



Wells Fargo & Company

Annual Company-Run Stress Test Results

June 21, 2019

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In this Report, when we refer to “Wells Fargo,” “the Company,” “we,” “our” or “us”, we mean Wells Fargo & Company and Subsidiaries (consolidated). When we refer to “Wells Fargo Bank, N.A.” or “the Bank,” we mean Wells Fargo Bank, National Association, the Company’s principal subsidiary.

This Report contains forward-looking statements, including projections of our financial results and condition under a hypothetical scenario that incorporates a set of assumed economic and financial conditions prescribed by our regulators. The projections are not intended to be our forecast of expected future economic or financial conditions or our forecast of the Company’s or the Bank’s expected future financial results or condition, but rather reflect possible results under the prescribed hypothetical scenario. Our future financial results and condition will be influenced by actual economic and financial conditions and various other factors as described in our reports filed with the Securities and Exchange Commission (SEC) and available at www.sec.gov.

Overview

Wells Fargo & Company is a diversified, community-based financial services company with \$1.89 trillion in assets. Founded in 1852 and headquartered in San Francisco, Wells Fargo provides banking, investment and mortgage products and services, as well as consumer and commercial finance, through 7,700 locations, more than 13,000 ATMs, digital (online, mobile and social), and contact centers (phone, email and correspondence), and has offices in 33 countries and territories to support customers who conduct business in the global economy. With approximately 262,000 active, full-time equivalent team members, Wells Fargo serves one in three households in the United States and ranked No. 29 on *Fortune’s* 2019 rankings of America’s largest corporations. Wells Fargo ranked fourth in assets and third in the market value of our common stock among all U.S. banks at March 31, 2019.

As a large bank holding company, Wells Fargo is subject to the *Supervisory and Company-Run Stress Test Requirements for Covered Companies* rule issued by the Board of Governors of the Federal Reserve System (Federal Reserve) to implement the stress testing and disclosure requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act stress tests). A stress test is defined in the rule as “a process to assess the potential impact of scenarios on the consolidated earnings, losses, and capital of a company over the planning horizon, taking into account its current condition, risks, exposures, strategies, and activities.”

Since the 2008 financial crisis, stress testing has evolved as an important analytical tool for evaluating capital adequacy under assumed severely adverse conditions. Wells Fargo regularly uses such exercises in its capital management framework to measure our exposure to material risks and evaluate the adequacy of capital resources available to absorb potential losses arising from those risks and to continue to support lending and other key operations during severely adverse economic conditions. We conduct multiple stress tests each year under a range of adverse scenarios.

In this Report, we present the results of our 2019 annual company-run Dodd-Frank Act stress test. This test evaluates the potential impact of the 2019 supervisory severely adverse scenario¹, inclusive of the global market shock and the counterparty default components² (the Scenario), on the Company’s consolidated financial position. It is important to note that the supervisory severely adverse scenario is not a forecast but rather a hypothetical scenario with assumed economic and financial conditions designed by the Federal Reserve to assess the strength of banking organizations and their resilience to severely adverse economic environments and market conditions.

¹ For the supervisory severely adverse scenario description and macroeconomic variables, see Board of Governors of the Federal Reserve System, “2019 Supervisory Scenarios for Annual Stress Tests Required under the Dodd-Frank Act Stress Testing Rules and the Capital Plan Rule,” February, 2019, available at <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20190213a1.pdf>

² Wells Fargo is subject to both the instantaneous market shock and default assumption by its largest trading counterparty. The market shock and counterparty default information published by the Federal Reserve for the 2019 stress test is available at <http://www.federalreserve.gov/bankinfo/ccar.htm>.

Our stress testing results in pro forma capital ratios that include specific assumptions regarding capital actions that are prescribed by the Dodd-Frank Act stress test rule³ (Dodd-Frank capital actions). The Dodd-Frank capital actions assume common stock dividend payments are maintained over the duration of the hypothetical scenario at the Company's quarterly average dollar amount calculated from Q2 2018 through Q1 2019 plus common stock dividends attributable to issuances related to expensed employee compensation or in connection with a planned merger or acquisition. In practice, if this Scenario were to occur, the Company would take capital conservation actions mandated by internal policy, which would include but not be limited to changes in common stock dividend payments.

We performed our stress test by projecting balance sheet changes, losses and related provision, revenue, expense, risk-weighted assets, and capital ratios under the Scenario using models and methodologies developed or selected by the Company, except where the assumptions, practices or methodologies were specifically prescribed by rules or instructions published by the Federal Reserve⁴. Because we employ models and methodologies developed by us, our results will differ, potentially significantly, from projections that the Federal Reserve will make for Wells Fargo as part of conducting its own Dodd-Frank Act stress test using the same Scenario such as differences in the Federal Reserve's risk-weighted asset assumptions compared to the Company's assumptions. In addition, the stress test results summarized in this Report are not comparable to the results of other stress tests performed by the Company in the past due to a number of factors, including the uniqueness of the scenarios used to prepare each stress test, differences in market conditions and the Company's financial position and exposures at the time each stress test is performed, differences in capital actions assumptions, and the evolving risk quantification methodologies and regulatory capital frameworks that may be applicable at the time each stress test is conducted.

The stress test results summarized in this Report should not be interpreted as expected or likely outcomes for the Company, but rather as a possible result under hypothetical, highly adverse economic conditions that do not take into account capital conservation actions mandated under internal policy if the Scenario were to actually occur. The results of our 2019 annual stress test suggest that the Company's performance would decline under the assumptions of the Scenario in response to increased provision expenses, reduced business volumes, lower net interest income, and higher market-related losses. As shown in Table 4, for the nine-quarter test horizon from January 1, 2019 to March 31, 2021, we project a cumulative total net loss before tax of \$17.0 billion. This cumulative net loss before tax reflects projected losses of \$44.4 billion from provision for loan losses, trading and counterparty credit losses, and losses on debt securities. These losses are partially offset by projected cumulative pre-provision net revenue (PPNR) of \$27.4 billion, which represents projected net interest income plus noninterest income less noninterest expense.

Our pro forma Common Equity Tier 1 ratio, decreases from 11.7% at December 31, 2018 to 11.1% at March 31, 2021 (see Table 2). Despite projected declines in revenue, significant losses, and the mandated assumption that capital conservation actions would not be taken, the projected minimum Common Equity Tier 1 ratio during the nine-quarter test horizon was 10.4%, well above the 4.5% stress test regulatory minimum. The Common Equity Tier 1 ratio results are calculated under the standardized approach, estimated under the Scenario assumptions provided by the Federal Reserve, and reflect the required Dodd-Frank capital actions.

³ The prescribed Dodd-Frank Act capital actions include estimated Q1 2019 capital actions taken by the Company, and for quarters two through nine of the test horizon, no issuance of regulatory capital other than assumed issuance of common stock for employee compensation or in connection with a planned merger or acquisition; payments of common stock dividends equal to the quarterly average dollar amount paid by the Company from Q2 2018 through Q1 2019; payments on all other regulatory capital instruments equal to the stated dividend, interest, or principal due during the quarter; and no capital redemptions or repurchases.

⁴ See Board of Governors of the Federal Reserve System, "Comprehensive Capital Analysis and Review 2019 Summary Instructions," March, 2019, for the CCAR and Dodd-Frank Act stress test instructions.

Supervisory Severely Adverse Scenario Overview

The Scenario published by the Federal Reserve and reflected in our stress test is characterized by a severe global recession accompanied by a period of heightened stress in commercial real estate markets and corporate debt markets. The U.S. economy experiences an abrupt, severe decline in output with real GDP falling 8% over the first seven quarters and unemployment increasing to 10% in Q3 2020. As a result of the severe decline in real activity, short-term Treasury rates fall and remain near zero through the end of the scenario period. Additionally, and separate from the macroeconomic assumptions, it is assumed that an instantaneous market shock impacts our trading and counterparty exposures resulting in significant losses. Table 1 summarizes key macroeconomic metrics from the Scenario⁵.

Table 1: Key Economic Metrics from the Supervisory Severely Adverse Scenario

Real GDP - 2018 Year End to Trough	(8.0) %
Unemployment Rate - Peak Level	10.0
Home Prices - 2018 Year End to Trough	(26.4)
Commercial Real Estate Prices - 2018 Year End to Trough	(35.0)
Dow Jones US Total Market Index - 2018 Year End to Trough	(50.0)
3-Month Treasury Yield - Trough	0.1
10-Year Treasury Yield - Trough	0.8

From the Federal Reserve's published variables we construct a more detailed Scenario comprising approximately 4,500 variables. At the national level for example, these additional variables include personal bankruptcy filings and mortgage foreclosures. At the sub-national level, the Scenario includes state and Metropolitan Statistical Area (MSA) measures of unemployment and home prices to better align with our geographic concentrations. In all instances, the methodology to expand the published variables is performed with a theoretically sound and empirically rigorous approach to facilitate coherence and internal consistency.

Summary Results for the Severely Adverse Scenario

Under the Scenario, the Company's pro forma Common Equity Tier 1 ratio, was projected to decrease from 11.7% at December 31, 2018 to 11.1% at March 31, 2021, the end of the nine-quarter test horizon. The projected minimum Common Equity Tier 1 ratio over the nine-quarter test horizon was 10.4%, which exceeds the 4.5% stress test regulatory minimum. The risk-based capital ratios are calculated under the standardized approach and reflect the Dodd-Frank capital actions. As shown in Table 2, all capital ratios remain above the regulatory minimum ratios throughout the nine-quarter test horizon.

⁵ For the full set of economic variables and scenario descriptions, see Board of Governors of the Federal Reserve "2019 Supervisory Scenarios for Annual Stress Tests Required under the Dodd-Frank Act Stress Testing Rules and the Capital Plan Rule," February, 2019, available at <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20190213a1.pdf>.

Table 2: Projected Capital Ratios

	Actual	Stressed pro forma ratios		Regulatory
	Dec. 31, 2018	Mar. 31, 2021	Minimum	Minimum (1)
Common Equity Tier 1	11.7 %	11.1 %	10.4 %	4.5 %
Tier 1 risk-based capital	13.5	13.2	12.2	6.0
Total risk-based capital	16.6	16.8	15.6	8.0
Tier 1 leverage	9.1	7.9	7.9	4.0
Supplementary leverage ratio	7.7	7.1	7.0	3.0

Memo items - Risk-Weighted Assets (2)

(in billions)

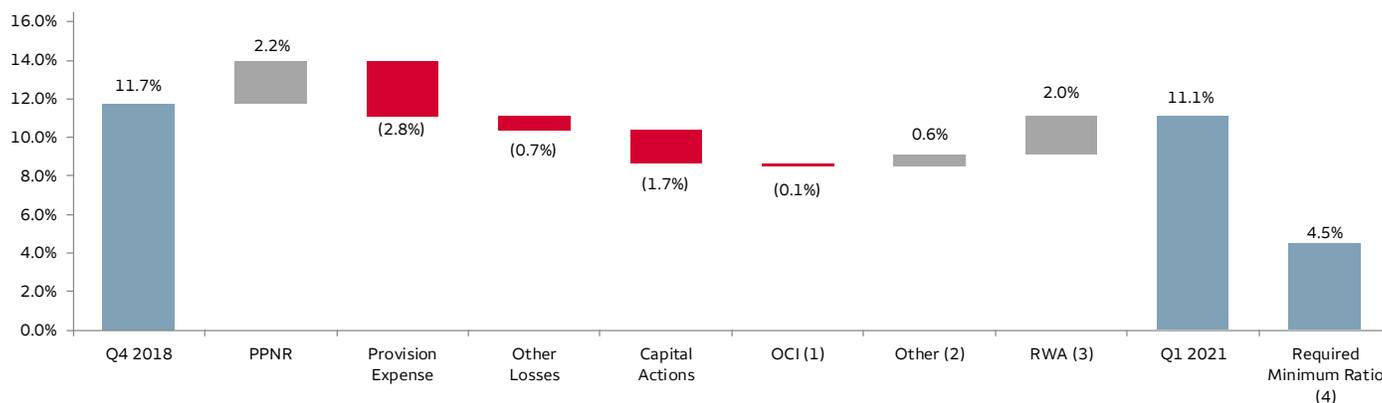
Standardized approach	\$	1,247.2	\$	1,023.7
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(1) As defined by the regulations issued by the Federal Reserve, OCC and FDIC. Under CCAR stress testing rules, the required minimum regulatory ratios do not include the GSIB capital surcharge, the capital conservation buffer, the countercyclical buffer, or the supplemental leverage buffer.

(2) Risk-weighted assets are calculated under the standardized risk-based capital approach.

As shown in Table 2, the pro forma Tier 1 capital ratio was projected to decline by 30 basis points (bps) and the Total risk-based capital ratio was projected to increase 20bps by the end of the nine-quarter test horizon due to changes in the level of Common Equity Tier 1. All three of the risk-based capital ratios were affected by a decrease in risk-weighted assets mainly driven by the decline in loan balances. The 120bps decrease in the projected pro forma Tier 1 leverage ratio was due to lower ending Tier 1 capital. The supplementary leverage ratio also remains well above the 3% regulatory minimum. The projected capital ratios in Table 2 remain above the regulatory minimum.

Table 3: Common Equity Tier 1 Ratio Attribution Analysis



(1) Other comprehensive income.

(2) Other incorporates all other adjustments, including mortgage servicing rights, goodwill and other intangibles, income tax, and net income attributable to non-controlling interests.

(3) Risk-weighted assets.

(4) The required minimum ratio does not include the GSIB capital surcharge or the capital conservation buffer.

Numbers may not foot due to rounding.

As shown in Table 3, the material drivers of changes in the projected pro forma Common Equity Tier 1 ratio include projected positive pre-provision net revenue offset by provision expense, other losses, which include the market shock and counterparty default, as well as the mandated Dodd Frank capital actions and a decline in other comprehensive income. Risk-weighted assets decline over the nine-quarter test horizon due primarily to a decline in loan balances as a result of

charge-offs and weakened loan demand. Throughout the nine-quarter forecast horizon our projected Common Equity Tier 1 ratio remains above the regulatory minimum.

As shown in Table 4, for the nine-quarter test horizon we projected a cumulative pro forma net loss before taxes of \$17.0 billion.

Table 4: Nine-Quarter Cumulative Projected Net Revenue, Losses and Net Income Before Taxes

(in billions)	Nine quarter cumulative, ending Mar. 31, 2021	Percent of average assets (1)
Pre-provision net revenue (2)	\$ 27.4	1.5%
Less		
Provision for loan and lease losses (3)	35.0	
Realized losses on securities & Other Losses (4)	0.7	
Trading and counterparty losses (5)	8.7	
Subtotal of losses	44.4	
Net income before taxes	\$ (17.0)	-1.0%
Memo items		
Other comprehensive income (6)	\$ (1.2)	
<i>Other effects on capital</i>	Q4 2018	Q1 2021
Accumulated other comprehensive income included in capital	\$ (5.8)	\$ (7.0)

(1) Average assets is the nine-quarter average of total assets (from Q1 2019 through Q1 2021).

(2) Pre-provision net revenue represents net interest income plus noninterest income less noninterest expense. It includes losses from operational risk events and expenses associated with the change in the allowance for unfunded commitments. It includes projected change in fair value of loans held for sale (and commitments to commit assumed to become held for sale) and loans accounted for under the fair value option of \$0.7B.

(3) Provision for loan and lease losses is reported in accordance with the reporting criteria required in the FR Y-14A.

(4) Realized losses on debt securities is \$0.5B. Other Losses of \$0.2B primarily include realized gains and losses on marketable equity securities.

(5) Trading and counterparty losses include mark-to-market losses, changes in credit valuation adjustments (CVA), single largest counterparty default, incremental default losses, and losses on non-trading related private equity positions that were subject to the global market shock stress.

(6) Projected other comprehensive income is reported in after-tax dollars and includes incremental unrealized losses/gains on available for sale securities and held to maturity securities that have experienced other than temporary impairment and includes unrecognized losses/gains on pension plan obligations and pension assets.

Pre-Provision Net Revenue

The estimated stressed pre-provision net revenue of \$27.4 billion reflects declining levels of net interest income and noninterest income over the nine-quarter test horizon, slightly offset by lower noninterest expense.

The decline in net interest income is due primarily to lower loan demand, consistent with a severe recession, low interest rates, higher levels of nonperforming assets, and the incorporation of an assumed liquidity stress event that increases our funding costs. The Scenario assumes short-term interest rates remain at 0.1% throughout the hypothetical test horizon, which reduces our net interest income. Lower trust and investment fees, lower mortgage banking fees, and reductions in most other noninterest income categories result from the hypothetical depressed economic environment. Trust and investment fees are lower as a result of the depressed equity market levels and slower economic growth. Mortgage banking fees decline due to net losses hedging the fair value of mortgage servicing rights (MSRs), as other risks emerge in this hypothetical scenario. Noninterest expense declines over the nine-quarter test horizon largely driven by lower personnel expense. However, the overall reduction is partially offset by higher operating and reputational losses, FDIC deposit insurance expense, and foreclosed assets expense associated with a weak economic environment.

Provision for Loan and Lease Losses

The nine-quarter cumulative provision for loan and lease losses was projected at \$35.0 billion and consists of projected loan loss net charge-offs of \$26.1 billion and a net increase in the allowance for loan and lease losses (ALLL) of \$8.9 billion under the hypothetical scenario. Per the Federal Reserve's instructions, we did not reflect adoption of accounting standard No. 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments (CECL).

Projected loan losses by type of loan are presented in Table 5.

Table 5: Projected Loan Losses by Type of Loan under the Supervisory Severely Adverse Scenario ⁽¹⁾

(in billions)		Nine quarters cumulative Mar. 31, 2021	Cumulative portfolio loss rate ⁽⁴⁾
First lien mortgages, domestic	\$	1.1	0.4%
Junior lien and home equity lines of credit, domestic		1.0	2.4%
Commercial & industrial ⁽²⁾		6.4	3.3%
Commercial real estate, domestic		3.0	2.5%
Credit card		6.4	17.5%
Other consumer		3.2	4.9%
All other loans ⁽³⁾		5.0	3.0%
Projected loan losses	\$	26.1	2.9%

(1) The loan categories presented in Table 5 adhere to FR Y-14A reporting definitions and will differ from the loan categories presented in our financial reports filed with the SEC.

(2) Commercial and industrial loans include small and medium enterprise loans and corporate cards.

(3) All other loans are largely commercial loans, and include loans to purchase or hold securities, loans secured by farmland, agricultural loans, loans to various financial institutions, and lease financing receivables, as well as overdrafts from commercial and consumer accounts.

(4) The cumulative portfolio loss rate is calculated by dividing the nine quarter cumulative net losses by the average loan balances over the same period. Average loan balances used to calculate portfolio loss rates exclude loans held for sale and loans held for investment under the fair value option.

While charge-offs represent the realization of loan losses that would have occurred each period in the hypothetical stress test, an increase in ALLL under the Scenario represents the recognition of loan losses and occurs in advance of the loan loss realization under generally accepted accounting principles (GAAP). The ALLL is management's estimate of incurred credit losses inherent in the loan portfolio at a specified point in time. Changes in the ALLL balance are reflected through the provision to help ensure adequate coverage of losses inherent in the loan portfolio at the specified point in time. Projected provision expense associated with the change in the allowance for unfunded credit commitments is included in pre-provision net revenue.

The commercial loan portfolio consists of commercial real estate (CRE) loans, which include CRE construction loans, and commercial non-real estate loans, which include commercial and industrial (C&I) loans and all other commercial loans. Estimated losses over the nine-quarter horizon on the commercial loan portfolio, including all other loans, totaled \$14.4 billion, or 55%, of the total loan losses in the Scenario. The estimated commercial loan losses were influenced by changes in the projected economic variables, particularly GDP, the unemployment rate, and commercial real estate prices.

The consumer loan portfolio consists of residential real estate loans (first lien, junior lien and home equity lines of credit), credit cards, and other consumer loans (primarily student loans, auto loans, and unsecured personal loans/lines of credit). Estimated losses over the nine-quarter horizon on the consumer portfolio totaled \$11.7 billion, or 45%, of the total loan losses in the Scenario. The estimated consumer loan losses were influenced by changes in the projected economic variables, notably the unemployment rate and home price index (HPI), and changes in the portfolio including the sale of Pick-a-Pay loans.

Realized and Unrealized Losses on Debt Securities

Pretax realized losses on debt securities, commonly referred to as other-than-temporary impairment (OTTI) write-downs, included in the pro forma income statement for the nine-quarter test horizon totaled \$0.5 billion. The investment losses were mainly driven by widening credit spreads, declining housing prices, and estimated deterioration in credit quality. Projected changes in unrealized losses on debt securities are included in other comprehensive income (OCI).

Trading and Counterparty Losses

Trading and counterparty credit losses totaled \$8.7 billion, which included mark-to-market losses, changes in credit valuation adjustment (CVA) reserves, incremental default losses, losses on non-trading related private equity positions projected under the global market shock, and an assumed default of our largest trading counterparty. The global market shock represents a significant increase in credit risk and associated risk premiums, a general increase in U.S. asset sales relative to other developed countries, and rising U.S. interest rates⁶. The counterparty default component incorporates an instantaneous and unexpected default of the counterparty with the largest net stressed exposure within the prescribed global market shock environment. These losses are assessed as of November 5, 2018, as prescribed by the FRB.

Wells Fargo Bank, N.A. Results

Wells Fargo Bank, National Association (Wells Fargo Bank, N.A., or the Bank) is a separate legal entity operating under a national bank charter within the Wells Fargo organizational structure and is the Company's principal subsidiary. In addition to performing Dodd-Frank Act stress testing on the consolidated Company, we also performed the annual stress tests required under rules and guidance published by the Office of the Comptroller of the Currency (OCC) with respect to the Bank⁷. The rules and guidance (including the macroeconomic severely adverse scenario) provided by the OCC for the Bank stress test were consistent with those provided by the Federal Reserve for the Dodd-Frank Act stress test performed on the consolidated Company.

The Bank accounted for approximately 90% of the Company's consolidated assets as of December 31, 2018. Accordingly, the results of the Bank's stress test under the same severely adverse scenario, including the counterparty default components, are similar in terms of the financial results of the consolidated Company, including the timing and severity of credit losses, changes in the balance sheet and pre-provision net revenues. The market shock component is also applied to the Bank, but as most of the market risk exposures subject to the market shock resides in other Wells Fargo non-bank legal entities, the loss generated from the shock is considerably less for the Bank than for the Company. In terms of capital ratios, however, there are differences when compared with the Company's capital ratios as the stress testing requirements for the Bank do not require the use of Dodd-Frank capital actions. Rather, the capital actions reflected in the Bank's pro forma capital ratios reflect management's judgment, guided by internal policy, of the actions the Bank would take to preserve capital under such severe economic conditions.

The projected results from the Bank's stress test are presented in Table 6.

⁶ The assumptions under the global market shock scenario differ from the nine-quarter macroeconomic scenario, both of which are prescribed by the Federal Reserve.

⁷ See 12 C.F.R. pt. 46 (2014).

Table 6: Wells Fargo Bank, N.A. Projected Capital Ratios for the Supervisory Severely Adverse Scenario

	Actual	Stressed pro forma ratios		Regulatory
	Dec. 31, 2018	Mar. 31, 2021	Minimum	Minimum (1)
Common Equity Tier 1	12.4 %	15.3 %	11.9 %	4.5 %
Tier 1 risk-based capital	12.4	15.3	11.9	6.0
Total risk-based capital	14.2	17.3	14.1	8.0
Tier 1 leverage	8.6	9.3	8.4	4.0
Supplementary leverage ratio	7.3	8.3	7.1	3.0

(1) Risk-based capital ratios represent minimum requirements per Minimum Supervisory Ratios and Standards (12 CFR part 225, Appendix A). The minimum regulatory ratios do not include the GSIB capital surcharge, the capital conservation buffer, or the supplemental leverage buffer.

As shown in Table 6, our projected pro forma Common Equity Tier 1 and Tier 1 capital ratios increased by 290bps while the Total risk-based capital ratio increased 310bps over the nine-quarter test horizon. The projected minimum Common Equity Tier 1 ratio over the nine-quarter test horizon was 11.9%, still well above the 4.5% regulatory minimum, and the other risk-based capital and leverage ratios all remained above the regulatory minimums as well. The increase in the ratios over the test horizon was driven primarily by a reduction in risk-weighted assets, due mainly to a decline in loan balances as a result of charge-offs and weakened loan demand, and reduced dividends to the parent. The 70bps increase in the projected pro forma Tier 1 leverage ratio was due primarily to lower assets.

Stress Testing Methodologies

The stress test described in this Report provides a forward-looking perspective on the potential risks to the Company's capital resources under the severely adverse conditions described in the Scenario. This section describes key risks considered in the stress test results and the methodologies applied to translate risk measures into estimates of potential losses over the nine-quarter test horizon. Among the key risks considered are credit risk, interest rate risk, market risk, liquidity risk, mortgage repurchase risk, reputation risk, operational risk, and the risks to capital associated with changes in OCI. Our Board of Directors and executive management have overall and ultimate responsibility for management of these risks, which are executed through committees and processes that help inform our capital adequacy assessments. Each Board committee receives reports and information regarding risk identification and monitoring, including emerging risks, directly from management and, in some cases, management committees have been established to inform the development of the risk management framework and provide governance and advice regarding risk management functions⁸. The Capital Management Committee, a management-level committee, is responsible for the overall capital management framework, including but not limited to, our capital management policy, setting capital targets and triggers, and recommending capital actions to our Board after consideration of capital adequacy assessments through our internal capital adequacy assessment process (ICAAP). The Capital Adequacy Process Committee, a management-level committee, provides appropriate oversight for the company-wide stress testing process, a key component of our ICAAP. This committee is responsible for the review and approval of stress testing methodologies, oversight of our stress test framework, as well as directing, synthesizing and reviewing the results of stress tests.

This section also describes the methodologies applied to estimate capital resources over the nine-quarter test horizon. Key outputs from these methodologies are pro forma balance sheets and income statements, which are used to produce capital projections, including projections of risk-weighted assets, and all regulatory and other capital ratios. In developing

⁸ For additional discussion of risk management at Wells Fargo, please refer to our most recent Annual and Quarterly reports filed with the SEC, which are available on the Company's website at https://www.wellsfargo.com/invest_relations/filings

pro forma financial statements, the Company applies accounting practices consistent with the Company's significant GAAP accounting policies⁹ and regulatory capital rules, except where supervisory guidance specifies alternative treatments.

Our stress testing methodologies focus on empirically defining the relationship between macroeconomic variables and business volumes, revenues, and losses where appropriate in order to estimate outcomes that may result from the specified Scenario. We use a series of quantitative and qualitative models along with estimation methodologies, coupled with management judgment, to produce a comprehensive estimate of future business performance. Stress testing methodologies are subject to considerable uncertainties and modeling limitations, including uncertainty about the extent to which historical relationships between macroeconomic factors and business outcomes will continue to be relevant in a severely stressed economic environment and the potential for changes to customer behavior in response to changes in the environment. Consideration for these uncertainties and limitations when evaluating stress test results is a core part of our capital adequacy process.

Pre-Provision Net Revenue

Pre-provision net revenue includes projections of net interest income, noninterest income (trading/counterparty losses and realized losses on debt securities are excluded from PPNR as they are presented separately) and noninterest expense. Each of these components has distinct processes to consider a variety of risks, including interest rate risk, liquidity risk, market risk, mortgage repurchase risk, operational risk, and reputation risk in the generation of stress projections for the given test horizon.

Net Interest Income

Interest rate risk

Interest rate risk, which potentially can have a significant earnings impact, is an integral part of being a financial intermediary. We are subject to interest rate risk because:

- Assets and liabilities may mature or reprice at different times (for example, if assets reprice faster than liabilities and interest rates are generally rising, earnings will initially increase);
- Assets and liabilities may reprice at the same time but by different amounts (for example, when the general level of interest rates is rising, we may increase rates paid on checking and savings deposit accounts by an amount that is less than the general rise in market interest rates);
- Short-term and long-term market interest rates may change by different amounts (for example, the shape of the yield curve may affect new loan yields and funding costs differently);
- The remaining maturity of various assets or liabilities may shorten or lengthen as interest rates change (for example, if long-term mortgage interest rates increase sharply, mortgage-backed securities (MBS) held in the debt securities portfolio may pay down slower than anticipated, which could impact portfolio income); or
- Interest rates may also have a direct or indirect effect on loan demand, credit losses, collateral values, mortgage origination volume, the fair value of MSRs and other financial instruments, the value of the pension liability and other items affecting earnings.

The primary method of measuring earnings sensitivity from interest rate risk not associated with mortgage banking is through modeling net interest income. Net interest income is the interest earned on debt securities, loans (including yield-related loan fees), and other interest-earning assets minus the interest paid on deposits, short-term borrowings, long-term debt, and other interest bearing liabilities. Net interest income is significantly influenced by the mix and overall size of our asset portfolio and the cost of funding those assets. Changes to balance sheet mix can be driven by changes in

⁹ For additional information about Wells Fargo's significant accounting policies, please refer to Note 1 to Consolidated Financial Statements included in our most recent Annual and Quarterly Reports filed with the SEC, which are available on the Company's website at https://www.wellsfargo.com/invest_relations/filings

interest rates as well as other risk factors and economic variables. In addition, some variable sources of interest income, such as resolutions from purchased credit impaired (PCI) loans, loan fees and collection of interest on nonaccrual loans, can vary from period to period. The estimation process for net interest income is built on two fundamental components. The first component is the projection of expected behavior on existing balance sheet portfolios over the nine-quarter test horizon under the Scenario. The second component is the projection of expected growth and pricing behavior for new business originated over the nine-quarter test horizon under the Scenario.

To model the first component, which is the expected behavior of the existing balance sheet, instrument details are collected for the Company's investment, loan, deposit, and debt portfolios. This detailed data is used to project the interest income and expense of existing portfolios specific to the Scenario conditions. The second component, which is new business and origination assumptions, incorporates a variety of considerations including historical loan and deposit growth, economic conditions influencing the business environment, observed spreads on new production, and planned strategic actions. The modeling methodology and management judgment applied to behavioral assumptions varies depending on the product being considered. For example, the modeling approach for loan and investment prepayment projections varies by portfolio and is generally based on historical relationships and drivers specific to each individual portfolio. In the case of estimating administered deposit yields, methodologies used for stress test purposes are consistent with management practices and include the consideration of historical experience and current expectations of strategic actions. In all cases, the resulting forecast of product behaviors in each scenario is evaluated relative to the Company's experience in various relevant economic environments and for consistency with business strategy.

Liquidity Risk

Effective liquidity risk management is designed to ensure we can meet customer loan requests, customer deposit maturities/withdrawals and other cash commitments efficiently under both normal operating conditions and under periods of Wells Fargo-specific and/or market stress. Liquidity risk can result in a negative impact to capital from actions the Company may take to meet liquidity objectives designed to minimize liquidity risk in the Scenario. Accordingly, we perform a comprehensive analysis to determine the specific hypothetical liquidity events to occur under the conditions specified in the Scenario. In our analysis, we quantify the potential outflows of cash and the related impacts to interest income and expense that might arise by considering factors such as the runoff of consumer and commercial deposits, the nonrenewal of maturing wholesale funding sources, the drawdown of committed customer lines of credit, and the need for additional collateral requirements. To gauge the magnitude of these factors, we largely rely on the liquidity experience observed by Wachovia Corporation (Wachovia) during the second half of 2008, including the aftermath of the Lehman Brothers bankruptcy. The data from Wachovia's crisis period prior to its acquisition by Wells Fargo provided empirical data for our liquidity stress scenario calculations. We also identify the funding sources needed to satisfy the assumed outflows of cash and quantify the related impacts to interest income and expense as well as the impact of increases in our debt issuance costs.

Noninterest Income

Projected noninterest income largely consists of revenue generated from service charges on deposits, trust and investment fees, card fees, mortgage banking fees, and all other fees. Loss projections for trading and debt securities portfolios are presented separately and discussed in the subsequent Market Risk Related Losses section. Trust and investment fees are largely derived from providing services to our brokerage customers, managing and administering assets, and investment banking activities. Mortgage banking fees primarily include fees and income associated with originating and servicing loans, net gains/losses on hedging the fair value of MSR's, and changes to the mortgage repurchase reserve. All other fees include charges and fees on loans, trading and equity gains, life insurance income, and operating lease income. The estimation process for noninterest income is based on macroeconomic and financial market variable assumptions, as well as key business performance metrics. The models we use to estimate noninterest income vary across the major noninterest income categories and are tailored to the specific underlying business activity being considered. Our models are informed by historical relationships between macroeconomic drivers and revenue streams. We then leverage data-driven approaches (where appropriate), expectations around new business, impact of regulatory changes, and management judgment. For example, specific financial market and macroeconomic variables such as the

Dow Jones U.S. Total Market Index and GDP are incorporated into the projections based on their assumed levels in the Scenario.

Mortgage Banking Interest Rate and Market Risk

Interest rate and market risk can be substantial in the mortgage business. Changes in interest rates may impact total origination and servicing fees, the fair value of residential MSRs, the fair value of mortgages held-for-sale (MHFS), the fair value of derivative loan commitments (interest rate “locks”) extended to mortgage applicants, the associated income and loss reflected in mortgage banking noninterest income, and the income and loss associated with instruments used to hedge changes in the fair value of MSRs, MHFS, and interest rate locks.

Interest rates affect the amount and timing of origination income and net mortgage servicing fees because consumer demand for new mortgages and the level of refinancing activity are sensitive to changes in mortgage interest rates. The earnings sensitivity to interest rates is greater when prevailing mortgage rates are below the average rate on the total mortgage debt outstanding. Conversely, interest rate risk will be reduced as mortgage rates rise to levels above the average rate of the servicing portfolio. Typically, a decline in mortgage interest rates will lead to an increase in mortgage originations and fees, and a decrease in net mortgage servicing fees. The Scenario interest rates drive assumptions around changes in the origination market size and loan prepayments. These assumptions are used to project the potential net impact on the Company’s balance sheet and income statement.

Mortgage Repurchase Risk

Wells Fargo sells mortgage loans to investors under contractual provisions that may include certain representations and warranties. Repurchase risk arises from the potential that a contractual representation or warranty has been breached and the breach is not remedied within a specified period (usually 90 days or less) after receiving notice of the breach. Wells Fargo establishes a repurchase reserve that reflects management’s estimate of losses for loans we have sold for which we could have a repurchase obligation, whether or not we currently service those loans, based on a combination of factors.

The repurchase risk typically diminishes over time as customers meet their contractual obligations, gain equity in their home, or both. Our estimates of repurchase risk are projections of repurchase losses by exposure type based on default expectations, estimated levels of origination defects, reimbursement by correspondent and other third party originators, and projected loss severity. While the repurchase reserve covers life of loan exposures, considerations such as government sponsored enterprise (GSE) representation and warranty relief, repurchase settlements, and statute of limitations provide limits to potential repurchase liabilities in severely adverse economic scenarios.

Noninterest Expense

Estimates of noninterest expense, primarily personnel-related expenses, are closely associated with the projected level of business activity, the overall strength or weakness of the assumed economic environment, or otherwise based on standard, defined calculations. In addition to routine business driven expenses, consideration is also given to expenses that may materialize from other risks in the stress environment such as operational losses or foreclosed assets related expenses. Our methodologies employ historical experience and management judgement where noninterest expense relationships are indeterminate with economic drivers or financial market variable assumptions.

Operational Risk

Operational risk is the risk resulting from inadequate or failed internal controls, processes, people and systems, or external events. Operational risk losses may be caused by events such as fraud, breaches of customer privacy, business disruptions, inappropriate employee conduct, and vendors that do not perform their responsibilities, all of which can lead to additional expenses in the form of regulatory fines and penalties and litigation. As such, operational risk is broadly defined for inclusion in our stress tests.

The scope of operational risk includes loss events that range from highly frequent, but low-impact losses to those that are much less frequent, but which have significant financial impacts. It is not uncommon for a few large events to generate the majority of the financial impact.

While the drivers of operational risk can vary by business and risk, the most significant financial impacts in our stress test often relate to alleged improper business activities, resulting in litigation and/or regulatory actions. Certain risks, such as transaction processing errors and external fraud events can occur more frequently and can be significant in the aggregate, but generally have less financial impact per event than loss events involving litigation. Material losses can also arise from a range of external events, such as cyber threats, as well as those that are less frequent, such as earthquakes or other natural disasters. All of these events are considered in our capital stress tests.

Our operational risk loss estimation process is comprehensive and uses a blend of quantitative and qualitative estimation methods. One of the qualitative estimation components uses a scenario-based loss estimation approach, leveraging day-to-day risk management expertise from group business and risk leaders and the legal department to identify drivers of risk and estimate potential loss exposure under a variety of stressed scenarios. We use scenario analysis, internal and external reference data, and informed judgment in estimating losses for operational risks that are generally not closely tied to macroeconomic factors. Given the difficulty in applying statistical techniques to a small population of loss events and the application of a qualitative, scenario-based approach which relies on informed judgment, we benchmark the projections using multiple approaches to assess reasonableness of the loss projections.

Reputation Risk

Reputation risk, the risk arising from negative perceptions by stakeholders, whether real or not, resulting in potential loss of trust in the Company's competence or integrity, is inherent in our business and remains elevated due to our risk profile in the financial services industry, and sales practice related matters and other instances where customers have or may have experienced financial harm. When determining the impacts in our stress tests from such breakdowns, we use management judgment and subject matter expertise in our assessment of the level of reputation risk generated by negative public perceptions of the Company in recognition of the fact that reputation risk can generate outcomes which are difficult to quantify and/or not easily predicted.

Provision for Loan and Lease Losses

Credit Risk

Loans represent the largest component of assets on our balance sheet and their related credit risk is among the most significant risks we manage. We define credit risk as the risk of loss associated with a borrower or counterparty default (failure to meet obligations in accordance with agreed upon terms). Loss projections for counterparty credit risk are presented separately and discussed in the Market Risk Related Losses section. Credit risk associated with a borrower default on a loan in the held for investment portfolio is translated to the pro forma income statement through the provision for loan losses, reflecting projected loan losses that would be realized as charge-offs in accordance with the Scenario and the provision reflecting the change appropriate to help ensure adequacy of the ALLL at the end of each period.

Loan Loss Forecasting

When estimating loan losses, probability of default (PD), loss severity (referred to as loss given default (LGD)), and exposure at default (EAD) components are combined to produce loan loss estimates. Loss estimates take into consideration the unique characteristics of our commercial and consumer loan portfolio segments. For each portfolio segment, losses are estimated collectively for groups of loans with similar risk characteristics.

A variety of models are used to project losses on the loans in the held for investment loan portfolio. While we report our loan portfolio by commercial and consumer portfolio segments in our financial reports filed with the SEC, for the purpose of stress testing we segment our portfolios between individually graded commercial loans (Wholesale) and Retail loans that include both consumer loans and scored small business commercial loans. The methodologies described in this section cover the models developed for the major categories of Wholesale and Retail loans. The loan loss projections take into consideration many factors, including historical performance, the forecasted economic scenarios, current credit characteristics, and for Wholesale loans, loan-level credit quality ratings and other loan characteristics. Where appropriate, we incorporate state, local, and foreign economic variables to reflect geographical concentrations within a given loan

portfolio. Management judgement is applied to modeled results, as necessary, to address model limitations identified through reviews of model performance, current and emerging risks, and, to a lesser extent, knowledge of recent trends or other factors not considered adequately captured by the models.

Wholesale Lending: Individually Graded

The Wholesale portfolio consists of two major segments for loss modeling purposes: investor/developer CRE and Corporate loans, which include C&I, owner/occupied CRE, farmland, financial institutions, and leasing. Loans in the Wholesale portfolio are subject to individual risk assessments using our internal borrower and collateral quality ratings.

The loss modeling framework relies principally on a PD, LGD and EAD framework. The PD model segments borrowers based on asset type, industry, exposure size and line of business and mostly relies on borrower quality rating migration matrices. Borrower quality ratings migration, and default likelihood are forecasted based on changes in economic variables, such as GDP, unemployment rates and asset prices. Separate models are used to forecast losses on domestic corporate loans, foreign corporate loans, investor/developer CRE loans and scored commercial portfolios. For investor/developer CRE loans, loan-level attributes such as loan-to-value and net operating income are combined with projected changes in commercial real estate price movements by property type and geographic location. While the domestic corporate loan segment utilizes national forecasts of macroeconomic variables, foreign corporate loans forecast credit losses using foreign macroeconomic variables. In all segments, the LGD model forecasts the loss severity on defaulted loans, which is dependent on the underlying collateral quality as well as economic conditions. The EAD model forecasts the portion of commitment amount that is funded at the time of default. These three components are combined for a given loan to calculate the forecasted losses for each quarter in the forecast horizon.

Retail Lending: Residential Real Estate (First Lien Mortgages and Home Equity Loans, Junior Lien Loans, and Home Equity Lines of Credit)

Losses on residential first lien mortgages and home equity loans are forecasted using models which project both PD and LGD. The loss forecast model for first lien portfolios is a loan-level model that predicts the conditional probabilities of reaching loss based on national, MSA- and state-level economic variables (including unemployment, HPI, mortgage rates, and real GDP) and loan attributes (for example, loan-to-value).

Our junior lien loans and home equity lines of credit loss forecasting process leverages a loan-level model which projects PD, LGD, and EAD based on national and MSA-level variables, including unemployment and HPI and loan attributes.

Retail Lending: Credit Cards

Projected losses on the credit card portfolio are based upon borrower characteristics and the impact of forecasted macroeconomic variables on the PD. An account level model is utilized to project losses on the largest segment of the credit card portfolio. Account activity, credit bureau attributes, and macroeconomic variables such as unemployment and bankruptcy filings are used to generate PD and EAD. A segment-level model which assigns each current exposure into a risk tier based on delinquency status and credit score is used to project losses on the less significant credit card segments. For recovery recognition, estimated recovery rates are modeled using macroeconomic, time since default and default type.

Retail Lending: Other

The other retail lending category includes the auto portfolio, student loan portfolio, personal lines and loans portfolio, the scored small business and business card portfolio, and several other smaller portfolios. Customized product models, which are mostly estimated at the loan level, are used to project losses within this diverse collection of portfolios.

Allowance for Loan and Lease Losses

The Company estimates the ALLL for each quarter of the nine-quarter forecast horizon using a methodology consistent with the following accounting standards:

- Accounting Standards Codification (ASC) 450-20 governs allowance attributable to non-impaired loans for losses that are probable and estimable;

- ASC 310-10-35 and 310-40 governs allowance for impaired loans (nonperforming, individually graded commercial loans and loans modified under a troubled debt restructuring); and
- ASC 310-30 governs allowance for Purchased Credit Impaired (PCI) loans.

Our ALLL methodology reflects Wholesale and Retail portfolio segments for stress testing purposes. While we attribute portions of the allowance to our respective Wholesale and Retail portfolio segments, the entire allowance is available to absorb credit losses inherent in the total loan portfolio.

Wholesale Portfolio Allowance

Average PD, LGD and EAD estimates are applied to projected quarterly loan distributions to calculate the Scenario based allowance estimates. Consistent with GAAP, nonperforming loan loss allowance is an estimate of the loss over the life-of-loan.

Retail Portfolio Allowance

The Retail loss forecasting models produce quarterly loss estimates. Loans are pooled generally by product type with similar risk characteristics. The ASC 450 allowance is estimated using forecasted losses to represent our best estimate of incurred loss based on historical experience, using quantitative and other mathematical techniques to translate our stress loss forecast into an appropriate allowance estimate.

Estimated troubled debt restructuring (TDR) volumes and associated life-of-loan losses are stressed throughout the observation period. Cash flow shortfalls from PCI mortgages are estimated using life-of-loan models, and related credit provision expenses are recognized as applicable to establish an appropriate allowance.

An incremental estimate for imprecision is included in both Wholesale and Retail allowance estimates to reflect inherent uncertainty in the process, judgments and estimates, particularly model risk and unforeseen changes in customer behavior.

Market Risk Related Losses

Market risk related losses result from adverse changes in the fair value of our trading and securities portfolios due to changes in market risk factors such as interest rates, credit spreads, foreign exchange rates, equity and commodity prices, and possible loss due to counterparty risk. This includes implied volatility risk, basis risk, and market liquidity risk. Market risk related to our available-for-sale debt securities portfolio and derivatives portfolio are reflected in estimates of OTTI and changes in market values. Market risk is also reflected in estimates of trading, private equity, and counterparty credit related losses. Counterparty related market losses occur when trading obligations are not fulfilled, and is measured by the likelihood of default of our trading counterparties. Additionally, unrealized losses can also occur if either positive exposures or expected default increase due to underlying market movement.

Securities Portfolio

The securities portfolio primarily consists of debt securities with losses projected through OTTI over the stress test horizon. Securities with projected market values below carrying values are evaluated for potential OTTI under the stress scenario. Projected market values are derived using assumptions consistent with the macroeconomic variables.

No future sales of securities are assumed to occur over the test horizon in the Scenario. Therefore, in the stress test we recognize OTTI if under scenario conditions we would not expect to recover the entire amortized cost basis of the security. The OTTI write-down is separated into an amount representing the credit loss, which is recognized in earnings. In addition, OCI represents unrealized gains/losses on the value of the securities that may fluctuate over the forecast horizon.

To project the amount, if any, of the security's amortized cost basis we would not expect to recover in the stressed environment, we perform a credit analysis to estimate the performance of the underlying credit or collateral positions under the projected economic conditions. In general, the methodology we use to estimate the credit-related component of OTTI varies based on the type of security under evaluation.

- Assets assumed not to be at risk for OTTI: We assume projected declines in the market values of U.S. Treasury and federal agency obligations as well as federal agency MBS are not due to credit risk given the implicit or explicit guarantees provided by the U.S. government.
- Asset-backed Securities: For securitized assets, detailed cash flow projections are developed for the underlying collateral. The unique credit characteristics of each transaction are analyzed and security-level collateral projections are created, factoring in scenario economic conditions. Key assumptions developed for determining the projected cash flows include default rates, loss severities and prepayment rates. The estimated collateral performance is then used to project cash flows to the various tranches in the security structure to create a set of projected bond cash flows. The debt security's cost basis is compared with the present value of the projected bond cash flows, discounted at the security's effective yield, and the difference is recognized in the pro forma income statement as credit related OTTI.
- Direct obligation assets: For assets where the credit risk is the direct obligation of the issuer (for example, corporate debt and municipal bonds), for each position we develop projections of credit losses considering the issuer's credit quality and migration of the credit quality, the type of security (secured or unsecured), and the projected economic conditions. The expected credit losses are compared with the security's amortized cost to determine OTTI.

Trading and Counterparty Credit Risk

Our approach to projecting market risk trading stress loss estimates is based upon shocking market risk factors and observing their impact on the value of the firm's trading and private equity portfolio. The market risk trading stress loss estimate is computed using a full revaluation methodology in which the portfolio is fully repriced under the stressed market conditions. For the specified scenario, the shifts of one or more risk factors are applied simultaneously to the position and the position is revalued. The difference between the base trade valuation and the post-shock valuation is the stress loss (or gain) estimate. The results are calculated for each position and aggregated to determine the stress loss estimate for the entire trading portfolio.

We estimate counterparty losses arising from two sources: (1) the increase in the CVA reserve, which is a measure of market implied credit losses and (2) the incremental losses associated with counterparty default, including largest counterparty default losses and correlated counterparty default losses.

The estimation of counterparty credit risk varies across the different portfolios and is multidimensional in nature to capture the stress of exposures, the stress of credit quality, and timing. Stressing of exposures predominantly occurs through the application of market shocks to risk drivers associated with underlying trades. The credit component of CVA is stressed by directly shocking the credit spreads used to price CVA. Credit spreads are market implied PD's which are classified as either observable market instruments, liquid credit default swaps (CDS) or observable bond prices for example, or as illiquid names. Counterparty names which have observable market instruments are referred to as liquid and are stressed by widening ratings-based spreads in each scenario. Counterparties which do not have observable market instruments are referred to as illiquid. The credit quality of these illiquid names are stressed by applying the market risk factor shocks to internal rating grades mapped to the external ratings.

For calculating the losses attributed to the Largest Counterparty Default (LCD) scenario component, the net stressed losses are calculated by applying the market risk factor shocks, then multiplying the resulting stressed net current exposure by a stressed LGD, and subtracting corresponding CVA for the counterparty from the resulting net stressed losses. LCD contagion is incorporated into related losses associated with our Default Fund Contribution for centrally cleared counterparties.

Changes in Capital and Capital Ratios

Capital estimates are derived from quarterly pro forma financial statements generated through the stress test projection process. The change in equity capital each quarter reflects the after tax net income (loss) estimate for that quarter adjusted for the Dodd-Frank capital actions required to be assumed during that quarter. The resulting equity capital balance for each quarter is adjusted for certain regulatory deductions defined by U.S. regulatory capital rules, including goodwill, to arrive at estimated regulatory capital. The pro forma balance sheet is risk-weighted from one quarter to the next to account for changes in the overall balance sheet size and mix and for changes in off-balance sheet exposures.

Assets are categorized and risk-weighted for each quarter of the nine-quarter horizon under the standardized approach. Other risk-weighted components (such as market risk and other adjustments) are also projected and included in the risk-weighted calculation process. The resulting regulatory capital estimate and risk-weighted assets are used to generate pro forma quarterly capital ratios.