Credit risk is the risk associated with the default or change in credit profile of a client, counterparty or customer. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. The consumer credit portfolio consists of scored mortgage and home equity loans held in the Consumer & Community Banking ("CCB") and Asset & Wealth Management ("AWM") business segments; scored mortgage loans held in the Corporate segment; scored credit card, auto and business banking loans, and overdrafts in CCB; and the associated lending-related commitments in each of those business segments. The wholesale credit portfolio refers primarily to exposures held by the Corporate & Investment Bank ("CIB"), Commercial Banking ("CB"), AWM and Corporate business segments, as well as risk-rated business banking and auto dealer loans held in CCB. In addition to providing credit to clients, the Firm engages in client-related activities that give rise to counterparty credit risk such as securities financing, margin lending and market-making activities in derivatives. Finally, credit risk is also inherent in the Firm's investment securities portfolio held by Treasury and Chief Investment Office ("CIO") in connection with its asset-liability management objectives. Investment securities, as well as deposits with banks and cash due from banks, are classified as wholesale exposures for RWA reporting.

Basel III includes capital charges for counterparty default risk and credit valuation adjustments ("CVA"). CVA is a fair value adjustment to reflect counterparty credit risk in the valuation of over-the-counter ("OTC") derivatives. The Firm calculates CVA RWA using the Simple CVA approach, which uses internal ratings based probability of default ("PD") and a combination of the current exposure method ("CEM") and the internal model method ("IMM") exposure at default ("EAD") for each netting set.

In addition to Credit Risk Management, an independent Credit Review function is responsible for:

- Independently assessing risk grades assigned to exposures in the Firm's wholesale credit portfolio and the timeliness of risk grade changes initiated by responsible business units; and
- Evaluating the effectiveness of the credit management processes of the LOBs and Corporate, including the adequacy of credit analyses and risk grading/loss given default ("LGD") rationales, proper monitoring and management of credit exposures, and compliance with applicable grading policies and underwriting guidelines.

For information on risk management policies and practices, governance and oversight and accounting policies related to these exposures:

➢ Refer to Credit and Investment Risk Management on pages 111-134 of the 2023 Form 10-K.

➢ Refer to the Notes to the Consolidated Financial Statements beginning on page 171 of the 2023 Form 10-K. Specific page references are contained in the Appendix of this report.

Summary of credit risk RWA

Credit risk RWA includes retail, wholesale and counterparty credit exposures described in this section as well as non-covered securitization and equity exposures. Other exposures such as non-material portfolios, unsettled transactions and other assets that are not classified elsewhere are also included. The following table presents the Firm's total credit risk RWA including a 1.06 scaling factor excluding CVA at December 31, 2023.

December 31, 2023 (in millions)		Basel III Advanced CECL Transitional RWA
Retail exposures	$	203,701
Wholesale exposures		502,026
Counterparty exposures		119,310
Securitization exposures[(a)]		60,476
Equity exposures		70,073
Other exposures[(b)(c)]		157,547
CVA		43,759
Less: Excess eligible credit reserves not included in Tier 2 capital		1,631
Total credit risk RWA	$	1,155,261

(a) Represents securitization RWA for non-covered positions only.
(b) Includes retail and wholesale exposures of $24.3 billion and $28 billion respectively calculated under the Standardized Approach for certain assets associated with the First Republic acquisition as permitted by the transition provisions under the U.S. capital rules. Also includes other assets, non-material portfolios, and unsettled transactions.
(c) Includes a deduction for $621 million of allowance for loan losses calculated under the Standardized approach for certain assets associated with the First Republic acquisition, as permitted by the transition provisions within the U.S. capital rules.

Credit risk exposures

Credit risk exposures for the three months ended December 31, 2023 are contained in the 2023 Form 10-K. Specific references to the 2023 Form 10-K are listed below.

Traditional credit products

- Refer to Credit and Investment Risk Management beginning on page 111 for credit-related information on the consumer and wholesale portfolios.
- Refer to Note 12 on pages 235-254 for the distribution of loans by geographic region and industry.
- Refer to Note 28 on pages 291-296 for the contractual amount and geographic distribution of lending-related commitments.
- Refer to Consumer Credit Portfolio and Wholesale Credit Portfolio on pages 116 and 121 for information on remaining contractual maturity breakdown for consumer and wholesale portfolios.

Counterparty credit risk

- Refer to the Consumer Credit Portfolio section on pages 114-119, and to the Wholesale Credit Portfolio section on pages 120-130 for eligible margin loans balances.
- Refer to Wholesale Credit Portfolio footnote (d) on page 121 and Country Risk on page 144.
- Refer to Note 5 on pages 203-216 for the gross positive fair value, netting benefits and net exposure of derivative receivables.
- Refer to Derivative contracts on page 128 for credit derivatives used in credit portfolio management activities.
- Refer to Credit and Investment Risk Management, Risk monitoring and management on page 112, Note 4, Credit risk concentration, on pages 201-202 of the 2023 Form 10-K, Note 5, Derivative instruments, on pages 203-216 and Note 11, Securities financing activities, on pages 232-234 of the 2023 Form 10-K for a discussion of credit limits for counterparty credit exposures, policies for securing collateral, valuing and managing collateral.
- Refer to Note 5, Derivative instruments, on pages 203-216, Note 11, Securities financing activities, on pages 232-234 and Wholesale Credit Portfolio, Receivables from customers, on page 128 of the 2023 Form 10-K for a discussion of primary types of collateral taken for counterparty credit exposures.
- Refer to Note 11 on pages 232-234 for information on gross and net securities purchased under resale agreements and securities borrowed transactions, and for information regarding the credit risk inherent in the securities financing portfolio.

Investment securities

- Refer to Credit and Investment Risk Management on pages 111-134 and Note 10 on pages 227-231 for the investment securities portfolio by issuer type.

Country risk

- Refer to page 145 the top 20 country exposures (excluding the U.S.).

Allowance for credit losses

- Refer to Allowance for Credit Losses on pages 131-133 for a summary of changes in the allowance for loan losses and allowance for lending-related commitments.
- Refer to Note 13 on pages 255-260 for the allowance for credit losses and loans and lending-related commitments by impairment methodology.
- Refer to Note 11 on pages 232-234 for the allowance for credit losses on held-to-maturity securities.

Average balances

- Refer to page 310 for the Consolidated average balance sheet.

Credit Risk Mitigation

- Refer to Credit and Investment Risk Management, Risk monitoring and management on page 112, Note 1, Basis of presentation, Offsetting assets and liabilities, on pages 171-174, Note 4, Credit risk concentrations, on page 201-202, Note 5, Derivative instruments, on pages 203-216, and Note 11, Securities financing activities on pages 232-234 of the 2023 Form 10-K for a discussion of processes for managing and recognizing credit risk mitigation and policies for on netting benefit.
- Refer to Market Risk Management, Risk monitoring and control, on page 135, Note 4, Credit risk concentrations, on page 201-202, Note 5, Derivative instruments, on pages 203-216, and Note 11, Securities financing activities, on pages 232-234 of the 2023 Form 10-K for a discussion of market and credit risk concentrations and credit derivative counterparties and their creditworthiness.

Credit risk concentrations

Concentrations of credit risk arise when a number of clients, counterparties or customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential credit risk concentrations and to obtain additional collateral when deemed necessary and permitted under the Firm's agreements. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are managed primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential credit risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines.

In the wholesale portfolio, credit risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual client or counterparty basis. The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, collateral and other risk-reduction techniques.

- Refer to Note 12 of 2023 Form 10-K for additional information on loans.

The Firm does not believe that its exposure to any particular loan product or industry segment results in a significant concentration of credit risk.

Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for credit losses.

- Refer to Note 4, Credit risk concentrations on pages 201-202 of the 2023 Form 10-K for additional information.

The retail portfolio is comprised of exposures that are scored and managed on a segment basis rather than on an individual-exposure basis. For the retail portfolio, credit loss estimates are based on statistical analysis of credit losses over discrete periods of time. The statistical analysis uses portfolio modeling, credit scoring, and decision-support tools, which consider loan-level factors such as delinquency status, credit scores, collateral values, and other risk factors.

The population of exposures subject to retail capital treatment for regulatory reporting substantially overlaps with the consumer credit portfolio reflected in the Firm's SEC disclosures. The retail population consists of all scored exposures (mainly in CCB business segment), certain residential mortgages booked as trading assets (that do not meet the definition of a covered position) and certain wholesale loans under $1 million as required by the Basel III capital rules.

The retail capital population excludes certain risk-rated business banking and auto dealer loans that are included in the consumer portfolio in the Firm's SEC disclosures; these are subject to wholesale capital treatment as required by the Basel III capital rules.

Risk parameter estimation

The internal ratings process for retail exposures covers the assignment of individual loan, line of credit or off-balance exposures into homogeneous segments defined by the predominant product and borrower risk characteristics. The criteria for grouping loans into segments was developed using a combination of empirical analysis and management judgment. Predominant risk drivers used for segmentation vary by portfolio and exposure type, but include loan characteristics such as product type, collateral type and loan-to-value, exposure size, origination channel and documentation type and borrower information such as credit score, delinquency history and line of credit utilization rate.

The retail exposures are first broken down into their retail subcategories. Residential mortgage exposures include all exposures secured by residential real estate. This includes traditional mortgages, home equity loans, home equity lines of credit and business banking exposures that are primarily secured by residential real estate. Qualifying revolving exposures ("QRE") include credit cards where the overall credit limit is less than or equal to $100,000.

Other retail includes all exposures not classified as residential mortgage or QRE. This includes personal auto finance loans, credit card accounts above $100,000, business card exposures without a personal guarantee and business banking loans that are less than $500,000 and that are scored or managed as a group of loans with homogeneous risk characteristics.

The segmentation process creates differentiated risk buckets spanning a wide spectrum of relatively-low to relatively-high expected loss rates. The assignment of exposures to segments occurs on a monthly basis for the majority of the retail portfolio, and at least quarterly for all modeled retail exposures. The overall capital requirement for a given retail subcategory fluctuates based on changes in the mix of products and key risk drivers used for segmentation, and may be impacted by any model enhancements or modifications to parameter estimates.

For each retail sub-category, a separate segmentation model exists for PD, LGD and, for exposures with available undrawn credit exposure, EAD. EAD for a given segment is defined as the Firm's carrying value for on-balance sheet exposures plus a portion of the off-balance sheet exposures based on the Firm's best estimate of net additions to the balance sheet if the exposures were to enter into default in the upcoming year, assuming an economic downturn for that period. Quantification of EAD for off-balance sheet exposures is developed through empirical analysis of historical behavior of defaulted exposures in the months leading up to a default.

The probability of default for a segment estimates the likelihood a borrower will default on the exposure over the next year, based on historical observations over an economic cycle. The PD is quantified based on empirical analysis and observed default rate performance over five or more years, including during a period of stressed economic conditions. Generally, the PD rate for a given segment equates to the simple average of observed one year default rates over the available historical reference data. However, in some instances the Firm makes adjustments to PD estimates to better reflect a full economic cycle.

LGD for a given segment is an estimate of expected loss during a period of stressed economic conditions. The LGD estimate is based on empirical analysis of post-default loss and recovery information over a historical observation period, and factors in the timing of expected cash flows, estimated recovery costs and accrued interest and fees. The Firm's final estimate is based on the higher of observed performance between the long-run reference data and the downturn-specific performance.

The risk drivers comprising the segments are evaluated on their ability to differentiate risk consistently over time. Modifications to the segments are made periodically, driven by the validation results, shifts in risk management strategies, regulatory guidance or risk modeling best practices. The risk characteristics used for segmentation are consistent with the predominant risk drivers used for other internal credit risk models used by the Firm.

Risk-weighted assets

To calculate retail credit RWA, the Firm inputs its risk parameter estimates (PD, LGD and EAD) into the Internal Ratings Based (IRB) risk weight formula, as specified by the Basel III capital rules. The IRB risk weight formula generates an estimate of unexpected losses at a 99.9% confidence level. Unexpected losses are converted to a RWA measure by an application of a 12.5 supervisory multiplier.

The following table presents the Firm's retail RWA at December 31, 2023.

December 31, 2023 (in millions)		Basel III Advanced RWA
Residential mortgages	$	35,666
Qualifying revolving		141,337
Other retail		26,698
Total retail credit RWA	$	203,701

Residential mortgage exposures

The following table includes first lien and junior lien mortgages and revolving home equity lines of credit. First lien mortgages were 93% of the exposure amount, revolving exposures were 6.9%, and the remaining exposures related to junior lien mortgages. Revolving exposures were predominantly originated prior to 2010 and drive approximately 19% of the total risk weighted assets of this portfolio, with nearly 18% of the exposures in the equal to or greater than 0.75% probability of default ("PD") ranges. Recent originations are primarily first lien mortgages and are predominantly reflected in the less than 0.75% PD ranges.

December 31, 2023
(in millions, except ratios)

									Exposure-weighted average		
PD range (%)		Balance sheet amount		Off balance sheet commitments		EAD		RWA	PD	LGD	Risk weight
0.00 to <0.10	$	140,729	$	17,819	$	146,975	$	6,549	0.05	29.76	4.46
0.10 to <0.20		48,553		539		48,690		5,598	0.15	33.49	11.50
0.20 to <0.75		42,469		1,937		44,202		9,931	0.33	36.99	22.46
0.75 to <5.50		10,480		6		10,383		6,577	1.77	35.59	63.34
5.50 to <10.00		907		–		892		951	6.35	26.99	106.47
10.00 to < 100		1,506		3		1,489		2,216	31.11	28.53	148.96
100 (default)		3,523		218		3,745		3,844	100.00	N/A (a)	102.63
Total	$	248,167	$	20,522	$	256,376	$	35,666	1.85%	31.50%	13.91%

(a) The Loss given default ("LGD") rate is reported as N/A for residential mortgage exposures in default because at the point they are classified as defaulted per the Basel III capital rules definition they have been charged off to the fair value of any underlying collateral less cost to sell. Any balance remaining after the charge-off is risk weighted at 100%.

Qualifying revolving exposures

The following table includes exposures to individuals that are revolving, unsecured and unconditionally cancellable by JPMorgan Chase; and they have a maximum exposure amount of up to $100,000 (i.e. credit card and overdraft lines on individual checking accounts).

December 31, 2023
(in millions, except ratios)

					Exposure-weighted average		
PD range (%)	Balance sheet amount	Off balance sheet commitments	EAD	RWA	PD	LGD	Risk weight
0.00 to <0.50	$ 88,385	$ 809,520	$ 336,263	$ 18,040	0.10	91.51	5.36
0.50 to <2.00	46,721	66,592	60,439	23,627	1.06	94.02	39.09
2.00 to <3.50	20,478	12,583	22,403	17,449	2.62	94.18	77.89
3.50 to <5.00	16,667	2,826	16,913	16,844	3.72	94.15	99.59
5.00 to <8.00	10,749	2,218	10,861	16,255	6.95	94.47	149.66
8.00 to < 100	25,815	1,532	25,817	49,122	24.06	93.16	190.26
100 (default)	–	–	–	–	100.00	N/A (a)	–
Total	$ 208,815	$ 895,271	$ 472,696	$ 141,337	1.94%	92.21%	29.90%

(a) Defaulted exposures in the qualifying revolving portfolio are charged off prior to reaching default as defined in the Basel III capital rules. Accordingly, no defaulted exposures are reported in the 100 (default) PD range.

Other retail exposures

The following table includes other retail exposures to individuals that are not classified as residential mortgage or qualifying revolving exposures (e.g. includes scored auto loans, credit card accounts above $100,000, business card exposures without a personal guarantee, scored business banking loans and certain wholesale loans under $1 million).

December 31, 2023
(in millions, except ratios)

					Exposure-weighted average		
PD range (%)	Balance sheet amount	Off balance sheet commitments	EAD	RWA	PD	LGD	Risk weight
0.00 to <0.50	$ 32,731	$ 12,806	$ 37,188	$ 5,163	0.20	36.64	13.88
0.50 to <2.00	32,581	5,128	33,496	12,828	1.13	35.02	38.30
2.00 to <3.50	4,135	1,166	4,335	2,889	2.50	46.68	66.63
3.50 to <5.00	2,724	741	2,803	1,739	3.75	40.84	62.06
5.00 to <8.00	1,623	144	1,635	1,039	6.67	39.17	63.54
8.00 to < 10.00	2,622	7	2,632	2,474	24.68	45.49	94.00
100 (default)	296	151	448	566	100.00	N/A (a)	126.58
Total	$ 76,712	$ 20,143	$ 82,537	$ 26,698	2.27%	36.79%	32.35%

(a) The LGD rate is reported as N/A for retail exposures in default because at the point they are classified as defaulted per the Basel III capital rules definition they have been charged off to the fair value of any underlying collateral less cost to sell. Any balance remaining after the charge off is risk weighted at 100%.