
2022 Annual Stress Test Disclosure

Dodd-Frank Act Stress Test Results
Supervisory Severely Adverse Scenario

June 27, 2022

JPMORGAN CHASE & CO.

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Overview

This 2022 Annual Stress Test Disclosure presents the results of the annual stress test conducted by JPMorgan Chase & Co. (“JPMorgan Chase” or the “Firm”) as required under the rules of the Board of Governors of the Federal Reserve System (the “Federal Reserve”) that implement the Dodd-Frank Act Stress Test (“DFAST”) requirements (“DFAST Rule”). The results reflect certain forecasted financial measures for the nine-quarter projection period (1Q22 through 1Q24) under the Supervisory Severely Adverse Scenario prescribed by the Federal Reserve. The stress test has been conducted in accordance with the regulations and other requirements of the Federal Reserve.

The results represent hypothetical estimates under the Supervisory Severely Adverse Scenario prescribed by the Federal Reserve on February 10, 2022 and do not represent JPMorgan Chase's forecasts of actual expected gains, losses, pre-provision net revenue (“PPNR”), net income before taxes, capital, risk-weighted assets (“RWA”), or capital ratios.

The results were calculated using forecasting models and methodologies developed by JPMorgan Chase. The Federal Reserve conducts its own stress tests of large banks, including JPMorgan Chase, based on forecasting models and methodologies developed by the Federal Reserve¹. Because the models and methodologies utilized by the Firm and the Federal Reserve are different, the results separately published by the Federal Reserve² may vary from those disclosed in this report. JPMorgan Chase may not be able to explain the differences between the results published in this report and the results published by the Federal Reserve. This report does not include information on the Firm's 2022 Stress Capital Buffer (“SCB”) requirement, which will be published by the Federal Reserve by August 31, 2022.

JPMorgan Chase's results reflect the standardized set of capital action assumptions that are specified in the Federal Reserve's DFAST Rule³ for each quarter of the projection period, as follows:

- No dividends on any instruments that qualify as common equity tier 1 capital (“CET1”);
- Payments on instruments that qualify as additional tier 1 capital or tier 2 capital equal to the stated dividend, interest, or principal due on such instrument;
- No redemption or repurchase of any capital instrument that is eligible for inclusion in the numerator of a regulatory capital ratio; and
- No issuances of common stock or preferred stock

A strong capital position is essential to the Firm's business strategy and competitive position. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative of the Firm's Board of Directors, Chief Executive Officer and Operating Committee. Capital adequacy and stress testing is subject to oversight at the most senior levels of the Firm, including the Firm's Board of Directors. The annual DFAST Stress Test is subject to a governance framework, which includes oversight by the Board of Directors, the Firmwide Asset and Liability Committee, Capital Governance Committee, the Firmwide and line of business (“LOB”) Chief Financial Officers and Chief Risk Officers, Model Risk Governance and Review, and Internal Audit.

¹ <https://www.federalreserve.gov/publications/files/2022-march-supervisory-stress-test-methodology.pdf>

² <https://www.federalreserve.gov/publications/files/2022-dfast-results-20220623.pdf>

³ 12 CFR 252.56(b)

2022 Stress Test Supervisory Severely Adverse Scenario

The Supervisory Severely Adverse Scenario is characterized by a severe global recession, accompanied by a period of heightened stress in commercial real estate and corporate debt markets

Key economic variables in the Supervisory Severely Adverse Scenario prescribed by the Federal Reserve¹

- **U.S. real GDP** – GDP declines 3.6% to its trough in the first quarter of 2023
- **U.S. unemployment rate** – Unemployment rate rises 5.8 percentage points to a peak level of 10% in the third quarter of 2023
- **U.S. inflation** – The annualized rate of change in the Consumer Price Index (“CPI”) decreases from 8.2% in the fourth quarter of 2021 to 1.3% in the third quarter of 2022
- **Real estate prices** – House prices decline 28.5% through the fourth quarter of 2023 relative to their level in the fourth quarter of 2021; commercial real estate prices decline by 39.6% by the fourth quarter of 2023 relative to their level in the fourth quarter of 2021
- **Equity markets** – Equity prices decline by 55.0% through the fourth quarter of 2022; equity market volatility peaks in the second quarter of 2022
- **Short-term and long-term rates** – Short-term Treasury rates remain unchanged from 0.1% in the fourth quarter of 2021; long-term Treasury rates drop from 1.6% in the fourth quarter of 2021 to 0.7% in the first quarter of 2022, gradually recovering to 1.3% by the first quarter of 2024
- **Mortgage rates** – 30-year mortgage rates rise 0.7 percentage points to a peak of 3.8% in the fourth quarter of 2022 before declining to 3.5% by the first quarter of 2024
- **Credit spreads** – The spread between yields on BBB corporate bonds and yields on long-term Treasury securities widen 470bps to a peak of 580bps in the fourth quarter of 2022
- **International** – The Scenario features slowdowns starting in the first quarter of 2022 in all developed country blocs, leading to recessions in the Euro area, the United Kingdom, and Japan

Additional components²

- The Firm is also subject to the following additional components as part of the 2022 Supervisory Severely Adverse Scenario:
 - **Global market shock** – set of hypothetical shocks to a large set of risk factors which stress trading, private equity, and certain other fair-valued positions
 - **Counterparty default** – involves the unexpected default of the Firm’s largest counterparty determined by net stressed losses

¹ For the full scenario description and a complete set of economic variables provided by the Federal Reserve, see Board of Governors of the Federal Reserve System “Federal Reserve Board releases hypothetical scenarios for its 2022 bank stress tests” (February 10, 2022) <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20220210a1.pdf>

² As prescribed by the Federal Reserve, the “as-of” date for the 2022 Annual Stress Test Global Market Shock and Counterparty Default components can be any date during the business week of October 4, 2021

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DFAST results under the Supervisory Severely Adverse Scenario

Capital and RWA projections – JPMorgan Chase

Firm-calculated projected stressed capital ratios^{1,2} (1Q22 – 1Q24)

	Actual 4Q21	Regulatory minimum ³	Stressed capital ratios	
			1Q24	Minimum ⁴
Common equity tier 1 capital ratio (%)	13.1%	4.5%	10.2%	9.3%
Tier 1 risk-based capital ratio (%)	15.0%	6.0%	12.1%	11.1%
Total risk-based capital ratio (%)	16.8%	8.0%	13.8%	12.9%
Tier 1 leverage ratio (%)	6.5%	4.0%	5.4%	5.2%
Supplementary leverage ratio (%)	5.4%	3.0%	4.5%	4.4%

¹ Risk-based capital ratios and Tier 1 leverage ratio were calculated under the Basel III Standardized rules. The supplementary leverage ratio ("SLR") was calculated under the Basel III Advanced rules. For additional information on Basel III, refer to Capital Risk Management on pages 86-96 and Note 27 on pages 281-282 of JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2021 ("2021 Form 10-K")

² The capital metrics reflect the Current Expected Credit Losses ("CECL") capital transition provisions that became effective in the first quarter of 2020. Refer to Capital Risk Management pages 86-96 of JPMorgan Chase's 2021 Form 10-K

³ Represents minimum requirements applicable to the Firm excluding regulatory capital buffers

⁴ The minimum capital ratio represents the lowest calculated stressed risk-based and leverage-based capital ratios during the period 1Q22 to 1Q24

Firm-calculated projected risk-weighted assets

	Actual 4Q21	Projected 1Q24
Risk-weighted assets (billions of dollars) ¹	\$1,639	\$1,757

¹ Risk-weighted assets are calculated under the Basel III Standardized capital risk-based approach

DFAST results under the Supervisory Severely Adverse Scenario

Profit & loss projections – JPMorgan Chase

Firm-calculated 9-quarter cumulative projected PPNR, losses, net income before taxes, and other comprehensive income (1Q22 – 1Q24)

	Billions of dollars	Percent of average assets ⁶
Pre-provision net revenue ¹	\$67.6	1.7 %
<i>equals</i>		
Net interest income	133.0	3.4
Noninterest income	103.6	2.7
<i>less</i>		
Noninterest expense	168.9	4.4
Other revenue ²	0.0	
<i>less</i>		
Provision for credit losses	64.7	
Trading and counterparty losses ³	20.9	
Other losses/(gains) ⁴	11.2	
<i>equals</i>		
Net income/(loss) before taxes	\$(29.2)	(0.8) %
Memo items		
<i>Other comprehensive income⁵</i>	\$1.3	
<i>Other effects on capital</i>	Actual 4Q21	1Q24
<i>Accumulated other comprehensive income ("AOCI") in capital (billions of dollars)</i>	\$(0.1)	\$1.2

Note: Numbers may not sum due to rounding

¹ PPNR includes losses from operational-risk events and other real estate owned costs

² Other revenue includes one-time income and expense items not included in PPNR

³ Trading and counterparty losses include mark-to-market ("MTM") and credit valuation adjustment ("CVA") losses resulting from the assumed instantaneous global market shock, and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities

⁴ Other losses/(gains) includes projected changes in fair value of loans held-for-sale ("HFS"), loans accounted for under the fair value option ("FVO"), and equity securities not held for trading

⁵ Other comprehensive income is reported on a pre-tax basis and includes net unrealized losses/(gains) on (a) available-for-sale ("AFS") investment securities, (b) cash flow hedges, and (c) net losses and prior service costs related to defined benefit pension and other postretirement employee benefit ("OPEB") plans

⁶ Average assets is the nine-quarter average of total assets

DFAST results under the Supervisory Severely Adverse Scenario

Loan loss projections – JPMorgan Chase

Firm-calculated 9-quarter cumulative projected loan losses, by type of loan (1Q22 – 1Q24)

Loan type	Billions of dollars	Portfolio loss rates (%) ⁴
First lien mortgages, domestic	\$0.9	0.4 %
Junior liens and home equity lines of credit, domestic	0.3	1.7
Commercial & industrial ¹	17.3	8.3
Commercial real estate, domestic	2.5	2.1
Credit cards	19.3	13.5
Other consumer ²	1.4	1.7
Other ³	8.1	2.6
Total projected loan losses	\$49.6	4.6 %

Note: Numbers may not sum due to rounding

¹ Includes small and medium enterprise loans and corporate cards

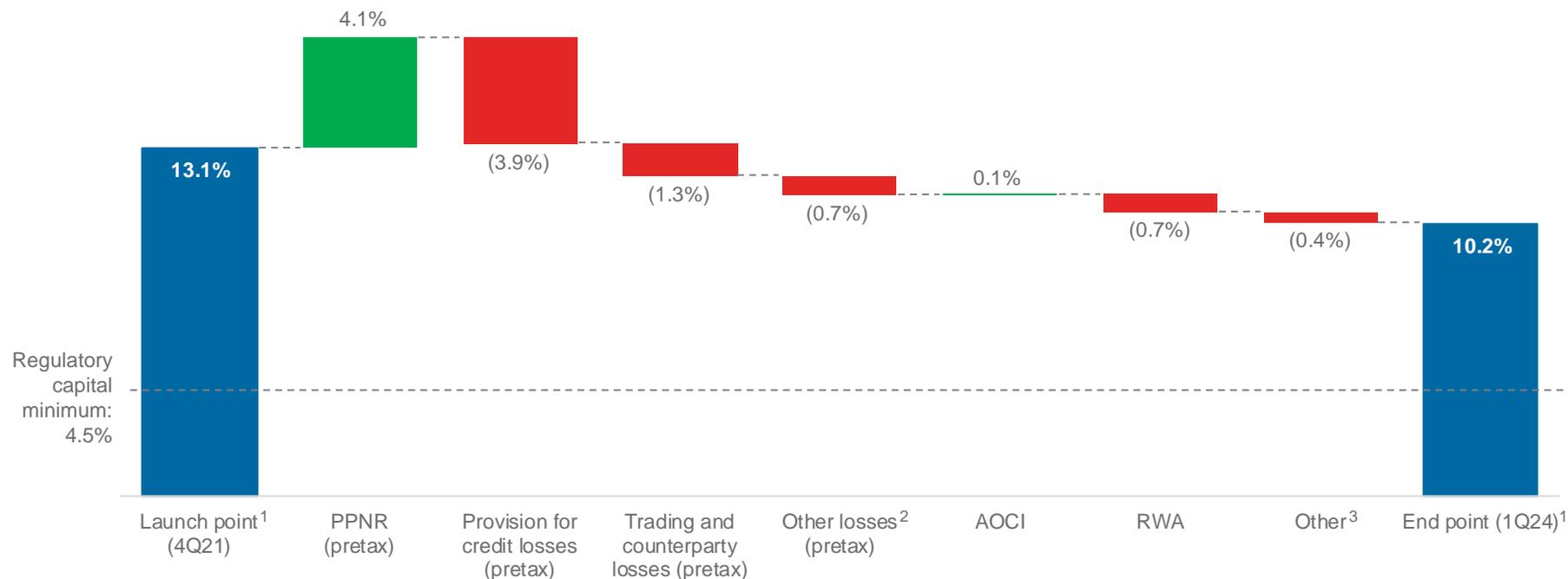
² Includes auto loans and other consumer loans

³ Includes international real estate loans, loans secured by farmland, loans to foreign governments, agricultural loans, securities lending, loans to depository and other financial institutions, and all other loans and leases

⁴ Portfolio loss rates are calculated by taking the cumulative losses over the nine-quarter projection period (i.e., 1Q22 to 1Q24) divided by the nine-quarter average loan balances excluding loans HFS and loans accounted for under the FVO

Key drivers of JPMorgan Chase's pro forma CET1 ratio

Firm-calculated CET1 ratio under Supervisory Severely Adverse Scenario (\$B)



CET1 capital	\$214	\$68	\$(65)	\$(21)	\$(11)	\$1		\$(6)	\$180
RWA	\$1,639						\$118		\$1,757

Note: Numbers may not sum due to rounding

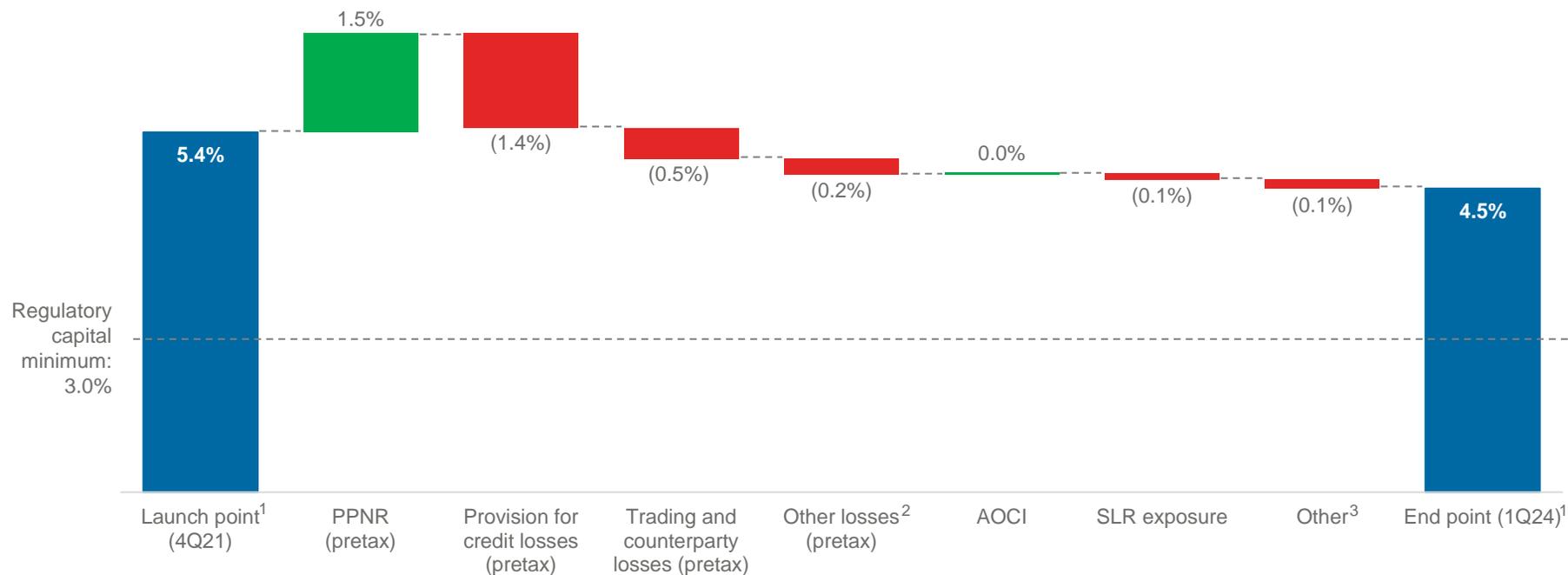
¹ 4Q21 and 1Q24 reflect end-of-period amounts. Other amounts represent the cumulative nine-quarter impact for 1Q22 to 1Q24

² Includes projected changes in fair value of loans HFS, loans accounted for under the FVO, and equity securities not held for trading

³ Includes preferred stock dividends, income tax expense/(benefit), and goodwill and intangibles net of related deferred tax liabilities

Key drivers of JPMorgan Chase's pro forma SLR

Firm-calculated SLR under Supervisory Severely Adverse Scenario (\$B)



Tier 1 capital	\$246	\$68	\$(65)	\$(21)	\$(11)	\$1		\$(6)	\$212
SLR exposure	\$4,572						\$93		\$4,664

Note: Numbers may not sum due to rounding

¹ 4Q21 and 1Q24 reflect end-of-period amounts. Other amounts represent the cumulative nine-quarter impact for 1Q22 to 1Q24

² Includes projected changes in fair value of loans HFS, loans accounted for under the FVO, and equity securities not held for trading

³ Includes preferred stock dividends, income tax expense/(benefit), and goodwill and intangibles net of related deferred tax liabilities

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DFAST results under the Supervisory Severely Adverse Scenario

Capital projections – JPMorgan Chase Bank, N.A. (JPMCB)

JPMCB-calculated projected stressed capital ratios^{1,2} (1Q22 – 1Q24)

	Actual 4Q21	Regulatory minimum ³	Stressed capital ratios	
			1Q24	Minimum ⁴
Common equity tier 1 capital ratio (%)	16.9%	4.5%	15.0%	13.5%
Tier 1 risk-based capital ratio (%)	16.9%	6.0%	15.0%	13.5%
Total risk-based capital ratio (%)	17.8%	8.0%	16.1%	14.7%
Tier 1 leverage ratio (%)	8.0%	4.0%	7.3%	7.1%
Supplementary leverage ratio (%)	6.5%	3.0%	6.0%	5.8%

¹ Risk-based capital ratios and Tier 1 leverage ratio were calculated under the Basel III Standardized rules. The SLR was calculated under the Basel III Advanced rules. For additional information on Basel III, refer to Capital Risk Management on pages 86-96 and Note 27 on pages 281-282 of JPMorgan Chase's 2021 Form 10-K

² The capital metrics reflect the Current Expected Credit Losses ("CECL") capital transition provisions that became effective in the first quarter of 2020. Refer to Capital Risk Management pages 86-96 of JPMorgan Chase's 2021 Form 10-K

³ Represents minimum requirements applicable to the Firm excluding regulatory capital buffers

⁴ The minimum capital ratio represents the lowest calculated stressed risk-based and leverage-based capital ratios during the period 1Q22 to 1Q24

DFAST results under the Supervisory Severely Adverse Scenario

Profit & loss projections – JPMorgan Chase Bank, N.A. (JPMCB)

JPMCB-calculated 9-quarter cumulative projected PPNR, losses, net income before taxes, and other comprehensive income (1Q22 – 1Q24)

	Billions of dollars	Percent of average assets ⁶
Pre-provision net revenue ¹	\$73.7	2.2 %
<i>equals</i>		
Net interest income	135.5	4.0
Noninterest income	94.0	2.8
<i>less</i>		
Noninterest expense	155.8	4.6
Other revenue ²	0.0	
<i>less</i>		
Provision for credit losses	64.6	
Trading and counterparty losses ³	13.3	
Other losses/(gains) ⁴	10.6	
<i>equals</i>		
Net income/(loss) before taxes	\$(14.7)	(0.4) %
Memo items		
<i>Other comprehensive income⁵</i>	\$2.0	
<i>Other effects on capital</i>	Actual 4Q21	1Q24
<i>Accumulated other comprehensive income (billions of dollars)</i>	\$0.2	\$2.0

Note: Numbers may not sum due to rounding

¹ PPNR includes losses from operational-risk events and other real estate owned costs

² Other revenue includes one-time income and expense items not included in PPNR

³ Trading and counterparty losses include MTM and CVA losses resulting from the assumed instantaneous global market shock, and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities

⁴ Other losses/(gains) includes losses/(gains) associated with loans HFS, loans accounted for under the FVO and equity securities not held for trading

⁵ Other comprehensive income is reported on a pre-tax basis and includes net unrealized losses/gains on (a) AFS investment securities, (b) cash flow hedges, and (c) net losses and prior service costs related to defined benefit pension and OPEB plans

⁶ Average assets is the nine-quarter average of total assets for 1Q22 to 1Q24

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Key risks addressed in capital adequacy assessment projections

The below risks, categorized across four risk types, represent risks inherent in JPMorgan Chase's business activities. The results of the Firm's capital stress tests reflect risks from each of these categories:

Risk types	Definition
Strategic	<ul style="list-style-type: none"> ■ Strategic risk is the risk to earnings, capital, liquidity or reputation¹ associated with poorly designed or failed business plans or inadequate response to changes in the operating environment ■ Capital risk is the risk the Firm has an insufficient level or composition of capital to support the Firm's business activities and associated risks during normal economic environments and under stressed conditions ■ Liquidity risk is the risk that the Firm will be unable to meet its contractual and contingent financial obligations as they arise or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets and liabilities
Credit and investment	<ul style="list-style-type: none"> ■ Credit and investment risk is the risk associated with the default or change in credit profile of a client, counterparty or customer; or loss of principal or a reduction in expected returns on investments, including consumer credit risk, wholesale credit risk and investment portfolio risk ■ Consumer credit risk is the risk associated with the default or change in credit profile of a customer ■ Wholesale credit risk is the risk associated with the default or change in credit profile of a client or counterparty ■ Investment portfolio risk is the risk associated with the loss of principal or a reduction in expected returns on investments arising from the investment securities portfolio or from principal investments
Market	<ul style="list-style-type: none"> ■ Market risk is the risk associated with the effect of changes in market factors, such as interest and foreign exchange rates, equity and commodity prices, credit spreads or implied volatilities, on the value of assets and liabilities held for both the short and long term
Operational	<ul style="list-style-type: none"> ■ Operational risk is the risk associated with an adverse outcome resulting from inadequate or failed internal processes or systems; human factors; or external events impacting the Firm's processes or systems. It includes compliance, conduct, legal, and estimations and model risk ■ Compliance risk is the risk of failing to comply with laws, rules, regulations or codes of conduct and standards of self-regulatory organizations ■ Conduct risk is the risk that any action or inaction by an employee or employees could lead to unfair client or customer outcomes, impact the integrity of the markets in which the Firm operates, or compromise the Firm's reputation ■ Legal risk is the risk of loss primarily caused by the actual or alleged failure to meet legal obligations that arise from the rule of law in jurisdictions in which the Firm operates, agreements with clients and customers, and products and services offered by the Firm ■ Estimations and model risk is the potential for adverse consequences from decisions based on incorrect or misused estimation outputs

For additional information on the Firm's risks, see Firmwide Risk Management and the various risk sections on pages 81-149 of JPMorgan Chase's 2021 Form 10-K

¹ Reputational impact is less quantifiable than other risks. Actual losses from historical events that may have impacted the Firm's reputation are captured through the Firm's operational loss forecasting framework; however, the entirety of the reputational impact may not be quantifiable

Key methodologies used in capital adequacy assessment projections

Components	Forecast methodology
<p>PPNR</p>	<ul style="list-style-type: none"> ■ Represents total net revenue less noninterest expense; includes operational risk expense and excludes the provision for credit losses ■ Product-centric models and forecasting frameworks for revenue forecasts are based on JPMorgan Chase's historical experience supplemented by industry data and qualitative model estimation, where appropriate ■ Granular, LOB-level projections are used for expense forecasts, governed by Firmwide expense reduction guidelines for severe stress environments ■ Operational risk loss projections utilize multiple approaches. For risks with relatively more frequent losses, the relationship between macroeconomic variables and the Firm's historical loss experience for those risks are utilized to derive loss projections. For idiosyncratic risks with relatively large potential losses, the loss projections rely on subject matter experts' forward-looking assessment of the risk (i.e., scenario analysis, reasonably possible losses)
<p>Provision for credit losses</p>	<p>Provision on loans and held-to-maturity investment securities</p> <ul style="list-style-type: none"> ■ Projections of net charge-offs, allowances for credit losses, and asset balances are based on the composition and characteristics across asset classes and customer segments of the wholesale and consumer loan portfolios and the held-to-maturity investment securities portfolio ■ Model-based approach reflects credit migrations and changes in delinquency trends driven by underlying economic factors; additionally, models consider macroeconomic forecasts, characteristics such as credit ratings, geographic distribution, product and industry mix, and collateral type ■ Utilizes loss experience data relevant to the Firm's asset classes and portfolios <p>Provision on AFS investment securities</p> <ul style="list-style-type: none"> ■ Projections of losses on AFS positions resulting from credit impairment assumes no investment securities are sold throughout the forecast period ■ Credit impairment is estimated using credit migration models for non-securitized assets and cash flow simulations for securitized assets
<p>Trading & counterparty losses</p>	<ul style="list-style-type: none"> ■ Instantaneous global market shocks with no mitigating actions were applied to trading and counterparty positions as of October 7, 2021; mark-to-market and nine-quarter default losses are reflected in the first quarter of the projection period ■ Utilizes the existing Firmwide stress framework and models approved for valuation and stress testing to measure the Firm's exposure to changes in the fair value of financial instruments primarily driven by changes in market factors such as credit spreads, equity prices, interest rates, currency rates and commodity prices ■ Counterparty default assumes the instantaneous and unexpected default of the counterparty which would result in the largest loss across derivatives and securities financing transaction activities after the market shock. In addition, modeled losses related to other traded products and central counterparty clearing exposures are also included

Key methodologies used in capital adequacy assessment projections (cont'd)

Components	Forecast methodology
Other gains/losses	<ul style="list-style-type: none"> ■ Projections reflect changes in valuations of HFS loans and commitments pending syndication, as well as loans accounted for under the FVO in the Firm's wholesale loan portfolio ■ Projections capture the Firm's exposure to changes in the mark-to-market value of HFS/FVO loans primarily due to credit spreads, default losses and business strategy for the portfolio
RWA	<ul style="list-style-type: none"> ■ Projections of risk-weighted assets are calculated under the Basel III Standardized capital risk-based approach ■ Credit risk RWA projections utilize forecasted assets, derivatives, and other off-balance sheet items ■ Market risk RWA projections reflect relationships between RWA and key macroeconomic drivers using estimation models
AOCI	<ul style="list-style-type: none"> ■ AOCI primarily includes the change in unrealized gains and losses on investment securities and the Firm's defined benefit pension and OPEB plans ■ Projections are based on estimated changes in value of positions using a combination of full revaluation and sensitivity-based forecasting approaches for AFS investment securities, pension and OPEB plan assets and liabilities
Capital	<ul style="list-style-type: none"> ■ Capital projections reflect the standardized set of capital action assumptions that are specified in the Federal Reserve's DFAST Rule

Forward-looking statements

The results presented here contain forward-looking projections that represent estimates based on the hypothetical, severely adverse economic and market scenarios and assumptions under the Supervisory Severely Adverse Scenario prescribed by the Federal Reserve. The stress test results do not represent JPMorgan Chase's forecasts of actual expected gains, losses, pre-provision net revenue, net income before taxes, capital, risk-weighted assets, or capital and leverage ratios. Actual results may differ from those set forth in the forward-looking statements. Factors that could cause JPMorgan Chase & Co.'s actual results to differ materially from those described in the forward-looking statements can be found in JPMorgan Chase & Co.'s Annual Report on Form 10-K for the year ended December 31, 2021, and Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, which have been filed with the Securities and Exchange Commission and are available on JPMorgan Chase & Co.'s website (<https://jpmorganchaseco.gcs-web.com/ir/sec-other-filings/overview>), and on the Securities and Exchange Commission's website (www.sec.gov). JPMorgan Chase & Co. does not undertake to update any forward-looking statements.