NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

THE PNC FINANCIAL SERVICES GROUP, INC.

See the Glossary on page 186 for additional information on certain terms and acronyms used throughout the Financial Statements and related Notes.

BUSINESS

PNC is one of the largest diversified financial services companies in the U.S. and is headquartered in Pittsburgh, Pennsylvania.

We have businesses engaged in retail banking, including residential mortgage, corporate and institutional banking and asset management, providing many of our products and services nationally. Our retail branch network is located coast-to-coast. We also have strategic international offices in four countries outside the U.S.

NOTE 1 ACCOUNTING POLICIES

Basis of Financial Statement Presentation

Our consolidated financial statements include the accounts of the parent company and its subsidiaries, most of which are wholly-owned, certain partnership interests and VIEs.

On June 1, 2021, we acquired BBVA, a U.S. financial holding company conducting its business operations primarily through its U.S. banking subsidiary, BBVA USA. PNC paid $11.5 billion in cash as consideration for the acquisition.

On October 8, 2021, BBVA USA merged into PNC Bank. On October 12, 2021, PNC converted approximately 2.6 million customers, 9,000 employees and over 600 branches across seven states. Our results of operations and balance sheets for all periods presented in this Report reflect the benefit of BBVA's acquired businesses for the period since the acquisition closed on June 1, 2021.

We prepared these consolidated financial statements in accordance with GAAP. We have eliminated intercompany accounts and transactions. We have also reclassified certain prior-year amounts to conform to the current period presentation, which did not have a material impact on our consolidated financial condition or results of operations.

We have also considered the impact of subsequent events on these consolidated financial statements.

Noninterest Income Presentation

Effective for the first quarter of 2022, PNC updated the presentation of its noninterest income categorization to be based on product and service type, and accordingly, has changed the basis of presentation of its noninterest income revenue streams to: (i) Asset management and brokerage, (ii) Capital markets related, (iii) Card and cash management, (iv) Lending and deposit services, (v) Residential and commercial mortgage and (vi) Other noninterest income. Additionally, in the fourth quarter of 2022, PNC updated the name of the noninterest income line item "Capital markets related" to "Capital markets and advisory." This update did not impact the components of the category. All periods presented herein reflect these changes. A description of each revenue stream follows:

Asset management and brokerage includes revenue from our asset management and retail brokerage businesses. Asset management services include investment management, custody, retirement planning, family planning, trust management and retirement administration. Brokerage services offer retail customers a wide range of investment options, including mutual funds, annuities, stock, bonds and managed accounts.

Capital markets and advisory includes revenue from services and activities primarily related to merger and acquisition advisory, equity capital markets advisory, asset-backed financing, loan syndication, securities underwriting, credit valuation adjustments related to the derivatives portfolio and customer-related trading.

Card and cash management includes revenue primarily from debit and credit card activities, inclusive of credit card points and rewards, treasury management services and ATM fees. Debit and credit card activities include interchange revenue and merchant service fees. Treasury management services include cash and investment management, receivables and disbursement management, funds transfer, international payment and access to online/mobile information management and reporting.

Lending and deposit services includes revenue primarily related to service charges on deposits, loan commitment and usage fees, the issuance of standby letters of credit, operating lease income and long-term care and insurance products.

Residential and commercial mortgage includes the gain and loss on sale of mortgages, revenue related to our mortgage servicing responsibilities, mortgage servicing rights valuation adjustments and net gains on originations and sales of loans held for sale.

Other noninterest income is primarily composed of private equity revenue, net securities gains and losses, activity related to our equity investment in Visa, including related swaps and gains and losses on asset sales.

See Note 23 Fee-based Revenue from Contracts with Customers for additional details related to these revenue streams within the scope of ASC Topic 606 - *Revenue from Contracts with Customers*.

Use of Estimates

We prepared these consolidated financial statements using financial information available at the time of preparation, which requires us to make estimates and assumptions that affect the amounts reported. Our most significant estimates pertain to the ACL and our fair value measurements. Actual results may differ from the estimates and the differences may be material to the consolidated financial statements.

Cash, Cash Equivalents and Restricted Cash

Cash and due from banks are considered cash and cash equivalents for financial reporting purposes because they represent a primary source of liquidity. Certain cash balances within Cash and due from banks on our Consolidated Balance Sheet are restricted as to withdrawal or usage by legally binding contractual agreements or regulatory requirements.

Investments

We hold interests in various types of investments. The accounting for these investments is dependent on a number of factors including, but not limited to, items such as:

- Ownership interest,
- Our plans for the investment, and
- The nature of the investment.

Debt Securities

Debt securities are recorded on a trade-date basis. We classify debt securities as either trading, held to maturity or available for sale. Debt securities that we purchase for certain risk management activities or customer-related trading activities are classified as trading securities, are reported in the Other assets line item on our Consolidated Balance Sheet and are carried at fair value. For debt securities classified as trading, realized and unrealized gains and losses within our Capital markets business are included in Capital markets and advisory noninterest income; other realized and unrealized gains and losses are included in Other noninterest income. We classify debt securities as held to maturity when we have the positive intent and ability to hold the securities to maturity, and carry them at amortized cost, less any allowance. Debt securities not classified as held to maturity or trading are classified as securities available for sale and are carried at fair value. Unrealized gains and losses on available for sale securities are included in AOCI net of income taxes.

We include all interest on debt securities, including amortization of premiums and accretion of discounts on investment securities, in net interest income using the constant effective yield method generally calculated over the contractual lives of the securities. Effective yields reflect either the effective interest rate implicit in the security at the date of acquisition or, for debt securities where an OTTI was recorded, the effective interest rate determined based on improved cash flows subsequent to an impairment. We compute gains and losses realized on the sale of available for sale debt securities on a specific security basis. These securities gains and losses are included in Other noninterest income on the Consolidated Income Statement.

The CECL standard requires expected credit losses on both held to maturity and available for sale securities to be recognized through a valuation allowance, ACL, instead of as a direct write-down to the amortized cost basis of the security. An available for sale security is considered impaired if the fair value is less than its amortized cost basis. If any portion of the decline in fair value is related to credit, the amount of allowance is determined as the portion related to credit, limited to the difference between the amortized cost basis and the fair value of the security. If we have the intent to sell, or believe it is more likely than not we will be required to sell an impaired available for sale security before recovery of the amortized cost basis, the credit loss is recorded as a direct write-down of the amortized cost basis. Credit losses on investment securities are recognized through the Provision for credit losses on our Consolidated Income Statement. Declines in the fair value of available for sale securities that are not considered credit related are recognized in AOCI on our Consolidated Balance Sheet.

We consider a security to be past due in terms of payment based on its contractual terms. A security may be placed on nonaccrual, with interest no longer recognized until received, when collectability of principal or interest is doubtful. As of December 31, 2023, nonaccrual or past due held-to-maturity and available-for-sale securities were immaterial.

A security may be partially or fully charged off against the allowance if it is determined to be uncollectible, including for an available for sale security, if we have the intent to sell or believe it is more likely than not we will be required to sell the security before recovery of the amortized cost basis. Recoveries of previously charged-off available for sale securities are recognized when received, while recoveries on held to maturity securities are recognized when expected.

See the Allowance for Credit Losses section of this Note 1 for further discussion regarding the methodologies used to determine the allowance for investment securities. See Note 2 Investment Securities for additional information about the investment securities portfolio and the related ACL.

Equity Securities and Partnership Interests

We account for equity securities, equity investments, private equity investments, and investments in limited partnerships, limited liability companies and other investments that are not required to be consolidated under one of the following methods:

- We use the equity method for general and limited partner ownership interests and limited liability companies in which we are considered to have significant influence over the operations of the investee. Under the equity method, we record our equity ownership share of net income or loss of the investee in Noninterest income and any dividends received on equity method investments are recorded as a reduction to the investment balance. When an equity investment experiences an other-than-temporary decline in value, we record a loss on the investment.
- We measure equity securities that have a readily determinable fair value at fair value through Net income. We do not consider contractual restrictions on the sale of an equity security when measuring fair value. Both realized and unrealized gains and losses are included in Noninterest income. Dividend income on these equity securities is included in Other interest income on our Consolidated Income Statement.
- We generally use the practicability exception to fair value measurement for all other investments without a readily determinable fair value. When we elect this alternative measurement method, the investment is recorded at cost and the carrying value is adjusted for impairment, if any, plus or minus changes in value resulting from observable price changes in orderly transactions for identical or similar instruments of the same issuer. Adjustments to fair value based on changes in observable price are recorded in Other noninterest income. These investments are written down to fair value if a qualitative assessment indicates impairment and the fair value is less than the carrying value. The amount of the write-down is accounted for as a loss included in Other noninterest income. Distributions received on these investments are included in Other noninterest income.

Investments described above are included in Equity investments on our Consolidated Balance Sheet.

Private Equity Investments

We report private equity investments, which include direct investments in companies, affiliated partnership interests and indirect investments in private equity funds, at estimated fair value. These estimates are based on available information and may not necessarily represent amounts that we will ultimately realize through distribution, sale or liquidation of the investments. Fair values of publicly-traded direct investments are determined using quoted market prices and are subject to various discount factors arising from security level restrictions, when appropriate. The valuation procedures applied to direct investments and indirect investments are detailed in Note 14 Fair Value. We include all private equity investments within Equity investments on our Consolidated Balance Sheet. Changes in fair value of private equity investments are recognized in Other noninterest income.

We consolidate affiliated partnerships when we have determined that we have control of the partnership or are the primary beneficiary if the entity is a VIE. The portion we do not own is reflected in Noncontrolling interests on our Consolidated Balance Sheet.

Loans

Loans are classified as held for investment when management has both the intent and ability to hold the loan for the foreseeable future, or until maturity or payoff. Management's intent and view of the foreseeable future may change based on changes in business strategies, the economic environment, market conditions and the availability of government programs.

Measurement of delinquency status is based on the contractual terms of each loan. Loans that are 30 days or more past due are considered delinquent. The CARES Act credit reporting rules, which required exceptions to this policy, expired in the third quarter of 2023. As such, delinquency status at December 31, 2023 is being reported for all loans based on the contractual terms of each loan. Prior period amounts continue to be presented in accordance with the credit reporting rules under the CARES Act, which required certain loans modified due to pandemic-related hardships to not be reported as past due based on the contractual terms of the loan, even when borrowers may not have made payments on their loans during the modification period.

Loans held for investment, excluding PCD loans, are recorded at amortized cost basis unless we elect to measure these under the fair value option. Amortized cost basis represents principal amounts outstanding, net of unearned income, unamortized deferred fees and costs on originated loans, premiums or discounts on purchased loans and charge-offs. Amortized cost basis does not include accrued interest, as we include accrued interest in Other assets on our Consolidated Balance Sheet. Interest on performing loans is accrued based on the principal amount outstanding and recorded in Interest income as earned using the constant effective yield method over the contractual life. Loan origination fees, direct loan origination costs, and loan premiums and discounts are deferred and accreted or amortized into Net interest income using the constant effective yield method, over the contractual life of the loan. The processing fee received for loans originated through PPP lending under the CARES Act is deferred and accreted into Net interest income using the effective yield method, over the contractual life of the loan. Loans under the fair value option are reported at their fair value, with any changes to fair value reported as Noninterest income on the Consolidated Income Statement and are excluded from measurement of ALLL.

In addition to originating loans, we also acquire loans through the secondary loan market, portfolio purchases or acquisitions of other financial services companies. Certain acquired loans that have experienced a more-than-insignificant deterioration of credit quality since origination (*i.e.*, PCD) are recognized at an amortized cost basis equal to their purchase price plus an ALLL measured at the acquisition date. PNC considers a variety of factors in connection with the identification of more-than-insignificant deterioration in credit quality, including but not limited to nonperforming status, delinquency, risk ratings and other qualitative factors that indicate deterioration in credit quality since origination. Subsequent decreases in expected cash flows that are attributable, at least in part, to credit quality are recognized through a charge to the provision for credit losses resulting in an increase in the ALLL. Subsequent increases in expected cash flows are recognized as a provision recapture of previously recorded ALLL.

We consider a loan to be collateral dependent when we determine that substantially all of the expected cash flows will be generated from the operation or sale of the collateral underlying the loan, or when the borrower is experiencing financial difficulty and we have elected to measure the loan at the estimated fair value of collateral (less costs to sell if sale or foreclosure of the property is expected). Additionally, we consider a loan to be collateral dependent when foreclosure or liquidation of the underlying collateral is probable.

On January 1, 2023, we adopted ASU 2022-02 *Financial Instruments—Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures* (ASU 2022-02), which eliminates the accounting guidance for TDRs and replaces TDRs with loan modifications to borrowers experiencing financial difficulty, or FDMs. FDMs occur as a result of our loss mitigation activities. A variety of solutions are offered to borrowers, including loan modifications that may result in principal forgiveness, interest rate reductions, term extensions, payment delays, repayment plans or combinations thereof:

- Principal forgiveness includes principal and accrued interest forgiveness.
- Interest rate reductions include modifications where the interest rate is reduced and/or interest is deferred.
- Term extensions extend the original contractual maturity date of the loan.
- Payment delays consist of modifications where we expect to collect contractual amounts due but that result in a delay in the receipt of payments specified under the original loan terms. We generally consider payment delays to be insignificant when the delay is three months or less.
- Repayment plans are offered for some of our credit card and unsecured line of credit products, which provide for a reduced payment and interest rate for a specific period of time.

Additionally, modifications to borrowers experiencing financial difficulty also result from borrowers that have been discharged from personal liability through Chapter 7 bankruptcy and have not formally reaffirmed their obligations to us, and those that enter into trial modifications.

FDMs exclude loans held for sale and loans accounted for under the fair value option. Our disclosed FDM population also excludes government insured or guaranteed education loans as loss mitigation activities for these loans are either required by law or they are considered separate from PNC's loss mitigation treatments. Commercial loans with an appraised value of collateral that exceeds the loan value, loans with guarantor support, and residential mortgage government insured or guaranteed loans are included in our disclosed population of FDMs when those loan modifications are granted to a borrower experiencing financial difficulty.

FDMs continue to be subject to our existing nonaccrual policies. Expected losses or recoveries on FDMs have been factored into the ALLL estimates for each loan class under the methodologies described in this Note 1. Refer to Note 3 Loans and Related Allowance for Credit Losses for more information on FDMs.

Prior to the adoption of this ASU, a TDR was considered a loan whose terms had been restructured in a manner that granted a concession to a borrower experiencing financial difficulty. A concession had been granted when we did not expect to collect all amounts due, including original interest accrued at the original contract rate, as a result of the restructuring, or there was a delay in payment that was more-than-insignificant. TDRs resulted from our loss mitigation activities, and included rate reductions, principal forgiveness, postponement/reduction of scheduled amortization and extensions, which were intended to minimize economic loss and to avoid foreclosure or repossession of collateral. Additionally, TDRs also resulted from borrowers that had been discharged from personal liability through Chapter 7 bankruptcy and had not formally reaffirmed their loan obligations to us. In those situations where principal is forgiven, the amount of such principal forgiveness was immediately charged off. Additionally, for periods prior to 2023, potential incremental losses or recoveries on TDRs had been factored into the ALLL estimates for each loan class under the methodologies described in this Note 1. Once a loan became a TDR, it would continue to be reported as a TDR until it was ultimately repaid in full, the collateral was foreclosed upon or it fully charged off. PNC excluded loans held for sale, loans accounted for under the fair value option, and certain government insured or guaranteed loans from our TDR population.

See the following for additional information related to loans, including further discussion regarding our policies, the methodologies and significant inputs used to determine the ALLL and additional details on the composition of our loan portfolio:

- Nonperforming Loans and Leases section of this Note 1,
- Allowance for Credit Losses section of this Note 1, and
- Note 3 Loans and Related Allowance for Credit Losses in this Report.

Nonperforming Loans and Leases

The matrix that follows summarizes our policies for classifying certain loans as nonperforming loans and/or discontinuing the accrual of loan interest income.

Commercial	
Loans classified as nonperforming and accounted for as nonaccrual	• Loans accounted for at amortized cost where: – The loan is 90 days or more past due. – The loan is rated substandard or worse due to the determination that full collection of principal and interest is not probable as demonstrated by the following conditions: • The collection of principal or interest is 90 days or more past due, • Reasonable doubt exists as to the certainty of the borrower's future debt service ability, according to the terms of the credit arrangement, regardless of whether 90 days have passed or not, • The borrower has filed, or will likely file for bankruptcy, and it is not probable the borrower will be able to repay contractual payments due under the loan, • The bank advances additional funds to cover principal or interest, • We are in the process of liquidating a commercial borrower, or • We are pursuing remedies under a guarantee.
Loans excluded from nonperforming classification but accounted for as nonaccrual	• Loans accounted for under the fair value option and full collection of principal and interest is not probable. • Loans accounted for at the lower of cost or market less costs to sell (held for sale) and full collection of principal and interest is not probable.
Loans excluded from nonperforming classification and nonaccrual accounting	• Loans that are well secured and in the process of collection. • Certain government insured or guaranteed loans where substantially all principal and interest is insured. • Commercial purchasing card assets that do not accrue interest.

Consumer	
Loans classified as nonperforming and accounted for as nonaccrual	• Loans accounted for at amortized cost where full collection of contractual principal and interest is not deemed probable as demonstrated in the policies below: – The loan is 90 days past due for home equity and installment loans, and 180 days past due for well-secured residential real estate loans, – The loan had been modified and classified as a TDR prior to the adoption of ASU 2022-02, – The loan has been modified due to a borrower experiencing financial difficulty and is not government insured or guaranteed, – The loan has been modified to defer prior payments in forbearance to the end of the loan term, – Notification of bankruptcy has been received, – The bank holds a subordinate lien position in the loan and the first lien mortgage loan is seriously stressed (*i.e.*, 90 days or more past due), – Other loans within the same borrower relationship have been placed on nonaccrual or charge-offs have been taken on them, – The bank has ordered the repossession of non-real estate collateral securing the loan, or – The bank has charged-off the loan to the value of the collateral.
Loans excluded from nonperforming classification but accounted for as nonaccrual	• Loans accounted for under the fair value option and full collection of principal and interest is not probable. • Loans accounted for at the lower of cost or market less costs to sell (held for sale) and full collection of principal and interest is not probable.
Loans excluded from nonperforming classification and nonaccrual accounting	• Certain government insured or guaranteed loans where substantially all principal and interest is insured. • Residential real estate loans that are well secured and in the process of collection. • Consumer loans and lines of credit, not secured by residential real estate or automobiles, as permitted by regulatory guidance.

Commercial

We generally charge off commercial (commercial and industrial, commercial real estate and equipment lease financing) nonperforming loans when we determine that a specific loan, or portion thereof, is uncollectible. This determination is based on the specific facts and circumstances of the individual loans. In making this determination, we consider the viability of the business or project as a going concern, the past due status when the asset is not well secured, the expected cash flows to repay the loan, the value of the collateral and the ability and willingness of any guarantors to perform. For commercial loans and leases less than a defined dollar threshold, balances are generally charged off in full after 180 days for loans and 120 days for leases.

Consumer

We generally charge off secured consumer (home equity, residential real estate and automobile) nonperforming loans to the fair value of collateral less costs to sell if the fair value is lower than the amortized cost basis of the loan outstanding and the delinquency of the loan, combined with other risk factors such as bankruptcy or lien position, indicates that the loan (or a portion thereof) is uncollectible as per our historical experience. These nonperforming loans would also be charged off when the collateral has been repossessed. We charge off secured consumer loans no later than 180 days past due. Most consumer loans and lines of credit, not secured by automobiles or residential real estate, are charged off once they have reached 120-180 days past due.

For secured collateral dependent loans, collateral values are updated at least annually and subsequent declines in collateral values are charged off, resulting in incremental provision for credit loss. Subsequent increases in collateral values may be reflected as an adjustment to the ALLL to reflect the expectation of recoveries in an amount greater than previously expected, limited to amounts previously charged-off.

Accounting for Nonperforming Assets and Leases and Other Nonaccrual Loans

For nonaccrual loans, interest income accrual and deferred fee/cost recognition is discontinued. Additionally, depending on whether the accrued interest has been incorporated into the ACL estimates, as discussed in the Accrued Interest section of this Note 1, the accrued and uncollected interest is either reversed through Net interest income (if a CECL reserve is not maintained for accrued interest) or charged off against the allowance (if a CECL reserve is maintained for accrued interest), except for credit cards, where we reverse any accrued interest through Net interest income at the time of a charge-off, as per industry standard practice. Nonaccrual loans that are also collateral dependent may be charged off to reduce the basis to the fair value of collateral less costs to sell.

If payment is received on a nonaccrual loan, generally the payment is first applied to the remaining principal balance. Payments are then applied to recover any charged-off amounts related to the loan. Finally, if both the principal balance and any charge-offs have been recovered, then the payment will be recorded as interest income. For certain consumer loans, the receipt of interest payments is recognized as interest income on a cash basis. Cash basis income recognition is applied if a loan's amortized cost basis is deemed fully collectible and the loan has performed for at least six months.

For TDRs prior to the adoption of ASU 2022-02, payments were applied based upon their contractual terms unless the related loan was deemed non-performing. TDRs were generally included in nonperforming and nonaccrual loans. However, after a reasonable period of time, generally six months, in which the loan performed under restructured terms and met other performance indicators, it was returned to performing/accruing status. TDRs resulting from (i) borrowers that had been discharged from personal liability through Chapter 7 bankruptcy and had not formally reaffirmed their loan obligations to us, and (ii) borrowers that were not currently obligated to make both principal and interest payments under the restructured terms were not returned to accruing status.

For FDMs, payments are applied based upon their contractual terms unless the related loan is deemed nonperforming. Consumer loans modified due to a borrower experiencing financial difficulty are generally included in nonperforming and nonaccrual loans if they are not government insured or guaranteed. Commercial loans modified due to a borrower experiencing financial difficulty may be included in nonperforming and nonaccrual loans, subject to the bank's policies for nonperforming loans and leases. FDMs may remain on accruing status if the bank expects to collect all contractual principal and interest due under the loan and the borrower remains current. Collateral coverage, guarantor and/or sponsor support and debt service coverage are factors that may be considered in the accruing status of an FDM loan. FDM loans classified as nonperforming and nonaccrual loans may return to accruing status after a reasonable period of time, generally six months, in which the loan performs under modified terms and meets other performance indicators. This return to accruing status demonstrates that the bank expects to collect all of the loan's remaining contractual principal and interest. Loan modifications granted to borrowers experiencing financial difficulty resulting from (i) borrowers that have been discharged from personal liability through Chapter 7 bankruptcy and have not formally reaffirmed their loan obligations to us, and (ii) borrowers that are not currently obligated to make both principal and interest payments under the modified terms are not returned to accrual status.

Other nonaccrual loans are generally not returned to accruing status until the borrower has performed in accordance with the loan's contractual terms and other performance indicators for at least six months, the period of time which was determined to demonstrate the expected collectability of the loan's remaining contractual principal and interest. Nonaccrual loans with partially charged-off principal may return to accruing status if the loan performs after a reasonable period of time, generally six months, and the loan meets other performance indicators. When a nonperforming loan is returned to accruing status, it is then considered a performing loan. Nonaccrual loans with fully charged-off principal are prohibited from returning to accruing status.

Foreclosed assets consist of any asset seized or property acquired through a foreclosure proceeding or acceptance of a deed-in-lieu of foreclosure. OREO comprises principally residential and commercial real estate properties obtained in partial or total satisfaction of loan obligations. After obtaining a foreclosure judgment, or in some jurisdictions the initiation of proceedings under a power of sale in the loan instruments, the property will be sold. When we are awarded title or completion of deed-in-lieu of foreclosure, we transfer the loan to foreclosed assets included in Other assets on our Consolidated Balance Sheet. Property obtained in satisfaction of a loan is initially recorded at estimated fair value less cost to sell. Based upon the estimated fair value less cost to sell, the amortized cost basis of the loan is adjusted and a charge-off/recovery is recognized to the ALLL. We estimate fair values primarily based on appraisals or sales agreements with third parties. Subsequently, foreclosed assets are valued at the lower of the amount recorded at the acquisition date or estimated fair value less cost to sell. Valuation adjustments on these assets and gains or losses realized from disposition of such property are reflected in Other noninterest expense.

For certain mortgage loans that have a government guarantee, we establish a separate other receivable upon foreclosure. The receivable is measured based on the loan balance (inclusive of principal and interest) that is expected to be recovered from the guarantor.

See Note 3 Loans and Related Allowance for Credit Losses for additional information on FDMs, nonperforming assets and credit quality indicators related to our loan portfolio.

Allowance for Credit Losses

Our ACL is based on historical loss experience, current borrower risk characteristics, current economic conditions, reasonable and supportable forecasts of future conditions and other relevant factors. We maintain the ACL at an appropriate level for expected losses on our existing investment securities, loans, equipment finance leases, other financial assets and unfunded lending related commitments, for the remaining estimated contractual term of the assets or exposures as of the balance sheet date. The remaining contractual term of assets in scope of CECL is estimated considering contractual maturity dates, prepayment expectations, utilization or draw expectations and any contractually embedded extension options that do not allow us to unilaterally cancel the extension options. For products without a fixed contractual maturity date (*e.g*., credit cards), we rely on historical payment behavior to determine the length of the paydown or default time period.

We estimate expected losses on a pooled basis using a combination of (i) the expected losses over a reasonable and supportable forecast period, (ii) a period of reversion to long-run average expected losses, where applicable and (iii) the long-run average expected losses for the remaining estimated contractual term. For all assets and unfunded lending related commitments in the scope of CECL, the ACL also includes individually assessed reserves and qualitative reserves, as applicable.

We use forward-looking information in estimating expected credit losses for our reasonable and supportable forecast period. For this purpose, we use forecasted scenarios produced by PNC's Economics Team, which are designed to reflect potential trajectories of the business cycles and their related estimated probabilities. The forecast length that we have currently determined to be reasonable and supportable is three years. As noted in the methodology discussions that follow, forward-looking information is incorporated into the expected credit loss estimates. Such forward-looking information includes forecasted relevant macroeconomic variables, which are estimated using quantitative macroeconomic models, analysis from PNC economists and management judgment.

The reversion period is used to bridge our three-year reasonable and supportable forecast period and the long-run average expected credit losses. We consider a number of factors in determining the duration of the reversion period, such as contractual maturity of the asset, observed historical patterns and the estimated credit loss rates at the end of the forecast period relative to the beginning of the long-run average period. The reversion period is typically one to three years, if not immediate.

The long-run average expected credit losses are derived from long-run historical credit loss information adjusted for the credit quality of the current portfolio and, therefore, do not consider current and forecasted economic conditions.

See the following sections related to investment securities, loans and leases, unfunded lending related commitments and other financial assets for details about specific reserve methodologies.

Allowance for Investment Securities

A significant portion of our investment securities are issued or guaranteed by either the U.S. government (U.S. Treasury or a government entity) or a government-sponsored agency (FNMA or FHLMC). Taking into consideration historical information and current and forecasted conditions, we do not expect to incur any credit losses on these securities.

Investment securities that are not issued or guaranteed by the U.S. government or a government-sponsored agency consist of both securitized products, such as non-agency mortgage and asset-backed securities, as well as non-securitized products, such as corporate and municipal debt securities. A discounted cash flow approach is primarily used to determine the amount of the allowance required. The estimates of expected cash flows are determined using macroeconomic sensitive models taking into consideration the reasonable and supportable forecast period and scenarios discussed above. Additional factors unique to a specific security may also be taken into consideration when estimating expected cash flows. The cash flows expected to be collected, after considering expected prepayments, are discounted at the effective interest rate. For an available-for-sale security, the amount of the allowance is limited to the difference between the amortized cost basis of the security and its estimated fair value.

See Note 2 Investment Securities for additional information about the investment securities portfolio.

Allowance for Loan and Lease Losses

Our pooled expected credit loss methodology is based upon the quantification of risk parameters, such as PD, LGD, EAD and the remaining estimated contractual term for a loan, loan segment or lease. We also consider the impact of prepayments and amortization on the estimated contractual term in our expected loss estimates. We use historical credit loss information, current borrower risk characteristics and forecasted economic variables for the reasonable and supportable forecast period, coupled with analytical methods, to estimate these risk parameters by loan, loan segment or lease. PD, LGD and EAD parameters are calculated for each forecasted scenario and the long-run average period, and are combined to generate expected loss estimates by scenario. Each scenario is then weighted to determine our total estimated loss. The following matrix provides key credit risk characteristics that we use to estimate these risk parameters.

Loan Class	Probability of Default	Loss Given Default	Exposure at Default
Commercial			
Commercial and industrial / Equipment lease financing	• For wholesale obligors: internal risk ratings based on borrower characteristics and industry • For retail small balance obligors: credit score, delinquency status, and product type	• Collateral type, LTV, industry, size and outstanding exposure for secured loans • Capital structure, industry and size for unsecured loans • For retail small balance obligors, product type and credit scores	• Outstanding balances, commitment, contractual maturities and historical prepayment experience for loans • Current utilization and historical pre-default draw experience for lines
Commercial real estate (CRE)	• Property performance metrics, property type, market and risk pool for the forecast period • For the long-run average period, internal risk ratings based on borrower characteristics	• Property type, LTV, market, risk pool and costs to sell for the forecast period • For the long-run average period, internal ratings based on collateral performance	• Outstanding balances, commitment, contractual maturities and historical prepayment experience for loans
Consumer			
Home equity / Residential real estate	• Borrower credit scores, delinquency status, origination vintage, LTV and contractual maturity	• Collateral characteristics, LTV and costs to sell	• Outstanding balances, contractual maturities and historical prepayment experience for loans • Current utilization and historical pre-default draw experience for lines
Automobile	• Borrower credit scores, delinquency status, borrower income, LTV and contractual maturity	• New vs. used, LTV and borrower credit scores	• Outstanding balances, contractual maturities and historical prepayment experience
Credit card	• Borrower credit scores, delinquency status, utilization, payment behavior and months on book	• Borrower credit scores and credit line amount	• Paydown curves are developed using a pro-rata method and estimated using borrower behavior segments, payment ratios and borrower credit scores
Education / Other consumer	• Modeled using either discrete risk parameters or analytical approaches based on net charge-offs and paydown rates		

The following matrix describes the key economic variables that are consumed during our forecast period by loan class, as well as other assumptions that are used for our reversion and long-run average approaches.

Loan Class	Forecast Period - Key Economic Variables	Reversion Method	Long-Run Average
Commercial			
Commercial and industrial / Equipment lease financing	• GDP and Gross Domestic Investment measures, employment related variables and personal income and consumption measures	• Immediate reversion	• Average parameters determined based on internal and external historical data • Modeled parameters using long-run economic conditions for retail small balance obligors
Commercial real estate (CRE)	• CRE Price Index, unemployment rates, GDP, corporate bond yield and interest rates	• Immediate reversion	• Average parameters determined based on internal and external historical data
Consumer			
Home equity / Residential real estate	• Unemployment rates, HPI and interest rates	• Straight-line over 3 years	• Modeled parameters using long-run economic conditions
Automobile	• Unemployment rates, HPI, disposable personal income and Manheim used car index	• Straight-line over 1 year	• Average parameters determined based on internal historical data
Credit card	• Unemployment rates, personal consumption expenditure and HPI	• Straight-line over 2 years	• Modeled parameters using long-run economic conditions
Education / Other consumer	• Modeled using either discrete risk parameters or analytical approaches based on net charge-offs and paydown rates		

After the forecast period, we revert to the long-run average over the reversion period noted above, which is the period between the end of the forecast period and when losses are estimated to have completely reverted to the long-run average.

Once we have developed a combined estimate of credit losses (*i.e.*, for the forecast period, reversion period and long-run average) under each of the forecasted scenarios, we produce a probability-weighted credit loss estimate. In addition, we add or deduct any qualitative components and other adjustments, such as individually assessed loans, to produce the ALLL. See the Individually Assessed Component and Qualitative Component discussions that follow in this Note 1 for additional information about those adjustments.

Discounted Cash Flow

Prior to January 1, 2023, we used a discounted cash flow methodology for our home equity and residential real estate loan classes, in addition to our TDR portfolios. We determined effective interest rates considering contractual cash flows adjusted for estimated prepayments. Changes in the ALLL due to the impact of the passage of time under the discounted cash flow estimate were recognized through the provision for credit losses.

Effective January 1, 2023, we discontinued our use of a discounted cash flow methodology, and we now use a pooled expected loss methodology based upon the quantification of risk parameters, such as PD, LGD and EAD for a loan or loan segment.

Individually Assessed Component

Loans and leases that do not share similar risk characteristics with a pool of loans are individually assessed as follows:

- For commercial nonperforming loans greater than or equal to a defined dollar threshold, reserves are based on an analysis of the present value of the loan's expected future cash flows or the fair value of the collateral, if appropriate under our policy for collateral dependent loans. Nonperforming commercial loans below the defined threshold are reserved for under a pooled basis, as we believe these loans continue to share similar risk characteristics.
- For consumer nonperforming loans classified as collateral dependent, charge-off and ALLL related to recovery of amounts previously charged off are evaluated through an analysis of the fair value of the collateral less costs to sell.

Qualitative Component

While our reserve models and methodologies strive to reflect all relevant expected credit risk factors, the ACL also accounts for factors that may not be directly measured in the determination of individually assessed or pooled reserves. Such qualitative factors may include, but are not limited to:

- Industry concentrations and conditions,
- Changes in market conditions, including regulatory and legal requirements,

- Changes in the nature and volume of our portfolio,
- Recent credit quality trends,
- Recent loss experience in particular portfolios, including specific and unique events,
- Recent macroeconomic factors that may not be reflected in the forecast information,
- Limitations of available input data, including historical loss information and recent data such as collateral values,
- Model imprecision and limitations,
- Changes in lending policies and procedures, including changes in loss recognition and mitigation policies and procedures, and
- Timing of available information.

See Note 3 Loans and Related Allowance for Credit Losses for additional information about our loan portfolio and the related allowance.

Accrued Interest
When accrued interest is reversed or charged-off in a timely manner, the CECL standard provides a practical expedient to exclude accrued interest from ACL measurement. We consider our nonaccrual and charge-off policies to be timely for all of our investment securities, loans and leases, with the exception of consumer credit cards, education loans and certain unsecured consumer lines of credit. We consider the length of time before nonaccrual/charge-off and the use of appropriate other triggering events for nonaccrual and charge-offs in making this determination. Pursuant to these policy elections, we calculate reserves for accrued interest on credit cards, education loans and certain unsecured consumer lines of credit, which are then included within the ALLL. See the Debt Securities and the Nonperforming Loans and Leases sections of this Note 1 for additional information on our nonaccrual and charge-off policies.

Pursuant to our use of a discounted cash flow methodology in estimating credit losses for our home equity and residential real estate loan classes prior to January 1, 2023, applicable reserves for accrued interest were also included within the ALLL for these loan classes.

Purchased Credit Deteriorated Loans or Securities
The allowance for PCD loans or securities is determined at the time of acquisition, as the estimated expected credit loss of the outstanding balance or par value, based on the methodologies described previously for loans and securities. In accordance with CECL, the allowance recognized at acquisition is added to the acquisition date purchase price to determine the asset's amortized cost basis.

Allowance for Unfunded Lending Related Commitments
We maintain the allowance for unfunded lending related commitments on off-balance sheet credit exposures that are not unconditionally cancelable (*e.g.*, unfunded loan commitments, letters of credit and certain financial guarantees), at a level we believe is appropriate as of the balance sheet date to absorb expected credit losses on these exposures. Other than the estimation of the probability of funding, this reserve is estimated in a manner similar to the methodology used for determining reserves for pooled loans and leases. See the Allowance for Loan and Lease Losses section of this Note 1 for the key credit risk characteristics for unfunded lending related commitments. The allowance for unfunded lending related commitments is recorded as a liability on the Consolidated Balance Sheet. Net adjustments to this reserve are included in the Provision for credit losses on the Consolidated Income Statement.

See Note 3 Loans and Related Allowance for Credit Losses for additional information about this allowance.

Allowance for Other Financial Assets
We determine the allowance for other financial assets (*e.g.*, trade receivables, servicing advances on PNC-owned loans and balances with banks) considering historical loss information and other available indicators. In certain cases where there are no historical, current or forecast indicators of an expected credit loss, we may estimate the reserve to be close to zero. As of December 31, 2023 and December 31, 2022 the allowance for other financial assets was immaterial.

Loans Held for Sale

We designate loans as held for sale when we have the intent and ability to sell them. At the time of designation to held for sale, any ACL is reversed, and a valuation allowance for the shortfall between the amortized cost basis and the net realizable value is recognized, excluding the amounts already charged off. Similarly, when loans are no longer considered held for sale, the valuation allowance (net of writedowns) is reversed, and an allowance for credit losses is established, excluding the amounts already charged-off. Write-downs on loans held for sale (if required) are recorded as charge-offs through the valuation allowance. Adjustments to the valuation allowance on held for sale loans are recognized in Other noninterest income.

We have elected to account for certain commercial and residential mortgage loans held for sale at fair value. The changes in the fair value of commercial and residential mortgage loans are measured and recorded within Residential and Commercial mortgage within noninterest income each period. See Note 14 Fair Value for additional information.

Interest income with respect to loans held for sale is accrued based on the principal amount outstanding and the loan's contractual interest rate.

In certain circumstances, loans designated as held for sale may be transferred to held for investment based on a change in strategy. We transfer these loans at the lower of cost or estimated fair value; however, any loans originated or purchased for the held for sale portfolio and for which the fair value option has been elected remain at fair value for the life of the loan.

Loan Sales, Loan Securitizations and Retained Interests

We recognize the sale of loans or other financial assets when the transferred assets are legally isolated from our creditors and the appropriate accounting criteria are met. We have sold mortgage and other loans through securitization transactions. In a securitization, financial assets are transferred into trusts or to SPEs in transactions to effectively legally isolate the assets from us.

In a securitization, the trust or SPE issues beneficial interests in the form of senior and subordinated securities backed or collateralized by the assets sold to the trust. The senior classes of the asset-backed securities typically receive investment grade credit ratings at the time of issuance. These ratings are generally achieved through the creation of lower-rated subordinated classes of asset-backed securities, as well as subordinated or residual interests. In certain cases, we may retain a portion or all of the securities issued, interest-only strips, one or more subordinated tranches, servicing rights and, in some cases, cash reserve accounts. If sale accounting is achieved, securitized loans are removed from the balance sheet and a net gain or loss is recognized in Noninterest income at the time of initial sale. Gains or losses recognized on the sale of the loans depend on the fair value of the loans sold and the retained interests at the date of sale. We generally estimate the fair value of the retained interests based on the present value of future expected cash flows using assumptions as to discount rates, interest rates, prepayment speeds, credit losses and servicing costs, if applicable.

With the exception of loan sales to certain U.S. government-chartered entities, our loan sales and securitizations are generally structured without recourse to us except for representations and warranties and with no restrictions on the retained interests. We originate, sell and service commercial mortgage loans under the FNMA DUS program. Under the provisions of the DUS program, we participate in a loss-sharing arrangement with FNMA. When we are obligated for loss-sharing or recourse, our policy is to record such liabilities initially at fair value and subsequently reserve for estimated losses in accordance with guidance contained in applicable GAAP.

Variable Interest Entities

A VIE is a corporation, partnership, limited liability company, or any other legal structure used to conduct activities or hold assets generally that either:

- Does not have equity investors with voting rights that can directly or indirectly make decisions about the entity's most significant economic activities through those voting rights or similar rights, or
- Has equity investors that do not provide sufficient equity for the entity to finance its activities without additional subordinated financial support.

A VIE often holds financial assets, including loans or receivables, real estate or other property.

VIEs are assessed for consolidation under ASC 810 – *Consolidation* when we hold a variable interest in these entities. We consolidate a VIE if we are its primary beneficiary. The primary beneficiary of a VIE is determined to be the party that meets both of the following criteria: (i) has the power to make decisions that most significantly affect the economic performance of the VIE; and (ii) has the obligation to absorb losses or the right to receive benefits that in either case could potentially be significant to the VIE. Upon consolidation of a VIE, we recognize all of the VIE's assets, liabilities and noncontrolling interests on our Consolidated Balance Sheet. On a quarterly basis, we determine whether any changes occurred requiring a reassessment of whether we are the primary beneficiary of an entity.

See Note 4 Loan Sale and Servicing Activities and Variable Interest Entities for information about VIEs that we consolidate as well as those that we do not consolidate but in which we hold a significant variable interest.

Mortgage Servicing Rights

We provide servicing under various loan servicing contracts for commercial and residential loans. These contracts are either purchased in the open market or retained as part of a loan securitization or loan sale. All acquired or originated servicing rights are initially measured at fair value. Fair value is based on the present value of the expected future net cash flows, including assumptions as to:

- Deposit balances and interest rates for escrow and commercial reserve earnings,
- Discount rates,
- Estimated prepayment speeds, and
- Estimated servicing costs.

We've elected to subsequently measure commercial and residential MSRs at fair value. We manage the risk of changes in fair value of MSRs by hedging the fair value with derivatives and securities which are expected to offset the change in fair value of the servicing rights. Changes in the fair value of MSRs are recognized as gains/(losses). The fair value of these servicing rights is estimated by using a discounted cash flow valuation model which calculates the present value of estimated future net servicing cash flows, taking into consideration actual and expected mortgage loan prepayment rates, discount rates, servicing costs and other factors which are determined based on current market conditions.

See Note 5 Goodwill and Mortgage Servicing Rights and Note 14 Fair Value for additional information.

Goodwill

Goodwill arising from business acquisitions represents the value attributable to unidentifiable intangible elements in the business acquired. Goodwill is assigned at the reporting unit level on the acquisition date. A reporting unit is a business segment or one level below a business segment. At least annually, in the fourth quarter, management performs the goodwill impairment test at a reporting unit level. The goodwill impairment test may also be performed more frequently if events occur or circumstances have changed significantly from the annual test date, when such events or circumstances may indicate that it is more-likely-than-not that the fair value of a reporting unit is below its carrying value. Examples of events or circumstances that are considered for more frequent goodwill impairment testing include, but are not limited to, changes in macroeconomic conditions, industry and market considerations, and other relevant PNC or reporting unit specific events.

When performing a goodwill impairment test, PNC may first perform a qualitative analysis to evaluate whether it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount. If, after considering all relevant events and circumstances, PNC determines it is not more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, then performing a quantitative impairment test is not necessary. If PNC elects to bypass the qualitative analysis, or concludes via qualitative analysis that it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, a quantitative goodwill impairment test is performed. Inputs are generated and used in calculating the fair value of the reporting unit, which is compared to its carrying amount. The fair value of our reporting units is determined by using discounted cash flows and/or market comparability methodologies. If the fair value is greater than the carrying amount, then the reporting unit's goodwill is deemed not to be impaired. If the fair value is less than the carrying amount, an entity should recognize an impairment charge for the amount by which the carrying amount of goodwill exceeds the reporting unit's fair value. The loss recognized should not exceed the total amount of goodwill allocated to that reporting unit and subsequent reversals of goodwill impairment are not permitted.

See Note 5 Goodwill and Mortgage Servicing Rights for additional information.

Leases

Lessor Arrangements

We provide financing for various types of equipment, including aircraft, energy and power systems and vehicles through a variety of lease arrangements. Finance leases are carried at the aggregate of lease payments plus estimated residual value of the leased equipment, less unearned income. Leveraged leases, a form of financing leases, are carried net of nonrecourse debt. We recognize income over the term of the lease using the constant effective yield method. Lease residual values are reviewed for impairment at least annually. Gains or losses on the sale of leased assets are included in Other noninterest income. Valuation adjustments on operating lease residuals are included in Other noninterest expense while valuation adjustments on the net investment of a direct financing or sales-type lease are included in Provision for credit losses.

Lessee Arrangements

We lease retail branches, datacenters, office space, land and equipment under operating and finance leases. Under ASC 842, we elected the practical expedient to account for the lease and nonlease components of real estate leases and leases of advertising assets, such as signage, as a single lease component. For other leased asset classes, lease and nonlease components of new lease agreements are accounted for separately. In addition, we elected the practical expedient to not apply the recognition requirements under the standard to short-term leases. Leases with an initial term of 12 months or less are not recorded on the balance sheet, as we recognize lease expense for these leases on a straight-line basis over the lease term. Generally, we have elected to use the Overnight Indexed Swap rate corresponding to the term of the lease at the lease measurement date as our incremental borrowing rate to measure the right-of-use-asset and lease liability.

See Note 6 Leases for additional information on our leasing arrangements.

Depreciation and Amortization

For financial reporting purposes, we depreciate premises and equipment, net of salvage value, principally using the straight-line method over their estimated useful lives.

We use estimated useful lives for furniture and equipment ranging from one to 10 years and depreciate buildings over an estimated useful life of up to 40 years. We amortize leasehold improvements over their estimated useful lives of up to 15 years or the respective lease terms, whichever is shorter.

We purchase, as well as internally develop and customize, certain software to enhance or perform internal business functions. Software development costs incurred in the planning and post-development project stages are charged to Noninterest expense. Costs associated with designing software configuration and interfaces, installation, coding programs and testing systems are capitalized and amortized using the straight-line method over periods generally ranging from one to 10 years. Implementation costs of software hosting arrangements are capitalized and amortized over the contractual term of the associated arrangement, including extension options we are reasonably certain to exercise, on a straight-line basis.

We review the remaining useful lives and carrying values of premises and equipment to determine whether an event has occurred that would indicate a change in useful life is warranted or if any impairment exists.

Other Comprehensive Income

Other comprehensive income, on an after-tax basis, primarily consists of unrealized gains or losses on available for sale debt securities, unrealized gains or losses on derivatives designated as cash flow hedges, and changes in plan assets and benefit obligations of pension and other postretirement benefit plans. Details of each component are included in Note 12 Other Comprehensive Income.

Treasury Stock

We record common stock purchased for treasury at cost. At the date of subsequent reissue, the treasury stock account is reduced by the cost of such stock on the first-in, first-out basis.

Earnings Per Common Share

Basic earnings per common share is calculated using the two-class method to determine income attributable to common shareholders. Unvested share-based payment awards that contain nonforfeitable rights to dividends or dividend equivalents are considered participating securities under the two-class method. Distributed dividends and dividend equivalents related to participating securities and an allocation of undistributed net income to participating securities reduce the amount of income attributable to common shareholders. In a period with a loss, no allocation will be made to the participating securities, as they do not have a contractual obligation to absorb losses. Income attributable to common shareholders is then divided by the weighted-average common shares outstanding for the period.

Diluted earnings per common share is calculated under the more dilutive of either the treasury stock method or the two-class method. For the diluted calculation, we increase the weighted-average number of shares of common stock outstanding by the assumed conversion of outstanding convertible preferred stock from the beginning of the year or date of issuance, if later, and the number of shares of common stock that would be issued assuming the exercise of stock options and warrants and the issuance of incentive shares using the treasury stock method. These adjustments to the weighted-average number of shares of common stock outstanding are made only when such adjustments will dilute earnings per common share. For periods in which there is a loss from continuing operations, any potential dilutive shares will be anti-dilutive. In this scenario, no potential dilutive shares will be included in the continuing operations, discontinued operations or total earnings per common share calculations, even if overall net income is reported.

See Note 13 Earnings Per Share for additional information.

Fair Value of Financial Instruments

The fair value of financial instruments and the methods and assumptions used in estimating fair value amounts and financial assets and liabilities for which fair value was elected are detailed in Note 14 Fair Value.

Derivative Instruments and Hedging Activities

We use a variety of financial derivatives to both mitigate exposure to market (primarily interest rate) and credit risks inherent in our business activities, as well as to facilitate customer risk management activities. We manage these risks as part of our asset and liability management process and through credit policies and procedures.

We recognize all derivative instruments at fair value as either Other assets or Other liabilities on the Consolidated Balance Sheet and the related cash flows in the Operating Activities section of the Consolidated Statement of Cash Flows. Adjustments for counterparty credit risk are included in the determination of fair value. The accounting for changes in the fair value of a derivative instrument depends on whether it has been designated and qualifies as part of a cash flow or net investment hedging relationship. For all other derivatives, changes in fair value are recognized in earnings.

We utilize a net presentation for derivative instruments on the Consolidated Balance Sheet taking into consideration the effects of legally enforceable master netting agreements. Cash collateral exchanged with counterparties is also netted against the applicable derivative exposures by offsetting obligations to return, or general rights to reclaim, cash collateral against the fair values of the net derivatives being collateralized.

For those derivative instruments that are designated and qualify as accounting hedges, we designate the hedging instrument, based on the exposure being hedged, as a fair value hedge, a cash flow hedge or a hedge of the net investment in a foreign operation.

We formally document the relationship between the hedging instruments and hedged items, as well as the risk management objective and strategy, before undertaking an accounting hedge. To qualify for hedge accounting, the derivatives and related hedged items must be designated as a hedge at inception of the hedge relationship. In addition, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. For accounting hedge relationships, we formally assess, both at the inception of the hedge and on an ongoing basis, if the derivatives are highly effective in offsetting designated changes in the fair value or cash flows of the hedged item. If it is determined that the derivative instrument is not highly effective, hedge accounting is discontinued. We assess effectiveness using statistical regression analysis. Where the critical terms of the derivative and hedged item match, effectiveness may be assessed qualitatively.

For derivatives that are designated as fair value hedges (*i.e*., hedging the exposure to changes in the fair value of an asset or a liability attributable to a particular risk, such as changes in benchmark interest rates), changes in the fair value of the hedging instrument are recognized in earnings and offset by also recognizing in earnings the changes in the fair value of the hedged item attributable to the hedged risk. To the extent the change in fair value of the derivative does not offset the change in fair value of the hedged item, the difference is reflected in the Consolidated Income Statement in the same income statement line as the hedged item.

For derivatives designated as cash flow hedges (*i.e*., hedging the exposure to variability in expected future cash flows), the gain or loss on derivatives is reported as a component of AOCI and subsequently reclassified to income in the same period or periods during which the hedged cash flows affect earnings and recorded in the same income statement line item as the hedged cash flows. For derivatives designated as a hedge of net investment in a foreign operation, the gain or loss on the derivatives is reported as a component of AOCI.

We discontinue hedge accounting when it is determined that the derivative no longer qualifies as an effective hedge; the derivative expires or is sold, terminated or exercised; or the derivative is de-designated as a fair value or cash flow hedge or, for a cash flow hedge, it is no longer probable that the forecasted transaction will occur by the end of the originally specified time period.

We purchase or originate financial instruments that contain an embedded derivative. For financial instruments not measured at fair value with changes in fair value reported in earnings, we assess, at inception of the transaction, if the economic characteristics of the embedded derivative are clearly and closely related to the economic characteristics of the host contract, and whether a separate instrument with the same terms as the embedded derivative would be a derivative. If the embedded derivative is not clearly and closely related to the host contract and meets the definition of a derivative, the embedded derivative is recorded separately from the host contract with changes in fair value recorded in earnings, unless we elect to account for the hybrid instrument at fair value.

We enter into commitments to originate residential and commercial mortgage loans for sale. We also enter into commitments to purchase or sell commercial and residential real estate loans. These commitments are accounted for as free-standing derivatives which are recorded at fair value in Other assets or Other liabilities on the Consolidated Balance Sheet. Any gain or loss from the change in fair value after the inception of the commitment is recognized in Noninterest income.

See Note 15 Financial Derivatives for additional information.

Income Taxes

We account for income taxes under the asset and liability method. Deferred tax assets and liabilities are determined based on differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that we expect will apply at the time when we believe the differences will reverse. Changes in tax rates and tax law are accounted for in the period of enactment. Thus, at the enactment date, deferred taxes are remeasured and the change is recognized in Income tax expense. The recognition of deferred tax assets requires an assessment to determine the realization of such assets. Realization refers to the incremental benefit achieved through the reduction in future taxes payable or refunds receivable from the deferred tax assets, assuming that the underlying deductible differences and carryforwards are the last items to enter into the determination of future taxable income. We establish a valuation allowance for tax assets when it is more likely than not that they will not be realized, based upon all available positive and negative evidence.

We have elected to apply the proportional amortization method to our qualifying LIHTC and NMTC equity investments. Investment tax credits and investment impairment are recognized in tax expense for any individual LIHTC and NMTC equity investment for which we can demonstrate that the investment was made primarily for the purpose of receiving income tax credits and other income tax benefits. We use the deferral method of accounting for all investment tax credit equity investments. Under this method, the investment tax credits are recognized as a reduction to the related asset.

See Note 18 Income Taxes for additional information.

Revenue Recognition

We earn interest and noninterest income from various sources, including:
- Lending,
- Securities portfolio,
- Asset management,
- Loan sales, loan securitizations and servicing,
- Brokerage services,
- Sale of loans and securities,
- Certain private equity activities, and
- Securities, derivatives and foreign exchange activities.

In addition, we earn fees and commissions from:
- Issuing loan commitments, standby letters of credit and financial guarantees,
- Deposit account services,
- Merchant services,
- Selling various insurance products,
- Providing treasury management services including money transfer services,
- Providing merger and acquisition advisory and related services,
- Debit and credit card transactions, and
- Facilitating and participating in certain capital markets transactions.

Service charges on deposit accounts are recognized when earned. Brokerage fees and gains and losses on the sale of securities and certain derivatives are recognized on a trade-date basis.

We record private equity income or loss based on changes in the valuation of the underlying investments or when we dispose of our interest.

We recognize gain/(loss) on changes in the fair value of certain financial instruments where we have elected the fair value option. These financial instruments include certain commercial and residential mortgage loans originated for sale, certain residential mortgage portfolio loans and resale agreements. We also recognize gain/(loss) on changes in the fair value of residential and commercial MSRs.

We recognize revenue from servicing residential and commercial mortgages for others as earned based on the specific contractual terms. These revenues are reported on the Consolidated Income Statement in the line item Residential and commercial mortgage. We recognize revenue from securities, derivatives and foreign exchange customer-related trading, as well as securities underwriting activities, as these transactions occur or as services are provided. We generally recognize gains from the sale of loans upon meeting the derecognition criteria for transfers of financial assets. Mortgage revenue recognized is reported net of mortgage repurchase reserves.

For the fee-based revenue within the scope of ASC Topic 606 - *Revenue from Contracts with Customers*, revenue is recognized when or as those services are transferred to the customer. See Note 23 Fee-based Revenue from Contracts with Customers for additional information related to revenue within the scope of ASC Topic 606.

Recently Adopted Accounting Standards

Accounting Standards Update	Description	Financial Statement Impact
Reference Rate Reform - ASU 2020-04 Issued March 2020 **Reference Rate Reform Scope - ASU 2021-01** Issued January 2021 **Reference Rate Reform Deferral of Sunset Date – ASU 2022-06** Issued December 2022	• Provides optional expedients and exceptions for applying generally accepted accounting principles to contracts, hedging relationships and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform (codified in ASC 848). • Includes optional expedients related to contract modifications that allow an entity to account for modifications (if certain criteria are met) as if the modifications were only minor (assets within the scope of ASC 310, Receivables), were not substantial (assets within the scope of ASC 470, Debt) and/or did not result in remeasurements or reclassifications (assets within the scope of ASC 842, Leases, and other Topics) of the existing contract. • Includes optional expedients related to hedging relationships within the scope of ASC 815, Derivatives & Hedging, whereby changes to the critical terms of a hedging relationship do not require dedesignation if certain criteria are met. In addition, potential sources of ineffectiveness as a result of reference rate reform may be disregarded when performing some effectiveness assessments. • Includes optional expedients and exceptions for contract modifications and hedge accounting that apply to derivative instruments impacted by the market-wide discounting transition. • Guidance in these ASUs is effective as of March 12, 2020 through December 31, 2024.	• ASU 2020-04 was adopted March 12, 2020. ASU 2021-01 was retrospectively adopted October 1, 2020. ASU 2022-06 was adopted upon issuance. • During the fourth quarter of 2020, we elected to apply certain optional expedients for contract modifications and hedging relationships to derivative instruments impacted by the market-wide discounting transition. These optional expedients remove the requirement to remeasure contract modifications or dedesignate hedging relationships due to reference rate reform. The elections made in the fourth quarter of 2020 apply only to derivative instruments impacted by the market-wide discounting transition, not all derivative instruments. • During the first quarter of 2021, we elected to apply certain optional expedients to derivative instruments that were modified in the first quarter due to the adoption of fallback language recommended by the ISDA to address the anticipated cessation of LIBOR. These optional expedients remove the requirement to remeasure contract modifications or dedesignate hedging relationships due to reference rate reform. We applied these optional expedients consistently to all eligible LIBOR cessation-related contract modifications and hedging relationships since election. • During the fourth quarter of 2021, we elected to apply certain optional expedients for contract modifications to receivables modified in the fourth quarter due to the cessation of 1-week and 2-month USD LIBOR tenors and non-USD Interbank Offered Rates. These optional expedients remove the requirement to assess whether the contract modification was more-than-minor in accordance with ASC 310. We also elected to apply certain optional expedients related to assessing hedge effectiveness to our cash flow hedge relationships affected by reference rate reform. We applied these optional expedients consistently to all eligible LIBOR cessation-related contract modifications and hedging relationships since election. • During the second quarter of 2023, we elected and applied certain optional expedients for contract modifications and hedging relationships impacted by the central clearing counterparties conversion processes for LIBOR-indexed derivative instruments. These optional expedients remove the requirement to remeasure contract modifications or dedesignate hedging relationships due to reference rate reform. The elections made apply only to derivatives instruments impacted by the central clearinghouse conversion process. • During the second quarter of 2023, we applied certain optional expedients for investment security, debt and preferred stock instrument contract modifications impacted by LIBOR cessation. These optional expedients remove the requirement to remeasure contract modifications. • We may elect additional optional expedients for contract modifications and hedge relationships affected by reference rate reform through the effective date of this guidance.

Accounting Standards Update	Description	Financial Statement Impact
Troubled Debt Restructurings and Vintage Disclosures - ASU 2022-02 Issued March 2022	• Eliminates the accounting guidance for TDRs and requires an entity to apply the loan refinancing and restructuring guidance to determine whether a modification results in a new loan or a continuation of an existing loan. • Eliminates the requirement to use a discounted cash flow approach to measure the allowance for credit losses for TDRs. • Enhances disclosure requirements for certain loan refinancings and restructurings by creditors when a borrower is experiencing financial difficulty. • Requires disclosure of current-period gross charge-offs by year of origination for financing receivables and net investments in leases within the scope of CECL.	• Adopted January 1, 2023 using a modified retrospective transition approach for the amendments related to the recognition and measurement of TDRs. • The impact of adoption resulted in a decrease to the beginning period ALLL of $35 million, resulting in an increase to retained earnings of $26 million, net of tax, as of January 1, 2023. • The presentation of our loan modification disclosures have been updated to reflect information on loan modifications given to borrowers experiencing financial difficulty and can be found within Note 3 Loans and Related Allowance for Credit Losses. TDR disclosures are presented for comparative periods only and are not required to be updated in current periods. Additionally, our vintage disclosure has been updated to reflect gross charge-offs by year of origination.

Accounting Standards Update	Description	Financial Statement Impact
Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method – ASU 2023-02 Issued March 2023	• Permits reporting entities to elect to account for their tax equity investments, regardless of the tax credit program from which the income tax credits are received, using the proportional amortization method if certain conditions are met. • A reporting entity makes an accounting policy election to apply the proportional amortization method on a tax-credit-program-by-tax-credit-program basis rather than electing to apply the proportional amortization method at the reporting entity level or to individual investments.	• Early adopted September 30, 2023, using a modified retrospective transition approach for the amendments related to our tax credit programs that are eligible to apply proportional amortization. The cumulative effect to retained earnings as of January 1, 2023 was immaterial. • At adoption, we elected to apply the proportional amortization method to all qualifying investments in the NMTC program. PNC historically applied proportional amortization to LIHTC investments since applying ASU 2014-01. • See Note 4 Loan Sale and Servicing Activities and Variable Interest Entities for the impact of adoption.