Office of the
Comptroller of the Currency

Quarterly Report on Bank Trading and Derivatives Activities

First Quarter 2022

Office of the Comptroller of the Currency
Washington, D.C.

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Contents

About This Report

The Office of the Comptroller of the Currency's (OCC) quarterly report on bank trading and derivatives activities is based on call report information provided by all insured U.S. commercial banks and savings associations, reports filed by U.S. financial holding companies, and other published data. A total of 1,291 insured U.S. national and state commercial banks and savings associations reported trading and derivatives activities at the end of the first quarter of 2022.[1] A small group of large financial institutions continues to dominate trading and derivatives activity in the U.S. commercial banking system. During the first quarter of 2022, four large commercial banks represented 89.0 percent of the total banking industry notional amounts and 68.8 percent of industry net current credit exposure (NCCE).

The OCC and other supervisors have dedicated examiners at the largest banks to continuously evaluate the credit, market, operational, reputation, and compliance risks of bank trading and derivatives activities. In addition to the OCC's supervisory activities, the OCC works with other financial supervisors and major market participants to address infrastructure, clearing, and margining issues in over-the-counter (OTC) derivatives. OCC activities include development of objectives and milestones for stronger trade processing and improved market transparency across derivative categories, migration of certain highly liquid products to clearinghouses, and requirements for posting and collecting margin.

OCC activities also include assessing London Interbank Offered Rate (LIBOR) exposures in supervised banks and their progress toward an orderly transition away from LIBOR. The OCC and the other federal financial institution regulatory agencies issued a joint statement in October 2021 to emphasize the expectation that supervised institutions with LIBOR exposure continue to progress toward an orderly transition away from LIBOR. (Refer to OCC Bulletin 2021-48, "LIBOR Transition: Joint Statement on Managing the LIBOR Transition.") Given LIBOR's cessation, the agencies have stated that entering into new contracts, including derivatives, that use LIBOR as a reference rate after December 31, 2021, would create safety and soundness risks, including litigation, operational, and consumer protection risks. In addition, in OCC Bulletin 2021-46, "LIBOR Transition: Updated Self-Assessment Tool for Banks," the OCC provides a tool for banks to evaluate their preparedness for the LIBOR cessation.

This is the 106th edition of the OCC's *Quarterly Report on Bank Trading and Derivatives Activities*. The first report was published in 1995. Please send any comments or feedback on the structure and content of this report to QuarterlyDerivatives@occ.treas.gov.

[1] Institutions with total assets of less than $5 billion have the option to file the FFIEC 051 call report. Due to the limited amount of derivatives data provided by FFIEC 051 call report filers, this report provides this information separately and distinctly in table 25 in the appendix.

Executive Summary

- Insured U.S. commercial banks and savings associations (collectively, banks) reported trading revenue of $10.6 billion in the first quarter of 2022, $3.4 billion more (47.8 percent) than in the previous quarter and $10.0 million more (0.1 percent) than a year earlier (see table 1).
- Credit exposure from derivatives decreased in the first quarter of 2022 compared with the fourth quarter of 2021. NCCE decreased $49.0 billion, or 13.8 percent, to $307.0 billion (see table 5).
- Derivative notional amounts increased in the first quarter of 2022 by $22.9 trillion, or 12.9 percent, to $200.4 trillion (see table 10).
- Derivative contracts remained concentrated in interest rate products, which totaled $145.9 trillion or 72.8 percent of total derivative notional amounts (see table 10).

Revenue

Insured U.S. Commercial Banks and Savings Associations' Trading Revenue

Insured U.S. commercial banks and savings associations reported $10.6 billion in trading revenue in the first quarter of 2022, $3.4 billion more (47.8 percent) than in the previous quarter and $10.0 million more (0.1 percent) than a year earlier (see table 1). The quarter-over-quarter increase in trading revenue was primarily due to increases in revenue from foreign exchange and credit trading instruments. For a historical view of quarterly bank trading revenue by instrument, see figure 15a in the appendix.

Table 1: Quarterly Bank Trading Revenue, in Millions of Dollars

Trading instruments	1Q 2022	4Q 2021	Q/Q Change	Q/Q % Change	1Q 2021	Y/Y Change	Y/Y % Change
Interest Rate	$403	$273	$130	47.7%	–$42	$445	1051.4%
Foreign Exchange	$6,341	$3,747	$2,593	69.2%	$6,343	-$3	0.0%
Equity	$1,458	$3,534	–$2,077	–58.8%	$2,388	–$930	–39.0%
Commodity & Other	$1,161	$347	$814	234.5%	$623	$539	86.5%
Credit	$1,259	–$714	$1,974	276.3%	$1,300	–$41	–3.1%
Total Trading Revenue	**$10,622**	**$7,187**	**$3,434**	**47.8%**	**$10,611**	**$10**	**0.1%**

Source: Call reports, Schedule RI

Holding Company Trading Revenue

Consolidated bank holding company (BHC) trading performance provides a more complete picture of trading revenue in the banking system. As shown in table 2, consolidated holding company trading revenue of $15.1 billion in the first quarter of 2022 was $1.3 billion more (9.3 percent) than in the previous quarter. The quarter-over-quarter increase in trading revenue was primarily due to increases in revenue from foreign exchange and commodity and other

trading instruments. Year-over-year holding company trading revenue decreased by $12.1 billion (44.5 percent). For a historical view of quarterly holding company trading revenue by instrument, see figure 15b in the appendix.

Table 2: Quarterly Holding Company Trading Revenue, in Millions of Dollars

Trading instruments	1Q 2022	4Q 2021	Q/Q Change	Q/Q % Change	1Q 2021	Y/Y Change	Y/Y % Change
Interest Rate	–$3,137	–$572	–$2,565	–448.7%	–$1,792	–$1,345	–75.0%
Foreign Exchange	$10,267	$4,496	$5,772	128.4%	$8,051	$2,216	27.5%
Equity	$4,546	$8,745	–$4,199	–48.0%	$13,698	–$9,152	–66.8%
Commodity & Other	$3,498	$1,340	$2,158	161.1%	$2,665	$833	31.3%
Credit	–$92	–$203	$111	54.6%	$4,531	–$4,623	–102.0%
Total BHC Trading Revenue	**$15,083**	**$13,805**	**$1,277**	**9.3%**	**$27,152**	**–$12,070**	**–44.5%**

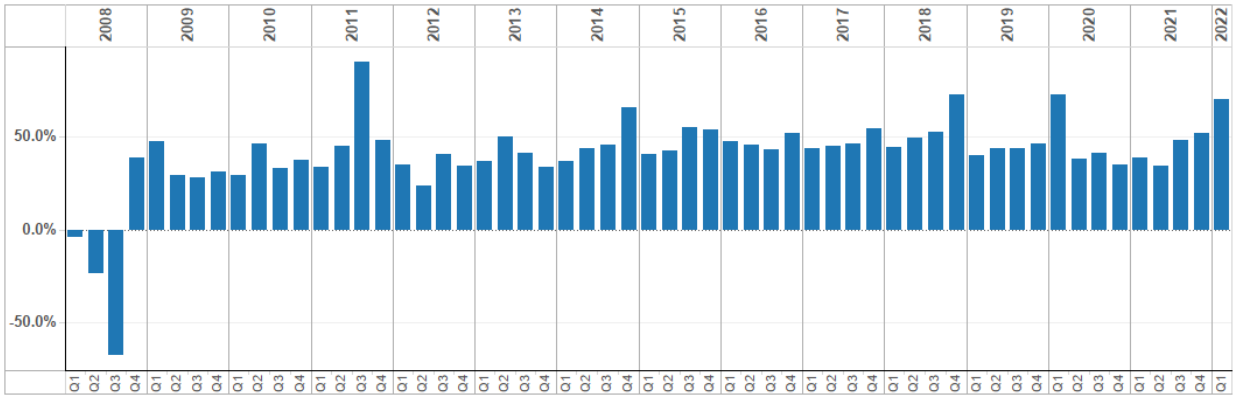
Source: Consolidated Financial Statements for Holding Companies—FR Y-9C, Schedule HI

Bank Trading Revenue as a Percentage of Consolidated Holding Company Trading Revenue

Before the 2008 financial crisis, trading revenue at banks typically ranged from 60 percent to 80 percent of consolidated BHC trading revenue. Since the 2008 financial crisis and the adoption of bank charters by the former investment banks, the percentage of bank trading revenue to consolidated BHC trading revenue has fallen and is now typically between 30 percent and 50 percent. This decline reflects the significant amount of trading activity by the former investment banks that, while included in BHC results, remains outside insured commercial banks. More generally, insured U.S. commercial banks and savings associations have more limited legal authorities than their holding companies, particularly in the trading of commodity and equity products.

In the first quarter of 2022, banks generated 70.4 percent of consolidated holding company trading revenue, an increase from 52.1 percent in the previous quarter (see figure 1).

Figure 1: Bank Trading Revenue as a Percentage of Consolidated Holding Company Trading Revenue



Source: Consolidated Financial Statements for Holding Companies—FR Y-9C (Schedule HI) and call report (Schedule RI)

Counterparty Credit Risk

Counterparty credit risk is a significant risk in bank derivative trading activities. The notional amount of a derivative contract is a reference amount that determines contractual payments, but it is generally not an amount at risk. The credit risk in a derivative contract is a function of a number of variables, such as whether counterparties exchange notional principal, the volatility of the underlying market factors (interest rate, currency, commodity, equity, or corporate reference entity), the maturity and liquidity of the contract, and the creditworthiness of the counterparty.

Credit risk in derivatives differs from credit risk in loans because of the more uncertain nature of the potential credit exposure. Because the credit exposure is a function of movements in market factors, banks do not know, and can only estimate, how much the value of the derivative contract might be at various points in the future.

The credit exposure is bilateral in most derivative transactions, such as swaps (which make up the bulk of bank derivative contracts). Each party to the contract may (and, if the contract has a long enough tenor, probably will) have a credit exposure to the other party at various times during the contract's life. With a funded traditional loan, the amount at risk is the amount advanced to the borrower. The credit risk is unilateral as the bank faces the credit exposure of the borrower.

Measuring credit exposure in derivative contracts involves identifying those contracts on which a bank would lose value if the counterparty to a contract defaulted. The total of all contracts with positive value (i.e., derivative receivables) to the bank is the gross positive fair value (GPFV) and represents an initial measurement of credit exposure. The total of all contracts with negative value (i.e., derivative payables) to the bank is the gross negative fair value (GNFV) and represents a measurement of the exposure the bank poses to its counterparties.

GPFV increased by $226.0 billion (11.4 percent) in the first quarter of 2022 to $2.2 trillion, primarily driven by a $115.0 billion (23.2 percent) increase in receivables from foreign exchange contracts (see table 3a). GNFV increased $170.0 billion (8.8 percent) to $2.1 trillion during the quarter, driven by a $99.0 billion (19.8 percent) increase in payables on foreign exchange contracts (see table 3b).

Table 3a: Gross Positive Fair Values, in Billions of Dollars

Trading instruments	1Q 2022	4Q 2021	Q/Q Change	Q/Q % Change	1Q 2021	Y/Y Change	Y/Y % Change
Interest rate	$1,240	$1,218	$22	1.8%	$1,440	–$200	–13.9%
FX	$607	$492	$115	23.2%	$548	$59	10.8%
Equity	$154	$156	–$3	–1.6%	$176	–$22	–12.5%
Commodity & Other	$158	$71	$87	122.7%	$55	$102	184.4%
Credit	$44	$40	$5	11.5%	$34	$10	30.7%
GPFV	**$2,203**	**$1,977**	**$226**	**11.4%**	**$2,253**	**–$50**	**–2.2%**

Source: Call reports, Schedule RC-L

Table 3b: Gross Negative Fair Values, in Billions of Dollars

Trading instruments	1Q 2022	4Q 2021	Q/Q Change	Q/Q % Change	1Q 2021	Y/Y Change	Y/Y % Change
Interest rate	$1,168	$1,163	$6	0.5%	$1,371	–$202	–14.8%
FX	$595	$496	$99	19.8%	$534	$61	11.4%
Equity	$157	$165	–$8	–4.8%	$182	–$25	–13.9%
Commodity & Other	$137	$64	$72	112.2%	$51	$85	165.2%
Credit	$45	$44	$1	2.4%	$36	$10	27.0%
GNFV	**$2,102**	**$1,932**	**$170**	**8.8%**	**$2,174**	**-$72**	**–3.3%**

Source: Call reports, Schedule RC-L

A legally enforceable netting agreement between a bank and a counterparty creates a single legal obligation for all transactions (called a "netting set") under the agreement. Therefore, when banks have such agreements with their counterparties, contracts with negative values (an amount a bank would pay to its counterparty) can offset contracts with positive values (an amount owed by the counterparty to the bank), leaving an NCCE as shown in table 4.

Table 4: Netting Contract Examples

Bank A portfolio with Counterparty B	Number of contracts	Value of contracts	Credit measure/metric
Contracts with positive value to Bank A	6	$500	GPFV
Contracts with negative value to Bank A	4	–$350	GNFV
Total contracts	10	$150	NCCE to Bank A from Counterparty B

Most derivative transactions that a bank has with an individual counterparty are subject to a legally enforceable netting agreement. Some transactions may be subject to the laws of a jurisdiction that does not provide legal certainty of netting agreements, in which case banks must regard such transactions as separate from the netting set. Other transactions may involve nonstandard contractual documentation. Transactions that are not subject to the same legally enforceable netting agreement have distinct values that cannot be netted and for which the appropriate current credit measure is the gross exposure to the bank, if that amount is positive. While banks can net exposures within a netting set under the same netting agreement, they cannot net exposures across netting sets without a separate legally enforceable netting agreement. As a result, a bank's NCCE to a particular counterparty equals the sum of the GPFV of contracts less the dollar amount of netting benefits with that counterparty. A bank's NCCE across all counterparties equals the sum of its NCCE to each of its counterparties.

NCCE is the primary metric the OCC uses to evaluate credit risk in bank derivative activities. NCCE for insured U.S. commercial banks and savings associations decreased by $49.0 billion (13.8 percent) to $307.0 billion in the first quarter of 2022 (see table 5).[2] Legally enforceable

[2] Banks report NCCE on two different schedules (RC-R and RC-L) of the call report, and the amounts reported are not the same because of differences in the scope of coverage. Neither measure comprehensively captures NCCE. RC-L includes exposure only from OTC derivative transactions; it excludes exchange-traded transactions. RC-R excludes transactions not subject to capital requirements. This report uses RC-R to measure NCCE.

netting agreements allowed banks to reduce GPFV exposures by 86.1 percent ($1.9 trillion) in the first quarter of 2022.

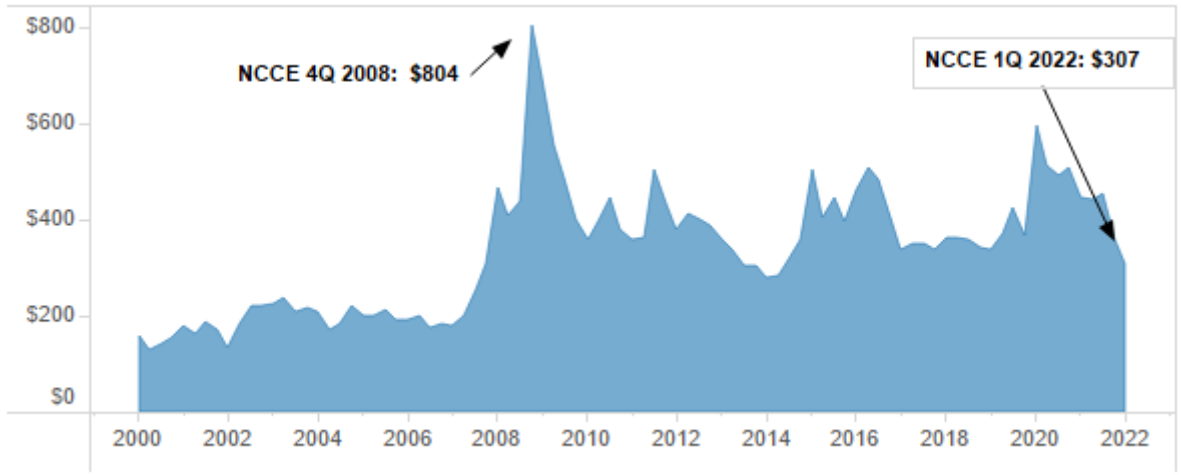
Table 5: Net Current Credit Exposure, in Billions of Dollars

Netting benefit ratio	1Q 2022	4Q 2021	Q/Q Change	Q/Q % Change
GPFV	$2,203	$1,977	$226	11.4%
NCCE RC-R	$307	$356	–$49	–13.8%
Netting benefit RC-R	$1,896	$1,621	$275	16.9%
Netting benefit % RC-R	86.1%	82.0%		4.1%

Source: Call reports, Schedules RC-L and RC-R

NCCE peaked at $804.0 billion at the end of 2008, during the financial crisis when interest rates had plunged, and credit spreads were very high (see figure 2). The decline in NCCE since 2008 has largely resulted from declines in the GPFV of interest rate and credit contracts. After a large increase in NCCE during the first quarter of 2020 as markets responded to the financial impact of the COVID-19 global pandemic, NCCE ended the first quarter of 2022 lower at $307.0 billion as more normal market activity resumed.

Figure 2: Net Current Credit Exposure, in Billions of Dollars



Source: Call reports, Schedule RC-R

The bulk of NCCE in the financial system is concentrated in banks and securities firms (35.7 percent) and in corporations and other counterparties (57.2 percent) (see table 6). The combined exposure to hedge funds and sovereign governments was small (7.1 percent in total).

Table 6: Net Current Credit Exposure by Counterparty Type as a Percentage of Total Net Current Credit Exposure

Quarter	Banks and securities firms	Hedge funds	Sovereign governments	Corporate and all other counterparties
1Q 2022	35.7%	2.1%	5.0%	57.2%
4Q 2021	37.9%	2.0%	7.4%	52.6%
4Q 2020	39.1%	2.2%	8.3%	50.4%
4Q 2019	44.2%	2.5%	9.2%	44.1%
4Q 2018	41.7%	5.0%	10.0%	43.2%
4Q 2017	41.7%	3.1%	7.9%	47.3%
4Q 2016	48.4%	2.0%	6.5%	43.0%

Source: Call reports, Schedule RC-L

A more risk-sensitive measure of credit exposure would consider the value of collateral held against counterparty exposures. Reporting banks held collateral valued at 97.1 percent of their total NCCE at the end of the first quarter of 2022, down from 107.9 percent in the fourth quarter of 2021 (see table 7). Collateral held against hedge fund exposures decreased in the first quarter to 535.4 percent. Bank exposures to hedge funds are secured because banks take initial margin on transactions with hedge funds, in addition to fully securing any current credit exposure. Collateral coverage of corporate and sovereign exposures is much less than coverage of financial institutions and hedge funds.

Table 7: Ratio of Fair Value Collateral to Net Current Credit Exposure

Quarter	FV banks and securities firms	FV hedge funds	FV sovereign governments	FV corporate and all other counterparties	FV/NCCE %
1Q 2022	119.5%	535.4%	76.7%	68.5%	97.1%
4Q 2021	128.5%	687.6%	69.3%	76.0%	107.9%
4Q 2020	110.6%	467.6%	52.1%	59.5%	87.8%
4Q 2019	130.0%	485.9%	48.3%	91.8%	114.5%
4Q 2018	128.9%	308.0%	47.1%	91.8%	113.7%
4Q 2017	124.4%	495.5%	25.1%	89.8%	111.5%
4Q 2016	119.1%	491.5%	34.2%	67.0%	98.5%

Note: FV stands for fair value.

Source: Call reports, Schedule RC-L

The majority of collateral held by banks against NCCE is very liquid with 66.7 percent held in cash (both U.S. dollar and other currencies) and an additional 7.6 percent held in U.S. Treasuries and U.S. government agency securities (see table 8). Supervisors assess changes in the quality and liquidity of collateral held as a key early indicator of potential easing in credit terms. Examiners review the collateral management practices of derivative dealers as a regular part of their supervision activities.

Table 8: Composition of Collateral

Quarter	Cash U.S. $	Cash other currencies	U.S. Treasury securities	U.S. government agency	Corp bonds	Equity securities	All other collateral
1Q 2022	46.3%	20.4%	7.0%	0.6%	2.4%	6.3%	16.9%
4Q 2021	39.3%	24.5%	8.1%	0.9%	1.6%	8.2%	17.3%
4Q 2020	39.5%	28.6%	7.8%	1.7%	1.1%	7.2%	14.1%
4Q 2019	34.4%	24.5%	11.6%	1.7%	2.3%	7.6%	17.7%
4Q 2018	37.2%	23.3%	10.8%	2.2%	2.1%	7.1%	17.2%
4Q 2017	37.6%	25.5%	10.3%	1.9%	2.5%	5.7%	16.5%
4Q 2016	40.1%	31.5%	8.1%	1.7%	1.6%	5.0%	12.0%

Source: Call reports, Schedule RC-L

Market Risk

Value-at-Risk

Banks primarily control market risk in trading operations by establishing limits against potential losses. Banks use value-at-risk (VaR) to quantify the maximum expected loss over a specified time period and at a certain confidence level under relevant market conditions. Banks subject to the market risk capital rule, 12 CFR 3, subpart F, are required to report their VaR-based measures quarterly on FFIEC Form 102. The VaR measurement is calculated daily using a one-tail, 99 percent confidence level, and a holding period equivalent to a 10-business-day movement in underlying risk factors, such as rates, spreads, and prices. Tables 9a and 9b show the quarter-over-quarter change in VaR, as well as the VaR-based capital charge, for banks most active in trading and derivatives activity. As shown in table 9a, market risk in trading operations, as measured by VaR, is a small proportion of their risk-based capital. Figure 22 in the appendix illustrates the historical trend in VaR measurements for these institutions.

Table 9a: Value-at-Risk, in Millions of Dollars

Value-at-Risk	JPMorgan Chase Bank NA	Citibank NA	Bank of America NA	Goldman Sachs Bank USA
1Q 2022 Average 60 Day VaR	$382	$143	$85	$293
4Q 2021 Average 60 Day VaR	$129	$151	$80	$197
Q/Q Change	$253	–$8	$4	$95
1Q 2022 Total Risk-Based Capital	$280,403	$165,783	$192,230	$49,465

Source: Market Risk Regulatory Report for Institutions Subject to the Market Risk Capital Rule—FFIEC 102

Table 9b: Value-at-Risk Capital Requirement, in Millions of Dollars

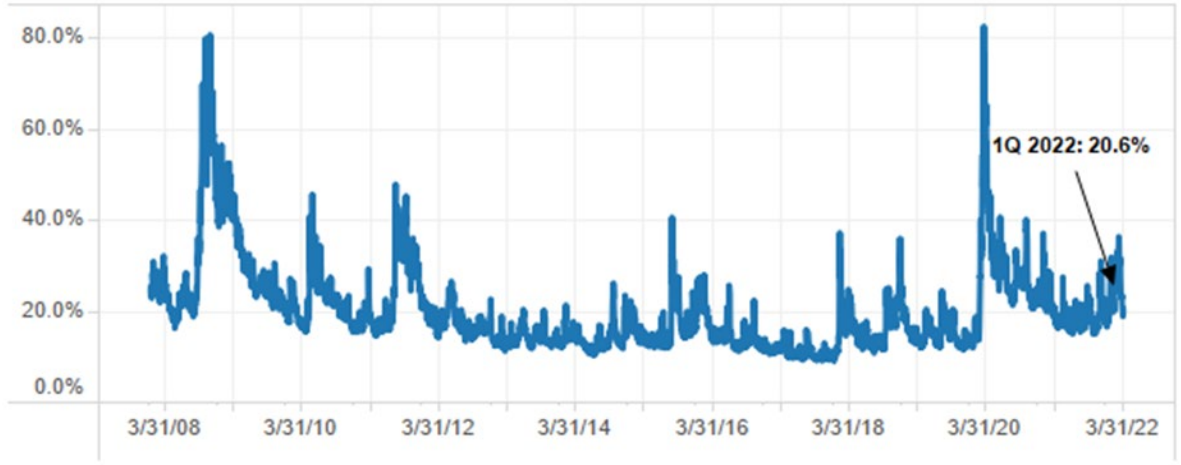
Value-at-Risk capital requirement	JPMorgan Chase Bank NA	Citibank NA	Bank of America NA	Goldman Sachs Bank USA
1Q 2022 VaR Capital Requirement	$1,528	$428	$254	$878
4Q 2021 VaR Capital Requirement	$498	$452	$241	$592
Q/Q Change	$1,030	–$24	$13	$286
1Q 2022 Total Risk-Based Capital	$280,403	$165,783	$192,230	$49,465

Source: Market Risk Regulatory Report for Institutions Subject to the Market Risk Capital Rule—FFIEC 102

Volatility Index

Figure 3 shows the VIX, a volatility index,[3] which measures the market's expectation of stock market volatility in the S&P 500 index over the next 30-day period. Higher volatility as represented by the VIX is associated with increased equity trading volume, which drives increased bank and holding company equity trading revenue. The figure illustrates that there was an extended period of low volatility following the end of the 2008 financial crisis that continued until late in the first quarter of 2020. In mid-March 2020 volatility spiked as financial markets reacted to fears over the potential impact of the COVID-19 global pandemic. The VIX exceeded its previous high from the 2008 financial crisis before settling back to a more normal level of 20.6 percent at the end of the first quarter of 2022.

Figure 3: Volatility Index (VIX)



Source: Bloomberg

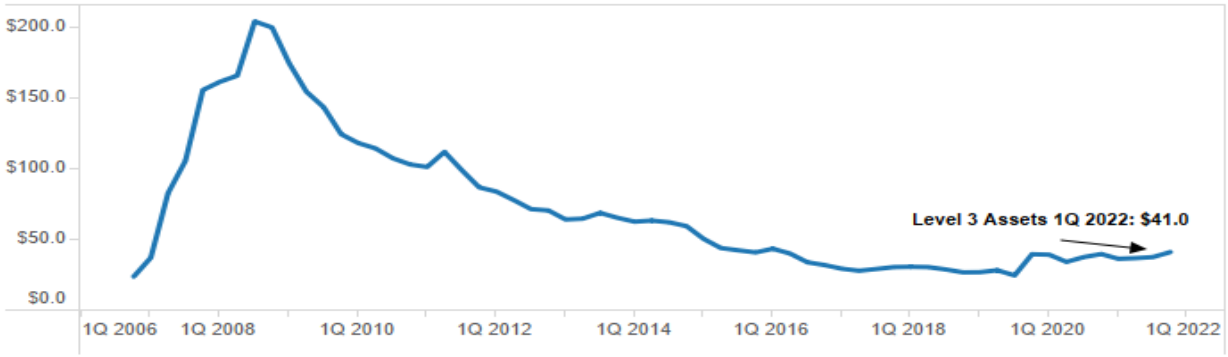
Level 3 Trading Assets

Another measure used to assess market risk is the volume of and changes in level 3 trading assets. Level 3 trading assets are assets whose fair value cannot be determined by using observable inputs, such as market prices. Since the peak of the financial crisis at the end of 2008,

[3] VIX is the trademarked ticker symbol for the Chicago Board Options Exchange SPX Volatility Index.

major dealers have reduced the volume of level 3 trading assets. Because the model inputs that determine the fair value of these exposures are not derived from observable market transactions, banks use their own model assumptions in determining their fair values. Level 3 trading assets peaked at $204.1 billion at the end of 2008 (see figure 4). At the end of the first quarter of 2022, banks held $41.0 billion of level 3 trading assets, up 9.5 percent from the previous quarter and 3.5 percent higher than a year ago. Level 3 trading assets are $163.1 billion (79.9 percent) lower than the peak level from 2008.

Figure 4: Level 3 Trading Assets, in Billions of Dollars



Source: Call reports, Schedule RC-Q

Notional Amounts of All Derivative Contracts

Changes in notional amounts are generally reasonable reflections of business activity and can provide insight into potential revenue and operational issues. The notional amount of derivative contracts, however, does not provide a useful measure of market or credit risk.

The total notional amount of derivative contracts held by banks in the first quarter increased by $22.9 trillion (12.9 percent) to $200.4 trillion from the previous quarter (see table 10). The increase in the notional amount of derivative contracts by underlying risk exposure was primarily driven by an increase in interest rate contracts. Interest rate notional amounts continued to represent the majority of banks' derivative holdings at $145.9 trillion, or 72.8 percent of total derivatives (see table 10).

Table 10: Derivative Notional Amounts by Underlying Risk Exposure Quarter-Over-Quarter, in Billions of Dollars

Trading instrument	1Q 2022	4Q 2021	Q/Q Change	Q/Q % Change	1Q 2021	Y/Y Change	Y/Y % Change
Interest rate	$145,875	$126,236	$19,639	15.6%	$137,435	$8,439	6.1%
FX	$43,580	$41,847	$1,733	4.1%	$42,609	$971	2.3%
Equity	$4,489	$4,256	$233	5.5%	$4,005	$484	12.1%
Commodity & Other	$1,906	$1,584	$322	20.3%	$1,582	$324	20.5%
Credit derivatives	$4,504	$3,540	$964	27.2%	$3,359	$1,146	34.1%
Total notional	**$200,354**	**$177,464**	**$22,891**	**12.9%**	**$188,990**	**$11,364**	**6.0%**

Source: Call reports, Schedule RC-L

The increase in the total notional amount of derivative contracts by contract type was primarily driven by an increase in swaps contracts (see table 11). Swaps contracts remained the leading derivatives contract type at 62.1 percent of all notional amounts.

The four banks with the most derivative activity hold 89.0 percent of all bank derivatives, while the largest 25 banks account for nearly 100 percent of all contracts (see tables 15 and 17 and figure 10 in the appendix for more information).

Table 11: Derivative Notional Amounts by Contract Type Quarter-Over-Quarter, in Billions of Dollars

Trading instrument	1Q 2022	4Q 2021	Q/Q Change	Q/Q % Change	1Q 2021	Y/Y Change	Y/Y % Change
Futures & forwards	$33,523	$31,180	$2,343	7.5%	$40,934	–$7,411	–18.1%
Swaps	$124,397	$109,290	$15,107	13.8%	$107,722	$16,674	15.5%
Options	$37,930	$33,453	$4,477	13.4%	$36,975	$955	2.6%
Credit derivatives	$4,504	$3,540	$964	27.2%	$3,359	$1,146	34.1%
Total notional	**$200,354**	**$177,464**	**$22,891**	**12.9%**	**$188,990**	**$11,364**	**6.0%**

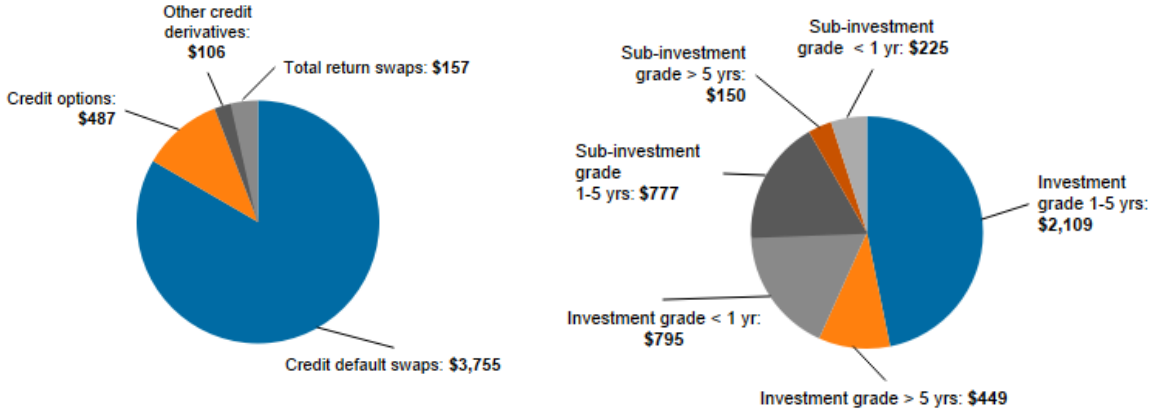
Source: Call reports, Schedule RC-L

Credit Derivatives

The notional amounts of credit derivatives increased $964.0 billion (27.2 percent), to $4.5 trillion in the first quarter of 2022 (see table 10). Contracts referencing investment-grade firms increased $701.0 billion, and contracts referencing sub-investment-grade firms increased $263.0 billion in the first quarter (see figure 20 in the appendix). As shown in the chart on the left of figure 5, credit default swaps are the dominant product, at $3.8 trillion (83.4 percent) of all credit derivative notional amounts.

Credit derivative contracts referencing investment-grade entities with maturities from one to five years represented the largest segment of the market at $2.1 trillion or 46.8 percent of all credit derivative notional amounts. Contracts of all tenors that reference investment-grade entities are $3.4 trillion or 74.4 percent of the market (see the chart on the right in figure 5).

Figure 5: Credit Derivative Composition, in Billions of Dollars



Source: Call reports, Schedule RC-L

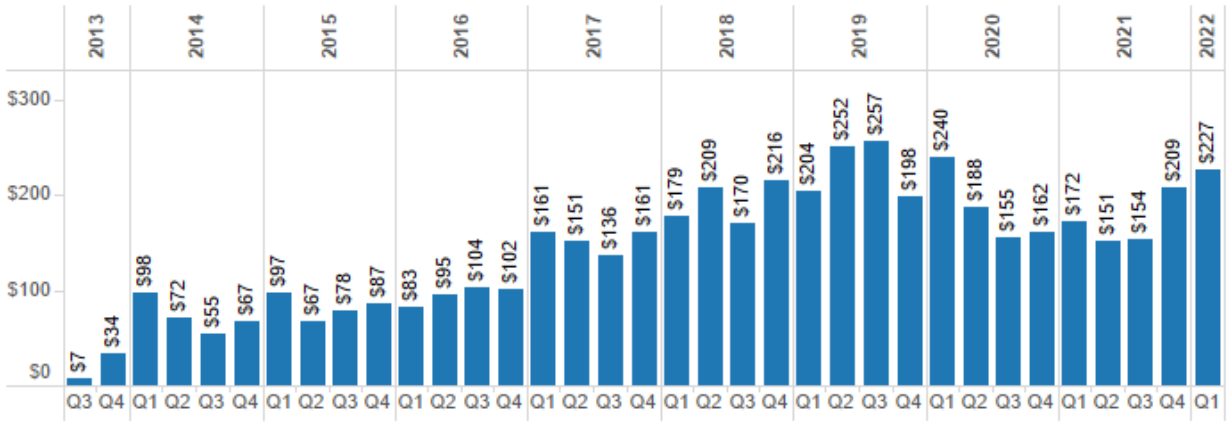
The notional amount for the 96 banks that net sold credit protection (i.e., assumed credit risk) was $2.2 trillion, up $496.6 billion (29.6 percent) from the fourth quarter of 2021 (see table 24 in the appendix). The notional amount for the 73 banks that net purchased credit protection (i.e., hedged credit risk) was $2.3 trillion, $467.3 billion higher (25.1 percent) than in the fourth quarter of 2021 (see table 24 in the appendix).

Compression Activity

Notional amounts of banks' derivative contracts have generally declined since 2013 because of trade compression efforts, leading to less need for risk management products. Trade compression continues to be a significant factor in reducing the amount of notional derivatives outstanding.

Trade compression aggregates a large number of swap contracts with similar factors, such as risk or cash flows, into fewer trades. Compression removes economic redundancy in a derivative book and reduces operational risk and capital costs for large banks. Trade compression activities increased in the first quarter of 2022, as shown in figure 6.

Figure 6: Quarterly Compression Activity, in Trillions of Dollars



Source: LCH Group

Centrally Cleared Derivative Contracts

In the first quarter of 2015, banks began reporting their volumes of cleared and uncleared derivative transactions, as well as risk weights for counterparties in each of these categories. In the first quarter of 2022, 43.4 percent of banks' derivative holdings were centrally cleared (see table 12). From a market factor perspective, 56.1 percent of interest rate derivative contracts' notional amounts outstanding were centrally cleared, while very little of the FX derivative market was centrally cleared. The bank-held credit derivative market remained largely uncleared, as 33.8 percent of credit derivative transactions were centrally cleared during the first quarter of 2022.

Centrally cleared derivative transactions were heavily concentrated at qualifying central counterparties, with 87.6 percent of notional amounts reflecting the 2 percent risk weight applicable to such counterparties.

Table 12: Centrally Cleared Derivative Contracts as a Percentage of Total Derivative Contracts

Quarter	Interest rate	FX	Equity	Precious metals	Credit	Other	Total
1Q 2022	56.1%	2.9%	24.3%	6.4%	33.8%	12.4%	43.4%
4Q 2021	51.8%	2.0%	20.6%	3.1%	29.2%	12.3%	39.4%
3Q 2021	50.5%	2.1%	21.4%	2.6%	35.3%	13.2%	39.0%
2Q 2021	50.7%	2.0%	22.1%	3.3%	35.3%	14.1%	39.5%
1Q 2021	48.6%	2.0%	24.3%	2.9%	39.3%	12.3%	38.2%
4Q 2020	45.3%	1.9%	24.3%	2.1%	36.8%	12.4%	35.0%
3Q 2020	49.2%	1.9%	24.9%	2.8%	39.2%	12.9%	38.9%
2Q 2020	50.7%	1.9%	25.7%	2.0%	36.0%	12.0%	40.3%
1Q 2020	52.9%	2.0%	26.5%	2.1%	34.4%	11.8%	42.3%

Source: Call reports, Schedule RC-R

Glossary of Terms

Bilateral netting: A legally enforceable arrangement between a bank and a counterparty that creates a single legal obligation covering all included individual contracts. This arrangement means that a bank's receivables or payables, in the event of the default or insolvency of one of the parties, would be the net sum of all positive and negative fair values of contracts included in the bilateral netting arrangement.

Centrally cleared derivative contract: A standardized derivative contract that is transacted bilaterally but submitted for clearing to a central counterparty, with the central counterparty becoming the ultimate counterparty to both the buyer and the seller.

Credit derivative: A financial contract that allows a party to take on or reduce credit exposure (generally on a bond, loan, or index). The OCC's derivatives survey includes OTC credit derivatives, such as credit default swaps, total return swaps, and credit spread options.

Derivative: A financial contract in which the value is derived from the performance of underlying market factors, such as interest rates, currency exchange rates, and commodity, credit, and equity prices. Derivative transactions include a wide assortment of financial contracts, such as structured debt obligations and deposits, swaps, futures, options, caps, floors, collars, forwards, and various combinations thereof.

Gross negative fair value (GNFV): The sum total of the fair values of contracts when the bank owes money to its counterparties, without taking netting into account. This amount represents the maximum losses the bank's counterparties would incur if the bank defaulted and there was no netting of contracts, and the counterparties held no bank collateral. GNFVs associated with credit derivatives are included.

Gross positive fair value (GPFV): The sum total of the fair values of contracts when the bank is owed money by its counterparties, without taking netting into account. This amount represents the maximum losses a bank would incur if all its counterparties defaulted and there was no netting of contracts, and the bank held no counterparty collateral. GPFVs associated with credit derivatives are included.

Net current credit exposure (NCCE): For a portfolio of derivative contracts, NCCE is the GPFV of contracts less the dollar amount of netting benefits. On any individual contract, current credit exposure (CCE) is the fair value of the contract if positive and zero when the fair value is negative or zero. NCCE is also the net amount owed to banks if all contracts were immediately liquidated.

Notional amount: The nominal or face amount that is used to calculate payments made on swaps and other risk management products. This amount generally does not change hands and is thus referred to as notional.

OTC derivative contracts: Privately negotiated derivative contracts that are transacted off organized exchanges.

Potential future exposure (PFE): An estimate of what the CCE could be over time, based on a supervisory formula in the agencies' risk-based capital rules. PFE is generally determined by multiplying the notional amount of the contract by a credit conversion factor that is based on the underlying market factor (e.g., interest rates, commodity prices, or equity prices) and the contract's remaining maturity. The risk-based capital rules, however, permit banks to adjust the formulaic PFE measure by the net-to-gross ratio, which proxies the risk-reduction benefits attributable to a valid bilateral netting contract. PFE data in this report use the amounts on which banks hold risk-based capital.

Qualifying central counterparties (QCCP): QCCPs are defined in 12 CFR 3.2 as a CCP either that the Financial Stability Oversight Council has designated systemically important under title VIII of the Dodd–Frank Wall Street Reform and Consumer Protection Act or that meets a series of standards. See 12 CFR 3.2 for a full definition.

Total credit exposure (TCE): The sum total of NCCE and PFE.

Total risk-based capital: The sum of tier 1 plus tier 2 capital. Tier 1 capital generally consists of common shareholders' equity, perpetual preferred shareholders' equity with noncumulative dividends, retained earnings, and tier 1 capital of consolidated subsidiaries that is not owned by the bank (minority interest), less regulatory adjustments and deductions. Tier 2 capital generally consists of subordinated debt, intermediate-term preferred stock, cumulative and long-term preferred stock, tier 2 capital of consolidated subsidiaries that is not owned by the bank (minority interest), and a portion of a bank's allowance for loan and lease losses less regulatory adjustments and deductions.

Trade compression: A significant factor in reducing the amount of notional derivatives outstanding. Trade compression aggregates a large number of swap contracts with similar factors, such as risk or cash flows, into fewer trades. Compression removes economic redundancy in a derivative book and reduces operational risks and capital costs for large banks.

Volatility index (VIX): A measure of the market's expectation of stock market volatility of S&P 500 index options over the next 30-day period.

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Table 13: Notional Amounts of Derivative Contracts

Top 25 Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars, March 31, 2022

Rank	Bank Name	Legal Entity Identifier	Total Assets	Total Derivatives	Total Futures (EXCH TR)	Total Options (EXCH TR)	Total Forwards (OTC)	Total Swaps (OTC)	Total Options (OTC)	Total Credit Derivatives (OTC)	Spot FX
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	$3,476,711	$60,259,442	$1,250,187	$1,623,356	$10,186,380	$37,634,403	$8,071,615	$1,493,501	$912,918
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	474,643	49,753,368	1,375,600	1,381,287	5,323,827	26,829,867	14,269,817	572,970	514,346
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,718,008	45,737,761	733,153	382,186	4,355,888	32,780,925	5,814,309	1,671,300	486,202
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,513,619	22,480,178	323,221	296,607	4,408,660	13,635,273	3,267,295	549,122	521,909
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,764,272	11,815,747	506,850	358,475	532,150	8,536,937	1,761,938	119,397	19,679
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	318,494	2,539,221	12,678	0	2,461,873	29,956	34,714	0	67,412
7	HSBC NA	1IE8VN30JCEQV1H4R804	174,720	1,406,965	89,464	5,677	444,220	777,280	75,074	15,250	53,934
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	380,465	1,202,539	16,745	65	273,151	884,450	27,853	275	166,310
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	577,544	762,195	5,572	500	108,549	444,882	193,154	9,537	4,640
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	534,892	552,653	5,809	10,200	33,786	442,921	47,927	12,009	1,655
11	WESTERN ALLIANCE BANK		60,537	440,127	422,435	0	14,710	563	2,420	0	0
12	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	417,358	338,000	0	0	2,732	334,468	800	0	0
13	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	172,118	330,493	0	0	311,249	18,855	389	0	20,117
14	TRUIST BANK	JJKC32MCHWDI71265Z06	531,045	312,919	4,536	31,168	24,880	189,088	53,772	9,475	336
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	191,869	212,269	5,205	0	16,505	173,812	14,248	2,499	113
16	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	210,153	156,843	2,303	162	7,509	99,268	42,379	5,223	143
17	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	385,291	148,575	18,876	0	5,660	117,251	703	6,086	269
18	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	163,179	147,545	989	0	2,562	117,370	20,248	6,376	25
19	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	125,733	140,454	1,431	0	16,767	117,346	4,909	1	695
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	179,082	136,624	1,675	0	10,139	111,511	13,096	204	729
21	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	201,737	113,432	0	0	26,007	67,087	10,864	9,474	1,381
22	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	46,652	78,715	4,066	1,753	54,734	10,921	7,235	5	0
23	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	176,021	74,771	385	0	5,572	61,580	3,168	4,066	30
24	BMO HARRIS BANK NA		166,509	58,499	0	0	3,079	54,392	952	75	241
25	SANTANDER BANK N A	TR24TWEY5RVRQV65HD49	95,904	55,383	0	0	1,876	47,534	5,877	95	55
	Top 25 Commercial Banks, SAs & TCs With Derivatives		**$15,056,556**	**$199,254,718**	**$4,781,181**	**$4,091,436**	**$28,632,466**	**$123,517,939**	**$33,744,755**	**$4,486,941**	**$2,773,140**
	Other Commercial Banks, SAs & TCs With Derivatives		**6,520,242**	**1,099,603**	**2,632**	**607**	**106,808**	**878,747**	**93,443**	**17,366**	**3,026**
	Total All Commercial Banks, SAs & TCs With Derivatives		**21,576,799**	**200,354,321**	**4,783,813**	**4,092,043**	**28,739,274**	**124,396,686**	**33,838,198**	**4,504,307**	**2,776,166**

Note: Credit derivatives have been included in the sum of total derivatives. Credit derivatives have been included as an "over the counter" category, although the call report does not differentiate by market currently. Before the first quarter of 1995 total derivatives included spot FX. Beginning in that quarter, spot FX has been reported separately.

Source: Call reports, Schedule RC-L

Table 14: Notional Amounts of Derivative Contracts (Holding Companies)
Top 25 Holding Companies in Derivatives, in Millions of Dollars, March 31, 2022

Rank	Holding Company	Legal Entity Identifier	Total Assets	Total Derivatives	Total Futures (EXCH TR)	Total Options (EXCH TR)	Total Forwards (OTC)	Total Swaps (OTC)	Total Options (OTC)	Total Credit Derivatives (OTC)	Spot FX
1	JPMORGAN CHASE & CO.	8I5DZWZKVSZI1NUHU748	$3,954,687	$59,718,800	$1,293,295	$2,151,628	$10,778,813	$36,217,168	$7,774,264	$1,503,632	$890,904
2	CITIGROUP INC.	6SHGI4ZSSLCXXQSBB395	2,394,105	46,789,956	847,656	2,762,810	5,368,775	30,926,371	5,399,016	1,485,328	482,797
3	GOLDMAN SACHS GROUP, INC., THE	784F5XWPLTWKTBV3E584	1,589,443	44,874,642	1,908,527	2,737,072	5,488,890	23,821,905	9,606,308	1,311,940	218,832
4	BANK OF AMERICA CORPORATION	9DJT3UXIJIZJI4WXO774	3,238,223	41,926,381	916,222	1,384,707	8,630,526	25,647,313	4,399,372	948,241	392,530
5	MORGAN STANLEY	IGJSJL3JD5P30I6NJZ34	1,222,233	38,494,673	1,025,270	1,745,217	4,749,686	23,429,769	6,753,299	791,432	109,904
6	WELLS FARGO & COMPANY	PBLD0EJDB5FWOLXP3B76	1,939,709	12,116,584	525,370	396,966	986,919	8,349,025	1,759,735	98,569	19,672
7	SMBC AMERICAS HOLDINGS, INC.		33,238	7,946,658	897,780	2,723,649	158,588	2,997,269	1,167,383	1,989	2,902
8	MIZUHO AMERICAS LLC		51,797	7,327,227	25,493	33,460	129,857	6,935,434	194,872	8,111	1,893
9	HSBC NORTH AMERICA HOLDINGS INC.	213800JCL1FHBQK3M654	231,039	4,299,265	585,407	1,075,397	444,988	2,097,765	80,457	15,250	53,934
10	STATE STREET CORPORATION	549300ZFEEJ2IP5VME73	322,350	2,531,671	12,678	0	2,461,873	22,406	34,714	0	67,412
11	BANK OF NEW YORK MELLON CORPORATION, THE	WFLLPEPC7FZXENRZV188	473,811	1,190,947	17,555	71	284,335	860,858	27,853	275	166,521
12	U.S. BANCORP	N1GZ7BBF3NP8GI976H15	586,517	764,123	5,573	500	108,219	447,140	193,154	9,537	4,640
13	BARCLAYS US LLC	213800H14XVWOV87OI72	173,847	756,405	5,226	361,227	345,799	43,082	0	1,071	72
14	RBC US GROUP HOLDINGS LLC		174,447	576,879	197,986	143,919	9,780	224,182	361	651	206
15	PNC FINANCIAL SERVICES GROUP, INC., THE	CFGNEKW0P8842LEUIA51	541,469	547,331	6,017	10,200	38,114	432,989	47,927	12,084	1,655
16	WESTERN ALLIANCE BANCORPORATION	5493003VJXZ5JXT9S762	60,576	440,127	422,435	0	14,710	563	2,420	0	0
17	TD GROUP US HOLDINGS LLC	549300ARWZ5E3L64UH29	524,292	396,693	27,273	62	20,795	347,690	874	0	0
18	NORTHERN TRUST CORPORATION	549300GLF98S992BC502	172,565	327,743	0	0	311,249	16,105	389	0	20,117
19	TRUIST FINANCIAL CORPORATION	549300DRQQI75D2JP341	543,979	320,194	4,536	31,168	28,794	192,449	53,772	9,475	336
20	CREDIT SUISSE HOLDINGS (USA), INC.	549300YHT5NGRKJD1R94	95,933	239,030	6,179	1,327	121,685	32,071	14,308	63,460	186
21	CAPITAL ONE FINANCIAL CORPORATION	ZUE8T73ROZOF6FLBAR73	434,195	224,105	18,876	0	12,414	186,025	703	6,086	269
22	CITIZENS FINANCIAL GROUP, INC.	2138004JDDA4ZQUPFW65	192,472	212,269	5,205	0	16,505	173,812	14,248	2,499	113
23	MUFG AMERICAS HOLDINGS CORPORATION	5493004K1ECE43Q0BX47	159,223	158,105	2,788	486	30,198	117,346	7,072	216	695
24	FIFTH THIRD BANCORP	THRNG6BD57P9QWTQLG42	211,459	158,048	2,303	162	7,509	100,473	42,379	5,223	143
25	AMERIPRISE FINANCIAL, INC.	GRI2NT5QHYW751NMR949	167,530	150,670	13,533	4,658	344	73,553	56,408	2,175	1
	Top 25 Holding Companies with Derivatives		**$19,489,137**	**$272,488,527**	**$8,773,182**	**$15,564,686**	**$40,549,364**	**$163,692,762**	**$37,631,286**	**$6,277,246**	**$2,435,735**

Note: Currently, the Y-9 report does not differentiate credit derivatives by contract type. Credit derivatives have been included in the sum of total derivatives. Before to the first quarter of 2005, total derivatives included spot FX. Beginning in that quarter, spot FX has been reported separately.

Source: Consolidated Financial Statements for Bank Holding Companies, FR Y- 9, Schedule HC-L

Table 15: Distribution of Derivative Contracts

Top 25 Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars, March 31, 2022

Rank	Bank Name	Legal Entity Identifier	Total Assets	Total Derivatives	Percent Exchange Traded Contracts	Percent OTC Contracts	Percent Interest Rate Contracts	Percent Foreign Exchange Contracts	Percent Equity Contracts	Percent Other Contracts	Percent Credit Derivatives
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	$3,476,711	$60,259,442	4.8	95.2	69.8	22.6	3.4	1.8	2.5
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	474,643	49,753,368	5.5	94.5	85.5	12.9	0.3	0.1	1.2
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,718,008	45,737,761	2.4	97.6	66.3	26.8	2.3	1.0	3.7
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,513,619	22,480,178	2.8	97.2	69.2	24.5	3.6	0.3	2.4
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,764,272	11,815,747	7.3	92.7	89.7	6.0	2.4	0.9	1.0
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	318,494	2,539,221	0.5	99.5	1.6	97.1	0.0	1.3	0.0
7	HSBC NA	1IE8VN30JCEQV1H4R804	174,720	1,406,965	6.8	93.2	17.8	75.6	1.5	4.1	1.1
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	380,465	1,202,539	1.4	98.6	23.3	76.0	0.7	0.0	0.0
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	577,544	762,195	0.8	99.2	85.0	13.5	0.0	0.2	1.3
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	534,892	552,653	2.9	97.1	89.7	4.0	1.3	2.9	2.2
11	WESTERN ALLIANCE BANK		60,537	440,127	96.0	4.0	100.0	0.0	0.0	0.0	0.0
12	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	417,358	338,000	0.0	100.0	97.9	2.1	0.0	0.0	0.0
13	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	172,118	330,493	0.0	100.0	5.6	94.2	0.2	0.0	0.0
14	TRUIST BANK	JJKC32MCHWDI71265Z06	531,045	312,919	11.4	88.6	76.5	5.9	12.6	2.0	3.0
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	191,869	212,269	2.5	97.5	87.8	10.7	0.0	0.3	1.2
16	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	210,153	156,843	1.6	98.4	70.7	14.2	2.3	9.4	3.3
17	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	385,291	148,575	12.7	87.3	84.8	3.1	0.0	8.0	4.1
18	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	163,179	147,545	0.7	99.3	93.2	1.0	0.0	1.4	4.3
19	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	125,733	140,454	1.0	99.0	87.1	12.7	0.1	0.0	0.0
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	179,082	136,624	1.2	98.8	80.3	6.7	0.0	12.9	0.1
21	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	201,737	113,432	0.0	100.0	42.4	24.6	24.6	0.0	8.4
22	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	46,652	78,715	7.4	92.6	79.0	0.5	0.1	20.4	0.0
23	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	176,021	74,771	0.5	99.5	87.3	5.2	0.8	1.3	5.4
24	BMO HARRIS BANK NA		166,509	58,499	0.0	100.0	93.5	5.1	1.2	0.0	0.1
25	SANTANDER BANK N A	TR24TWEY5RVRQV65HD49	95,904	55,383	0.0	100.0	91.7	8.1	0.0	0.0	0.2
	Top 25 Commercial Banks, SAs & TCs With Derivatives		**$15,056,556**	**$199,254,718**	**$8,872,617**	**$190,382,101**	**$144,872,486**	**$43,518,499**	**$4,487,077**	**$1,889,716**	**$4,486,941**
	Other Commercial Banks, SAs & TCs With Derivatives		**6,520,242**	**1,099,603**	**3,239**	**1,096,364**	**1,002,089**	**61,847**	**2,187**	**16,114**	**17,366**
	Total All Commercial Banks, SAs & TCs With Derivatives		**21,576,799**	**200,354,321**	**8,875,856**	**191,478,465**	**145,874,575**	**43,580,346**	**4,489,264**	**1,905,829**	**4,504,307**
	Top 25 Commercial Banks, SAs & TCs With Derivatives: Percentage of Total			**99.5**	**4.4**	**95.0**	**72.3**	**21.7**	**2.2**	**0.9**	**2.2**
	Other Commercial Banks, SAs & TCs With Derivatives: Percentage of Total			**0.5**	**0.0**	**0.5**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**
	Total All Commercial Banks, SAs & TCs With Derivatives: Percentage of Total			**100.0**	**4.4**	**95.6**	**72.8**	**21.8**	**2.2**	**1.0**	**2.2**

Note: Currently, the call report does not differentiate credit derivatives by over the counter or exchange traded. Credit derivatives have been included in the "over the counter" category as well as in the sum of total derivatives here. "FX" does not include spot FX. "Other" is defined as the sum of commodity and equity contracts.

Source: Call reports, Schedule RC-L

Table 16: Credit Equivalent Exposures

Top 25 Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars, March 31, 2022

Rank	Bank Name	Legal Entity Identifier	Total Assets	Total Derivatives	Total Risk-Based Capital	Bilaterally Netted Current Credit Exposure	Potential Future Exposure	Total Credit Exposure From All Contracts	Percent of Total Credit Exposure To Capital
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	$3,476,711	$60,259,442	$280,403	$98,533	$314,664	$413,197	147
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	474,643	49,753,368	49,465	14,092	41,791	55,883	113
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,718,008	45,737,761	165,783	60,872	182,833	243,705	147
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,513,619	22,480,178	192,230	37,791	62,681	100,472	52
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,764,272	11,815,747	166,302	36,612	27,050	63,662	38
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	318,494	2,539,221	18,922	6,930	21,422	28,352	150
7	HSBC NA	1IE8VN30JCEQV1H4R804	174,720	1,406,965	22,502	4,165	4,151	8,316	37
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	380,465	1,202,539	20,127	5,950	10,054	16,004	80
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	577,544	762,195	52,301	3,438	5,027	8,465	16
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	534,892	552,653	49,055	4,930	1,296	6,226	13
11	WESTERN ALLIANCE BANK		60,537	440,127	5,393	24	61	84	2
12	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	417,358	338,000	37,004	133	1,525	1,658	4
13	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	172,118	330,493	10,621	1,326	3,890	5,216	49
14	TRUIST BANK	JJKC32MCHWDI71265Z06	531,045	312,919	45,468	2,721	2,078	4,799	11
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	191,869	212,269	19,856	1,348	1,470	2,818	14
16	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	210,153	156,843	19,446	2,729	2,887	5,616	29
17	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	385,291	148,575	30,484	4,848	4,077	8,925	29
18	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	163,179	147,545	14,532	542	518	1,060	7
19	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	125,733	140,454	16,409	697	357	1,054	6
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	179,082	136,624	17,611	2,606	2,028	4,635	26
21	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	201,737	113,432	18,961	285	5,787	6,072	32
22	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	46,652	78,715	4,166	3,282	1,291	4,573	110
23	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	176,021	74,771	16,647	1,512	748	2,260	14
24	BMO HARRIS BANK NA		166,509	58,499	15,737	19	106	125	1
25	SANTANDER BANK N A	TR24TWEY5RVRQV65HD49	95,904	55,383	11,540	609	414	1,023	9
	Top 25 Commercial Banks, SAs & TCs With Derivatives		**$15,056,556**	**$199,254,718**	**$1,300,965**	**$295,993**	**$698,207**	**$994,200**	**76**
	Other Commercial Banks, SAs & TCs With Derivatives		**6,520,242**	**1,099,603**	**628,137**	**10,897**	**10,810**	**21,706**	**3**
	Total All Commercial Banks, SAs & TCs With Derivatives		**21,576,799**	**200,354,321**	**1,929,103**	**306,889**	**709,017**	**1,015,906**	**53**

Note: Total credit exposure is defined as the credit equivalent amount from derivative contracts (RC-R column B lines 20 and 21), which is the sum of netted current credit exposure and PFE. The total credit exposure to capital ratio is calculated using risk-based capital (tier 1 plus tier 2 capital). Currently, the call report does not differentiate credit derivatives by contract type. Credit derivatives have been included in the sum of total derivatives here.

Source: Call reports, Schedule RC-L and RC-R

Table 17: Notional Amounts of Derivative Contracts Held for Trading

Top Four Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars, March 31, 2022

Rank	Bank Name	Legal Entity Identifier	Total Assets	Total Derivatives	Total Held for Trading & MTM	Percent Held for Trading & MTM	Total Not Held For Trading & MTM	Percent Not Held for Trading & MTM
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	$3,476,711	$60,259,442	$58,290,461	99.2	$475,480	0.8
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	474,643	49,753,368	49,146,969	99.9	33,429	0.1
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,718,008	45,737,761	43,889,732	99.6	176,729	0.4
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,513,619	22,480,178	20,432,339	93.2	1,498,717	6.8
	Top Four Commercial Banks, SAs & TCs With Derivatives		**$8,182,981**	**$178,230,749**	**$171,759,501**	**98.7**	**$2,184,355**	**1.3**
	Other Commercial Banks, SAs & TCs With Derivatives		**13,393,818**	**22,123,572**	**19,361,446**	**88.4**	**2,544,712**	**11.6**
	Total All Commercial Banks, SAs & TCs With Derivatives		**21,576,799**	**200,354,321**	**191,120,947**	**97.6**	**4,729,067**	**2.4**

Note: Currently, the call report does not differentiate between traded and not-traded credit derivatives. Credit derivatives have been excluded from the sum of total derivatives here.

Source: Call reports, Schedule RC-L

Table 18: Gross Fair Values of Derivative Contracts

Top Four Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars, March 31, 2022

Rank	Bank Name	Legal Entity Identifier	Total Assets	Total Derivatives	Trading Gross Positive Fair Value*	Trading Gross Negative Fair Value**	Not For Trading Gross Positive Fair Value*	Not For Trading Gross Negative Fair Value**	Credit Derivatives Gross Positive Fair Value	Credit Derivatives Gross Negative Fair Value**
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	$3,476,711	$60,259,442	$680,747	$638,162	$2,590	$2,824	$11,844	$11,303
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	474,643	49,753,368	632,623	620,533	262	14	8,128	8,989
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,718,008	45,737,761	443,500	419,216	4,589	3,507	17,461	17,575
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,513,619	22,480,178	173,884	163,997	38,879	39,531	5,282	5,231
	Top Four Commercial Banks, SAs & TCs With Derivatives		**$8,182,981**	**$178,230,749**	**$1,930,754**	**$1,841,908**	**$46,320**	**$45,876**	**$42,715**	**$43,098**
	Other Commercial Banks, SAs & TCs With Derivatives		**13,393,818**	**22,123,572**	**157,716**	**150,108**	**23,570**	**19,160**	**1,538**	**2,072**
	Total All Commercial Banks, SAs & TCs With Derivatives		**21,576,799**	**200,354,321**	**2,088,470**	**1,992,016**	**69,890**	**65,036**	**44,253**	**45,170**

Note: Currently, the call report does not differentiate between traded and non-traded credit derivatives. Credit derivatives have been included in the sum of total derivatives here.
*Market value of contracts that have a positive fair value as of the end of the quarter.
**Market value of contracts that have a negative fair value as of the end of the quarter.

Source: Call reports, Schedule RC-L

Table 19: Trading Revenues From Cash Instruments and Derivatives

Top Four Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars: Revenue Figures are for the Quarter (Not Year-to-Date), March 31, 2022

Rank	Bank Name	Legal Entity Identifier	Total Assets	Total Derivatives	Total Trading Revenues From Cash & Off-Balance Sheet Positions	Trading Revenue From Interest Rate Positions	Trading Revenue From Foreign Exchange Positions	Trading Revenue From Equity Positions	Trading Revenue From Commodity & Other Positions	Trading Revenue From Credit Positions
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	$3,476,711	$60,259,442	$3,121	$934	$1,277	–$35	$558	$387
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	474,643	49,753,368	873	–1,446	1,703	91	28	497
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,718,008	45,737,761	3,760	821	1,495	934	554	–44
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,513,619	22,480,178	1,514	380	566	412	–9	165
	Top Four Commercial Banks, SAs & TCs With Derivatives		**$8,182,981**	**$178,230,749**	**$9,268**	**$689**	**$5,041**	**$1,402**	**$1,131**	**$1,005**
	Other Commercial Banks, SAs & TCs With Derivatives		**13,393,818**	**22,123,572**	**1,354**	**–286**	**1,300**	**56**	**30**	**254**
	Total All Commercial Banks, SAs & TCs With Derivatives		**21,576,799**	**200,354,321**	**10,622**	**403**	**6,341**	**1,458**	**1,161**	**1,259**

Note: Effective in the first quarter of 2007, trading revenues from credit exposures are reported separately, along with the four other types of exposures. The total derivatives column includes credit exposures. Trading revenue is defined here as "trading revenue from cash instruments and off-balance-sheet derivative instruments."

Source: Call reports, Schedule RC-L and Schedule RI

Table 20: Notional Amounts of Derivative Contracts by Contract Type and Maturity (Interest Rate and Foreign Exchange Rate)

Top Four Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars, March 31, 2022

Rank	Bank Name	Legal Entity Identifier	Total Assets	Total Derivatives	Interest Rate Maturity < 1 Year	Interest Rate Maturity 1-5 Years	Interest Rate Maturity > 5 Years	Interest Rate: All Maturities	Foreign Exchange Rate Maturity < 1 Year	Foreign Exchange Rate Maturity 1-5 Years	Foreign Exchange Rate Maturity > 5 Years	Foreign Exchange Rate: All Maturities
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	$3,476,711	$60,259,442	$45,825,913	$7,097,348	$5,404,223	$58,327,484	$9,933,658	$2,467,025	$1,188,196	$13,588,879
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	474,643	49,753,368	21,875,815	6,819,536	6,698,460	35,393,811	4,398,289	955,557	683,283	6,037,129
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,718,008	45,737,761	22,233,236	3,580,495	2,676,686	28,490,417	10,446,733	709,328	262,178	11,418,239
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,513,619	22,480,178	6,125,885	5,721,876	3,999,016	15,846,777	4,484,590	501,430	318,346	5,304,366
	Top Four Commercial Banks, SAs & TCs With Derivatives		**$8,182,981**	**$178,230,749**	**$96,060,849**	**$23,219,255**	**$18,778,385**	**$138,058,489**	**$29,263,270**	**$4,633,340**	**$2,452,003**	**$8,182,981**
	Other Commercial Banks, SAs & TCs With Derivatives		**13,393,818**	**22,123,572**	**6,876,173**	**3,107,414**	**4,230,859**	**14,214,446**	**5,589,022**	**188,841**	**166,399**	**13,393,818**
	Total All Commercial Banks, SAs & TCs With Derivatives		**21,576,799**	**200,354,321**	**102,937,022**	**26,326,669**	**23,009,244**	**152,272,935**	**34,852,292**	**4,822,181**	**2,618,402**	**21,576,799**

Note: Beginning January 1, 2022, the largest banks are required to calculate their derivative exposure amount for regulatory capital purposes using the Standardized Approach for Counterparty Credit Risk (SA-CCR). Refer to the call report instructions and OCC Bulletin 2020-7, “Standardized Approach for Counterparty Credit Risk: Final Rule,” for additional information on the SA-CCR exposure calculation.

Source: Call reports, Schedule RC-L and RC-R

Table 21: Notional Amounts of Derivative Contracts by Contract Type and Maturity (Precious Metals)

Top Four Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars, March 31, 2022

Rank	Bank Name	Legal Entity Identifier	Total Assets	Total Derivatives	Precious Metals Maturity < 1 Year	Precious Metals Maturity 1-5 Years	Precious Metals Maturity > 5 Years	Precious Metals: All Maturities
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	$3,476,711	$60,259,442	$305,878	$24,222	$23	$330,123
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	474,643	49,753,368	5,591	372	0	5,963
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,718,008	45,737,761	111,100	3,046	2	114,148
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,513,619	22,480,178	28,996	445	0	29,441
	Top Four Commercial Banks, SAs & TCs With Derivatives		**$8,182,981**	**$178,230,749**	**$451,565**	**$28,085**	**$25**	**$479,675**
	Other Commercial Banks, SAs & TCs With Derivatives		**13,393,818**	**22,123,572**	**11,600**	**287**	**280**	**12,168**
	Total All Commercial Banks, SAs & TCs With Derivatives		**21,576,799**	**200,354,321**	**463,165**	**28,372**	**305**	**491,843**

Note: Beginning January 1, 2022, the largest banks are required to calculate their derivative exposure amount for regulatory capital purposes using the Standardized Approach for Counterparty Credit Risk (SA-CCR). Under SA-CCR gold derivatives are considered precious metals derivative contracts rather than an exchange rate derivative contract resulting in an increase in reported precious metals derivative contracts compared to prior quarters. Refer to the call report instructions and OCC Bulletin 2020-7, “Standardized Approach for Counterparty Credit Risk: Final Rule,” for additional information on the SA-CCR exposure calculation.

Source: Call reports, Schedule RC-L and RC-R

Table 22: Notional Amounts of Derivative Contracts by Contract Type and Maturity (Other Commodity and Equity)

Top Four Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars, March 31, 2022

Rank	Bank Name	Legal Entity Identifier	Total Assets	Total Derivatives	Other Commodity Maturity < 1 Year	Other Commodity Maturity 1-5 Years	Other Commodity Maturity > 5 Years	Other Commodity: All Maturities	Equity Maturity < 1 Year	Equity Maturity 1-5 Years	Equity Maturity > 5 Years	Equity: All Maturities
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	$3,476,711	$60,259,442	$1,166,710	$111,436	$6,309	$1,284,455	$2,844,001	$612,287	$64,372	$3,520,660
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	474,643	49,753,368	52,774	16,540	63	69,377	214,746	42,167	10,613	267,526
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,718,008	45,737,761	166,957	51,706	804	219,467	497,041	133,591	8,830	639,462
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,513,619	22,480,178	23,868	5,891	279	30,038	655,231	178,673	29,073	862,977
	Top Four Commercial Banks, SAs & TCs With Derivatives		**$8,182,981**	**$178,230,749**	**$1,410,309**	**$185,573**	**$7,455**	**$1,603,337**	**$4,211,019**	**$966,718**	**$112,888**	**$5,290,625**
	Other Commercial Banks, SAs & TCs With Derivatives		**13,393,818**	**22,123,572**	**85,920**	**64,394**	**23,361**	**173,675**	**280,346**	**34,001**	**62,295**	**376,642**
	Total All Commercial Banks, SAs & TCs With Derivatives		**21,576,799**	**200,354,321**	**1,496,229**	**249,967**	**30,816**	**1,777,012**	**4,491,365**	**1,000,719**	**175,183**	**5,667,267**

Note: Beginning January 1, 2022, the largest banks are required to calculate their derivative exposure amount for regulatory capital purposes using the Standardized Approach for Counterparty Credit Risk (SA-CCR). Refer to the call report instructions and OCC Bulletin 2020-7, “Standardized Approach for Counterparty Credit Risk: Final Rule,” for additional information on the SA-CCR exposure calculation.

Source: Call reports, Schedule RC-L and RC-R

Table 23: Notional Amounts of Credit Derivative Contracts by Contract Type and Maturity (Investment Grade and Sub-Investment Grade)

Top Four Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars, March 31, 2022

Rank	Bank Name	Legal Entity Identifier	Total Assets	Total Derivatives	Total Credit Derivatives	Investment Grade Maturity <1 Year	Investment Grade Maturity 1-5 Years	Investment Grade Maturity >5 Years	Investment Grade All Maturities	Sub-Investment Grade Maturity <1 Year	Sub-Investment Grade Maturity 1-5 Years	Sub-Investment Grade Maturity >5 Years	Sub-Investment Grade All Maturities
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	$3,476,711	$60,259,442	$1,493,501	$266,862	$655,984	$192,507	$1,115,353	$71,831	$240,167	$66,150	$378,148
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	474,643	49,753,368	572,970	65,800	242,586	54,371	362,757	30,669	154,768	24,776	210,213
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,718,008	45,737,761	1,671,300	253,848	931,851	140,688	1,326,387	61,884	253,998	29,031	344,913
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,513,619	22,480,178	549,122	163,515	202,301	39,245	405,061	49,543	80,188	14,330	144,061
	Top Four Commercial Banks, SAs & TCs With Derivatives		**$8,182,981**	**$178,230,749**	**$4,286,893**	**$750,025**	**$2,032,722**	**$426,811**	**$3,209,558**	**$213,927**	**$729,121**	**$134,287**	**$1,077,335**
	Other Commercial Banks, SAs & TCs With Derivatives		**13,393,818**	**22,123,572**	**217,414**	**44,949**	**75,931**	**21,906**	**142,785**	**11,408**	**47,897**	**15,324**	**74,629**
	Total All Commercial Banks, SAs & TCs With Derivatives		**21,576,799**	**200,354,321**	**4,504,307**	**794,974**	**2,108,653**	**448,717**	**3,352,343**	**225,335**	**777,018**	**149,611**	**1,151,964**

Source: Call reports, Schedule RC-L

Table 24: Distribution of Credit Derivative Contracts Held for Trading

Top 25 Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars, March 31, 2022

Rank	Bank Name	Legal Entity Identifier	Total Assets	Total Derivatives	Total Credit Derivatives	Total Credit Derivatives Purchased	Total Credit Derivatives Sold	Purchased Credit Default Swaps	Purchased Total Return Swaps	Purchased Credit Options	Purchased Other Credit Derivatives	Sold Credit Default Swaps	Sold Total Return Swaps	Sold Credit Options	Sold Other Credit Derivatives
1	JPMORGAN CHASE BANK NA	7H6GLXDRUGQFU57RNE97	$3,476,711	$60,259,442	$1,493,501	$763,357	$730,144	$643,893	$24,113	$89,644	$5,707	$633,411	$10,602	$86,127	$4
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	474,643	49,753,368	572,970	310,591	262,379	287,681	2,839	19,149	922	241,564	2,949	17,767	99
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,718,008	45,737,761	1,671,300	858,220	813,080	784,343	12,634	61,243	0	739,203	5,686	68,191	0
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,513,619	22,480,178	549,122	283,502	265,620	193,243	15,183	75,076	0	181,212	15,756	68,652	0
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,764,272	11,815,747	119,397	70,126	49,271	10,988	38,141	250	20,747	8,919	26,783	0	13,569
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	318,494	2,539,221	0	0	0	0	0	0	0	0	0	0	0
7	HSBC NA	1IE8VN30JCEQV1H4R804	174,720	1,406,965	15,250	8,931	6,319	8,656	275	0	0	6,319	0	0	0
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	380,465	1,202,539	275	275	0	275	0	0	0	0	0	0	0
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	577,544	762,195	9,537	2,933	6,604	440	0	0	2,493	0	0	0	6,604
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	534,892	552,653	12,009	4,240	7,770	600	0	0	3,640	0	0	0	7,770
11	WESTERN ALLIANCE BANK		60,537	440,127	0	0	0	0	0	0	0	0	0	0	0
12	TD BANK NATIONAL ASSN	03D0JEWFDFUS0SEEKG89	417,358	338,000	0	0	0	0	0	0	0	0	0	0	0
13	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	172,118	330,493	0	0	0	0	0	0	0	0	0	0	0
14	TRUIST BANK	JJKC32MCHWDI71265Z06	531,045	312,919	9,475	3,494	5,981	630	1,515	0	1,349	0	0	0	5,981
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	191,869	212,269	2,499	0	2,499	0	0	0	0	0	0	0	2,499
16	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	210,153	156,843	5,223	1,513	3,710	0	0	0	1,513	0	0	0	3,710
17	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	385,291	148,575	6,086	3,208	2,878	0	0	0	3,208	0	0	0	2,878
18	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	163,179	147,545	6,376	2,616	3,760	0	0	0	2,616	0	0	0	3,760
19	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	125,733	140,454	1	1	0	1	0	0	0	0	0	0	0
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	179,082	136,624	204	26	178	26	0	0	0	85	93	0	0
21	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	201,737	113,432	9,474	8,683	791	8,036	2	645	0	790	1	0	0
22	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	46,652	78,715	5	0	5	0	0	0	0	5	0	0	0
23	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	176,021	74,771	4,066	2,748	1,318	0	0	0	2,748	0	0	0	1,318
24	BMO HARRIS BANK NA		166,509	58,499	75	75	0	0	75	0	0	0	0	0	0
25	SANTANDER BANK N A	TR24TWEY5RVRQV65HD49	95,904	55,383	95	12	83	12	0	0	0	83	0	0	0
	Top 25 Commercial Banks, SAs & TCs With Derivatives		**$15,056,556**	**$199,254,718**	**$4,486,941**	**$2,324,551**	**$2,162,390**	**$1,938,824**	**$94,777**	**$246,007**	**$44,943**	**$1,811,591**	**$61,870**	**$240,737**	**$48,192**
	Other Commercial Banks, SAs & TCs With Derivatives		**6,520,242**	**1,099,603**	**17,366**	**6,023**	**11,343**	**1,600**	**0**	**0**	**4,423**	**3,349**	**4**	**0**	**7,990**
	Total All Commercial Banks, SAs & TCs With Derivatives		**21,576,799**	**200,354,321**	**4,504,307**	**2,330,575**	**2,173,733**	**1,940,425**	**94,777**	**246,007**	**49,366**	**1,814,940**	**61,874**	**240,737**	**56,182**
	Top 25 Commercial Banks, SAs & TCs With Derivatives: Percentage of Total				**99.6**	**51.6**	**48.0**	**43.0**	**2.1**	**5.5**	**1.0**	**40.2**	**1.4**	**5.3**	**1.1**
	Other Commercial Banks, SAs & TCs With Derivatives: Percentage of Total				**0.4**	**0.1**	**0.3**	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**	**0.2**
	Total All Commercial Banks, SAs & TCs With Derivatives: Percentage of Total				**100.0**	**51.7**	**48.3**	**43.1**	**2.1**	**5.5**	**1.1**	**40.3**	**1.4**	**5.3**	**1.2**

Note: Credit derivatives have been excluded from the sum of total derivatives here.

Source: Call reports, Schedule RC-L

Table 25: Derivatives Data Reported by FFIEC 051 Filers*

Commercial Banks, Savings Associations and Trust Companies in Derivatives, in Millions of Dollars, March 31, 2022

FFIEC 051 Call Report Schedule SU

Gross Notional Amount of Derivatives	1Q22	4Q21	3Q21	2Q21	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19
Total gross notional amount of interest rate derivatives held for trading	$4,994	$5,011	$5,301	$5,189	$5,391	$5,819	$6,236	$5,183	$4,476	$2,293	$2,526	$913
Total gross notional amount of all other derivatives held for trading	$39	$44	$14	$173	$20	$19	$53	$34	$48	$33	$30	$37
Total gross notional amount of interest rate derivatives not held for trading	$21,308	$22,545	$29,991	$31,949	$38,839	$52,867	$57,459	$52,779	$37,572	$20,044	$18,527	$11,135
Total gross notional amount of all other derivatives not held for trading	$1,007	$1,314	$1,461	$1,350	$1,269	$1,137	$1,202	$1,302	$1,171	$631	$546	$273

FFIEC 051 Call Report Schedule RC-R**

Notional principal amounts of over-the-counter derivative contracts covered by the regulatory capital rules	1Q22	4Q21	3Q21	2Q21	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19
Interest rate	Data not reported	$13,975	Data not reported	$17,688	Data not reported	$22,947	Data not reported	$33,122	Data not reported	$12,478	Data not reported	$7,177
Foreign exchange rate		$4		$3		$84		$19		$18		$4
Credit (investment grade reference asset)		$230		$196		$217		$199		$166		$39
Credit (non-investment grade reference asset)		$160		$154		$143		$138		$61		$25
Equity		$0		$0		$0		$0		$0		$0
Precious metals		$0		$1		$0		$0		$0		$0
Other		$4		$1		$20		$25		$9		$5

Notional principal amounts of centrally cleared derivative contracts covered by the regulatory capital rules	1Q22	4Q21	3Q21	2Q21	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19
Interest rate	Data not reported	$21	Data not reported	$193	Data not reported	$250	Data not reported	$299	Data not reported	$96	Data not reported	$168
Foreign exchange rate		$0		$0		$0		$0		$0		$0
Credit (investment grade reference asset)		$0		$0		$0		$0		$0		$0
Credit (non-investment grade reference asset)		$0		$0		$0		$0		$0		$0
Equity		$0		$0		$0		$0		$0		$0
Precious metals		$0		$0		$0		$0		$0		$0
Other		$0		$0		$0		$0		$0		$0

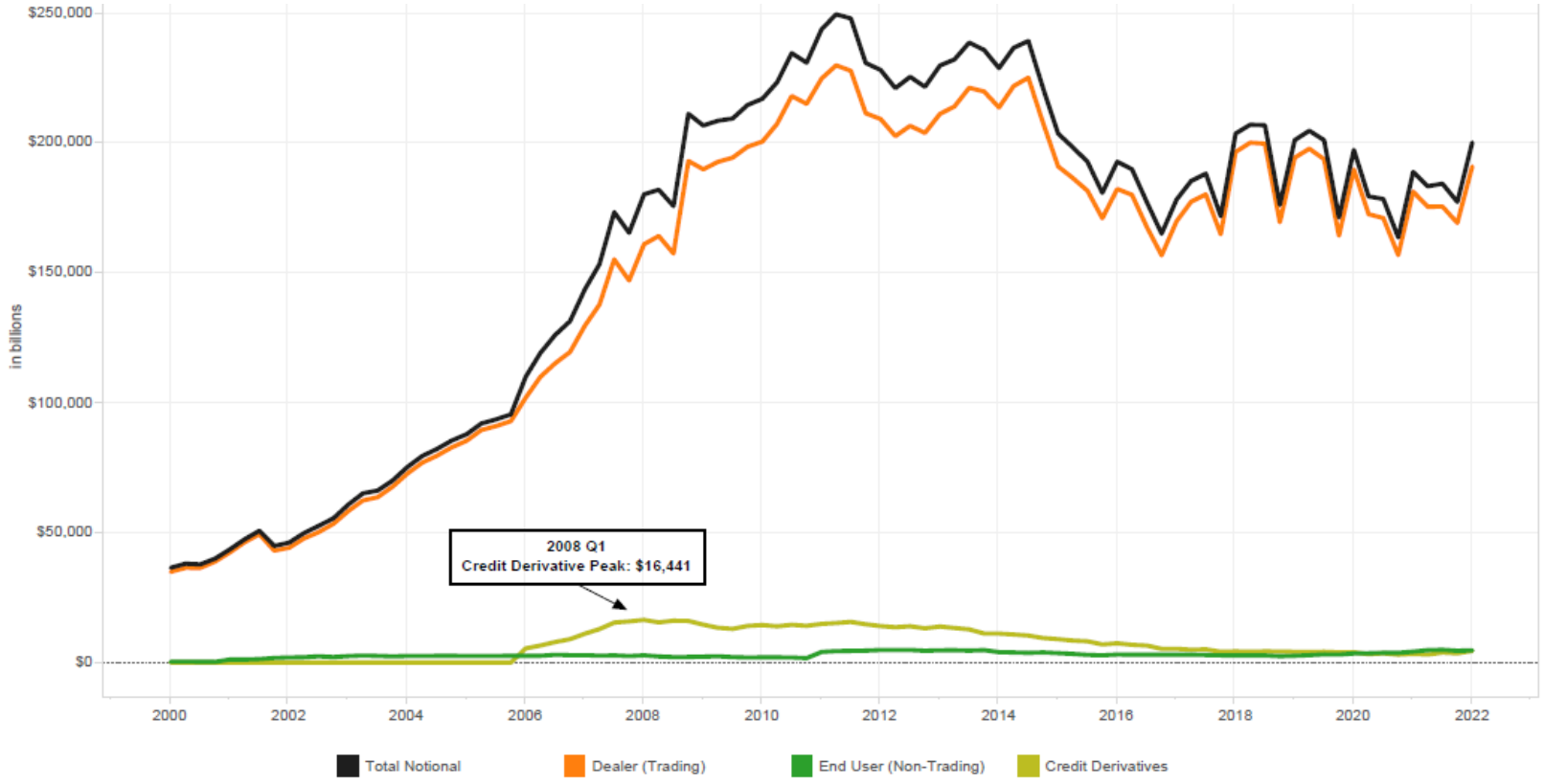
	1Q22	4Q21	3Q21	2Q21	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19
Current credit exposure across all derivative contracts covered by the regulatory capital rules	Data not reported	$233	Data not reported	$287	Data not reported	$449	Data not reported	$504	Data not reported	$140	Data not reported	$95

*Beginning September 30, 2019, the eligibility to file the FFIEC 051 Call Report expanded from banks with total assets less than $1 billion to include banks with less than $5 billion in total assets.
**Beginning September 30, 2019, banks filing the FFIEC 051 Call Report complete this information from schedule RC-R in the June and December reports only.

Source: Call reports, Schedule SU and Schedule RC-R

Figure 7: Derivative Notional Amounts by Type

Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

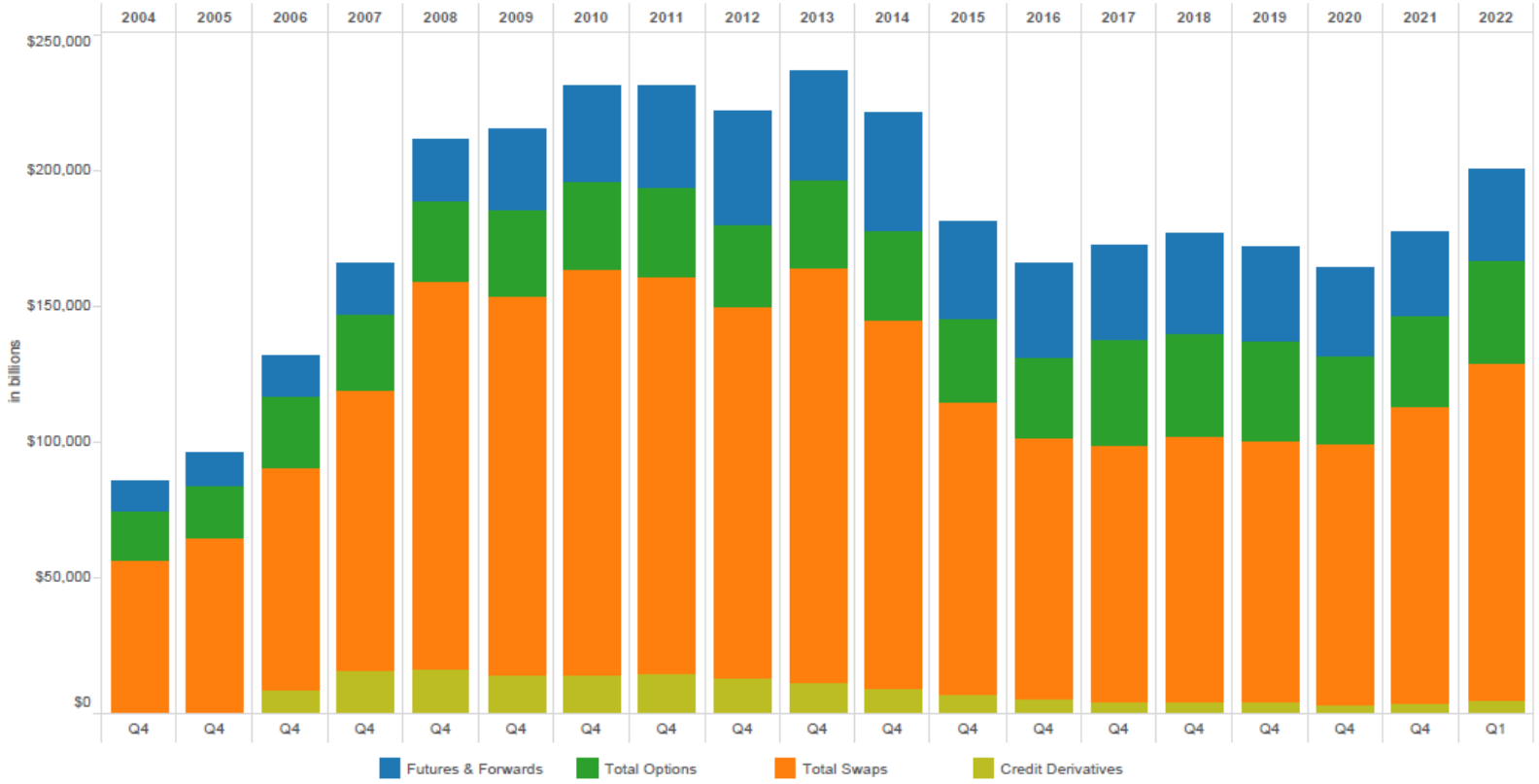
	2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Total Notional	$203,796	$207,203	$206,996	$176,354	$201,283	$204,876	$201,258	$171,465	$197,504	$179,573	$178,579	$163,799	$188,990	$183,501	$184,480	$177,464	$200,354
Dealer (Trading)	196,712	200,286	199,891	169,636	194,518	197,950	193,912	164,441	189,995	172,723	171,242	156,997	181,421	175,607	175,695	169,361	191,121
End User (Non-Trading)	2,738	2,738	2,764	2,448	2,620	2,852	3,163	3,079	3,522	3,595	3,757	3,768	4,211	4,791	4,933	4,562	4,729
Credit Derivatives	4,345	4,179	4,342	4,270	4,145	4,074	4,183	3,945	3,986	3,255	3,581	3,034	3,359	3,104	3,852	3,540	4,504

Note: Numbers may not add up to total due to rounding. Total derivative notionals are now reported including credit derivatives, for which regulatory reporting does not differentiate between trading and non-trading.

Source: Call reports, Schedule RC-L

Figure 8: Derivative Contracts by Product*

Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

	2006 Q4	2007 Q4	2008 Q4	2009 Q4	2010 Q4	2011 Q4	2012 Q4	2013 Q4	2014 Q4	2015 Q4	2016 Q4	2017 Q4	2018 Q4	2019 Q4	2020 Q4	2021 Q4	2022 Q1
Futures & Forwards	$14,882	$18,867	$22,529	$29,652	$35,539	$37,469	$41,621	$40,027	$43,380	$35,691	$34,201	$34,162	$36,145	$34,789	$32,350	$31,180	$33,523
Total Options	26,277	27,727	29,747	31,884	32,078	32,505	30,375	32,305	33,081	30,889	29,373	38,841	38,009	36,117	31,991	33,453	37,930
Total Swaps	81,340	103,102	143,111	139,138	149,331	146,266	136,608	152,469	135,169	107,392	96,384	94,784	97,930	96,614	96,423	109,290	124,397
Credit Derivatives	9,020	15,863	16,029	14,112	14,151	14,759	13,190	11,191	9,449	6,986	5,293	4,186	4,270	3,945	3,034	3,540	4,504
Total Notional	131,519	165,559	211,416	214,786	231,099	230,998	221,794	235,992	221,078	180,959	165,252	171,974	176,354	171,465	163,799	177,464	200,354

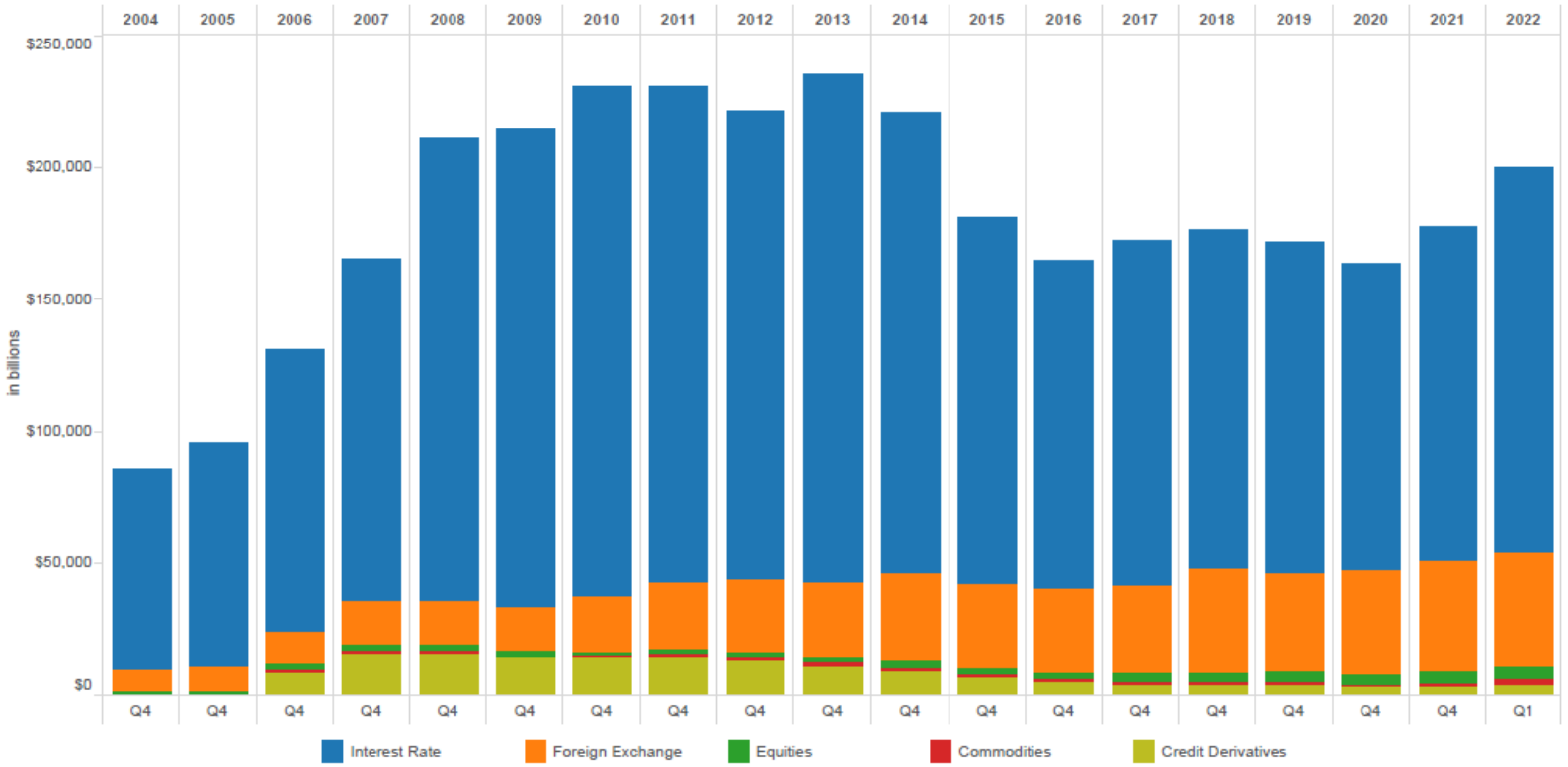
*Notional amount of total: futures, exchange-traded options, over the counter options, forwards and swaps.

Note: Numbers may not add up to total due to rounding.

Source: Call reports, Schedule RC-L

Figure 9: Derivative Contracts by Type*

Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

	2007 Q4	2008 Q4	2009 Q4	2010 Q4	2011 Q4	2012 Q4	2013 Q4	2014 Q4	2015 Q4	2016 Q4	2017 Q4	2018 Q4	2019 Q4	2020 Q4	2021 Q4	2022 Q1
Interest Rate	$129,491	$175,895	$181,454	$193,399	$187,866	$177,650	$193,084	$174,687	$138,369	$124,488	$130,417	$128,175	$125,065	$116,000	$126,236	$145,875
Foreign Exchange	16,614	16,224	16,555	20,990	25,436	27,587	28,480	33,183	32,100	31,737	32,903	39,220	37,170	39,596	41,847	43,580
Equities	2,524	2,207	1,685	1,364	1,606	1,970	2,028	2,537	2,395	2,475	3,080	3,374	3,796	3,775	4,256	4,489
Commodities	1,067	1,061	979	1,195	1,330	1,397	1,209	1,222	1,108	1,257	1,388	1,315	1,488	1,395	1,584	1,906
Credit Derivatives	15,863	16,029	14,112	14,151	14,759	13,190	11,191	9,449	6,986	5,293	4,186	4,270	3,945	3,034	3,540	4,504
Total Notional	165,559	211,416	214,786	231,099	230,998	221,794	235,992	221,078	180,959	165,252	171,974	176,354	171,465	163,799	177,464	200,354

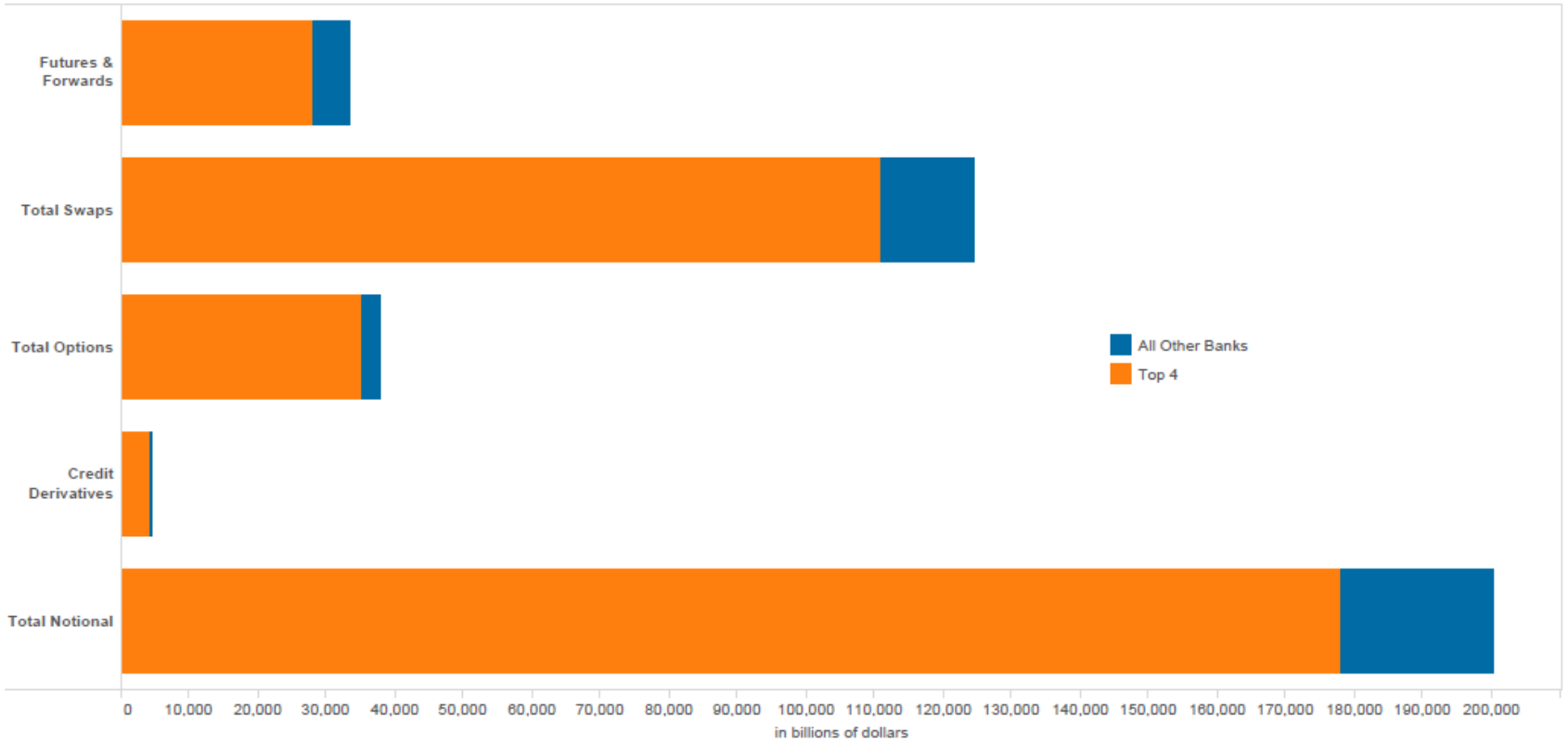
*Notional amount of total: futures, exchange traded options, over the counter options, forwards, and swaps.

Note: As of 2006 Q2 equities and commodities types are shown as separate categories. They were previously shown as “Other Derivs.” Numbers may not add up to total due to rounding.

Source: Call reports, Schedule RC-L

Figure 10: Four Banks Dominate in Derivatives*

Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

	Top 4	All Other Banks	Grand Total
Futures & Forwards	$27,957	$5,566	$33,523
Total Swaps	110,880	13,516	124,397
Total Options	35,106	2,824	37,930
Credit Derivatives	4,287	217	4,504
Total Notional	178,231	22,124	200,354

*Notional amount of total: futures, exchange-traded options, over-the-counter options, forwards, and swaps.

Source: Call reports, Schedule RC-L

Figure 11: Credit Exposure to Risk-Based Capital (in Percentage)

Top Four Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings

	2017				2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
JPMorgan Chase Bank NA	201	193	195	179	197	184	190	167	173	150	163	153	181	165	168	163	159	155	158	143	147
Bank of America NA	66	64	59	57	62	61	62	57	58	58	59	56	68	59	54	54	53	57	53	49	52
Citibank NA	186	184	171	140	146	139	144	132	130	132	134	126	140	125	137	133	145	150	170	153	147
Goldman Sachs	472	484	433	420	389	384	371	354	366	372	372	344	319	299	304	314	316	285	286	149	113

TOTAL	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	220	218	205	191	195	187	188	173	178	169	176	164	174	160	165	164	165	158	168	136	133

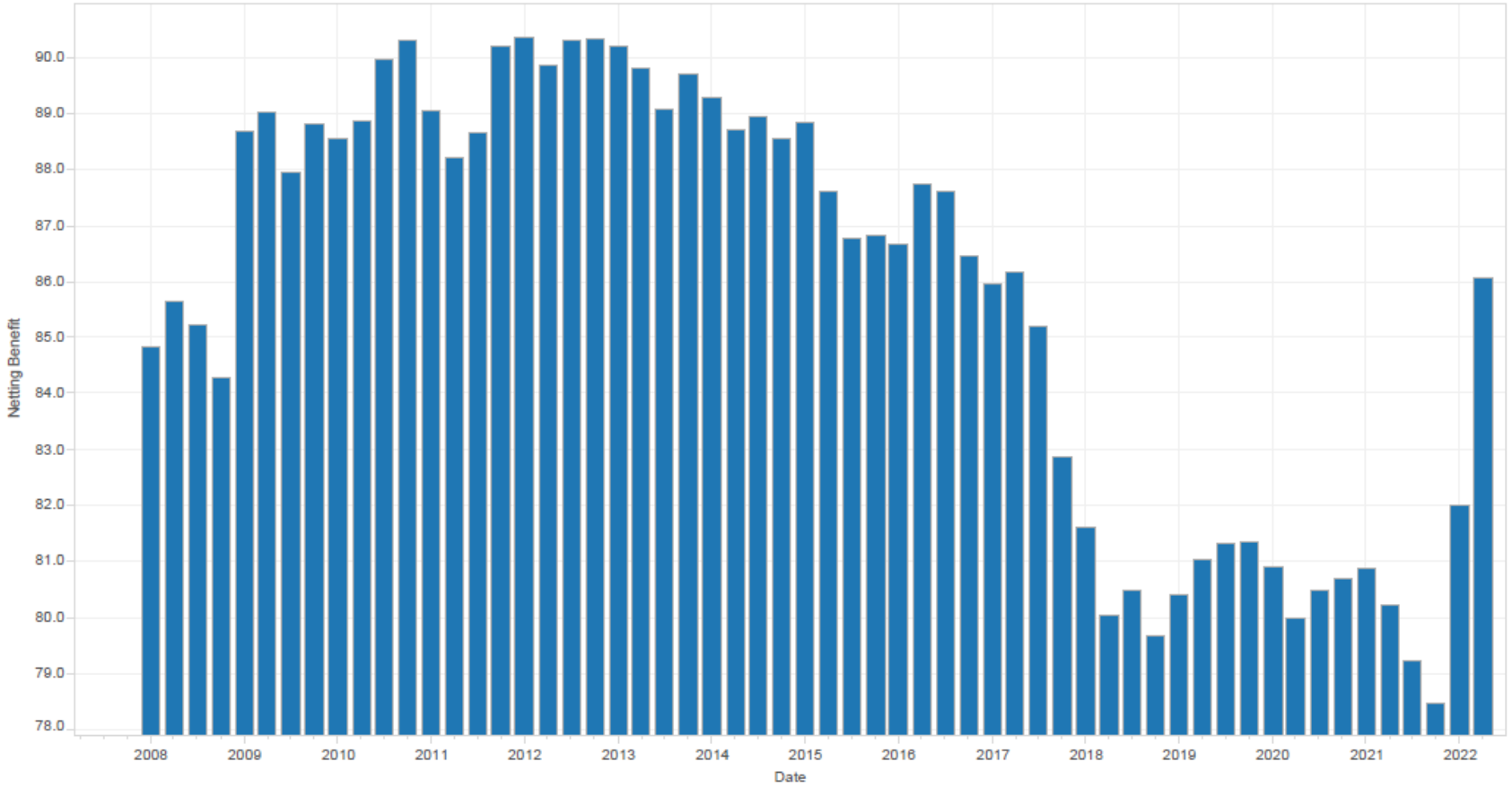
Note: Beginning January 1, 2022, the largest banks are required to calculate their derivative exposure amount for regulatory capital purposes using the Standardized Approach for Counterparty Credit Risk (SA-CCR). Refer to the call report instructions and OCC Bulletin 2020-7, “Standardized Approach for Counterparty Credit Risk: Final Rule,” for additional information on the SA-CCR exposure calculation.

Note: The methodology to calculate the credit risk exposure to capital ratio for the Top 4 category uses a weighted average of total current credit exposure.

Source: Call reports, Schedule RC-R

Figure 12: Netting Benefit*: Amount of Gross Credit Exposure Eliminated Through Bilateral Netting (in Percentage)

Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings



Netting Benefit

2013				2014				2015				2016				2017				2018				2019				2020				2021				2022
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
89.8	89.1	89.7	89.3	88.7	88.9	88.6	88.8	87.6	86.8	86.8	86.7	87.7	87.6	86.5	86.0	86.2	85.2	82.9	81.6	80.0	80.5	79.7	80.4	81.0	81.3	81.4	80.9	80.0	80.5	80.7	80.9	80.2	79.2	78.5	82.0	86.1

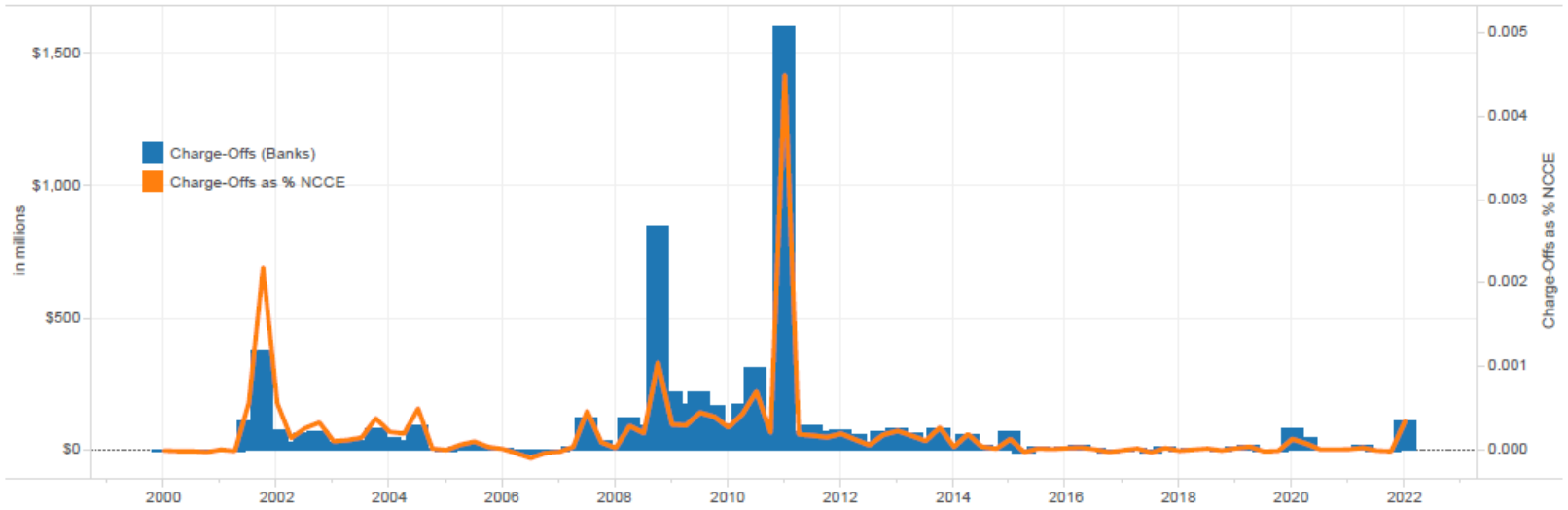
*The netting benefit is defined as the Gross Positive Fair Value (GPFV) from call report Schedule RC-L minus the Net Current Credit Exposure from call report Schedule RC-R divided by the GPFV.

Note: Beginning January 1, 2022, the largest banks are required to calculate their derivative exposure amount for regulatory capital purposes using the Standardized Approach for Counterparty Credit Risk (SA-CCR). Refer to the call report instructions and OCC Bulletin 2020-7, "Standardized Approach for Counterparty Credit Risk: Final Rule," for additional information on the SA-CCR exposure calculation.

Source: Call reports, Schedules RC-L and RC-R

Figure 13: Quarterly Charge-Offs/(Recoveries) From Derivatives—Bank

Insured U.S. Commercial Banks and Savings Associations With Derivatives



In millions of dollars

	2000				2001				2002				2003			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	0.0	-1.0	-1.0	-3.0	2.0	-1.0	107.3	370.0	75.8	28.2	59.0	73.7	25.3	29.9	32.3	83.7

	2004				2005				2006				2007			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	46.7	34.9	92.2	5.4	1.3	14.2	23.0	8.3	3.6	-7.0	-16.0	-5.8	-3.1	9.1	119.5	30.7

	2008				2009				2010				2011			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	15	120	92	847	217	168	221	162	100	173	314	83	1,601	72	91	69

	2012				2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	76.35	54.34	26.12	73.44	84.28	60.72	35.77	83.45	12.78	55.90	14.53	7.91	69.31	-7.93	10.44	6.40

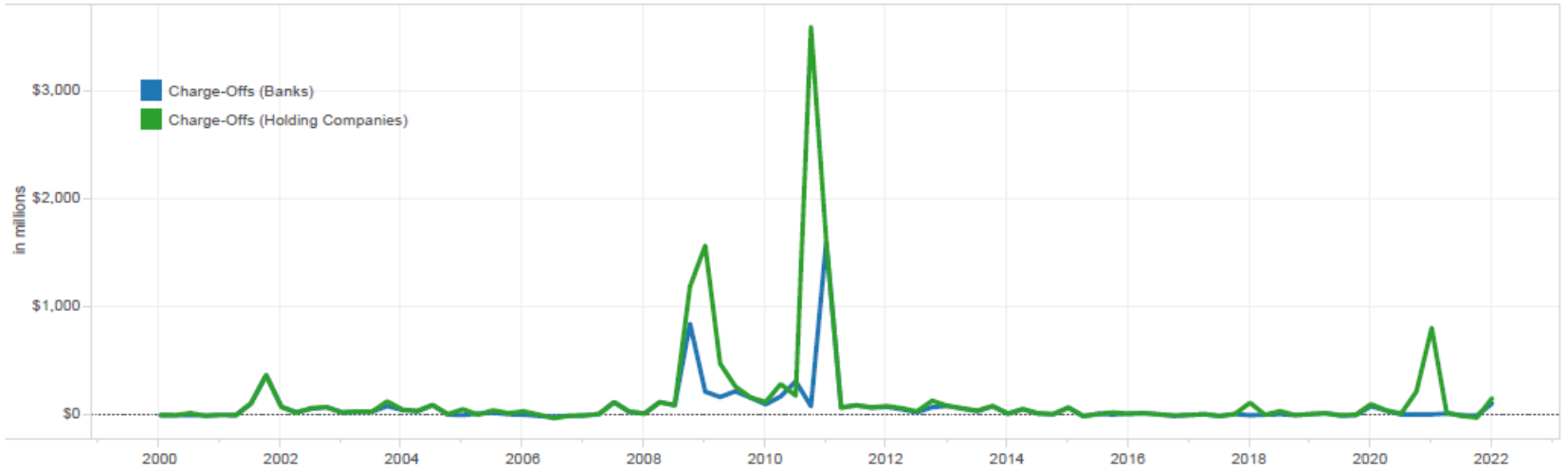
	2016				2017				2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Charge-Offs (Banks)	13.3	18.6	6.5	-7.8	1.2	8.7	-8.8	10.3	-1.1	4.0	8.8	0.1	9.1	17.2	-4.8	-1.5	82.7	42.1	6.0	6.6	6.8	14.7	-0.2	-3.3	109.5

Note: The figures are for each quarter alone, not year-to-date.

Source: Call reports Schedule RI, NCCE: Pre 2009 Q2 (RC-R); 2009 Q2 - 2014 Q4 (RC-L); 2015 Q1 onward (RC-R)

Figure 14: Quarterly Charge-Offs/(Recoveries) From Derivatives—Holding Company

Insured U.S. Commercial Banks and Savings Associations With Derivatives Compared With Holding Companies



In millions of dollars

	2000				2001				2002				2003				2004			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	0.0	-1.0	-1.0	-3.0	2.0	-1.0	107.3	370.0	75.8	28.2	59.0	73.7	25.3	29.9	32.3	83.7	46.7	34.9	92.2	5.4
Charge-Offs (Holding Companies)	0.1	-1.0	19.3	-7.0	2.0	-1.0	107.3	369.6	75.8	21.2	66.0	73.7	25.3	32.9	31.4	127.8	51.2	40.4	94.2	9.0

	2005				2006				2007				2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	1	14	23	8	4	-7	-16	-6	-3	9	119	31	15	120	92	847	217	168	221	162
Charge-Offs (Holding Companies)	55	4	45	18	35	5	-28	-7	-3	10	119	32	15	120	93	1,192	1,570	477	266	164

	2010				2011				2012				2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Charge-Offs (Banks)	100	173	314	83	1,601	72	91	69	76	54	26	73	84	61	36	83	13	56	15	8	69	-8	10	6
Charge-Offs (Holding Companies)	122	288	181	3,598	1,617	68	92	73	85	64	35	133	87	63	43	83	14	56	17	9	69	-10	13	24

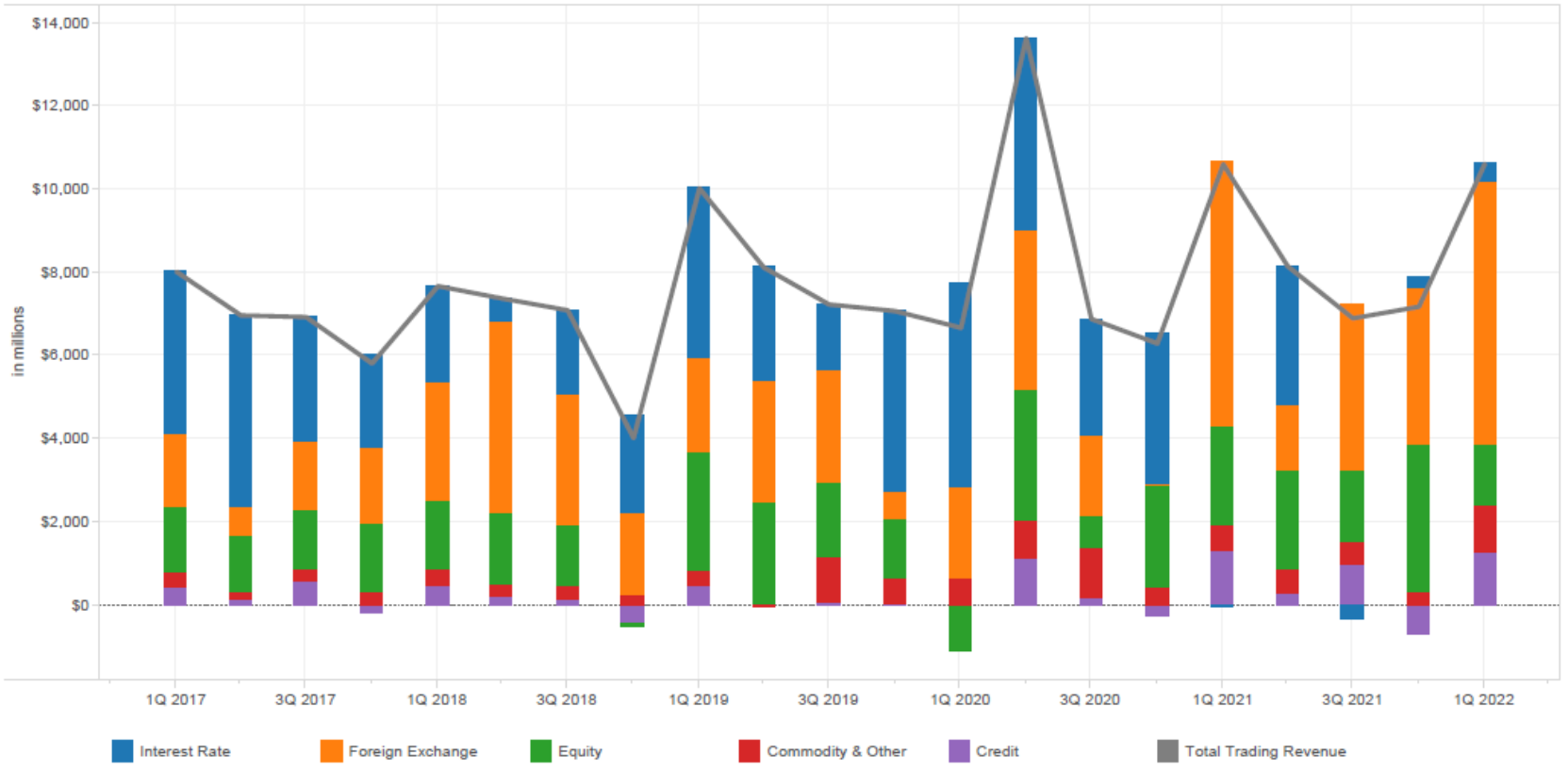
	2016				2017				2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Charge-Offs (Banks)	13.3	18.6	6.5	-7.8	1.2	8.7	-8.8	10.3	-1.1	4.0	8.8	0.1	9.1	17.2	-4.8	-1.5	82.7	42.1	6.0	6.6	6.8	14.7	-0.2	-3.3	109.5
Charge-Offs (Holding Companies)	12.8	18.0	7.5	-2.5	1.4	8.9	-8.3	9.6	114.5	3.5	36.6	0.1	9.5	17.9	-0.3	4.1	102.1	44.2	14.6	218.3	807.7	23.7	-8.2	-22.5	158.0

Note: The figures are for each quarter alone, not year-to-date.

Source: Call reports, Schedule RI and Y-9, Schedule HI

Figure 15a: Quarterly Trading Revenue (Cash and Derivative Positions)*—Bank

Insured U.S. Commercial Banks and Savings Associations



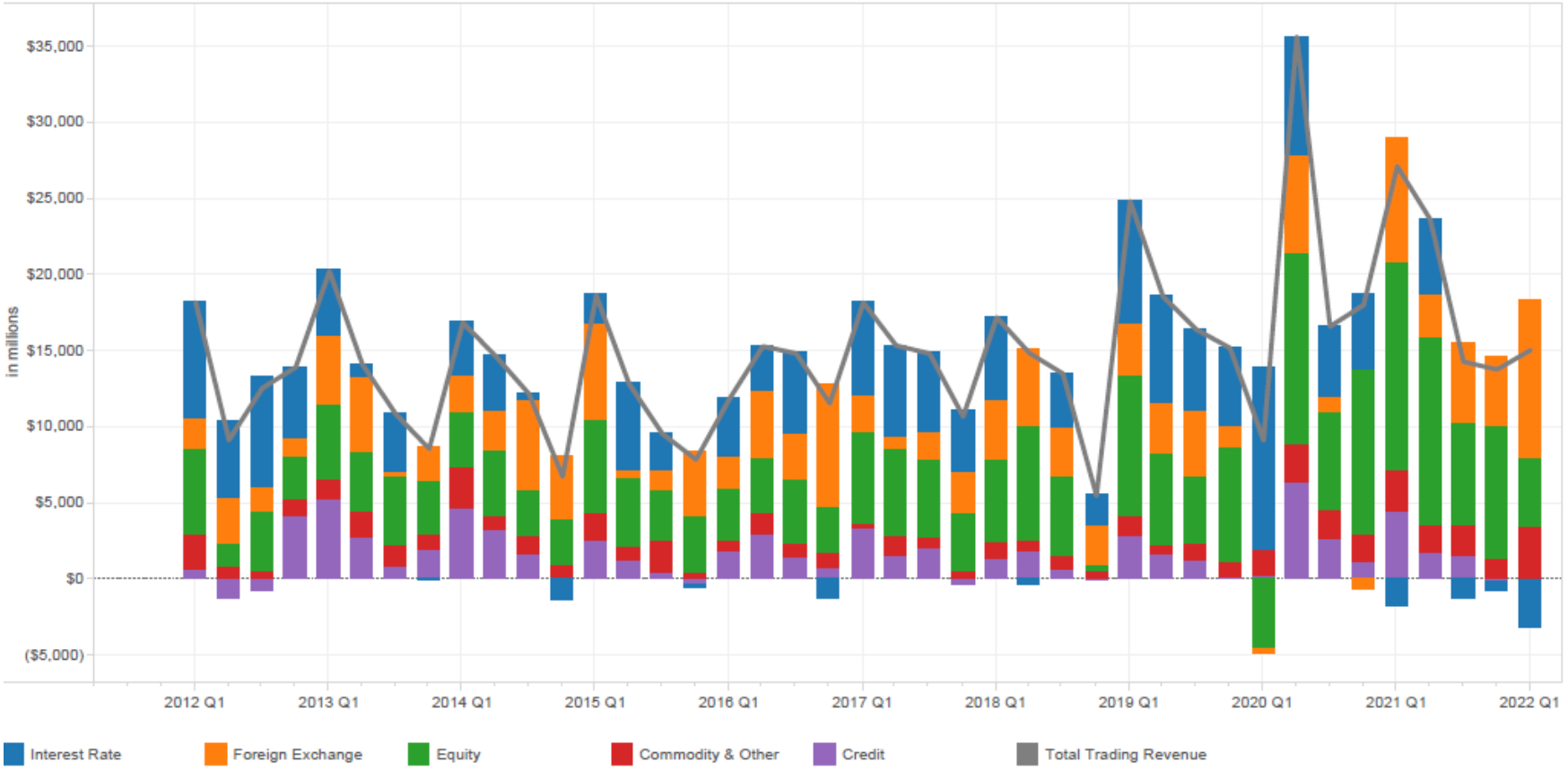
In millions of dollars

	2017				2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Interest Rate	$3,917	$4,586	$3,011	$2,220	$2,317	$587	$2,020	$2,305	$4,078	$2,780	$1,567	$4,361	$4,942	$4,634	$2,821	$3,616	($42)	$3,369	($329)	$273	$403
Foreign Exchange	1,743	697	1,608	1,811	2,861	4,569	3,149	1,971	2,254	2,900	2,718	662	2,167	3,841	1,942	18	6,343	1,546	3,998	3,747	6,341
Equity	1,595	1,359	1,454	1,649	1,624	1,727	1,444	-43	2,895	2,464	1,805	1,427	-1,040	3,139	750	2,480	2,388	2,384	1,729	3,534	1,458
Commodity & Other	330	211	300	324	395	286	349	274	323	-43	1,109	600	646	905	1,226	434	622	549	531	347	1,161
Credit	447	128	566	-178	487	215	141	-476	485	30	43	34	-34	1,129	154	-243	1,300	312	979	-714	1,259
Total Trading Revenue	8,031	6,981	6,940	5,824	7,684	7,384	7,103	4,030	10,035	8,131	7,242	7,083	6,681	13,648	6,893	6,305	10,611	8,161	6,908	7,187	10,622

*The trading revenue figures are for cash and derivative activities. Revenue figures are for each quarter alone, not year-to-date. Note: Numbers may not add up to total due to rounding.

Source: Call reports, Schedule RI

Figure 15b: Quarterly Trading Revenue (Cash and Derivative Positions)*—Holding Company



n millions of dollars

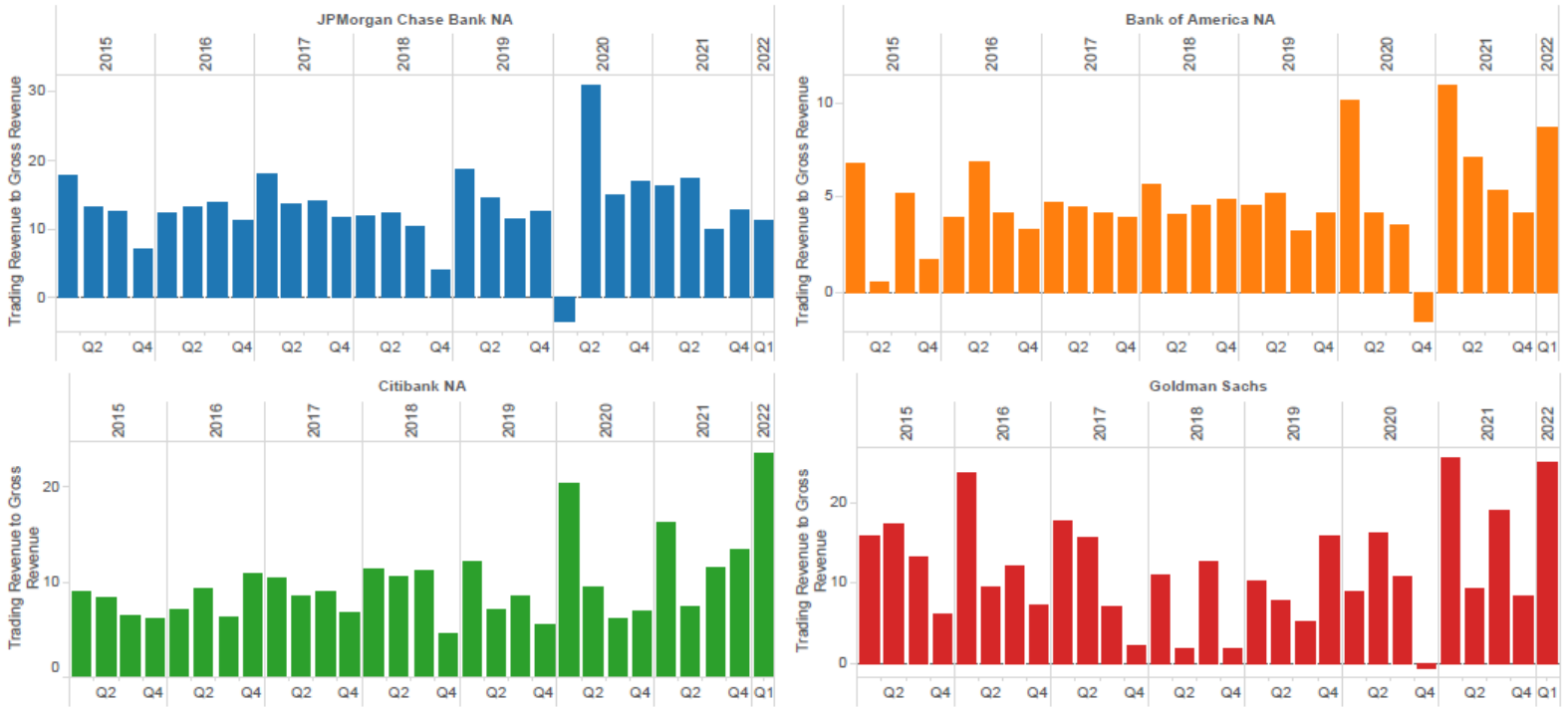
	2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Interest Rate	$5,361	($336)	$3,550	$1,997	$8,050	$6,973	$5,377	$5,075	$12,036	$7,801	$4,582	$4,867	($1,792)	$4,968	($1,182)	($572)	($3,137)
Foreign Exchange	3,900	5,133	3,222	2,530	3,396	3,351	4,241	1,463	-302	6,374	1,037	-628	8,051	2,732	5,144	4,496	10,267
Equity	5,431	7,445	5,222	502	9,215	6,083	4,548	7,546	-4,499	12,604	6,424	10,826	13,698	12,409	6,835	8,745	4,546
Commodity & Other	1,177	779	874	508	1,298	512	1,045	981	1,664	2,486	1,912	1,804	2,665	1,802	1,978	1,340	3,498
Credit	1,359	1,848	666	-25	2,903	1,684	1,226	159	257	6,404	2,681	1,181	4,531	1,760	1,543	-203	-92
Total Trading Revenue	17,229	14,870	13,534	5,513	24,862	18,604	16,437	15,223	9,157	35,669	16,637	18,049	27,152	23,671	14,318	13,805	15,083

*The trading revenue figures are for cash and derivative activities. Revenue figures are for each quarter alone, not year-to-date. Note: Numbers may not add up to total due to rounding.

Source: Y9, Schedule HI

Figure 16: Quarterly Trading Revenue (Cash and Derivative Positions) as a Percentage of Gross Revenue (in Percentage)*

Top Four Insured U.S. Commercial Banks and Savings Associations by Derivative Holdings



Trading Revenue to Gross Revenue*

	2017				2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
JPMorgan Chase Bank NA	17.98	13.66	14.01	11.52	11.90	12.19	10.26	3.92	18.57	14.57	11.30	12.62	-3.33	30.88	14.83	16.96	16.12	17.50	9.89	12.79	11.21
Bank of America NA	4.70	4.49	4.09	3.87	5.62	4.04	4.54	4.90	4.60	5.14	3.20	4.09	10.13	4.14	3.55	-1.52	10.89	7.10	5.33	4.08	8.74
Citibank NA	10.47	8.50	9.12	6.94	11.33	10.69	11.26	4.66	12.32	7.23	8.48	5.56	20.50	9.63	6.27	7.08	16.24	7.42	11.57	13.44	23.64
Goldman Sachs	17.71	15.66	7.10	2.15	10.85	1.84	12.77	1.86	10.31	7.78	4.98	15.90	8.96	16.21	10.68	-0.56	25.61	9.27	19.13	8.19	24.97

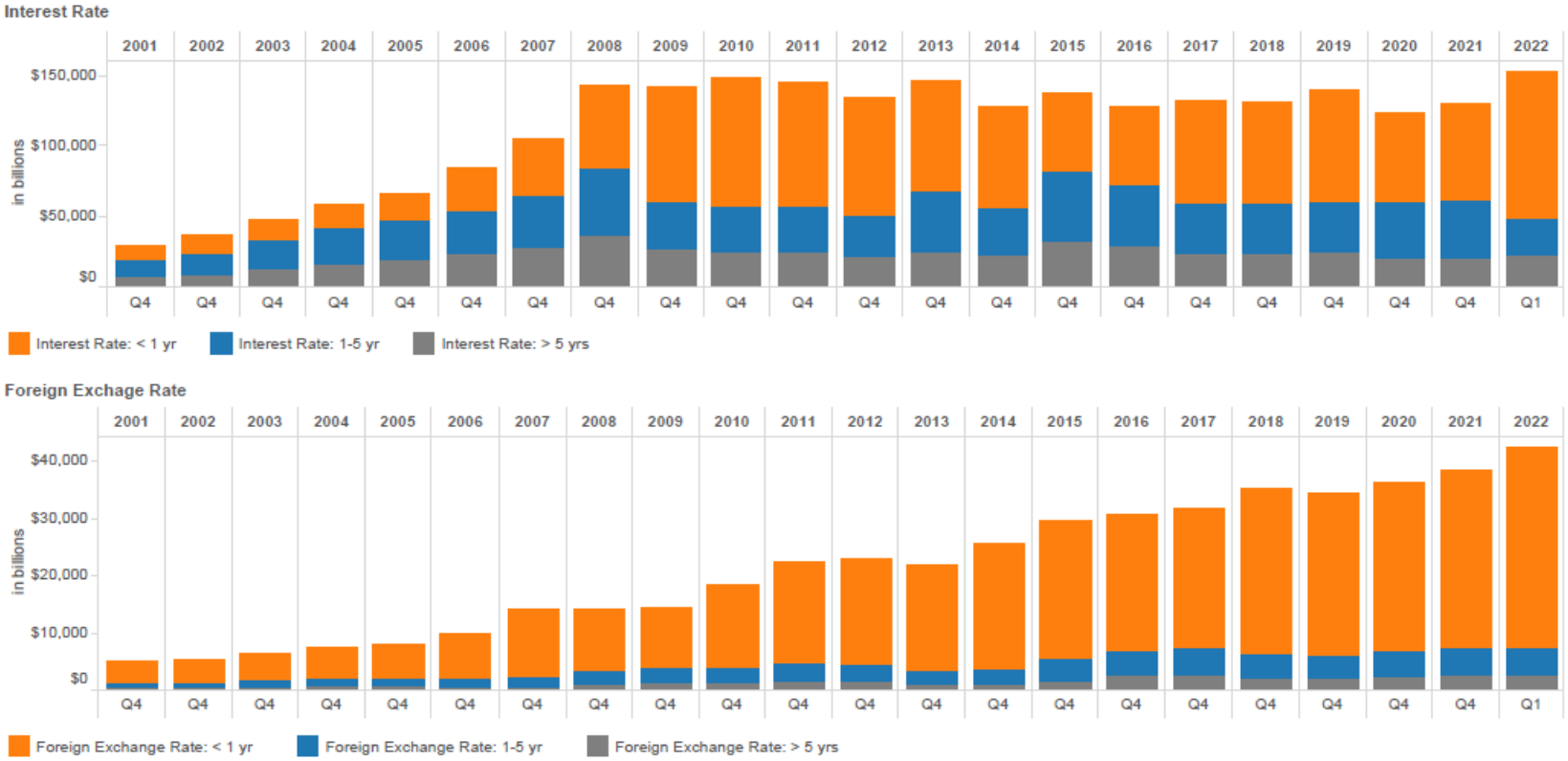
TOTAL	2017				2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	11.68	9.32	9.39	7.55	9.77	8.95	8.82	4.36	12.43	9.60	8.01	8.61	7.44	18.00	9.49	8.91	15.11	12.03	9.51	10.40	14.36

*The trading revenue figures are for cash and derivative activities. Revenue figures are quarterly, not year-to-date numbers. Note: Gross revenue equals interest income plus non-interest income.

Source: Call reports, Schedule RI

Figure 17: Notional Amounts of Interest Rate and Foreign Exchange Rate Contracts by Maturity

Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

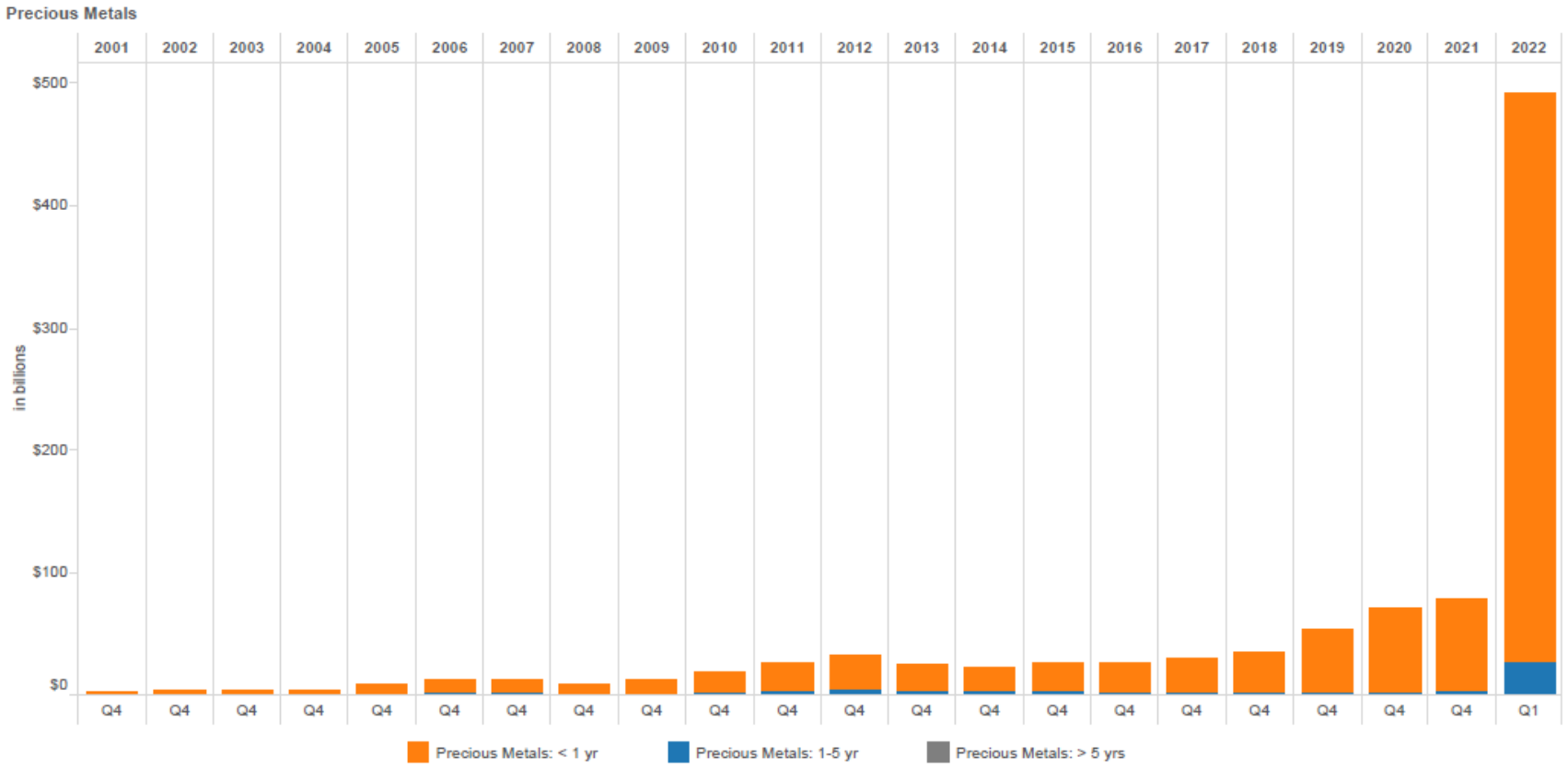
	2007 Q4	2008 Q4	2009 Q4	2010 Q4	2011 Q4	2012 Q4	2013 Q4	2014 Q4	2015 Q4	2016 Q4	2017 Q4	2018 Q4	2019 Q4	2020 Q4	2021 Q4	2022 Q1
Interest Rate: < 1 yr	$39,085	$58,618	$81,236	$90,843	$87,812	$82,948	$77,758	$71,808	$55,054	$55,061	$72,589	$71,492	$79,132	$62,444	$68,039	$102,937
Interest Rate: 1-5 yr	37,222	47,456	33,970	33,497	32,750	30,191	44,157	33,727	49,406	43,261	36,154	36,681	35,854	39,198	41,246	26,327
Interest Rate: > 5 yrs	27,724	36,868	26,374	24,307	24,168	21,175	24,630	22,214	32,981	29,762	23,565	23,244	24,259	20,838	20,468	23,009
Foreign Exchange Rate: < 1 yr	11,660	10,640	10,490	14,629	17,632	18,386	18,372	22,145	24,130	23,912	24,380	28,891	28,241	29,434	30,954	34,852
Foreign Exchange Rate: 1-5 yr	1,639	2,195	2,473	2,462	3,117	2,910	2,341	2,587	3,986	4,454	4,805	4,219	4,052	4,404	4,864	4,822
Foreign Exchange Rate: > 5 yrs	622	1,082	1,347	1,290	1,503	1,480	1,029	969	1,648	2,420	2,525	2,096	2,146	2,402	2,552	2,618

Note: Beginning January 1, 2022, the largest banks are required to calculate their derivative exposure amount for regulatory capital purposes using the Standardized Approach for Counterparty Credit Risk (SA-CCR). Refer to the call report instructions and OCC Bulletin 2020-7, “Standardized Approach for Counterparty Credit Risk: Final Rule,” for additional information on the SA-CCR exposure calculation.

Source: Call reports, Schedule RC-R

Figure 18: Notional Amounts of Precious Metal Contracts by Maturity

Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

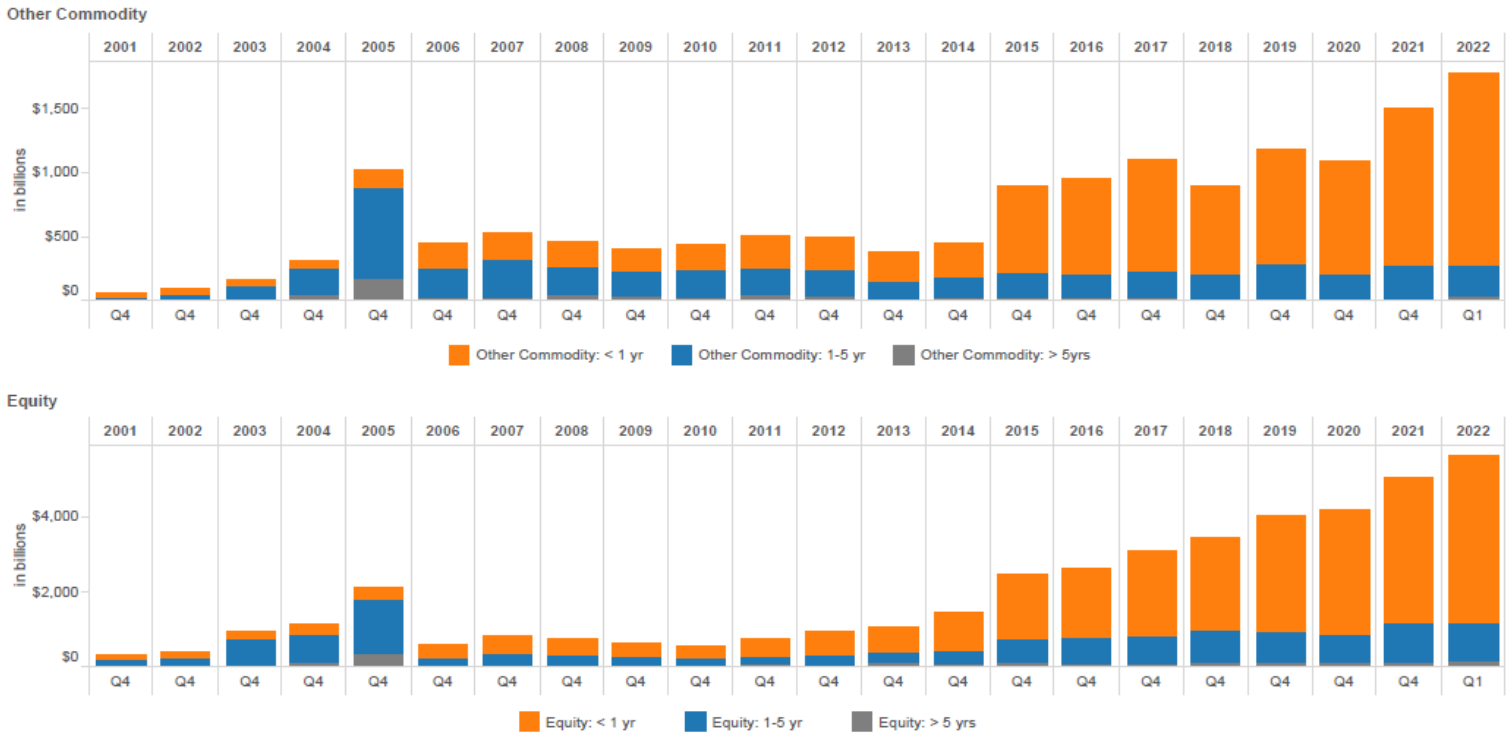
	2004 Q4	2005 Q4	2006 Q4	2007 Q4	2008 Q4	2009 Q4	2010 Q4	2011 Q4	2012 Q4	2013 Q4	2014 Q4	2015 Q4	2016 Q4	2017 Q4	2018 Q4	2019 Q4	2020 Q4	2021 Q4	2022 Q1
Precious Metals: < 1 yr	$4.04	$8.59	$10.35	$10.72	$7.55	$11.55	$17.47	$21.12	$27.68	$21.41	$19.29	$23.51	$25.07	$28.62	$33.62	$52.58	$67.80	$75.78	$463.17
Precious Metals: 1-5 yr	0.5	1.3	1.7	2.1	1.5	1.2	1.9	4.7	5.8	3.8	2.8	3.9	2.5	2.4	2.3	2.1	2.5	3.5	28.4
Precious Metals: > 5 yrs	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Note: Beginning January 1, 2022, the largest banks are required to calculate their derivative exposure amount for regulatory capital purposes using the Standardized Approach for Counterparty Credit Risk (SA-CCR). Under SA-CCR gold derivatives are considered precious metals derivative contracts rather than an exchange rate derivative contract resulting in an increase in reported precious metals derivative contracts compared to prior quarters. Refer to the call report instructions and OCC Bulletin 2020-7, “Standardized Approach for Counterparty Credit Risk: Final Rule,” for additional information on the SA-CCR exposure calculation.

Source: Call reports, Schedule RC-R

Figure 19: Notional Amounts of Other Commodity and Equity Contracts by Maturity

Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

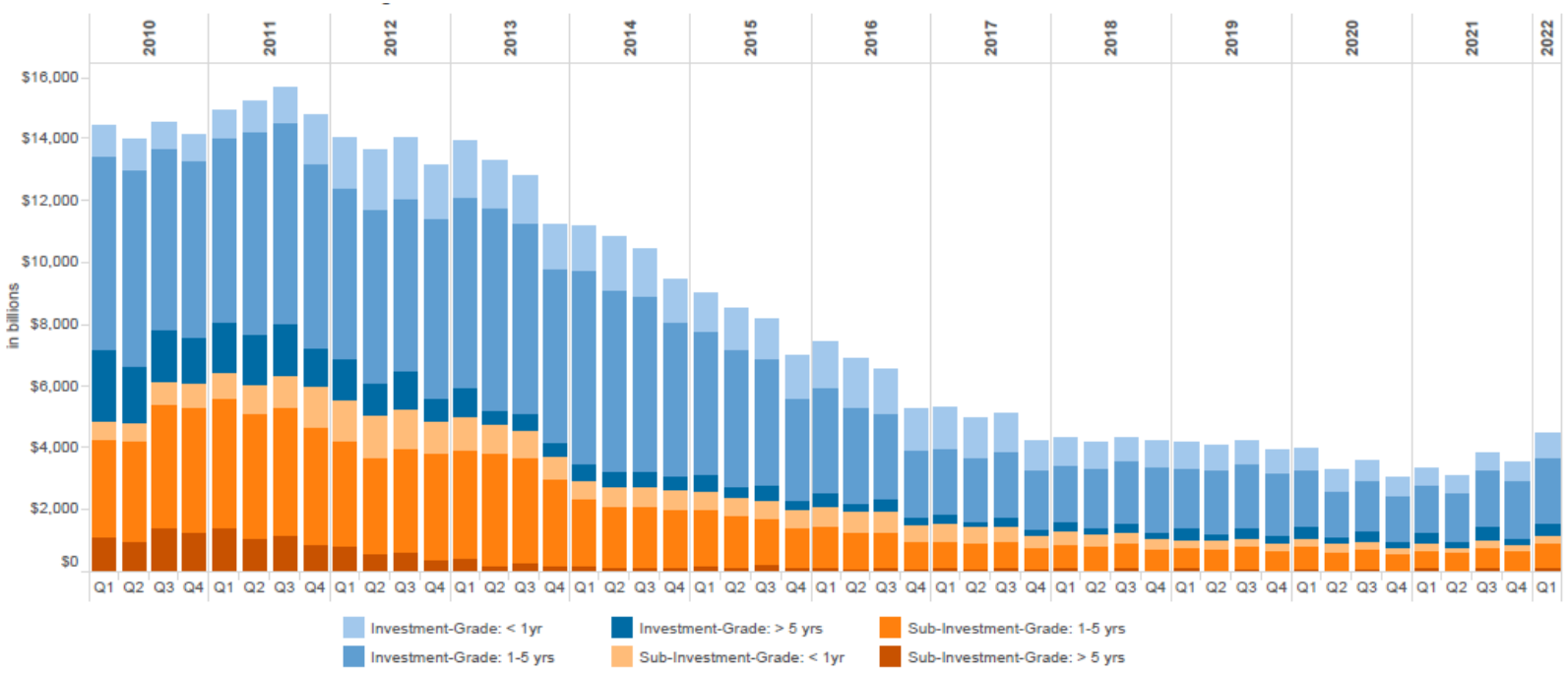
	2004 Q4	2005 Q4	2006 Q4	2007 Q4	2008 Q4	2009 Q4	2010 Q4	2011 Q4	2012 Q4	2013 Q4	2014 Q4	2015 Q4	2016 Q4	2017 Q4	2018 Q4	2019 Q4	2020 Q4	2021 Q4	2022 Q1
Other Commodity: < 1 yr	$64	$133	$185	$206	$179	$176	$203	$261	$261	$235	$257	$668	$750	$883	$688	$884	$879	$1,216	$1,496
Other Commodity: 1-5 yr	205	707	235	297	233	198	209	209	208	144	164	197	179	202	198	286	198	279	250
Other Commodity: > 5yrs	40	175	20	25	43	33	25	46	28	6	20	22	23	25	9	10	9	7	31
Equity: < 1 yr	273	321	341	473	409	312	296	427	627	645	996	1,743	1,842	2,296	2,449	3,084	3,287	3,881	4,491
Equity: 1-5 yr	736	1,428	221	297	256	228	191	210	262	291	352	628	677	733	864	844	771	1,055	1,001
Equity: > 5 yrs	140	383	45	70	72	82	85	94	82	136	101	130	123	113	139	136	139	145	175

Note: Beginning January 1, 2022, the largest banks are required to calculate their derivative exposure amount for regulatory capital purposes using the Standardized Approach for Counterparty Credit Risk (SA-CCR). Refer to the call report instructions and OCC Bulletin 2020-7, “Standardized Approach for Counterparty Credit Risk: Final Rule,” for additional information on the SA-CCR exposure calculation.

Source: Call reports, Schedule RC-R

Figure 20: Notional Amounts of Credit Derivative Contracts by Credit Quality and Maturity

Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

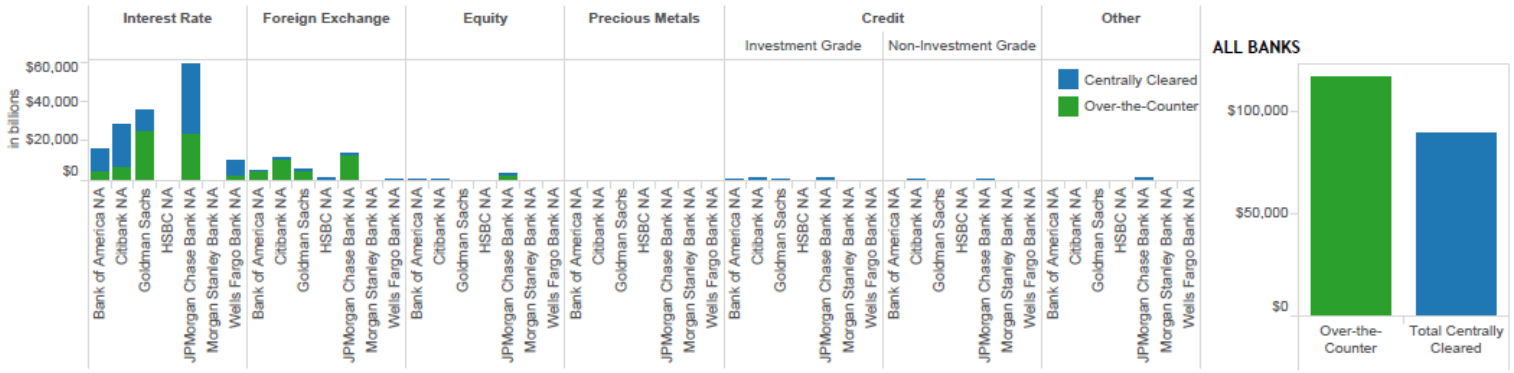
	2017				2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Investment-Grade: < 1yr	$1,343	$1,234	$1,216	$934	$880	$805	$764	$837	$763	$758	$675	$781	$726	$619	$648	$554	$546	$539	$565	$601	$795
Investment-Grade: 1-5 yrs	2,072	2,073	2,085	1,897	1,839	1,995	1,988	2,173	1,976	2,083	2,084	2,018	1,799	1,523	1,637	1,521	1,545	1,589	1,846	1,864	2,109
Investment-Grade: > 5 yrs	309	195	345	186	331	184	338	204	367	189	330	198	367	171	336	160	332	160	418	187	449
Total Investment Grade	$3,724	$3,502	$3,647	$3,016	$3,050	$2,984	$3,089	$3,214	$3,106	$3,030	$3,089	$2,997	$2,891	$2,313	$2,622	$2,235	$2,423	$2,289	$2,829	$2,651	$3,352

	2017				2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Sub-Investment-Grade: < 1yr	$582	$509	$480	$375	$400	$335	$318	$304	$259	$283	$275	$268	$247	$278	$233	$218	$245	$215	$244	$208	$225
Sub-Investment-Grade: 1-5 yrs	838	830	814	718	763	791	801	691	661	701	708	624	743	608	618	533	570	551	654	632	777
Sub-Investment-Grade: > 5 yrs	159	93	149	77	133	69	133	61	119	60	111	56	105	56	108	48	119	49	125	49	150
Total Sub-Investment Grade	$1,579	$1,432	$1,443	$1,170	$1,296	$1,195	$1,252	$1,056	$1,039	$1,044	$1,093	$947	$1,095	$942	$959	$799	$935	$815	$1,023	$889	$1,152

Source: Call reports, Schedule RC-L

Figure 21: Notional Amounts of Over-the-Counter and Centrally Cleared Derivative Contracts

Insured U.S. Commercial Banks and Savings Associations



In billions of dollars

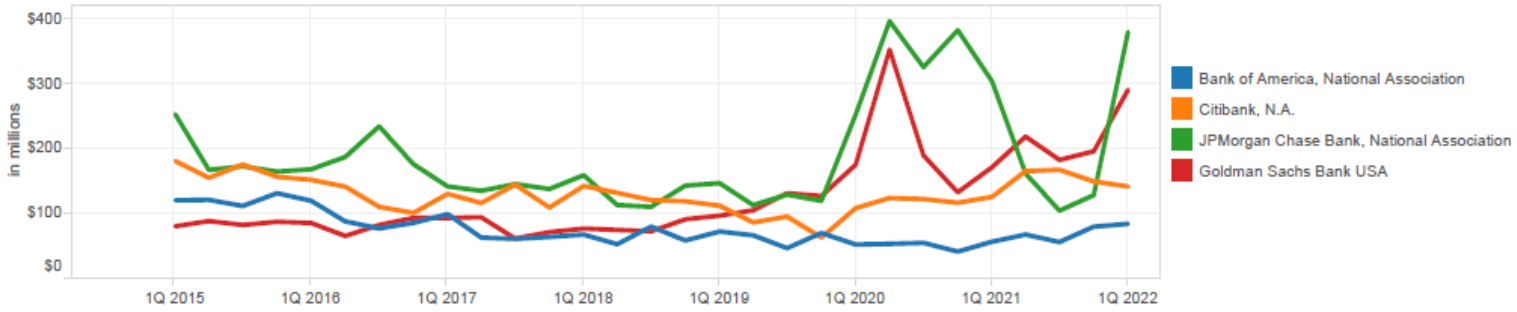
Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other		Total Centrally Cleared	Over-the-Counter	Total Notional
									Investment Grade		Non-Investment Grade						
	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter			
JPMorgan Chase Bank NA	33,791	24,537	508	13,080	1,023	2,497	0	330	592	439	285	226	105	1,179	36,305	42,288	78,593
Citibank NA	20,856	7,634	362	11,056	16	624	25	89	297	1,001	76	266	101	118	21,733	20,788	42,521
Bank of America NA	10,990	4,857	130	5,175	226	637	6	24	144	268	41	109	0	30	11,536	11,098	22,635
Goldman Sachs	9,913	25,481	171	5,866	14	254	0	6	23	339	5	184	0	69	10,126	32,200	42,326
HSBC NA	67	94	52	1,049	0	18	0	9	0	1	4	2	0	0	123	1,173	1,296
Wells Fargo Bank NA	7,031	2,732	0	815	96	200	0	3	21	10	6	17	0	57	7,154	3,834	10,989
Morgan Stanley Bank NA	0	39	0	25	0	27	0	0	0	7	0	3	0	0	0	100	100
Grand Total	82,648	65,373	1,224	37,066	1,375	4,257	31	461	1,077	2,065	416	805	207	1,454	86,978	111,481	198,459
ALL OTHER	2,720	1,532	12	3,990	0	36	0	0	1	29	0	25	14	102	2,748	5,715	8,462
TOTAL	85,368	66,905	1,237	41,056	1,375	4,293	31	461	1,078	2,094	417	831	221	1,556	89,726	117,196	206,921

% of Total

Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other		Total Centrally Cleared as a % of Total Notional	Total Over-the-Counter as a % of Total Notional
									Investment Grade		Non-Investment Grade					
	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter		
JPMorgan Chase Bank NA	58%	42%	4%	96%	29%	71%	0%	100%	57%	43%	56%	44%	8%	92%	46%	54%
Citibank NA	73%	27%	3%	97%	2%	98%	22%	78%	23%	77%	22%	78%	46%	54%	51%	49%
Bank of America NA	69%	31%	2%	98%	26%	74%	20%	80%	35%	65%	27%	73%	0%	100%	51%	49%
Goldman Sachs	28%	72%	3%	97%	5%	95%	0%	100%	6%	94%	3%	97%	0%	100%	24%	76%
HSBC NA	42%	58%	5%	95%	0%	100%	0%	100%	0%	100%	71%	29%	0%	100%	10%	90%
Wells Fargo Bank NA	72%	28%	0%	100%	32%	68%	0%	100%	69%	31%	27%	73%	0%	100%	65%	35%
Morgan Stanley Bank NA	0%	100%	0%	100%	0%	100%			0%	100%	0%	100%	0%	100%	0%	100%

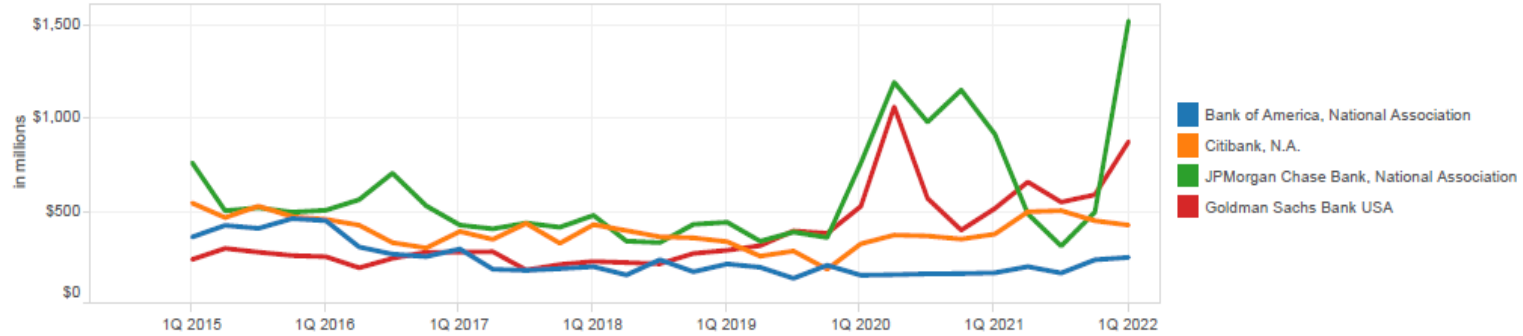
Source: Call reports, Schedule RC-R

Figure 22: Average 60-Day Value-at-Risk



	2017				2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Bank of America, National Association	$100	$83	$81	$84	$88	$53	$81	$59	$73	$87	$47	$71	$53	$54	$55	$42	$57	$68	$57	$80	$85
Citibank, N.A.	131	117	146	110	144	133	122	120	113	87	96	64	109	125	123	118	127	167	169	151	143
JPMorgan Chase Bank, National Association	143	136	146	139	160	114	111	144	148	114	130	120	254	399	328	385	306	163	105	129	382
Goldman Sachs Bank USA	94	95	62	72	77	75	73	92	97	106	132	128	176	355	191	134	173	220	184	197	293

VaR Capital Requirement



	2017				2018				2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Bank of America, National Association	$299	$190	$184	$193	$204	$160	$242	$177	$219	$201	$141	$212	$158	$161	$166	$167	$171	$204	$170	$241	$254
Citibank, N.A.	394	351	437	330	431	399	365	359	338	261	288	191	327	374	370	353	380	500	506	452	428
JPMorgan Chase Bank, National Association	428	408	439	416	480	342	334	432	443	341	390	361	762	1,197	983	1,155	917	489	315	498	1,528
Goldman Sachs Bank USA	282	285	186	216	232	226	220	275	292	317	397	384	529	1,065	572	401	518	660	552	592	878

Source: Market Risk Regulatory Report for Institutions Subject to the Market Risk Capital Rule—FFIEC 102