lower than the current market rate for new debt with similar risk and a corresponding reduction of the scheduled amortization payments of the loan due to the longer term. Also, \$8 thousand of closing costs were capitalized on the restructured loan. Additionally, the modification of the terms of five commercial real estate loans and one residential home equity loan included consolidating the loans into one commercial real estate loan and extending the maturity date at a stated interest rate lower than the current market rate for new debt with similar risk. Also the modification of the terms of a residential mortgage loan included a reduction in the stated interest rate for three years and a corresponding reduction of the scheduled amortized payments of the loan due to the lower interest rate. Additionally, \$4 thousand of interest and past due escrow payments were capitalized on the restructured loan. The modification of the terms of another commercial real estate loan included a postponement or reduction of the scheduled amortized payments of the loan for greater than a 3 month period and a partial release of collateral due to a sale of property after which the bank received part of the proceeds to bring the loan current and reduce the principal balance with the remainder of the proceeds used to pay delinquent taxes. This resulted in a reduction in outstanding principal of \$97 thousand at the time of restructuring.

The following table presents loans by class modified as troubled debt restructurings that occurred during the years ended December 31, 2018, 2017 and 2016 (in thousands):

December 31, 2018	Number of Loans	Pre-Modification Outstanding Recorded Investment	Post-Modification Outstanding Recorded Investment
Troubled debt restructurings:			
Commercial and agricultural:			
Commercial and industrial	2	\$ 491	\$ 491
Total	2	\$ 491	\$ 491

The TDRs described above increased the allowance for loan losses by \$0.4 million and resulted in no charge offs during the year ended December 31, 2018.

December 31, 2017	Number of Loans	Pre-Modification Outstanding Recorded Investment	Post-Modification Outstanding Recorded Investment
Troubled debt restructurings:			
Commercial and agricultural:			
Commercial and industrial	3	\$ 677	\$ 677
Commercial mortgages:			

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Commercial mortgages	1	166	166
Residential mortgages	1	105	105
Total	5	\$ 948	\$ 948

The TDRs described above increased the allowance for loan losses by \$0.1 million and resulted in no charge offs during the year ended December 31, 2017.

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December 31, 2016	Number of Loans	Pre-Modification Outstanding Recorded Investment	Post-Modification Outstanding Recorded Investment
Troubled debt restructurings:			
Commercial mortgages:			
Commercial mortgages	6	\$ 485	\$ 388
Residential mortgages	2	295	307
Consumer loans:			
Home equity lines and loans	1	74	74
Total	9	\$ 854	\$ 769

The TDRs described above did not increase the allowance for loan losses and resulted in no charge offs during the year ended December 31, 2016.

A loan is considered to be in payment default once it is 90 days contractually past due under the modified terms. There were no payment defaults on any loans previously modified as troubled debt restructurings during the year ended December 31, 2018, within twelve months following the modification.

The following table presents loans by class modified as TDRs for which there was a payment default within twelve months following the modification during the year ended December 31, 2017:

December 31, 2017	Number of Loans	Recorded Investment
Commercial mortgages:		
Commercial mortgages	1	\$ 164
Total	1	\$ 164

There were no payment defaults on any loans previously modified as troubled debt restructurings during the year ended December 31, 2016, within twelve months following the modification.

Credit Quality Indicators

The Corporation establishes a risk rating at origination for all commercial loans. The main factors considered in assigning risk ratings include, but are not limited to: historic and future debt service coverage, collateral position, operating performance, liquidity, leverage, payment history, management ability, and the customer's industry. Commercial relationship managers monitor all loans in their respective portfolios for any changes in the borrower's ability to service their debt and affirm the risk ratings for the loans at least annually.

For the retail loans, which include residential mortgages, indirect and direct consumer loans, home equity lines and loans, and credit cards, once a loan is properly approved and closed, the Corporation evaluates credit quality based upon loan repayment. Retail loans are not rated until they become 90 days past due.

The Corporation uses the risk rating system to identify criticized and classified loans. Commercial relationships within the criticized and classified risk ratings are analyzed quarterly. The Corporation uses the following definitions for criticized and classified loans (which are consistent with regulatory guidelines):

Special Mention – Loans classified as special mention have a potential weakness that deserves management's close attention. If left uncorrected, these potential weaknesses may result in deterioration of the repayment prospects for the

loan or the institution's credit position as some future date.

Substandard – Loans classified as substandard are inadequately protected by the current net worth and paying capability of the obligor or of the collateral pledged, if any. Loans so classified have a well-defined weakness or weaknesses that jeopardize the liquidation of the debt. They are characterized by the distinct possibility that the institution will sustain some loss if the deficiencies are not corrected.

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Doubtful – Loans classified as doubtful have all 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.

Loans not meeting the criteria above that are analyzed individually as part of the above described process are considered to be pass rated loans. Loans listed as not rated are included in groups of homogeneous loans. Based on the analyses performed as of December 31, 2018 and 2017, the risk category of the recorded investment of loans by class of loans is as follows (in thousands):

	December 31, 2018						
	Not Rated	Pass	Loans acquired with deteriorated credit quality	Special Mention	Substandard	Doubtful	Total
Commercial and agricultural:							
Commercial and industrial	\$—	\$190,666	\$	—\$4,452	\$ 6,222	\$ 1,743	\$203,083
Agricultural	—	329	—	—	—	—	329
Commercial mortgages:							
Construction	—	54,517	—	—	109	—	54,626
Commercial mortgages	—	574,221	—	16,830	15,948	1,363	608,362
Residential mortgages	180,570	—	—	—	2,655	—	183,225
Consumer loans							
Credit cards	1,450	—	—	—	—	—	1,450
Home equity lines and loans	97,283	—	—	—	1,183	—	98,466
Indirect consumer loans	149,113	—	—	—	693	—	149,806
Direct consumer loans	16,225	—	—	—	37	—	16,262
Total	\$444,641	\$819,733	\$	—\$21,282	\$ 26,847	\$ 3,106	\$1,315,609

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December 31, 2017							
	Not Rated	Pass	Loans acquired with deteriorated credit quality	Special Mention	Substandard	Doubtful	Total
Commercial and agricultural:							
Commercial and industrial	\$—	\$186,556	\$ —	\$4,447	\$ 6,605	\$ 1,422	\$199,030
Agricultural	—	546	—	—	—	—	546
Commercial mortgages:							
Construction	—	45,553	—	—	135	—	45,688
Commercial mortgages	—	575,321	792	9,665	13,331	1,377	600,486
Residential mortgages	191,777	—	—	—	3,160	—	194,937
Consumer loans							
Credit cards	1,516	—	—	—	—	—	1,516
Home equity lines and loans	99,568	—	—	—	1,310	—	100,878
Indirect consumer loans	152,598	—	—	—	934	—	153,532
Direct consumer loans	18,955	—	—	—	14	—	18,969
Total	\$464,414	\$807,976	\$ 792	\$14,112	\$ 25,489	\$ 2,799	\$1,315,582

The Corporation considers the performance of the loan portfolio and its impact on the allowance for loan losses. For residential and consumer loan classes, the Corporation also evaluates credit quality based on the aging status of the loan, which was previously presented, and by payment activity. Non-performing loans include non-accrual loans and non-accrual troubled debt restructurings.

The following table presents the recorded investment in residential and consumer loans based on payment activity as of December 31, 2018 and 2017 (in thousands):

December 31, 2018					
Consumer Loans					
	Residential Mortgages	Credit Card	Home Equity Lines and Loans	Indirect Consumer Loans	Other Direct Consumer Loans
Performing	\$180,570	\$1,450	\$97,283	\$149,113	\$16,225
Non-Performing	2,655	—	1,183	693	37
Total	\$183,225	\$1,450	\$98,466	\$149,806	\$16,262

December 31, 2017					
Consumer Loans					
	Residential Mortgages	Credit Card	Home Equity Lines and Loans	Indirect Consumer Loans	Other Direct Consumer Loans
Performing	\$191,777	\$1,516	\$99,568	\$152,598	\$18,955
Non-Performing	3,160	—	1,310	934	14
Total	\$194,937	\$1,516	\$100,878	\$153,532	\$18,969

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At the time of the merger with Fort Orange Financial Corp., the Corporation identified certain loans with evidence of deteriorated credit quality, and the probability that the Corporation would be unable to collect all contractually required payments from the borrower. These loans were classified as PCI loans. The Corporation adjusted its estimates of future expected losses, cash flows, and renewal assumptions on the PCI loans on a quarterly basis. These adjustments were made for changes in expected cash flows due to loans refinanced beyond original maturity dates, impairments recognized subsequent to the acquisition, advances made for taxes or insurance to protect collateral held and payments received in excess of amounts originally expected. During the first quarter of 2018, management determined that the disclosure of PCI loans was no longer material and will analyze these loans as part of the overall impairment process going forward.

(5) PREMISES AND EQUIPMENT

Premises and equipment at December 31, 2018 and 2017 are as follows (in thousands):

	2018	2017
Land	\$4,803	\$4,803
Buildings	41,332	41,045
Projects in progress	31	357
Equipment and furniture	38,008	37,545
Leasehold improvements	6,174	5,465
	90,348	89,215
Less accumulated depreciation and amortization	65,368	62,558
Net book value	\$24,980	\$26,657

Depreciation expense was \$3.4 million, \$3.7 million and \$4.2 million for 2018, 2017, and 2016, respectively.

Operating Leases

The Corporation leases certain branch properties under operating leases. Rent expense was \$1.1 million, \$1.2 million and \$1.2 million for the years ended December 31, 2018, 2017 and 2016, respectively. Rent commitments, before considering renewal options that generally are present, were as follows (in thousands):

Year	Estimated Expense
2019	\$ 897
2020	888
2021	886
2022	770
2023	620
2024 and thereafter	3,848
Total	\$ 7,909

Capital Leases

The Corporation leases certain buildings under capital leases. The lease arrangements require monthly payments through 2036.

The Corporation has included these leases in premises and equipment as follows:

	2018	2017
Buildings	\$5,572	\$5,572

Accumulated depreciation	(1,208)	(874)
Net book value	\$4,364	\$4,698

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The following is a schedule by year of future minimum lease payments under the capitalized lease, together with the present value of net minimum lease payments as of December 31, 2018 (in thousands):

Year	Amount
2019	\$ 367
2020	376
2021	388
2022	391
2023	391
2024 and thereafter	3,639
Total minimum lease payments	5,552
Less amount representing interest	1,248
Present value of net minimum lease payments	\$ 4,304

(6) GOODWILL AND INTANGIBLE ASSETS

The changes in goodwill included in the core banking segment during the years ended December 31, 2018 and 2017 were as follows (in thousands):

	2018	2017
Beginning of year	\$21,824	\$21,824
Acquired goodwill	—	—
End of year	\$21,824	\$21,824

Acquired intangible assets were as follows at December 31, 2018 and 2017 (in thousands):

	At December 31, 2018		At December 31, 2017	
	Balance	Accumulated Amortization	Balance	Accumulated Amortization
Core deposit intangibles	\$5,975	\$ 5,576	\$5,975	\$ 5,196
Other customer relationship intangibles	5,633	4,681	5,633	4,327
Total	\$11,608	\$ 10,257	\$11,608	\$ 9,523

Aggregate amortization expense was \$0.7 million, \$0.9 million, and \$1.0 million for 2018, 2017 and 2016, respectively.

The remaining estimated aggregate amortization expense at December 31, 2018 is listed below (in thousands):

Year	Estimated Expense
2019	\$ 609
2020	484
2021	258
Total	\$ 1,351

(7) DEPOSITS

A summary of deposits at December 31, 2018 and 2017 is as follows (in thousands):

	2018	2017
Non-interest-bearing demand deposits	\$484,433	\$467,610
Interest-bearing demand deposits	179,603	149,026
Insured money market accounts	537,948	513,782
Savings deposits	217,027	218,666
Time deposits	150,226	118,362
Total	\$1,569,237	\$1,467,446

Scheduled maturities of time deposits at December 31, 2018, are summarized as follows (in thousands):

Year	Maturities
2019	\$71,350
2020	36,062
2021	5,536
2022	31,362
2023	2,855
2024	3,061
Total	\$150,226

Time deposits that meet or exceed the FDIC Insurance limit of \$250 thousand at December 31, 2018 and 2017 were \$22.4 million and \$8.9 million, respectively.

(8) SECURITIES SOLD UNDER AGREEMENTS TO REPURCHASE

Repurchase agreements are secured borrowings. The Corporation pledges investment securities to secure these borrowings. A summary of securities sold under agreements to repurchase as of and for the years ended December 31, 2018, 2017 and 2016 is as follows (in thousands):

	2018	2017	2016
Balance at December 31	\$—	\$10,000	\$27,606
Maximum month-end balance	\$10,000	\$25,718	\$30,497
Average balance during year	\$3,644	\$14,207	\$29,120
Weighted-average interest rate at December 31	—	% 3.72	% 3.02
Average interest rate paid during year	3.77	% 3.37	% 2.92

There were no securities sold under agreements to repurchase as of December 31, 2018.

The contractual maturity of securities sold under agreements to repurchase by collateral pledged as of December 31, 2017 is as follows (in thousands):

	December 31, 2017			Total
	Overnight and Up to 1 Year Continuous	1 - 3 Years	3+ Years	
Mortgage-backed securities, residential	\$-11,798	\$ —	—	-\$11,798
Excess collateral held	—(1,798)	—	—	(1,798)
Gross amount of recognized liabilities for repurchase agreements	\$-10,000	\$ —	—	-\$10,000

The Corporation enters into sales of securities under agreements to repurchase and the amounts received under these agreements represent borrowings and are reflected as a liability in the consolidated balance sheets. The securities underlying these agreements are included in investment securities in the consolidated balance sheets. See Note 3 for additional information regarding securities pledged as collateral for securities sold under the repurchase agreements.

The Corporation has no control over the market value of the securities which fluctuate due to market conditions, however, the Corporation is obligated to promptly transfer additional securities if the market value of the securities falls below the repurchase agreement price. The Corporation manages this risk by utilizing highly marketable and easily priced securities, monitoring these securities for significant changes in market valuation routinely, and maintaining an unpledged securities portfolio believed to be sufficient to cover a decline in the market value of the securities sold under agreements to repurchase.

(9) FEDERAL HOME LOAN BANK TERM ADVANCES AND OVERNIGHT ADVANCES

There were no FHLB NY fixed rate term advances and overnight advances as of December 31, 2018.

The following is a summary of FHLB NY fixed rate term advances and overnight advances as of December 31, 2017. The carrying amount includes the advance balance plus purchase accounting adjustments that are amortized over the term of the advance (in thousands):

2017

Amount	Rate	Maturity Date	Call Date
\$57,700	1.53 %	January 2, 2018	-
2,000	3.05 %	January 2, 2018	-
\$59,700	1.58 %		

Each advance is payable at its maturity date, with a prepayment penalty for term advances. The Corporation has pledged \$132.5 million and \$149.7 million of first mortgage loans under a blanket lien arrangement at December 31, 2018 and 2017, respectively, as collateral for these advances and future borrowings. Based on this collateral and the Corporation's holdings of FHLB NY stock, the Corporation is eligible to borrow up to a total of \$112.6 million at December 31, 2018.

(10) REVENUE FROM CONTRACTS WITH CUSTOMERS

All of the Corporation's revenue from contracts with customers in the scope of ASC 606 is recognized within non-interest income. The following tables present the Corporation's non-interest income by revenue stream and reportable segment for the years ended December 31, 2018 and 2017 (in thousands). Items outside the scope of ASC 606 are noted as such.

Revenue by Operating Segment:	Year ended December 31, 2018			
	Core Banking	WMG	Holding Company, CFS, and CRM ^(b)	Total
Non-interest income				
Service charges on deposit accounts				
Overdraft fees	\$3,934	\$—	\$ —	\$3,934
Other	793	—	—	793
Interchange revenue from debit card transactions	4,040	—	—	4,040
WMG fee income	—	9,317	—	9,317
CFS fee and commission income	—	—	510	510
Net gains (losses) on sales of OREO	90	—	—	90
Net gains on sales of loans ^(a)	351	—	—	351
Loan servicing fees ^(a)	92	—	—	92
Change in fair value of equity securities ^(a)	2,024	—	(20)	2,004
Other ^(a)	2,272	—	(329)	1,943
Total non-interest income	\$13,596	\$9,317	\$ 161	\$23,074

(a) Not within scope of ASC 606.

(b) The Holding Company, CFS, and CRM column above includes amounts to eliminate transactions between segments.

Revenue by Operating Segment:	Year ended December 31, 2017			
	Core Banking	WMG	Holding Company, CFS, and CRM ^(b)	Total
Non-interest income				
Service charges on deposit accounts				
Overdraft fees	\$4,189	\$—	\$ —	\$4,189
Other	772	—	—	772
Interchange revenue from debit card transactions	3,761	—	—	3,761
WMG fee income	—	8,804	—	8,804
CFS fee and commission income	—	—	646	646
Net gains (losses) on sales of OREO	38	—	—	38
Net gains on sales of loans ^(a)	260	—	—	260
Loan servicing fees ^(a)	84	—	—	84
Net gains on sales of securities ^(a)	109	—	—	109
Change in fair value of equity securities ^(a)	80	—	—	80
Other ^(a)	1,933	—	(185)	1,748
Total non-interest income	\$11,226	\$8,804	\$ 461	\$20,491

(a) Not within scope of ASC 606.

(b) The Holding Company, CFS, and CRM column above includes amounts to eliminate transactions between segments.

Revenue by Operating Segment:	Year ended December 31, 2016			
	Core Banking	WMG	Holding Company, CFS, and CRM ^(b)	Total
Non-interest income				
Service charges on deposit accounts				
Overdraft fees	\$4,135	\$—	\$ —	\$4,135
Other	954	—	—	954
Interchange revenue from debit card transactions	4,027	—	—	4,027
WMG fee income	—	8,316	—	8,316
CFS fee and commission income	—	—	544	544
Net gains (losses) on sales of OREO	21	—	—	21
Net gains on sales of loans ^(a)	326	—	—	326
Loan servicing fees ^(a)	74	—	—	74
Net gains on sales of securities ^(a)	987	—	—	987
Change in fair value of equity securities ^(a)	43	—	—	43
Other ^(a)	1,751	—	(29)	1,722
Total non-interest income	\$12,318	\$8,316	\$ 515	\$21,149

(a) Not within scope of ASC 606.

(b) The Holding Company, CFS, and CRM column above includes amounts to eliminate transactions between segments.

A description of the Corporation's revenue streams accounted for under ASC 606 follows:

Service Charges on Deposit Accounts: The Corporation earns fees from its deposit customers for transaction-based, account maintenance, and overdraft services. Transaction-based fees, which included 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 Corporation fulfills the customer's request. Account maintenance fees, which relate primarily to monthly maintenance, are recognized at the time the maintenance occurs. 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.

Interchange Income from Debit Card Transactions: The Corporation earns interchange fees from debit cardholder transactions conducted through the Mastercard payment network. Interchange fees from cardholder transactions represent a percentage of the underlying transaction value and are recognized daily, concurrently with the transaction processing services provided to cardholder.

WMG Fee Income (Gross): The Corporation earns wealth management fees from its contracts with trust customers to manage assets for investment, and/or to conduct transactions on their accounts. These fees are primarily earned over time as the Corporation provides the contracted monthly or quarterly services and are generally assessed based on a tiered scale of the market value of assets under management (AUM) at quarter-end.

CFS Fee and Commission Income (Net): The Corporation earns fees from investment brokerage services provided to its customers by a third-party service provider. The Corporation receives commissions from the third-party service provider on a monthly basis based upon customer activity for the month. The Corporation (i) acts as an agent in arranging the relationship between the customer and the third-party service provider and (ii) does not control the services rendered to the customers. Investment brokerage fees are presented net of related costs. The Corporation also earns fees from tax services provided to its customers.

Net Gains/Losses on Sales of OREO: The Corporation 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 Corporation finances the sale of OREO to the buyer, the Corporation assesses whether the buyer is committed to perform their 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 Corporation adjusts the transaction price and related gain (loss) on sale if a significant financing component is present.

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(11) DERIVATIVES

As part of the Corporation's product offerings, the Corporation acts as an interest rate swap counterparty for certain commercial borrowers in the normal course of servicing our customers. The interest rate swap agreements are free-standing derivatives and are recorded at fair value in the Corporation's consolidated balance sheets. The Corporation manages its exposure to such interest rate swaps by entering into corresponding and offsetting interest rate swaps with third parties that mirror the terms of the interest rate swaps it has with the commercial borrowers. These positions directly offset each other and the Corporation's exposure is the fair value of the derivatives due to potential changes in credit risk of our commercial borrowers and third parties. The Corporation also enters into risk participation agreements with dealer banks on commercial loans in which it participates. The Corporation receives an upfront fee for participating in the credit exposure of the interest rate swap associated with the commercial loan in which it is a participant and the fee received is recognized immediately in other non-interest income. The Corporation is exposed to its share of the credit loss equal to the fair value of the interest rate swap in the event of nonperformance by the counterparty of the interest rate swap. The Corporation determines the fair value of the credit loss exposure using an estimated credit default rate based on the historical performance of similar assets.

The notional amount of the interest rate swaps does not represent amounts exchanged by the parties. The amount exchanged is determined by reference to the notional amount and the other terms of the individual interest rate swap agreements. At December 31, 2018, the Corporation held derivatives not designated as hedging instruments with a total notional amount of \$172.9 million. Derivatives not designated as hedging instruments included back-to-back interest rate swaps of \$152.8 million, consisting of \$76.4 million of interest rate swaps with commercial borrowers and an additional \$76.4 million of offsetting interest rate swaps with third-party counter-parties on substantially the same terms, and risk participation agreements with dealer banks of \$20.1 million. Free-standing derivatives are not designated as hedges for accounting purposes and are therefore recorded at fair value with changes in fair value recorded in other non-interest income.

The following table presents information regarding our derivative financial instruments, at December 31:

2018	Number of Instruments	Notional Amount	Weighted Average Maturity (in years)	Weighted Average Interest Rate Received	Weighted Average Contract Pay Rate	Fair Value Other Assets/ (Other Liabilities)
Derivatives not designated as hedging instruments:						
Interest rate swap agreements on loans with commercial loan customers	11	\$76,395	7.1	4.69 %	4.61 %	\$(3,255)
Interest rate swap agreements with third-party counter-parties	11	76,395	7.1	4.61 %	4.69 %	3,142
Risk participation agreements	6	20,142	15.0			(27)
Total	28	\$172,932				\$(140)

2017	Number of Instruments	Notional Amount	Weighted Average Maturity (in years)	Weighted Average Interest Rate Received	Weighted Average Contract Pay Rate	Fair Value Other Assets/ (Other Liabilities)
Derivatives not designated as hedging instruments:						
Interest rate swap agreements on loans with commercial loan customers	7	\$36,675	8.3	4.40 %	4.17 %	\$ (974)
Interest rate swap agreements with third-party counter-parties	7	36,675	8.3	4.17 %	4.40 %	974
Risk participation agreements	6	20,427	17.7			(75)
	20	\$93,777				\$ (75)

2016	Number of Instruments	Notional Amount	Weighted Average Maturity (in years)	Weighted Average Interest Rate Received	Weighted Average Contract Pay Rate	Fair Value Other Assets/ (Other Liabilities)
Derivatives not designated as hedging instruments:						
Interest rate swap agreements on loans with commercial loan customers	5	\$18,378	7.9	4.05 %	3.36 %	\$ (693)
Interest rate swap agreements with third-party counter-parties	5	18,378	7.9	3.36 %	4.05 %	693
Risk participation agreements	5	15,401	23.5			(68)
	15	\$52,157				\$ (68)

Off-balance sheet exposure for the risk participation agreements was \$0.3 million for December 31, 2018 and \$1.3 million for December 31, 2017, respectively.

Amounts included in the Consolidated Statements of Income related to derivatives not designated as hedging were as follows:

	Years Ended December 31,		
	2018	2017	2016
Derivatives not designated as hedging instruments:			
Interest rate swap agreements with commercial loan customers:			
Unrealized gain (loss) recognized in non-interest income	\$(2,281)	\$(281)	\$(708)
Interest rate swap agreements with third-party counter-parties:			
Unrealized gain (loss) recognized in non-interest income	2,168	281	709
Risk participation agreements:			
Unrealized gain (loss) recognized in non-interest income	48	(7)	(21)
Unrealized gain (loss) recognized in non-interest income	\$(65)	\$(7)	\$(20)

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(12) INCOME TAXES

For the years ended December 31, 2018, 2017 and 2016, income tax expense attributable to income from operations consisted of the following (in thousands):

	2018	2017	2016
Current expense:			
Federal	\$1,732	\$2,594	\$6,330
State	124	417	638
Total current	1,856	3,011	6,968
Deferred expense/(benefit):			
Federal	2,253	942	(2,177)
State	345	382	(387)
Remeasurement of deferred tax assets	(445)	2,927	—
Total deferred	2,153	4,251	(2,564)
Income tax expense	\$4,009	\$7,262	\$4,404

Income tax expense differed from the amounts computed by applying the U.S. Federal statutory income tax rate to income before income tax expense as follows (in thousands):

	2018	2017	2016
Statutory federal tax rate	21 %	34 %	34 %
Tax computed at statutory rate	\$4,963	\$5,006	\$4,907
Increase (reduction) resulting from:			
Tax-exempt income	(430)	(663)	(511)
831(b) premium adjustment	(167)	(269)	(368)
Dividend exclusion	(7)	(8)	(5)
State taxes, net of Federal impact	262	201	165
Nondeductible interest expense	7	8	9
Remeasurement of deferred tax assets	(445)	2,927	—
Other items, net	(174)	60	207
Income tax expense	\$4,009	\$7,262	\$4,404
Effective tax rate	17.0 %	49.4 %	30.5 %

The lower tax expense in 2018 when compared to 2017 can be attributed to a tax benefit of \$0.4 million recorded in December 2018 and to the estimated \$2.9 million one-time net deferred tax revaluation recorded in December 2017, both due to the enactment of Tax Act. On December 22, 2017, the Tax Act was enacted into legislation. Under ASC 740, the effects of changes in tax rates and laws are recognized in the period in which the new legislation is enacted. Accordingly, the Corporation had recorded \$2.9 million for the remeasurement of the Corporation's deferred tax assets.

Additionally, on December 22, 2017, the SEC released Staff Bulletin No. 118 ("SAB 118") to address any uncertainty or diversity of views in practice in accounting for the income tax effects of the Tax Act in situations where the necessary information is not available, prepared, or analyzed in reasonable detail to complete the accounting in the reporting period that includes the enactment date. SAB 118 allows for a measurement period not to extend beyond one year from the Tax Act's enactment date to the complete the necessary accounting. In 2017, the Corporation recorded provisional amounts of deferred income taxes using reasonable estimates in areas where information necessary to complete the accounting was not available, prepared, or analyzed. In 2018, the Corporation completed its accounting of the effects of the Tax Act with the completion of its 2017 tax returns.

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities at December 31, 2018 and 2017, are presented below (in thousands):

	2018	2017
Deferred tax assets:		
Allowance for loan losses	\$4,834	\$5,396
Accrual for employee benefit plans	136	186
Depreciation	(93) 86
Deferred compensation and directors' fees	634	872
Purchase accounting adjustment – deposits	—	7
Purchase accounting adjustment – loans	7	35
Purchase accounting adjustment – fixed assets	149	149
Gain on deemed sale of securities	339	567
Net unrealized losses on securities available for sale	1,590	1,169
Accounting for defined benefit pension and other benefit plans	2,315	2,370
Nonaccrued interest	625	544
Accrued expense	200	868
Other items, net	153	160
Total gross deferred tax assets	10,889	12,409
Deferred tax liabilities:		
Deferred loan fees and costs	640	676
Prepaid pension	3,141	3,023
Discount accretion	137	239
Core deposit intangible	1,101	1,026
REIT dividend	1,048	844
Other	109	101
Total gross deferred tax liabilities	6,176	5,909
Net deferred tax asset	\$4,713	\$6,500

Realization of deferred tax assets is dependent upon the generation of future taxable income. A valuation allowance is recognized when it is more likely than not that some portion of the deferred tax assets will not be realized. In assessing the need for a valuation allowance, management considers the scheduled reversal of the deferred tax assets, the level of historical taxable income and projected future taxable income over the periods in which the temporary differences comprising the deferred tax assets will be deductible. Based on its assessment, management determined that no valuation allowance is necessary.

As of December 31, 2018, 2017 and 2016, the Corporation did not have any unrecognized tax benefits.

The Corporation accounts for interest and penalties related to uncertain tax positions as part of its provision for Federal and State income taxes. As of December 31, 2018, 2017 and 2016, the Corporation did not accrue any interest or penalties related to its uncertain tax positions.

The Corporation is not currently subject to examinations by Federal taxing authorities for the years prior to 2015 and for New York State taxing authorities for the year prior to 2015.

(13) PENSION PLAN AND OTHER BENEFIT PLANS

Pension Plan

The Corporation has a noncontributory defined benefit pension plan covering a majority of employees. The plan's defined benefit formula generally based payments to retired employees upon their length of service multiplied by a percentage of the average monthly pay over the last five years of employment.

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New employees hired on or after the July 10, 2010 were not eligible to participate in the plan, however, existing participants at that time continued to accrue benefits. On October 20, 2016, the Corporation amended its noncontributory defined benefit pension plan ("pension plan") to freeze future retirement benefits after December 31, 2016. Beginning on January 1, 2017, both the pay-based and service-based component of the formula used to determine retirement benefits in the pension plan were frozen so that participants will no longer earn further retirement benefits. During the fourth quarter of 2018, the Corporation offered terminated, vested employees the option to receive lump sum settlement payments. A payout to participants of \$3.3 million during the year ended December 31, 2018 is reflected in the projected benefit obligation and fair value of assets tables presented below. A settlement charge of \$828 thousand has been recognized during the year ended December 31, 2018 in order to accelerate the recognition of a portion of the plan's unrecognized net loss.

The Corporation uses a December 31 measurement date for its pension plan.

The following table presents (1) changes in the plan's projected benefit obligation and plan assets, and (2) the plan's funded status at December 31, 2018 and 2017 (in thousands):

Change in projected benefit obligation:	2018	2017
Benefit obligation at beginning of year	\$42,240	\$39,791
Service cost	—	—
Interest cost	1,551	1,646
Actuarial (gain) loss	(2,491)	2,634
Curtailments	—	—
Settlements	(3,288)	—
Benefits paid	(1,990)	(1,831)
Benefit obligation at end of year	\$36,022	\$42,240
Change in plan assets:	2018	2017
Fair value of plan assets at beginning of year	\$46,672	\$41,560
Actual return on plan assets	82	6,943
Employer contributions	—	—
Settlements	(3,288)	—
Benefits paid	(1,990)	(1,831)
Fair value of plan assets at end of year	\$41,476	\$46,672
Funded status	\$5,454	\$4,432

Amount recognized in accumulated other comprehensive income (loss) at December 31, 2018 and 2017 consist of the following (in thousands):

	2018	2017
Net actuarial loss	\$9,075	\$9,356
Prior service cost	—	—
Total before tax effects	\$9,075	\$9,356

The accumulated benefit obligation at December 31, 2018 and 2017 was \$36.0 million and \$42.2 million, respectively.

The principal actuarial assumptions used in determining the projected benefit obligation as of December 31, 2018, 2017 and 2016 were as follows:

2018	2017	2016
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Discount rate	4.35%	3.74%	4.16%
Assumed rate of future compensation increase	N/A	N/A	N/A

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Components of net periodic benefit cost and other amounts recognized in other comprehensive income (loss) in 2018, 2017 and 2016 consist of the following (in thousands):

Net periodic benefit cost	2018	2017	2016
Service cost, benefits earned during the year	\$—	\$—	\$1,047
Interest cost on projected benefit obligation	1,551	1,646	1,883
Expected return on plan assets	(3,309)	(3,144)	(3,019)
Amortization of net loss	188	267	1,549
Amortization of prior service cost	—	—	7
Recognized (gain) loss due to settlements	828	—	—
Net periodic cost (benefit)	\$(742)	\$(1,231)	\$1,467
Other changes in plan assets and benefit obligations recognized in other comprehensive income (loss):	2018	2017	2016
Net actuarial (gain) loss	\$736	\$(1,165)	\$(5,526)
Recognized loss	(1,016)	(267)	(1,549)
Amortization of prior service cost	—	—	(7)
Total recognized in other comprehensive income (loss) (before tax effect)	\$(280)	\$(1,432)	\$(7,082)
Total recognized in net (benefit) cost and other comprehensive income (loss) (before tax effect)	\$(1,022)	\$(2,663)	\$(5,615)

During 2018, the plan's total unrecognized net loss decreased by \$0.3 million. Because the total unrecognized net gain or loss in the plan exceeds 10% of the projected benefit obligation or 10% of the plan assets, and the plan is frozen, the excess will be amortized over the average future life expectancy of all plan participants. Prior to the plan freeze on December 31, 2016, the excess had been amortized over the average future working lifetime of all plan participants. As of January 1, 2018, the average expected future life expectancy of all participants which was 26.38 years. Actual results for 2019 will depend on the 2019 actuarial valuation of the plan.

Amounts expected to be recognized in net periodic cost during 2019 (in thousands):

Loss recognition	\$196
Prior service cost recognition	\$—

The principal actuarial assumptions used in determining the net periodic benefit cost for the years ended December 31, 2018, 2017 and 2016 were as follows:

	2018	2017	2016
Discount rate	3.74%	4.16%	4.39%
Expected long-term rate of return on assets	7.25%	7.75%	7.75%
Assumed rate of future compensation increase	N/A	N/A	5.00%

The Corporation changes important assumptions whenever changing conditions warrant. At December 31, 2018 the Corporation used IRS Static 2019 Mortality Table with Mortality Improvement Scale 2019 (MP-2019) as a basis for the Plan's valuation. At December 31, 2017, the Corporation used IRS Static 2018 Mortality Table as a basis for the Plan's valuation. The discount rate is evaluated at least annually and the expected long-term return on plan assets will typically be revised every three to five years, or as conditions warrant.

The Corporation's overall investment strategy is to achieve a mix of investments for long-term growth and for near-term benefit payments with a wide diversification of asset types. The target allocations for plan assets are shown in the table below. Equity securities primarily include investments in common or preferred shares of both U.S. and international companies. Debt securities include U.S. Treasury and Government bonds as well as U.S. Corporate bonds. Other investments may consist of mutual funds, money market funds and cash & cash equivalents. While no significant changes in the asset allocations are expected during 2019, the Corporation may make changes at any time.

The expected return on plan assets was determined based on a CAPM using historical and expected future returns of the various asset classes, reflecting the target allocations described below.

Asset Class	Target Allocation 2018	Percentage of Plan Assets at December 31,		Expected Long-Term Rate of Return	
		2018	2017		
Large cap domestic equities	20% - 50%	38 %	40 %	10.3 %	
Mid-cap domestic equities	0% - 15%	2 %	6 %	10.6 %	
Small-cap domestic equities	0% - 10%	6 %	7 %	10.8 %	
International equities	0% - 20%	4 %	13 %	10.3 %	
Intermediate fixed income	30% - 70%	37 %	29 %	4.7 %	
Alternative assets	0% - 10%	— %	— %	7.5 %	
Cash	0% - 20%	13 %	5 %	2.5 %	
Total		100 %	100 %		

The investment policy of the plan is to provide for long-term growth of principal and income without undue exposure to risk. The focus is on long-term capital appreciation and income generation. The Corporation maintains an IPS that guides the investment allocation in the plan. The IPS describes the target asset allocation positions as shown in the table above.

The Corporation has appointed an Employee Pension and Profit Sharing Committee to manage the general philosophy, objectives and process of the plan. The Employee Pension and Profit Sharing Committee meets with the Investment Manager periodically to review the plan's performance and to ensure that the current investment allocation is within the guidelines set forth in the IPS. Only the Employee Pension and Profit Sharing Committee, in consultation with the Investment Manager, can make adjustments to maintain target ranges and for any permanent changes to the IPS. Quarterly, the Board of Directors' Trust and Employee Benefits Committee reviews the performance of the plan with the Investment Manager.

As of December 31, 2018 and 2017, the Corporation's pension plan did not hold any direct investment in the Corporation's common stock.

The Corporation used the following methods and significant assumptions to estimate the fair value of each type of financial instrument held by the pension plan:

Fair value is the exchange price that would be received for an asset in the principal or most advantageous market for the asset in an orderly transaction between market participants on the measurement date. The fair value hierarchy described below requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

The fair values for investment securities are determined by quoted market prices, if available (Level 1). For securities where quoted prices are not available, fair values are calculated based on market prices of similar securities (Level 2). For securities where quoted prices or market prices of similar securities are not available, fair values are calculated using discounted cash flows or other market indicators (Level 3).

Discounted cash flows are calculated using spread and optionality. During times when trading is more liquid, broker quotes are used (if available) to validate the model. Rating agency and industry research reports as well as defaults and deferrals on individual securities are reviewed and incorporated into the calculations.

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The fair value of the plan assets at December 31, 2018 and 2017, by asset class are as follows (in thousands):

Plan Assets	Carrying Value	Fair Value Measurement at December 31, 2018 Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash	\$5,476	\$5,476	\$ —	\$ —
Equity securities:				
U.S. companies	16,244	16,244	—	—
International companies	—	—	—	—
Mutual funds	16,242	16,242	—	—
Debt securities:				
U.S. Treasuries/Government bonds	2,031	—	2,031	—
U.S. Corporate bonds	1,483	—	1,483	—
Total plan assets	\$41,476	\$37,962	\$ 3,514	\$ —

Plan Assets	Carrying Value	Fair Value Measurement at December 31, 2017 Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash	\$ 2,066	\$ 2,066	\$ —	\$ —
Equity securities:				
U.S. companies	20,865	20,865	—	—
International companies	—	—	—	—