

*Wells Fargo & Company*

# Annual Company-Run Stress Test Results

Under the Federal Reserve's Assumed Severely Adverse Scenario

March 5, 2015



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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 and available at [www.sec.gov](http://www.sec.gov).*

## Overview

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Wells Fargo & Company is a nationwide, diversified, community-based financial services company with \$1.7 trillion in assets. Founded in 1852 and headquartered in San Francisco, we provide banking, insurance, investments, mortgage, and consumer and commercial finance through more than 8,700 locations, 12,500 ATMs, the Internet ([wellsfargo.com](http://wellsfargo.com)) and mobile banking, and we have offices in 36 countries to support our customers who conduct business in the global economy. With approximately 265,000 active, full-time equivalent team members, we serve one in three households in the United States. Wells Fargo & Company was ranked No. 29 on *Fortune’s* 2014 rankings of America’s largest corporations. Our vision is to satisfy all our customers’ financial needs, help them succeed financially, be recognized as the premier financial services company in our markets and be one of America’s great companies.

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 adverse conditions. Wells Fargo regularly uses such exercises in its capital planning 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 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 2015 annual company-run Dodd-Frank Act stress test. This test evaluates the potential impact of the 2015 supervisory severely adverse scenario<sup>1</sup>, inclusive of the global market shock and the counterparty default components<sup>2</sup> (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 highly stylized, 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.

Our stress testing results in pro forma capital ratios that reflect specific assumptions regarding capital actions that are prescribed by the Dodd-Frank Act stress test rule<sup>3</sup> (standardized capital actions). The standardized capital actions assume dividend payments are maintained at 2014 levels across the test horizon; while in practice, if this Scenario were to occur, the Company would take capital conservation actions mandated by internal policy, which include changes in dividend distributions.

We performed our stress test by projecting losses and related provision, revenue, expenses and capital ratios under the Scenario using models and methodologies developed or selected by us, except where the assumptions, practices or methodologies were specifically prescribed by rules or instructions published by the Federal Reserve<sup>4</sup>. 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. In addition, the stress test results summarized in this Report are not comparable to the results of other stress tests performed by the Company 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 positions and exposures at the time each stress test is performed, and the evolving risk quantification methodologies and regulatory capital frameworks that may be applicable to each stress test.

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.

The results of our 2015 annual stress test suggest that the Company's performance would decline under the assumptions of the Scenario, in response to increased credit related provision expenses, reduced new business volumes, net interest margin compression, and market-related losses. For the nine quarter test horizon from October 1, 2014 to December 31, 2016, we project a cumulative total net loss before tax of \$4.2 billion. The cumulative net loss before tax reflects projected gross losses of \$53.6 billion, including provision for loan losses, trading and counterparty credit losses, and losses on investment securities. It

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<sup>1</sup> For the supervisory severely adverse scenario description and macroeconomic variables, see Board of Governors of the Federal Reserve System, "2015 Supervisory Scenarios for Annual Stress Tests Required under the Dodd-Frank Act Stress Testing Rules and the Capital Plan Rule," October 23, 2014, available at <http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20141023a1.pdf>.

<sup>2</sup> Wells Fargo is subject to both the instantaneous market shock and default by its largest trading counterparty. The market shock and counterparty default information published by the Federal Reserve for the 2015 stress test is available at <http://www.federalreserve.gov/bankinforeg/ccar.htm>.

<sup>3</sup> The prescribed Dodd-Frank Act capital actions include estimated Q4 2014 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; payments of common stock dividends equal to the quarterly average dollar amount paid by the Company in the previous year; 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.

<sup>4</sup> See Board of Governors of the Federal Reserve System, "Comprehensive Capital Analysis and Review 2015 Summary Instructions and Guidance," October 23, 2014, for the CCAR and Dodd-Frank Act stress test instructions.

also reflects projected cumulative pre-provision net revenue (PPNR), which is calculated as projected net interest income plus noninterest income minus noninterest expense, for the nine quarters of \$49.4 billion.

Our pro forma Common Equity Tier 1 ratio, calculated under the Basel III general approach in 2014 and the standardized approach with transitional arrangements thereafter, estimated under the Scenario assumptions and reflecting the standardized capital actions decreases from 11.1% at September 30, 2014 to 9.6% at December 31, 2016 (see Table 2). Despite projected declines in revenue and significant losses, and the mandated assumption that limited capital conservation actions would be taken, the projected minimum Common Equity Tier 1 ratio during the nine quarter test horizon was 9.1%, well above the 4.5% regulatory minimum.

## Supervisory Severely Adverse Scenario

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The severely adverse macroeconomic scenario published by the Federal Reserve is characterized by a severe recession in the U.S. with high unemployment, significant declines in real estate prices, and a sharp drop in the equity market. The long-term Treasury yield declines below 1% and short term interest rates remain near zero over the projection horizon. Table 1 summarizes key macroeconomic metrics from the Scenario<sup>5</sup>.

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

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Real GDP - Current to Trough	-4.6 %
Unemployment Rate - Peak Level	10.1
Home Prices - Current to Trough	-25.4
Commercial Real Estate Prices - Current to Trough	-34.6
Dow Jones Total Stock Market Index - Current to Trough	-57.9
10-Year Treasury Yield - Trough	0.9

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From the Federal Reserve’s published guidance we construct a more detailed Scenario comprising approximately 4,500 variables. At the national level, 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 house 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.

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<sup>5</sup> For the full set of economic variables and scenario descriptions, see Board of Governors of the Federal Reserve “2015 Supervisory Scenarios for Annual Stress Tests Required under the Dodd-Frank Act Stress Testing Rules and the Capital Plan Rule,” October 23, 2014, available at <http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20141023a1.pdf>

## Summary Results for the Severely Adverse Scenario

Under the Scenario, the Company's pro forma Common Equity Tier 1 ratio, calculated under Basel III, was projected to decrease from 11.1% at September 30, 2014 to 9.6% at December 31, 2016, the end of the test horizon. The capital ratio projections include the standardized capital actions. The projected minimum Common Equity Tier 1 ratio over the nine quarter test horizon was 9.1%, still significantly above the 4.5% regulatory benchmark minimum. As shown in Table 2, all capital ratios remain above regulatory minimum ratios throughout the nine quarter test horizon.

**Table 2: Projected Capital Ratios**

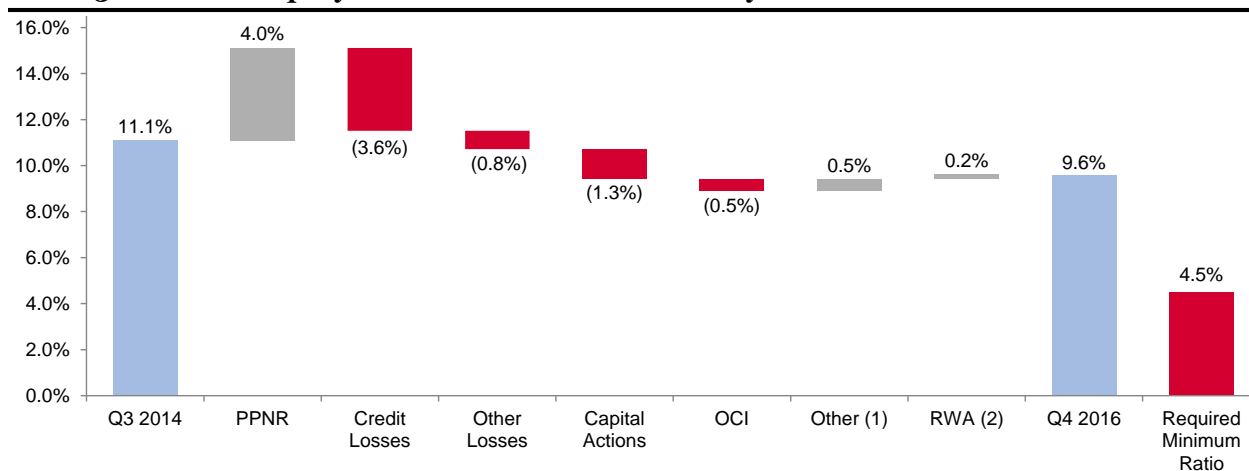
	Actual	Stressed pro forma ratios		2016 Regulatory
	Sept. 30, 2014	Dec. 31, 2016	Minimum	Minimum (1)
Tier 1 common equity (2)	10.8 %	10.7	9.5	5.0
Common Equity Tier 1 (2)	11.1	9.6	9.1	4.5
Tier 1 risk-based capital	12.6	11.0	10.5	6.0
Total risk-based capital	15.6	14.0	13.5	8.0
Tier 1 leverage	9.6	8.9	8.9	4.0
<b>Memo items - risk-weighted assets (3)</b>				
(in billions)				
Current general approach	\$ 1,222.9	1,113.5		
Basel III standardized approach		1,202.0		

(1) As defined by the regulations issued by the Federal Reserve, OCC and FDIC.

(2) Tier 1 common equity calculated under Basel I and Common Equity Tier 1 calculated under Basel III are non-GAAP financial measures that are used by investors, analysts and bank regulatory agencies to assess the capital position of financial services companies.

(3) For each quarter in 2014, risk-weighted assets are calculated using the Basel III general risk-based capital approach. For each quarter in 2015 and 2016, risk-weighted assets are calculated under the Basel III standardized risk-based capital approach, except for the Tier 1 common equity ratio which uses the Basel I general risk-based capital approach for all quarters (included those quarters in 2014).

**Table 3: Common Equity Tier 1 Ratio Attribution Analysis**



(1) Other incorporates all other adjustments, including mortgage servicing rights, goodwill and other intangibles, income tax and net income attributable to minority interests.

(2) Risk-weighted assets.

Our projected pro forma Common Equity Tier 1 to risk-weighted assets ratio under Basel III with transitional arrangements decreased 1.5% over the nine quarter test horizon and ended the test horizon at 9.6%, after reaching a projected minimum of 9.1%. 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 credit losses, the mandated, assumed standardized capital actions and a decline in other comprehensive income. Risk-weighted assets under the general risk-based capital framework 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.

The pro forma Tier 1 and Total risk-based capital ratios were both projected to decline 1.6% by the end of the nine quarter period due to changes in the level of Common Equity Tier 1 and the amortization of regulatory capital instruments. All three of the risk-based capital ratios under Basel III were affected by a decrease in risk-weighted assets mainly driven by the decline in loan balances as previously discussed. The 0.7% decrease in the projected pro forma Tier 1 leverage ratio was due to lower ending Tier 1 capital.

As shown in Table 4, for the nine quarter test horizon we estimated a cumulative pro forma net loss before taxes of \$4.2 billion.

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

(in billions)	Nine quarter cumulative, ending Dec. 31, 2016	Percent of average assets (1)
Pre-provision net revenue (2)	\$ 49.4	3.3%
Less		
Provision for loan and lease losses (3)	43.5	
Realized losses on investment securities	2.2	
Trading and counterparty losses (4)	7.9	
Subtotal of losses	53.6	
Net income before taxes	\$ (4.2)	(0.3%)
<b>Memo items</b>		
Other comprehensive income (5)	\$ (12.1)	
<i>Other effects on capital</i>	Q3 2014	Q4 2016
Accumulated other comprehensive income included in capital (6)	\$ 0.6	\$ (5.4)

(1) Average assets is the nine-quarter average of total assets (from 4Q 2014 through 4Q 2016).

(2) Pre-provision net revenue includes losses from operational risk events, mortgage repurchase reserve build, expenses associated with the change in the allowance for unfunded commitments, and costs associated with other real estate owned.

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

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

(5) 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.

(6) Reflects projected accumulated other comprehensive income excluding amounts deducted from regulatory capital under final Basel III capital rules, and reflects the 20% and 60% transition provisions for Q3 2014 and Q4 2016, respectively.

## Pre-Provision Net Revenue

The estimated stressed pre-provision net revenue of \$49.4 billion reflects projected declining levels of net interest income over the nine quarter test horizon, reduced noninterest income, and lower noninterest expenses.

The decline in net interest income is due primarily to weakened loan demand, consistent with a severe recession, low interest rates, higher levels of non-performing assets, and the incorporation of an assumed liquidity stress event that increases our funding costs. The lower levels of noninterest income are primarily related to lower mortgage banking fees and a decline in trust and investment fees. Mortgage banking fees decline due to hedge losses and lower production income, as well as a repurchase reserve build associated with the deterioration in the economic environment. Trust and investment fees are lower as a result of the depressed equity market levels.

Noninterest expense decreases over the nine quarter test horizon primarily driven by lower revenue-based and discretionary incentive compensation. Partially offsetting this are higher operating losses and foreclosed asset expense.

## Provision for Loan and Lease Losses

The nine quarter cumulative provision for loan and lease losses was estimated at \$43.5 billion and consists of projected loan loss charge-offs of \$26.1 billion and an increase in the allowance for loan and lease losses (ALLL) of \$17.4 billion.

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

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

(in billions)	Nine quarters cumulative Dec. 31, 2016	Cumulative portfolio loss rate (2)
First lien mortgages, domestic	\$ 4.2	1.7 %
Junior liens and home equity lines of credit, domestic	4.6	6.5
Commercial and industrial (3)	4.7	2.9
Commercial real estate, domestic	2.6	2.3
Credit card	4.2	13.1
Other consumer	4.6	5.1
All other loans (4)	1.2	1.1
<b>Projected loan losses</b>	<b>\$ 26.1</b>	<b>3.2 %</b>

(1) The loan categories presented in Table 5 adhere to FR Y 14A reporting definitions and will not agree to the loan categories presented in our financial reports filed with the SEC.

(2) The 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.

(3) Commercial and industrial (C&I) loans include C&I graded, small business and business card loans.

(4) All other loans are largely commercial loans, and include foreign real estate loans, loans to purchase or hold securities, loans secured by farmland, agriculture loans, loans to various financial institutions, and lease financing receivables.

While charge-offs represent the realization of loan losses, an increase in ALLL represents the recognition of the loan loss 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



ensure adequate coverage of losses inherent in the loan portfolio at the specified point in time. Projected provision expenses associated with the change in the allowance for unfunded credit commitments, which totaled \$0.3 billion in this Scenario, 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 C&I loans and all other loans. Estimated losses over the nine quarter horizon on the commercial loan portfolio, including all other loans, totaled \$8.5 billion or 33% 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 and auto loans). Estimated losses over the nine quarter horizon on the consumer portfolio totaled \$17.6 billion or 67% 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 the housing price index (HPI).

### Realized and Unrealized Losses on Investment Securities

Realized losses on investment 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 \$2.2 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 investment securities are included in other comprehensive income (OCI).

### Trading and Counterparty Losses

Trading and counterparty credit losses totaled \$7.9 billion, which includes mark-to-market losses, changes in credit valuation adjustments (CVA), incremental default losses, losses on non-trading related private equity positions projected under the global market shock, and a large counterparty default. The global market shock factors generally reflect the price and rate movements that occurred in the second half of 2008, a period featuring severe market dislocations. The counterparty default component incorporates an instantaneous and unexpected default of the counterparty with the largest net stressed losses within the prescribed global market shock environment.

## Wells Fargo Bank, N.A. Results

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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 Bank<sup>6</sup>. The rules and guidance (including the macroeconomic severely adverse scenario) provided by the OCC for the Bank

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<sup>6</sup> See 12 C.F.R. pt. 46 (2014).

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 accounts for approximately 90% of the Company's overall assets. Accordingly, the results of the Bank's stress test under the same severely adverse scenario, including the global market shock and 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. 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 standardized capital actions. Rather, the capital actions reflected in the Bank's pro forma capital ratios reflect management's judgment of the actions the Bank would take to preserve capital under such severe economic conditions.

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

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

	Actual	Stressed pro forma ratios		2016 Regulatory
	Sept. 30, 2014	Dec. 31, 2016	Minimum	Minimum (1)
Tier 1 common equity (2)	10.3 %	12.2	9.7	5.0
Common Equity Tier 1 (2)	10.7	11.3	9.5	4.5
Tier 1 risk-based capital	10.7	11.3	9.5	6.0
Total risk-based capital	12.9	13.5	11.8	8.0
Tier 1 leverage	8.3	9.2	8.1	4.0

(1) Risk-based capital ratios represent minimum requirements per Minimum Supervisory Ratios and Standards (12 CFR part 225, Appendix A) and the Tier 1 common equity benchmark ratio established in the capital plan rule. 12 CFR 225.8(d)(2)(i)(B).

(2) Tier 1 common equity calculated under Basel I and Common Equity Tier 1 calculated under Basel III are non-GAAP financial measures that are used by investors, analysts and bank regulatory agencies to assess the capital position of financial services companies.

As illustrated in Table 6, our projected pro forma Tier 1 common equity to risk-weighted assets ratio under Basel I increased 1.9% over the nine quarter test horizon. Our projected pro forma Common Equity Tier 1, Tier 1 and Total risk-based capital ratios under Basel III with transitional arrangements each increased 0.6% over the nine quarter test horizon. The growth in our pro forma capital ratios was driven primarily by modest net income generation over the nine quarter horizon and a reduction in risk-weighted assets due mainly to a decline in loan balances as a result of charge-offs and weakened loan demand, offset partially by dividends to the parent. The 0.9% increase in the projected pro forma Tier 1 leverage ratio was due to a decline in total assets over the stress test horizon.

## 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 adverse conditions described previously for 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 risks, and operational risk. Our Board of Directors

and executive management have overall and ultimate responsibility for management of these risks, which they carry out through committees with specific and well-defined risk management functions. Each Board committee receives reports and information regarding risk issues 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 functions<sup>7</sup>. We established such a management committee, the Stress Testing Oversight Committee, to provide appropriate oversight for the company-wide stress testing process. This committee is responsible for the review and approval of stress testing methodologies, oversight of our stress test framework development, 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 processes 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 pro forma financial statements, the Company applies accounting practices consistent with the Company's significant GAAP accounting policies<sup>8</sup>, 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 in order to estimate outcomes that may result from the specified adverse scenario. We use a series of models and 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. We regularly consider uncertainties and the limitations of our estimates when evaluating stress test results.

### Pre-Provision Net Revenue

Pre-provision net revenue includes projections of net interest income, noninterest income (other than market risk related losses presented separately in Table 4) 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, and operational risk in the generation of stress projections for the given test horizon.

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<sup>7</sup> For additional discussion of risk management at Wells Fargo, please refer to our most recent annual and quarterly reports, which are available on the Company's website at [https://www.wellsfargo.com/invest\\_relations/filings](https://www.wellsfargo.com/invest_relations/filings)

<sup>8</sup> 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, which are available on the Company's website at [https://www.wellsfargo.com/invest\\_relations/filings](https://www.wellsfargo.com/invest_relations/filings)

## 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 falling, earnings will initially decline);
- Assets and liabilities may reprice at the same time but by different amounts (for example, when the general level of interest rates is falling, we may reduce rates paid on checking and savings deposit accounts by an amount that is less than the general decline 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 decline sharply, mortgage backed securities (MBS) held in the investment securities portfolio may prepay significantly earlier than anticipated, which could reduce portfolio income); or
- Interest rates may also have a direct or indirect effect on loan demand, collateral values, credit losses, mortgage origination volume, the fair value of mortgage servicing rights (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 for deposits, short-term borrowings, and long-term debt. Net interest income is significantly influenced by the mix and overall size of our earning asset portfolio and the cost of funding those assets. In addition, some sources of interest income, such as loan prepayment 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 test horizon under the given scenario. The second component centers on estimating the expected growth and pricing behavior for new business originated under the given scenario.

To model 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. To a large extent, the estimate of net interest income is driven by the contractual features of the underlying balance sheet instruments. Assumptions are made regarding other drivers of earnings and balance sheet composition such as loan origination demand, prepayment speeds, deposit balances and mix, as well as pricing strategies.

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, assumptions made for stress test purposes are consistent with management practices and include the consideration of historical experience and current expectations of strategic actions. New business and origination assumptions incorporate 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. 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*

The objective of effective liquidity risk management is to ensure we can meet customer loan requests, customer deposit maturities/withdrawals and other cash commitments under both normal operating conditions and under periods of Wells Fargo-specific and/or market stress. Liquidity risk captures the negative impact to capital from actions the Company may take to meet this objective in the Scenario. Accordingly, we perform a comprehensive analysis to determine the specific liquidity events expected 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. Much of 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 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, and all other fees. Loss projections for trading and investment 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. Our all other fees includes charges and fees on loans, insurance, 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. Methodologies to estimate noninterest income vary across the major noninterest income categories and are tailored to the specific, underlying business activity being considered. In addition to models, the approaches include

consideration of historical experience, expectations around new business, impact of regulatory changes, and management judgment. In some cases, specific financial market and macroeconomic variables that have been previously identified as key drivers of revenue, such as the Dow Jones U.S. Total Market Index and GDP, are incorporated into the projections based on their assumed levels.

#### *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 our residential MSRs, the fair value of mortgages held-for-sale (MHFS) and the associated income and loss reflected in mortgage banking noninterest income, the income and expense associated with instruments used to hedge changes in the fair value of MSRs and MHFS, and the value of derivative loan commitments (interest rate “locks”) extended to mortgage applicants.

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 at or 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 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 repurchase liabilities that reflect 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.

In addition, beginning in 2013, the government sponsored enterprises (GSEs) that we sell mortgage loans to introduced a new representations and warranties framework which includes a sunset period for underwriting defect exposures after three years (one year for Home Affordable Refinance Program loans) if the borrower has a satisfactory payment history. The framework also expands audits conducted by the GSEs on new originations. These changes in GSE practices help mitigate some of the uncertainties in modeling the majority of repurchase risks during the defined time frame of default exposure. Our

estimates also consider settlements made with investors that limit future repurchase risk based on the parameters of the agreements.

### 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 asset related expenses. Where noninterest expense relationships are indeterminate with economic drivers or financial market variable assumptions, historical experience and management judgment is employed.

### *Operational Risk*

Operational risk is the risk of loss resulting from inadequate or failed internal controls and processes, people and systems, or resulting from external events. These losses may be caused by events such as fraud, breaches of customer privacy, business disruptions, inappropriate employee behavior, vendors that do not perform their responsibilities and regulatory fines and penalties. As such, operational risk is broadly defined.

The scope of operational risk includes loss event types 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 events to generate the majority of financial impact.

While the drivers of operational risk can vary by business, the most significant financial impacts often relate to products or business practices resulting in litigation or regulatory actions. Transaction processing errors and fraud events occur much more frequently and can be significant in the aggregate, but generally have less financial impact per event than loss events involving litigation. Lastly, material losses can also arise from a range of externally-driven events such as cyber threats as well as those that are less frequent such as earthquakes or terrorist attacks.

Our operational risk loss forecasting process utilizes statistical techniques to estimate correlation relationships between changes in specific macroeconomic variables on operational losses by incorporating our historical loss experience along with macroeconomic factors to estimate losses under a variety of economic scenarios. Given the difficulty in applying statistical techniques to a small population of loss events, we benchmark the projections using multiple approaches to assess reasonableness of the loss projection and consistency with the underlying scenario and then determine whether any adjustments may be necessary.

Operational loss projection is a relatively new discipline. Since our modeled operational loss forecasts are related to macroeconomic drivers, they do not capture the types of events that are not driven directly by the economy, such as natural disasters or cyber security breaches. To ensure a reasonably conservative projection, we assess our operational loss projection for appropriate conservatism and increase our stressed loss forecast for non-macroeconomic driven events that could conceivably occur.

## 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 ensure adequacy of the ALLL at the end of each period.

### *Loan Loss Forecasting*

When estimating loan losses, probability of default (PD), exposure at default (EAD), and loss severity (referred to as loss given default (LGD)) 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 based on models developed from historical experience for 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 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, and credit characteristics of the loan portfolio. Where appropriate, we incorporate state and local economic variables to reflect geographical concentration sensitivities within a given loan portfolio. Management adjusts primary modeled results based on model backtesting results, benchmark models and other analyses designed to provide additional information and address model limitations.

### Wholesale Lending: Individually Graded

The Wholesale portfolio is divided into two major segments for loss modeling purposes: Investor/Developer Commercial Real Estate (CRE) and corporate loans. For corporate loans, which include C&I, Owner/Occupied CRE, foreign and leasing, loan-level credit quality ratings and related forecasted migrations are used. Wholesale loans are subject to individual risk assessments using our internal borrower and collateral quality ratings. The primary corporate loan loss modeling framework relies principally on PD, LGD and EAD. The PD model segments borrowers based on line of business (and further segments our large corporate borrowers by industry), and relies on borrower quality rating migration matrices. Loans migrate between grades and eventually to default, based on changes in economic variables, such as GDP, unemployment rates and asset prices. The LGD model forecasts the loss severity on defaulted loans, which is dependent on the underlying collateral and changes in asset



prices. The EAD model forecasts the portion of commitment amount that is funded at the time of default. These three components are combined to calculate the forecasted losses for each quarter in the forecast horizon.

For Investor / Developer CRE loans, loan-level attributes such as loan-to-value, net operating income, and capitalization rates are combined with projected changes in commercial real estate price movements by property type and geographic location to estimate loan losses.

#### 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 forecast 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 MSA- and state-level economic variables (including unemployment, home price, mortgage rates, and real GDP) and borrower 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 MSA-level variables including unemployment and home prices and borrower attributes such as loan-to-value and delinquency status.

#### 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 combinations of macroeconomic variables such as unemployment, bankruptcy filings, and personal income are used to generate PD and exposure at default (EAD). A segment-level, score-based 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.

#### 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. A variety of models are used to project losses across this diverse collection of portfolios.

#### *Allowance for Loan and Lease Losses*

The Company estimates the ALLL for each period 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 reserve estimates. Consistent with GAAP, nonperforming loan loss allowance is an estimate of the remaining 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 inherent loss based on historical experience, utilizing 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 by life-of-loan models, and related provision expenses are recognized as applicable to establish an appropriate allowance.

An incremental estimate for imprecision is added to 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**

From a market risk perspective, our net income is exposed to adverse changes in the fair value of our trading portfolios and financial instruments due to changes in factors such as interest rates, credit spreads, foreign exchange rates, equity and commodity prices and their implied volatilities. Market risk related to our investment securities portfolio is reflected in estimates of OTTI and changes in market values. Market risk related to our trading and derivatives portfolios is reflected in estimates of trading and counterparty credit related losses. Counterparty credit risk arises when a trading partner fails to fulfill its obligations on a transaction or portfolio of transactions, and Wells Fargo must terminate the trade or replace the counterparty at a loss. Market risk is also reflected in estimates of losses related to our private equity portfolios.

#### Investment Securities Portfolio

The investment securities portfolio consists of debt securities and marketable equity securities. Losses on securities held in the investment securities portfolio are 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 were derived using assumptions consistent with the macroeconomic variables.

No future sales of investment securities are assumed to occur over the test horizon. 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, and the amount related to all other factors, which is recognized in OCI.

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.
- Securitized assets: 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.
- Market priced assets: For some assets where detailed econometric modeling is not viable, or where the security is accounted for at fair value, we measure OTTI as the decline in the projected market price of the security which is derived using assumptions consistent with the macroeconomic variables.

#### Trading and Counterparty Credit Risk

Our approach to projecting market risk trading stress loss estimates is based upon shocking market risk factors and then observing their impact on the firm's trading and private equity portfolio. The market risk trading stress loss estimate is primarily computed using a full revaluation methodology in which the portfolio is fully re-priced under the stressed market risk factor assumptions. For the specified scenario, the shifts of one or more risk factors are applied simultaneously to the position and the trade is re-valued. The difference between the original trade value and the post shock value is the stress loss or gain estimate. The stress loss and gain estimates of each position are aggregated to determine the stress loss estimate for the entire trading portfolio. Specific shifts in risk factors vary by asset class and related risk driver. For

example, the equity asset class has separate shifting methodologies for price and for implied volatility. Interest rates, credit rates and foreign exchange asset classes have separate shifting methodologies for their respective curves/rates and implied volatility surface.

We estimate counterparty losses arising from two sources: (1) the increase in the CVA, which is a measure of mark-to-market expected credit losses and (2) the incremental losses associated with counterparty default, which is calculated as the largest counterparty default.

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. In general, CVA is calculated either directly in the trading systems or through a profile based reserve approach. Stressing of exposures predominantly occurs through the application of market shock prescriptions, shifting rates and prices. The method for stressing the credit component of CVA depends upon whether the counterparty has observable market instruments which price credit, either liquid credit default swap (CDS) markets or observable bond prices. Counterparty names which have observable market instruments are referred to as the liquid portfolio and the liquid portfolio is stressed by widening spreads based on ratings-based shocks in each scenario. Counterparties which do not have observable market instruments are referred to as the illiquid portfolio, and stressing of the credit quality for the illiquid portfolio involves stressing the curves by the defined shifts in the scenario based on the mapping of internal grades to the external ratings.

For calculating the losses attributed to the counterparty default scenario component, the net stressed losses are calculated by re-pricing collateral and exposures after applying the market shock, then multiplying the resulting stressed net current exposure by LGD of 90%, and subtracting corresponding CVA for the counterparty from the resulting net stressed losses.

### 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 standardized capital actions assumed to be taken during that quarter. The resulting equity capital balance for each quarter is adjusted for certain regulatory deductions defined by U.S. regulatory capital rules, such as 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 scenario horizon under general (Basel I) and standardized (Basel III) approaches. 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, calculated under the general or standardized approach as applicable for the ratio and measurement period, are used to generate pro forma quarterly capital ratios.