

Quarterly Report on Bank Trading and Derivatives Activities

Second Quarter 2022

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

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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 1,258 insured U.S. national and state commercial banks and savings associations reported trading and derivatives activities at the end of the second 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 second quarter of 2022, four large commercial banks represented 88.9 percent of the total banking industry notional amounts and 66.0 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 107th 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 Federal Financial Institutions Examination Council (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 \$10.3 billion in the second quarter of 2022, \$273.0 million less (2.6 percent) than in the previous quarter and \$2.2 billion more (26.8 percent) than a year earlier (see table 1).
- Credit exposure from derivatives increased in the second quarter of 2022 compared with the first quarter of 2022. NCCE increased \$17.0 billion, or 5.5 percent, to \$324.0 billion (see table 5).
- Derivative notional amounts decreased in the second quarter of 2022 by \$5.5 trillion, or 2.7 percent, to \$194.8 trillion (see table 10).
- Derivative contracts remained concentrated in interest rate products, which totaled \$142.9 trillion or 73.3 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 \$10.3 billion in trading revenue in the second quarter of 2022, \$273.0 million less (2.6 percent) than in the previous quarter and \$2.2 billion more (26.8 percent) than a year earlier (see table 1). The quarter-over-quarter decrease in trading revenue was primarily due to decreases in revenue from equity, commodity, and other 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	2Q 2022	1Q 2022	Q/Q Change	Q/Q % Change	2Q 2021	Y/Y Change	Y/Y % Change
Interest Rate	\$874	\$403	\$471	116.9%	\$3,369	-\$2,495	-74.1%
Foreign Exchange	\$6,363	\$6,341	\$22	0.3%	\$1,547	\$4,816	311.4%
Equity	\$774	\$1,458	-\$684	-46.9%	\$2,384	-\$1,611	-67.6%
Commodity & Other	\$1,029	\$1,161	-\$132	-11.4%	\$549	\$480	87.3%
Credit	\$1,310	\$1,259	\$51	4.0%	\$312	\$998	319.5%
Total Trading Revenue	\$10,349	\$10,622	-\$273	-2.6%	\$8,161	\$2,188	26.8%

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 \$10.2 billion in the second quarter of 2022 was \$4.8 billion less (32.1 percent) than in the previous quarter. The quarter-over-quarter decrease in trading revenue was primarily due to a decrease in revenue from equity trading instruments. Year-over-year

holding company trading revenue decreased by \$13.4 billion (56.7 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	2Q 2022	1Q 2022	Q/Q Change	Q/Q % Change	2Q 2021	Y/Y Change	Y/Y % Change
Interest Rate	-\$2,380	-\$3,137	\$757	24.1%	\$4,968	-\$7,347	-147.9%
Foreign Exchange	\$10,574	\$10,267	\$307	3.0%	\$2,732	\$7,842	287.1%
Equity	-\$1,063	\$4,546	-\$5,610	-123.4%	\$12,409	-\$13,472	-108.6%
Commodity & Other	\$2,709	\$3,498	-\$789	-22.6%	\$1,802	\$906	50.3%
Credit	\$402	-\$92	\$495	536.4%	\$1,760	-\$1,358	-77.1%
Total BHC Trading Revenue	\$10,242	\$15,083	-\$4,841	-32.1%	\$23,671	-\$13,429	-56.7%

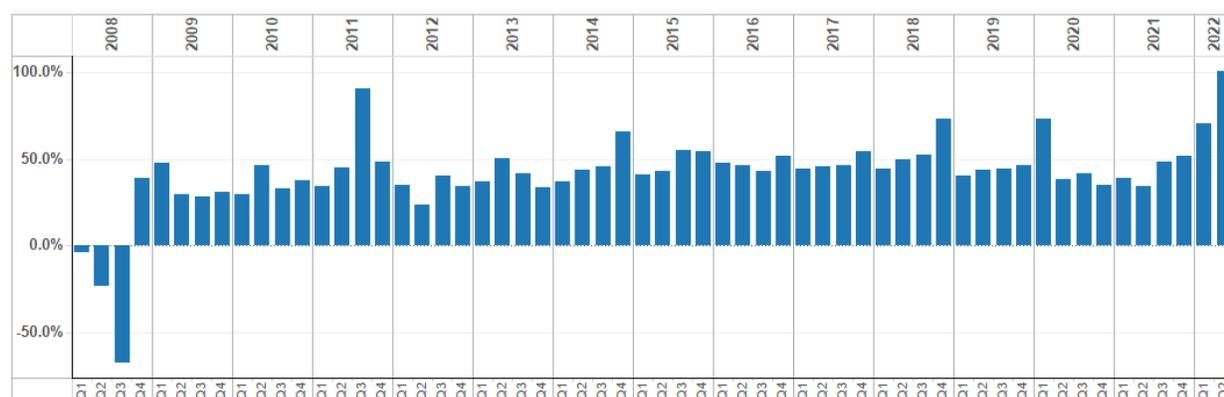
Source: Consolidated Financial Statements for Holding Companies—FR Y-9C, Schedule HI

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 decreased and is 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 second quarter of 2022 banks generated 101.0 percent of consolidated holding company trading revenue, an increase from 70.4 percent in the previous quarter (see figure 1). This was primarily due to a significant decrease in BHC trading revenue from equity trading instruments.

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 \$154.0 billion (7.0 percent) in the second quarter of 2022 to \$2.4 trillion, primarily driven by a \$139.0 billion (23.0 percent) increase in receivables from foreign exchange contracts (see table 3a). GNFV increased \$127.0 billion (6.1 percent) to \$2.2 trillion during the quarter, driven by a \$140.0 billion (23.5 percent) increase in payables on foreign exchange contracts (see table 3b).

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

Trading instruments	2Q 2022	1Q 2022	Q/Q Change	Q/Q % Change	2Q 2021	Y/Y Change	Y/Y % Change
Interest rate	\$1,264	\$1,240	\$23	1.9%	\$1,390	-\$126	-9.1%
FX	\$746	\$607	\$139	23.0%	\$454	\$292	64.4%
Equity	\$166	\$154	\$12	7.9%	\$175	-\$9	-5.1%
Commodity & Other	\$138	\$158	-\$20	-12.7%	\$75	\$63	83.8%
Credit	\$44	\$44	-\$1	-1.2%	\$30	\$14	47.9%
GPFV	\$2,357	\$2,203	\$154	7.0%	\$2,123	\$234	11.0%

Source: Call reports, Schedule RC-L

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

Trading instruments	2Q 2022	1Q 2022	Q/Q Change	Q/Q % Change	2Q 2021	Y/Y Change	Y/Y % Change
Interest rate	\$1,186	\$1,168	\$18	1.5%	\$1,326	-\$139	-10.5%
FX	\$735	\$595	\$140	23.5%	\$444	\$292	65.7%
Equity	\$154	\$157	-\$4	-2.2%	\$188	-\$34	-18.3%
Commodity & Other	\$115	\$137	-\$22	-15.7%	\$69	\$46	67.3%
Credit	\$40	\$45	-\$5	-12.5%	\$34	\$6	16.6%
GNFV	\$2,229	\$2,102	\$127	6.1%	\$2,060	\$170	8.2%

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 increased by \$17.0 billion (5.5 percent) to \$324.0 billion in the second 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 86.2 percent (\$2.0 trillion) in the second quarter of 2022.

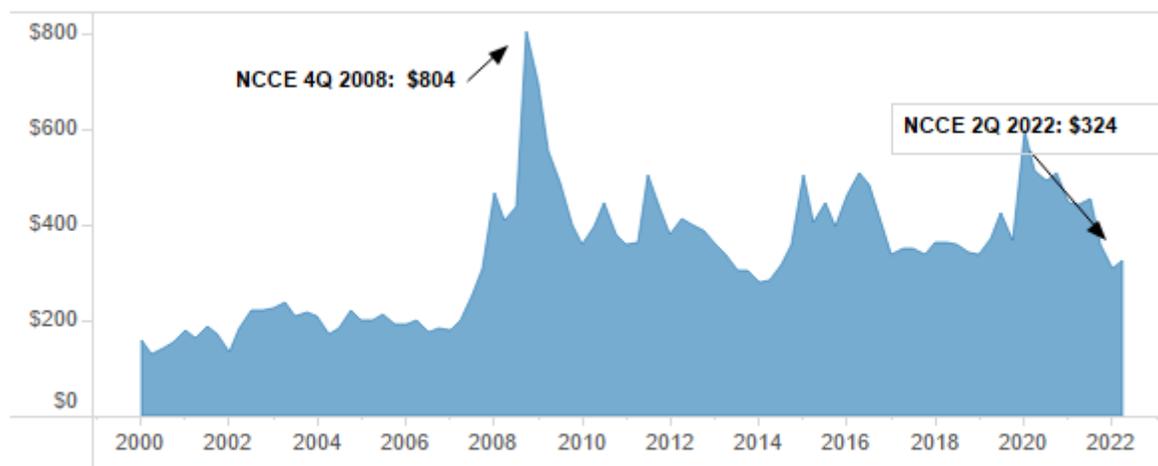
Table 5: Net Current Credit Exposure, in Billions of Dollars

Netting benefit ratio	2Q 2022	1Q 2022	Q/Q Change	Q/Q % Change
GPFV	\$2,357	\$2,203	\$154	7.0%
NCCE RC-R	\$324	\$307	\$17	5.5%
Netting benefit RC-R	\$2,033	\$1,896	\$137	7.2%
Netting benefit % RC-R	86.2%	86.1%		0.1%

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 second quarter of 2022 lower at \$324.0 billion as more normal market activity resumed.

Figure 2: Net Current Credit Exposure (NCCE), 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 (34.1 percent) and in corporations and other counterparties (60.2 percent) (see table 6). The combined exposure to hedge funds and sovereign governments was small (5.8 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
2Q 2022	34.1%	2.3%	3.5%	60.2%
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 93.2 percent of their total NCCE at the end of the second quarter of 2022, down from 97.1 percent in the first quarter of 2022 (see table 7). Collateral held against hedge fund exposures decreased in the second quarter to 436.3 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 (FV) 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 %
2Q 2022	114.1%	436.3%	71.1%	69.6%	93.2%
1Q 2022	119.5%	535.4%	76.7%	68.5%	97.1%
4Q 2021	128.6%	687.6%	69.3%	76.0%	108.0%
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%

Source: Call reports, Schedule RC-L

The majority of collateral held by banks against NCCE is very liquid with 68.7 percent held in cash (both U.S. dollar and other currencies) and an additional 7.3 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
2Q 2022	50.9%	17.8%	6.8%	0.5%	2.7%	5.5%	15.7%
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 Federal Financial Institutions Examination Council (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
2Q 2022 Average 60-Day VaR	\$261	\$143	\$122	\$421
1Q 2022 Average 60-Day VaR	\$382	\$143	\$85	\$293
Q/Q Change	-\$121	\$0	\$38	\$128
2Q 2022 Total Risk-Based Capital	\$279,857	\$166,094	\$195,227	\$50,350

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

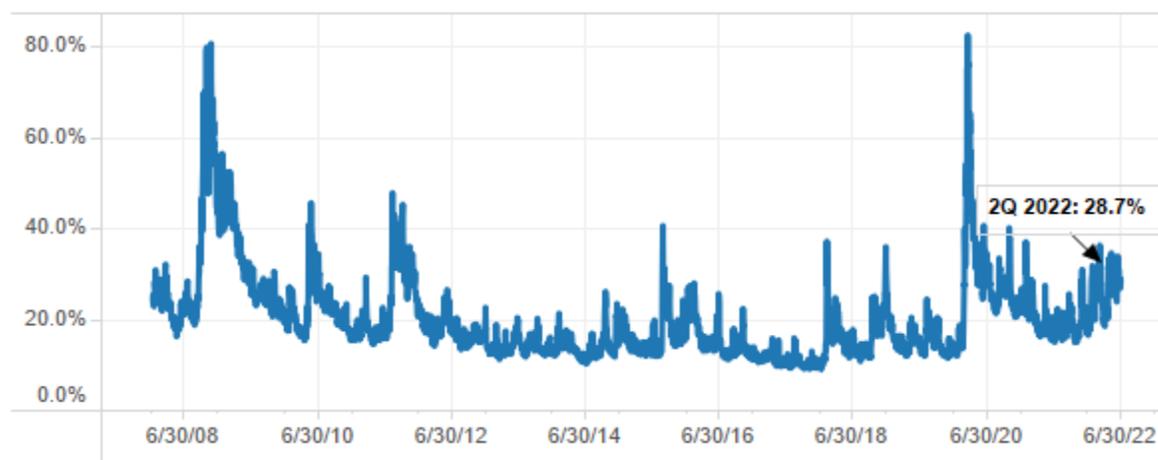
Value-at-Risk capital requirement	JPMorgan Chase Bank NA	Citibank NA	Bank of America NA	Goldman Sachs Bank USA
2Q 2022 VaR Capital Requirement	\$1,043	\$428	\$416	\$1,262
1Q 2022 VaR Capital Requirement	\$1,528	\$428	\$254	\$878
Q/Q Change	-\$485	\$0	\$162	\$385
2Q 2022 Total Risk-Based Capital	\$279,857	\$166,094	\$195,227	\$50,350

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 28.7 percent at the end of the second quarter of 2022.

Figure 3: Volatility Index (VIX)



Source: Bloomberg

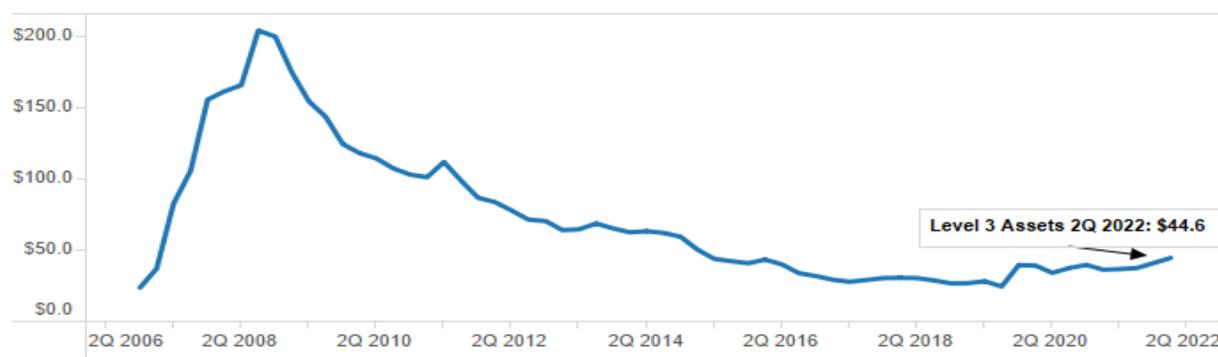
Level 3 Trading Assets

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 second quarter of 2022, banks held \$44.6 billion of level 3 trading assets, up 8.6 percent from the previous quarter and 22.9 percent higher than a year ago. Level 3 trading assets are \$159.5 billion (78.1 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 second quarter decreased by \$5.5 trillion (2.7 percent) to \$194.8 trillion from the previous quarter (see table 10). The decrease in the notional amount of derivative contracts by underlying risk exposure was primarily driven by a decrease in interest rate contracts and foreign exchange contracts. Interest rate notional amounts continued to represent the majority of banks' derivative holdings at \$142.9 trillion, or 73.3 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	2Q 2022	1Q 2022	Q/Q Change	Q/Q % Change	2Q 2021	Y/Y Change	Y/Y % Change
Interest rate	\$142,860	\$145,875	-\$3,014	-2.1%	\$133,300	\$9,561	7.2%
FX	\$41,915	\$43,580	-\$1,665	-3.8%	\$41,210	\$705	1.7%
Equity	\$4,328	\$4,489	-\$162	-3.6%	\$4,255	\$72	1.7%
Commodity & Other	\$1,779	\$1,906	-\$126	-6.6%	\$1,632	\$147	9.0%
Credit derivatives	\$3,966	\$4,504	-\$539	-12.0%	\$3,104	\$862	27.8%
Total notional	\$194,848	\$200,354	-\$5,506	-2.7%	\$183,501	\$11,347	6.2%

Source: Call reports, Schedule RC-L

The decrease in the total notional amount of derivative contracts by contract type was primarily driven by a decrease in swaps contracts (see table 11). Swaps contracts remained the leading derivatives contract type at 62.2 percent of all notional amounts.

The four banks with the most derivative activity hold 88.9 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	2Q 2022	1Q 2022	Q/Q Change	Q/Q % Change	2Q 2021	Y/Y Change	Y/Y % Change
Futures & forwards	\$32,045	\$33,523	-\$1,478	-4.4%	\$37,584	-\$5,539	-14.7%
Swaps	\$121,285	\$124,397	-\$3,112	-2.5%	\$106,973	\$14,312	13.4%
Options	\$37,552	\$37,930	-\$378	-1.0%	\$35,840	\$1,712	4.8%
Credit derivatives	\$3,966	\$4,504	-\$539	-12.0%	\$3,104	\$862	27.8%
Total notional	\$194,848	\$200,354	-\$5,506	-2.7%	\$183,501	\$11,347	6.2%

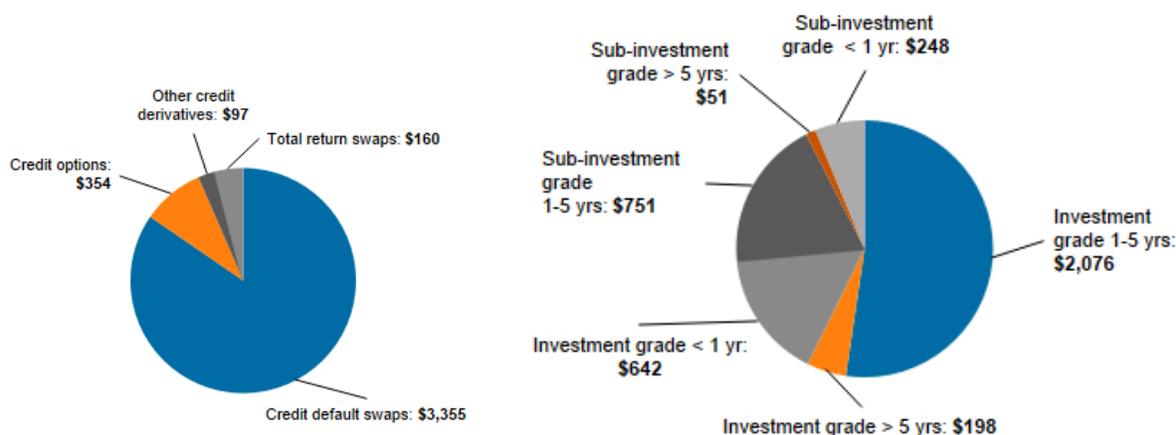
Source: Call reports, Schedule RC-L

Credit Derivatives

The notional amounts of credit derivatives decreased \$539.0 billion (12.0 percent) to \$4.0 trillion in the second quarter of 2022 (see table 11). Contracts referencing investment-grade firms decreased \$436.0 billion, and contracts referencing sub-investment-grade firms decreased \$103.0 billion in the second 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 \$3.4 trillion (84.6 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 52.3 percent of all credit derivative notional amounts. Contracts of all tenors that reference investment-grade entities are \$2.9 trillion or 73.5 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

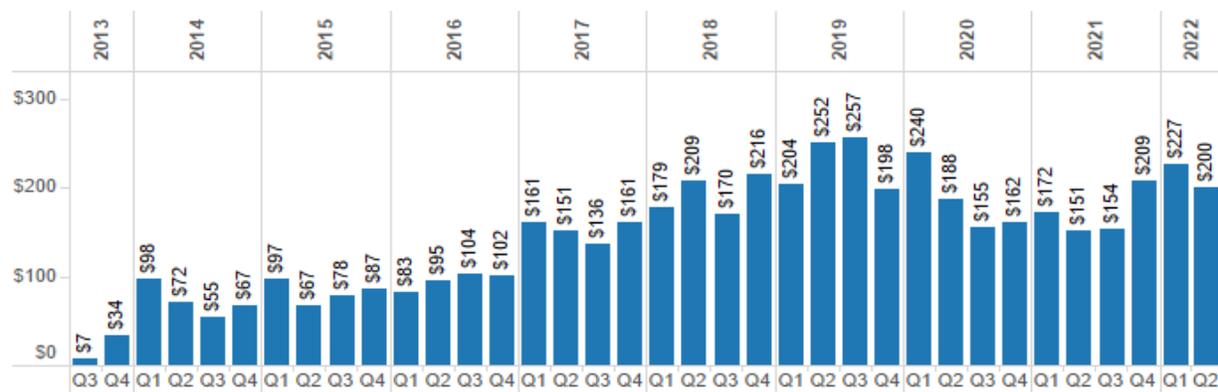
The notional amount for the 96 banks that net sold credit protection (i.e., assumed credit risk) was \$1.9 trillion, down \$269.4 billion (12.4 percent) from the first quarter of 2022 (see table 24 in the appendix). The notional amount for the 74 banks that net purchased credit protection (i.e., hedged credit risk) was \$2.1 trillion, \$269.1 billion lower (11.5 percent) than in the first quarter of 2022 (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 decreased in the second 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 second quarter of 2022 43.1 percent of banks' derivative holdings were centrally cleared (see table 12). From a market factor perspective, 55.9 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 25.4 percent of credit derivative transactions were centrally cleared during the second quarter of 2022.

Centrally cleared derivative transactions were heavily concentrated at qualifying central counterparties, with 81.0 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
2Q 2022	55.9%	3.2%	24.8%	5.9%	25.4%	12.3%	43.1%
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%
1Q2021	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, June 30, 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	\$3,380,824	\$56,200,450	\$1,232,145	\$1,085,583	\$9,733,163	\$35,094,569	\$7,964,743	\$1,090,247	\$821,836
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	501,906	49,470,852	1,645,642	1,402,285	4,869,422	27,089,712	13,897,663	566,128	501,960
3	CITIBANK NATIONAL ASSN	E57ODZWZ7F32TWEFA76	1,720,308	45,476,001	781,896	505,731	4,227,138	32,146,535	6,202,822	1,611,879	410,111
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,440,022	22,116,117	283,916	274,281	3,904,908	13,864,457	3,299,315	489,240	550,208
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCFXT09	1,712,535	11,466,365	490,962	402,513	770,132	7,891,721	1,799,180	111,857	18,618
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	296,434	2,207,692	6,445	0	2,133,669	32,328	35,250	0	63,909
7	HSBC NA	1IE8VN30JCEQV1H4R804	168,925	1,456,942	38,590	6,058	519,298	813,380	67,997	11,619	54,234
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	365,102	1,157,994	32,564	55	245,885	853,921	25,314	255	98,051
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	582,253	782,326	7,003	0	91,134	480,858	194,179	9,152	3,525
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	534,347	560,949	5,710	12,550	24,668	459,009	46,785	12,227	1,306
11	WESTERN ALLIANCE BANK		65,993	408,004	390,110	0	14,511	564	2,819	0	0
12	TD BANK NATIONAL ASSN	03D0JEWDFUS0SEEKG89	405,223	348,162	0	0	2,408	344,883	872	0	0
13	NORTHERN TRUST CO	6PTKHDJ8HDFU78PFWH30	157,290	324,507	0	0	305,241	18,886	380	0	12,932
14	TRUIST BANK	JJKC32MCHWDI71265Z06	532,080	323,074	4,571	27,909	23,234	198,848	60,057	8,455	267
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	226,532	247,999	1,235	0	12,393	217,440	14,087	2,844	213
16	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	205,546	169,366	2,072	276	8,017	109,487	44,261	5,253	455
17	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	159,787	166,065	947	0	2,276	127,040	29,595	6,207	53
18	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	388,440	163,938	24,466	0	4,907	127,591	638	6,336	341
19	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	124,662	137,923	2,316	0	21,802	107,925	5,880	1	1,006
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	184,673	135,693	1,426	0	7,712	112,569	13,812	175	891
21	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	191,345	118,240	0	0	23,358	76,117	5,964	12,801	1,079
22	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	178,091	79,969	407	0	5,877	62,397	7,368	3,920	78
23	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	45,203	71,801	2,673	2,630	46,752	10,793	8,948	6	0
24	UBS BANK USA		121,042	71,068	0	0	0	71,068	0	0	0
25	MANUFACTURERS&TRADERS TR CO	VWB2V0FCW3A0EE3ZJN75	203,656	70,220	0	0	2,615	64,692	2,912	0	220
	Top 25 Commercial Banks, SAs & TCs With Derivatives		\$14,892,219	\$193,731,717	\$4,955,095	\$3,719,871	\$27,000,519	\$120,376,790	\$33,730,839	\$3,948,603	\$2,541,292
	Other Commercial Banks, SAs & TCs With Derivatives		6,431,628	1,116,259	2,224	6,221	87,497	908,341	94,812	17,163	2,867
	Total All Commercial Banks, SAs & TCs With Derivatives		21,323,846	194,847,976	4,957,320	3,726,092	27,088,016	121,285,131	33,825,652	3,965,766	2,544,158

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, June 30, 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.	8I5DZWKVSI1NUHU748	\$3,841,314	\$55,517,627	\$1,296,383	\$1,598,430	\$10,120,035	\$33,737,633	\$7,668,110	\$1,097,036	\$801,444
2	CITIGROUP INC.	6SHG4ZSSLCXXQSBB395	2,380,904	46,455,593	904,871	2,936,166	5,266,897	30,326,021	5,701,115	1,320,523	404,817
3	GOLDMAN SACHS GROUP, INC., THE	784F5XWPLTWKTBV3E584	1,601,224	43,479,970	2,159,330	2,706,315	5,093,747	23,203,983	9,283,109	1,033,486	226,124
4	BANK OF AMERICA CORPORATION	9DJT3UXIJZJI4WXO774	3,111,606	40,668,458	834,904	1,321,815	7,373,507	25,812,605	4,417,254	908,373	392,210
5	MORGAN STANLEY	IGJSJL3JD5P30I6NJZ34	1,173,776	35,437,482	994,248	1,528,203	4,508,951	20,858,021	6,870,920	677,139	122,669
6	WELLS FARGO & COMPANY	PBLD0EJDB5FWOLXP3B76	1,881,142	11,716,531	503,341	455,729	1,164,203	7,703,314	1,796,129	93,815	18,584
7	SMBC AMERICAS HOLDINGS, INC.		28,912	9,462,366	991,592	2,853,846	116,453	4,201,205	1,297,649	1,620	77,862
8	MIZUHO AMERICAS LLC		49,181	7,959,568	31,943	31,205	130,588	7,574,689	182,574	8,569	3,965
9	HSBC NORTH AMERICA HOLDINGS INC.	213800JCL1FHBQK3M654	227,432	4,529,637	588,197	1,145,691	520,346	2,189,882	73,903	11,619	54,234
10	STATE STREET CORPORATION	549300ZFEJ2IP5VME73	300,223	2,200,142	6,445	0	2,133,669	24,778	35,250	0	63,909
11	BANK OF NEW YORK MELLON CORPORATION, THE	WFLLPEPC7FZXENRZV188	452,621	1,138,896	33,170	115	251,631	828,411	25,314	255	98,196
12	U.S. BANCORP	N1GZ7BBF3NP8GI976H15	591,381	797,052	7,003	0	90,454	496,265	194,178	9,152	3,525
13	BARCLAYS US LLC	213800H14XVWVO87OI72	174,306	779,413	18,153	445,942	267,993	44,863	0	2,462	7
14	RBC US GROUP HOLDINGS LLC		162,931	642,864	222,192	155,493	18,746	245,244	364	825	223
15	PNC FINANCIAL SERVICES GROUP, INC., THE	CFGNEKW0P8842LEUIA51	541,013	552,563	5,748	12,550	26,778	448,400	46,785	12,302	1,306
16	WESTERN ALLIANCE BANCORPORATION	5493003VJXZ5JXT9S762	66,055	408,004	390,110	0	14,511	564	2,819	0	0
17	TD GROUP US HOLDINGS LLC	549300ARWZ5E3L64UH29	516,518	398,482	26,239	251	11,110	359,895	988	0	0
18	TRUIST FINANCIAL CORPORATION	549300DRQI75D2JP341	545,123	331,403	4,571	27,909	24,864	205,547	60,057	8,455	267
19	NORTHERN TRUST CORPORATION	549300GLF98S992BC502	157,786	321,757	0	0	305,241	16,136	380	0	12,932
20	CAPITAL ONE FINANCIAL CORPORATION	ZUE8T73ROZOF6FLBAR73	440,288	248,084	24,466	0	11,039	205,604	638	6,336	341
21	CITIZENS FINANCIAL GROUP, INC.	2138004JDDA4ZQUPFW65	227,187	247,999	1,235	0	12,393	217,440	14,087	2,844	213
22	CREDIT SUISSE HOLDINGS (USA), INC.	549300YHT5NGRKJD1R94	91,685	214,556	8,280	1,791	99,509	29,667	14,476	60,832	74
23	FIFTH THIRD BANCORP	THRNG6BD57P9QWTQLG42	206,782	171,571	2,072	276	8,017	111,692	44,261	5,253	455
24	AMERIPRISE FINANCIAL, INC.	GRI2NT5QHYW751NMR949	158,503	164,805	19,948	3,294	405	78,276	60,927	1,955	1
25	REGIONS FINANCIAL CORPORATION		160,952	164,665	947	0	2,276	125,640	29,595	6,207	53
	Top 25 Holding Companies with Derivatives		\$19,088,845	\$264,009,487	\$9,075,387	\$15,225,020	\$37,573,362	\$159,045,774	\$37,820,883	\$5,269,060	\$2,283,411

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, June 30, 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	\$3,380,824	\$56,200,450	4.1	95.9	69.6	23.5	3.4	1.7	1.9
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	501,906	49,470,852	6.2	93.8	85.7	12.7	0.3	0.1	1.1
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,720,308	45,476,001	2.8	97.2	67.7	25.5	2.4	0.9	3.5
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,440,022	22,116,117	2.5	97.5	71.0	23.0	3.5	0.3	2.2
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,712,535	11,466,365	7.8	92.2	87.0	8.4	2.7	1.0	1.0
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	296,434	2,207,692	0.3	99.7	1.6	96.9	0.0	1.5	0.0
7	HSBC NA	11E8VN30JCEQV1H4R804	168,925	1,456,942	3.1	96.9	13.4	81.0	1.3	3.5	0.8
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	365,102	1,157,994	2.8	97.2	26.0	73.6	0.4	0.0	0.0
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	582,253	782,326	0.9	99.1	86.2	12.4	0.0	0.2	1.2
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	534,347	560,949	3.3	96.7	90.1	3.9	1.1	2.7	2.2
11	WESTERN ALLIANCE BANK		65,993	408,004	95.6	4.4	100.0	0.0	0.0	0.0	0.0
12	TD BANK NATIONAL ASSN	03D0JEWDFUS0SEEKG89	405,223	348,162	0.0	100.0	98.3	1.7	0.0	0.0	0.0
13	NORTHERN TRUST CO	6PTKHDJ8HDUF78PFWH30	157,290	324,507	0.0	100.0	5.7	94.1	0.2	0.0	0.0
14	TRUIST BANK	JJKC32MCHWDI71265Z06	532,080	323,074	10.1	89.9	78.1	5.9	11.3	2.1	2.6
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	226,532	247,999	0.5	99.5	88.0	10.5	0.0	0.4	1.1
16	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	205,546	169,366	1.4	98.6	71.4	14.7	1.9	9.0	3.1
17	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	159,787	166,065	0.6	99.4	93.6	1.0	0.0	1.6	3.7
18	CAPITAL ONE NATIONAL ASSN	207ALC1P1YMOOVDV0K75	388,440	163,938	14.9	85.1	85.6	2.8	0.0	7.7	3.9
19	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	124,662	137,923	1.7	98.3	82.0	17.8	0.1	0.0	0.0
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	184,673	135,693	1.1	98.9	80.2	6.0	0.0	13.6	0.1
21	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	191,345	118,240	0.0	100.0	39.0	29.1	21.0	0.0	10.8
22	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	178,091	79,969	0.5	99.5	87.6	5.6	0.7	1.2	4.9
23	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	45,203	71,801	7.4	92.6	73.7	0.2	0.1	25.9	0.0
24	UBS BANK USA		121,042	71,068	0.0	100.0	100.0	0.0	0.0	0.0	0.0
25	MANUFACTURERS&TRADERS TR CO	WWB2V0FCW3A0EE3ZJN75	203,656	70,220	0.0	100.0	98.5	1.5	0.0	0.0	0.0
	Top 25 Commercial Banks, SAs & TCs With Derivatives		\$14,892,219	\$193,731,717	\$8,674,966	\$185,056,751	\$141,853,414	\$41,844,076	\$4,324,705	\$1,760,920	\$3,948,603
	Other Commercial Banks, SAs & TCs With Derivatives		6,431,628	1,116,259	8,445	1,107,814	1,006,834	70,924	2,821	18,517	17,163
	Total All Commercial Banks, SAs & TCs With Derivatives		21,323,846	194,847,976	8,683,412	186,164,565	142,860,249	41,915,000	4,327,525	1,779,436	3,965,766
	Top 25 Commercial Banks, SAs & TCs With Derivatives: Percentage of Total			99.4	4.5	95.0	72.8	21.5	2.2	0.9	2.0
	Other Commercial Banks, SAs & TCs With Derivatives: Percentage of Total			0.6	0.0	0.6	0.5	0.0	0.0	0.0	0.0
	Total All Commercial Banks, SAs & TCs With Derivatives: Percentage of Total			100.0	4.5	95.5	73.3	21.5	2.2	0.9	2.0

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, June 30, 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	\$3,380,824	\$56,200,450	\$279,857	\$100,972	\$270,032	\$371,004	133
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	501,906	49,470,852	50,350	12,874	46,123	58,997	117
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,720,308	45,476,001	166,094	55,353	169,828	225,181	136
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,440,022	22,116,117	195,227	44,794	61,266	106,060	54
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCUFXT09	1,712,535	11,466,365	163,090	43,239	31,987	75,226	46
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	296,434	2,207,692	18,832	9,149	17,667	26,816	142
7	HSBC NA	1IE8VN30JCEQV1H4R804	168,925	1,456,942	22,673	6,285	3,328	9,613	42
8	BANK OF NEW YORK MELLON	HPFHU00Q28E4N0NFVK49	365,102	1,157,994	19,734	7,845	9,736	17,581	89
9	U S BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	582,253	782,326	53,351	4,567	4,176	8,742	16
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	534,347	560,949	49,162	4,586	727	5,313	11
11	WESTERN ALLIANCE BANK		65,993	408,004	5,638	9	27	36	1
12	TD BANK NATIONAL ASSN	03D0JEWFDUFUS0SEEKG89	405,223	348,162	37,501	148	1,582	1,730	5
13	NORTHERN TRUST CO	6PTKHDJ8HDFU78PFWH30	157,290	324,507	10,450	3,381	3,493	6,874	66
14	TRUIST BANK	JJKC32MCHWDI71265Z06	532,080	323,074	45,909	1,299	2,063	3,362	7
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	226,532	247,999	22,662	1,326	1,723	3,049	13
16	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	205,546	169,366	19,717	2,608	3,058	5,665	29
17	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	159,787	166,065	14,723	466	541	1,007	7
18	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	388,440	163,938	31,323	4,551	4,520	9,072	29
19	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	124,662	137,923	16,506	770	107	877	5
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUVH1BK78	184,673	135,693	17,826	2,279	1,886	4,165	23
21	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	191,345	118,240	19,216	55	4,725	4,780	25
22	HUNTINGTON NATIONAL BANK	2WHM8VNJH63UN14OL754	178,091	79,969	17,215	1,696	788	2,484	14
23	BOKF NATIONAL ASSN	FU7RSW4CQQY98A2O7J66	45,203	71,801	4,307	3,050	1,432	4,483	104
24	UBS BANK USA		121,042	71,068	9,640	0	282	282	3
25	MANUFACTURERS&TRADERS TR CO	VWB2V0FCW3A0EE3ZJN75	203,656	70,220	18,810	68	248	315	2
	Top 25 Commercial Banks, SAs & TCs With Derivatives		\$14,892,219	\$193,731,717	\$1,309,812	\$311,370	\$641,343	\$952,712	73
	Other Commercial Banks, SAs & TCs With Derivatives		6,431,628	1,116,259	639,362	13,072	11,064	24,136	4
	Total All Commercial Banks, SAs & TCs With Derivatives		21,323,846	194,847,976	1,949,174	324,442	652,407	976,849	50

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, June 30, 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	\$3,380,824	\$56,200,450	\$54,682,756	99.2	\$427,447	0.8
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	501,906	49,470,852	48,870,693	99.9	34,031	0.1
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,720,308	45,476,001	43,717,670	99.7	146,452	0.3
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,440,022	22,116,117	20,033,224	92.6	1,593,653	7.4
	Top Four Commercial Banks, SAs & TCs With Derivatives		\$8,043,060	\$173,263,420	\$167,304,343	98.7	\$2,201,583	1.3
	Other Commercial Banks, SAs & TCs With Derivatives		13,280,786	21,584,556	18,709,201	87.5	2,667,083	12.5
	Total All Commercial Banks, SAs & TCs With Derivatives		21,323,846	194,847,976	186,013,544	97.4	4,868,666	2.6

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, June 30, 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	\$3,380,824	\$56,200,450	\$718,436	\$680,272	\$3,232	\$1,901	\$12,792	\$10,998
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	501,906	49,470,852	645,109	631,354	182	12	6,026	6,220
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,720,308	45,476,001	489,066	460,844	4,502	3,655	15,519	14,984
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,440,022	22,116,117	193,874	167,487	52,262	49,941	5,546	5,246
	Top Four Commercial Banks, SAs & TCs With Derivatives		\$8,043,060	\$173,263,420	\$2,046,485	\$1,939,957	\$60,178	\$55,509	\$39,883	\$37,448
	Other Commercial Banks, SAs & TCs With Derivatives		13,280,786	21,584,556	174,419	167,866	32,248	26,571	3,834	2,059
	Total All Commercial Banks, SAs & TCs With Derivatives		21,323,846	194,847,976	2,220,904	2,107,823	92,426	82,080	43,717	39,507

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), June 30, 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	\$3,380,824	\$56,200,450	2,644	728	1,308	-333	497	444
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	501,906	49,470,852	596	-1,056	1,272	-174	18	536
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,720,308	45,476,001	3,978	1,156	1,782	785	299	-44
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,440,022	22,116,117	1,715	208	889	535	40	43
	Top Four Commercial Banks, SAs & TCs With Derivatives		\$8,043,060	\$173,263,420	8,933	1,036	5,251	813	854	979
	Other Commercial Banks, SAs & TCs With Derivatives		13,280,786	21,584,556	1,416	-162	1,112	-40	175	331
	Total All Commercial Banks, SAs & TCs With Derivatives		21,323,846	194,847,976	10,349	874	6,363	773	1,029	1,310

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, June 30, 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	\$3,380,824	\$56,200,450	\$38,940,492	\$6,969,958	\$5,326,050	\$51,236,500	\$9,836,902	\$2,345,328	\$1,135,126	\$13,317,356
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	501,906	49,470,852	21,076,849	7,384,084	6,884,431	35,345,364	4,528,639	954,289	661,919	6,144,847
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,720,308	45,476,001	22,533,428	3,605,319	2,618,511	28,757,258	9,902,747	600,687	219,775	10,723,209
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,440,022	22,116,117	7,192,942	5,001,639	3,795,610	15,990,191	4,199,596	432,310	270,822	4,902,728
	Top Four Commercial Banks, SAs & TCs With Derivatives		\$8,043,060	\$173,263,420	\$89,743,711	\$22,961,000	\$18,624,602	\$131,329,313	\$28,467,884	\$4,332,614	\$2,287,642	\$35,088,140
	Other Commercial Banks, SAs & TCs With Derivatives		13,280,786	21,584,556	6,897,285	3,303,556	4,361,479	14,562,320	5,415,286	212,912	188,776	5,816,975
	Total All Commercial Banks, SAs & TCs With Derivatives		21,323,846	194,847,976	96,640,996	26,264,556	22,986,081	145,891,633	33,883,170	4,545,526	2,476,418	40,905,115

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, June 30, 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	\$3,380,824	\$56,200,450	\$226,021	\$22,469	\$6	\$248,496
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	501,906	49,470,852	18,276	282	0	18,558
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,720,308	45,476,001	116,811	3,066	0	119,877
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,440,022	22,116,117	38,277	802	0	39,079
	Top Four Commercial Banks, SAs & TCs With Derivatives		\$8,043,060	\$173,263,420	\$399,385	\$26,619	\$6	\$426,010
	Other Commercial Banks, SAs & TCs With Derivatives		13,280,786	21,584,556	13,869	167	516	14,553
	Total All Commercial Banks, SAs & TCs With Derivatives		21,323,846	194,847,976	413,254	26,786	522	440,563

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, June 30, 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	\$3,380,824	\$56,200,450	\$1,049,901	\$126,851	\$5,387	\$1,182,139	\$2,705,313	\$525,698	\$73,278	\$3,304,289
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	501,906	49,470,852	18,684	16,168	47	34,899	192,296	41,384	13,028	246,708
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,720,308	45,476,001	148,622	56,655	860	206,137	519,587	125,821	9,140	654,548
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,440,022	22,116,117	23,151	7,067	279	30,497	615,153	191,449	19,944	826,546
	Top Four Commercial Banks, SAs & TCs With Derivatives		\$8,043,060	\$173,263,420	\$1,240,358	\$206,741	\$6,573	\$1,453,672	\$4,032,349	\$884,352	\$115,390	\$5,032,091
	Other Commercial Banks, SAs & TCs With Derivatives		13,280,786	21,584,556	113,160	75,668	38,094	226,922	239,828	26,716	58,842	325,386
	Total All Commercial Banks, SAs & TCs With Derivatives		21,323,846	194,847,976	1,353,518	282,409	44,667	1,680,594	4,272,177	911,068	174,232	5,357,477

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, June 30, 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	\$3,380,824	\$56,200,450	\$1,090,247	\$180,780	\$568,869	\$56,028	\$805,677	\$81,575	\$194,437	\$8,558	\$284,570
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	501,906	49,470,852	566,128	48,981	256,118	43,085	348,184	34,563	168,021	15,360	217,944
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,720,308	45,476,001	1,611,879	232,914	977,541	66,062	1,276,517	71,410	256,380	7,572	335,362
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,440,022	22,116,117	489,240	130,177	197,469	19,406	347,052	48,255	87,976	5,957	142,188
	Top Four Commercial Banks, SAs & TCs With Derivatives		\$8,043,060	\$173,263,420	\$3,757,494	\$592,852	\$1,999,997	\$184,581	\$2,777,430	\$235,803	\$706,814	\$37,447	\$980,064
	Other Commercial Banks, SAs & TCs With Derivatives		13,280,786	21,584,556	208,272	49,460	76,104	13,311	138,875	12,137	43,893	13,367	69,397
	Total All Commercial Banks, SAs & TCs With Derivatives		21,323,846	194,847,976	3,965,766	642,312	2,076,101	197,892	2,916,305	247,940	750,707	50,814	1,049,461

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, June 30, 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	\$3,380,824	\$56,200,450	\$1,090,247	\$565,970	\$524,277	\$480,804	\$25,390	\$54,458	\$5,318	\$467,133	\$9,164	\$47,921	\$59
2	GOLDMAN SACHS BANK USA	KD3XUN7C6T14HNAYLU02	501,906	49,470,852	566,128	308,908	257,220	290,285	2,239	15,484	900	242,847	2,344	11,928	101
3	CITIBANK NATIONAL ASSN	E57ODZWZ7FF32TWEFA76	1,720,308	45,476,001	1,611,879	823,601	788,278	758,372	12,462	52,767	0	717,081	7,406	63,791	0
4	BANK OF AMERICA NA	B4TYDEB6GKMZO031MB27	2,440,022	22,116,117	489,240	250,413	238,827	180,724	14,572	55,117	0	169,310	18,541	50,976	0
5	WELLS FARGO BANK NA	KB1H1DSPRFMYMCFXT09	1,712,535	11,466,365	111,857	66,200	45,657	11,462	37,541	235	16,962	9,036	26,540	0	10,081
6	STATE STREET BANK&TRUST CO	571474TGEMMWANRLN572	296,434	2,207,692	0	0	0	0	0	0	0	0	0	0	0
7	HSBC NA	1E8VN30JCEQV1H4R804	168,925	1,456,942	11,619	7,924	3,695	5,812	2,112	0	0	3,695	0	0	0
8	BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	365,102	1,157,994	255	255	0	255	0	0	0	0	0	0	0
9	U.S. BANK NATIONAL ASSN	6BYL5QZYBDK8S7L73M02	582,253	782,326	9,152	2,206	6,946	69	0	0	2,137	225	0	0	6,721
10	PNC BANK NATIONAL ASSN	AD6GFRVSDT01YPT1CS68	534,347	560,949	12,227	4,881	7,347	500	0	0	4,381	0	0	0	7,347
11	WESTERN ALLIANCE BANK		65,993	408,004	0	0	0	0	0	0	0	0	0	0	0
12	TD BANK NATIONAL ASSN	03D0JEWFDUS0SEEKG89	405,223	348,162	0	0	0	0	0	0	0	0	0	0	0
13	NORTHERN TRUST CO	6PTKHJ8HDUF78PFWH30	157,290	324,507	0	0	0	0	0	0	0	0	0	0	0
14	TRUIST BANK	JJKC32MCHWDI71265Z06	532,080	323,074	8,455	3,392	5,063	484	1,542	0	1,366	0	0	0	5,063
15	CITIZENS BANK NATIONAL ASSN	DRMSV1Q0EKMEXLAU1P80	226,532	247,999	2,844	0	2,844	0	0	0	0	0	0	0	2,844
16	FIFTH THIRD BANK NA	QFROUN1UWUYU0DVIWD51	205,546	169,366	5,253	1,532	3,721	0	0	0	1,532	0	0	0	3,721
17	REGIONS BANK	EQTWLK1G7ODGC2MGLV11	159,787	166,065	6,207	2,526	3,681	0	0	0	2,526	0	0	0	3,681
18	CAPITAL ONE NATIONAL ASSN	207ALC1P1YM0OVDV0K75	388,440	163,938	6,336	3,420	2,916	0	0	0	3,420	0	0	0	2,916
19	MUFG UNION BANK NA	OX3PU53ZLPQKJ4700D47	124,662	137,923	1	1	0	1	0	0	0	0	0	0	0
20	KEYBANK NATIONAL ASSN	HUX2X73FUCYHUHV1BK78	184,673	135,693	175	82	93	82	0	0	0	0	93	0	0
21	MORGAN STANLEY BANK NA	G1MLHIS0N32I3QPILB75	191,345	118,240	12,801	11,562	1,239	10,462	0	1,100	0	1,239	0	0	0
22	HUNTINGTON NATIONAL BANK	2WHM8VNH63UN14OL754	178,091	79,969	3,920	2,628	1,292	0	0	0	2,628	0	0	0	1,292
23	BOKF NATIONAL ASSN	FU7RSW4CQQY98A207J66	45,203	71,801	6	0	6	0	0	0	0	6	0	0	0
24	UBS BANK USA		121,042	71,068	0	0	0	0	0	0	0	0	0	0	0
25	MANUFACTURERS&TRADERS TR CO	VVWB2V0FCW3A0EE3ZJN75	203,656	70,220	0	0	0	0	0	0	0	0	0	0	0
	Top 25 Commercial Banks, SAs & TCs With Derivatives		\$14,892,219	\$193,731,717	\$3,948,603	\$2,055,501	\$1,893,102	\$1,739,312	\$95,858	\$179,161	\$41,170	\$1,610,572	\$64,088	\$174,616	\$43,826
	Other Commercial Banks, SAs & TCs With Derivatives		6,431,628	1,116,259	17,163	5,978	11,185	1,843	0	0	4,136	3,218	20	0	7,946
	Total All Commercial Banks, SAs & TCs With Derivatives		21,323,846	194,847,976	3,965,766	2,061,479	1,904,287	1,741,155	95,858	179,161	45,305	1,613,790	64,108	174,616	51,772
	Top 25 Commercial Banks, SAs & TCs With Derivatives: Percentage of Total				99.6	51.8	47.7	43.9	2.4	4.5	1.0	40.6	1.6	4.4	1.1
	Other Commercial Banks, SAs & TCs With Derivatives: Percentage of Total				0.4	0.2	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	52.0	48.0	43.9	2.4	4.5	1.1	40.7	1.6	4.4	1.3

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, June 30, 2022

FFIEC 051 Call Report Schedule SU

Gross Notional Amount of Derivatives	2Q22	1Q22	4Q21	3Q21	2Q21	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19
<i>Total gross notional amount of interest rate derivatives held for trading</i>	\$4,953	\$4,994	\$5,011	\$5,301	\$5,189	\$5,391	\$5,819	\$6,236	\$5,183	\$4,476	\$2,293	\$2,526
<i>Total gross notional amount of all other derivatives held for trading</i>	\$35	\$39	\$44	\$14	\$173	\$20	\$19	\$53	\$34	\$48	\$33	\$30
<i>Total gross notional amount of interest rate derivatives not held for trading</i>	\$19,170	\$21,308	\$22,545	\$29,991	\$31,949	\$38,839	\$52,867	\$57,459	\$52,779	\$37,572	\$20,044	\$18,527
<i>Total gross notional amount of all other derivatives not held for trading</i>	\$1,142	\$1,007	\$1,314	\$1,461	\$1,350	\$1,269	\$1,137	\$1,202	\$1,302	\$1,171	\$631	\$546

FFIEC 051 Call Report Schedule RC-R**

Notional principal amounts of over-the-counter derivative contracts covered by the regulatory capital rules	2Q22	1Q22	4Q21	3Q21	2Q21	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19
<i>Interest rate</i>	\$13,714	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
<i>Foreign exchange rate</i>	\$4		\$4		\$3		\$84		\$19		\$18	
<i>Credit (investment grade reference asset)</i>	\$265		\$230		\$196		\$217		\$199		\$166	
<i>Credit (non-investment grade reference asset)</i>	\$135		\$160		\$154		\$143		\$138		\$61	
<i>Equity</i>	\$0		\$0		\$0		\$0		\$0		\$0	
<i>Precious metals</i>	\$0		\$0		\$1		\$0		\$0		\$0	
<i>Other</i>	\$0		\$4		\$1		\$20		\$25		\$9	

Notional principal amounts of centrally cleared derivative contracts covered by the regulatory capital rules	2Q22	1Q22	4Q21	3Q21	2Q21	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19
<i>Interest rate</i>	\$108	Data not reported	\$21	Data not reported	\$193	Data not reported	\$250	Data not reported	\$299	Data not reported	\$96	Data not reported
<i>Foreign exchange rate</i>	\$0		\$0		\$0		\$0		\$0		\$0	
<i>Credit (investment grade reference asset)</i>	\$0		\$0		\$0		\$0		\$0		\$0	
<i>Credit (non-investment grade reference asset)</i>	\$0		\$0		\$0		\$0		\$0		\$0	
<i>Equity</i>	\$0		\$0		\$0		\$0		\$0		\$0	
<i>Precious metals</i>	\$0		\$0		\$0		\$0		\$0		\$0	
<i>Other</i>	\$0		\$0		\$0		\$0		\$0		\$0	

Current Credit Exposure	2Q22	1Q22	4Q21	3Q21	2Q21	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19
Current credit exposure across all derivative contracts covered by the regulatory capital rules	\$363	Data not reported	\$233	Data not reported	\$287	Data not reported	\$449	Data not reported	\$504	Data not reported	\$140	Data not reported

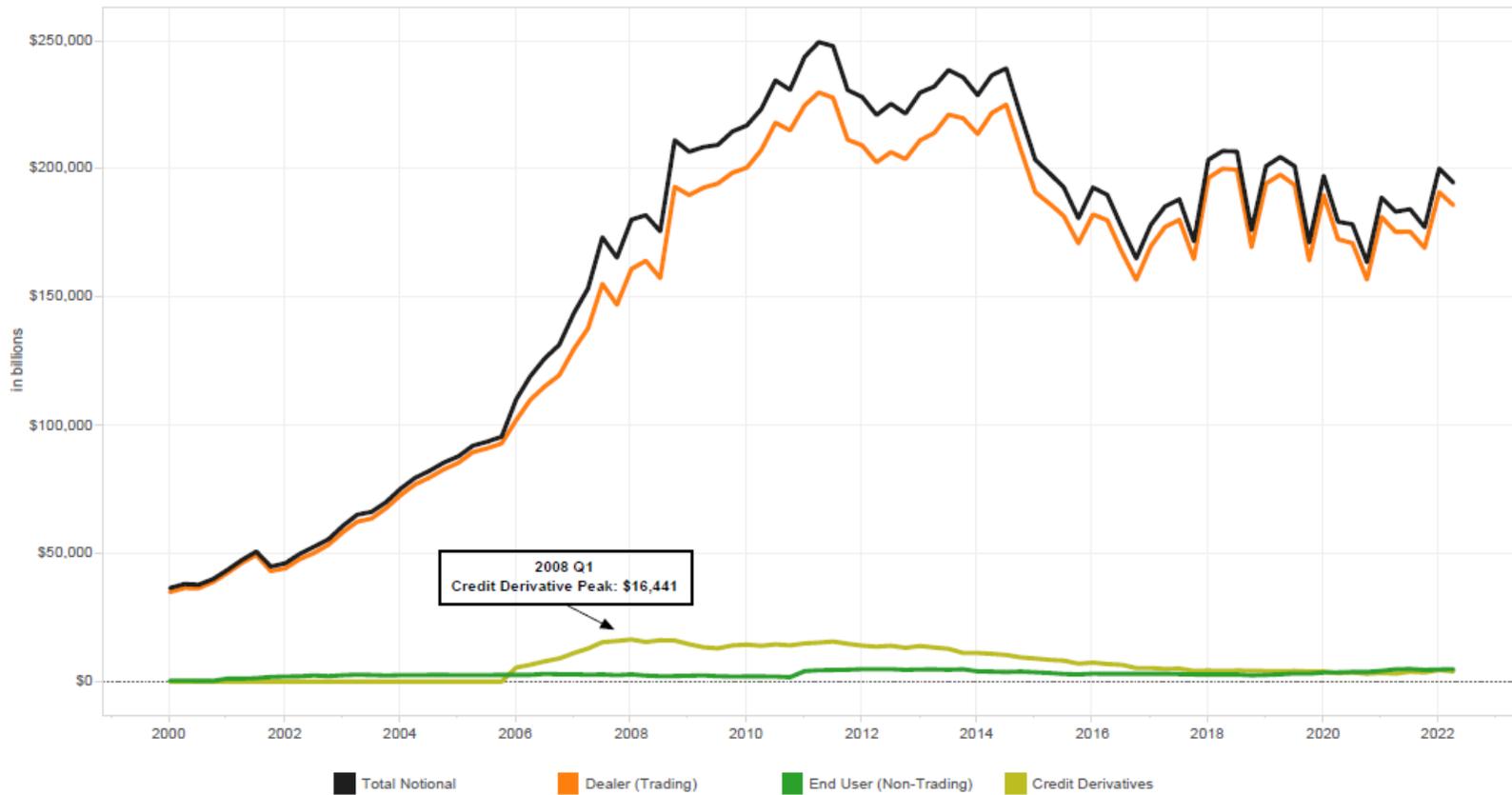
*Beginning September 30, 2019, the eligibility to file the FFIEC 051 Call Report expanded from banks with total assets less than \$1 billion to include banks with less than \$5 billion in total assets.

**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

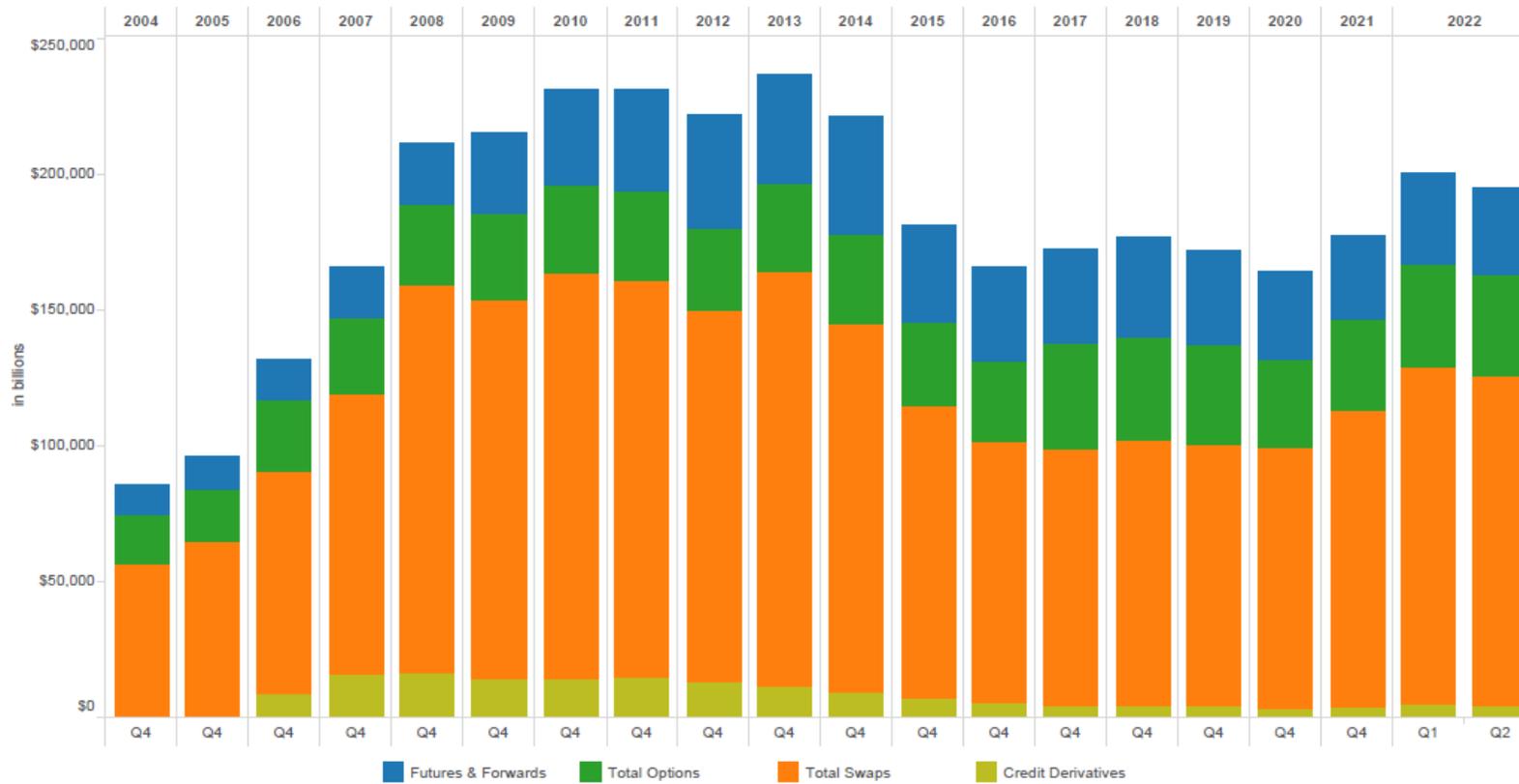
	2018				2019				2020				2021				2022	
	Q1	Q2	Q3	Q4	Q1	Q2												
Total Notional	\$203,796	\$207,203	\$206,996	\$176,354	\$201,283	\$204,876	\$201,258	\$171,465	\$197,504	\$179,573	\$178,579	\$163,799	\$188,990	\$183,501	\$184,480	\$177,464	\$200,354	\$194,848
Dealer (Trading)	196,712	200,286	199,891	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	186,014
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	4,889
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	3,966

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	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
	Q4	Q1	Q2															
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	\$32,045
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	37,552
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	121,285
Credit Derivatives	9,020	15,863	16,029	14,112	14,151	14,759	13,190	11,191	9,449	6,988	5,293	4,188	4,270	3,945	3,034	3,540	4,504	3,968
Total Notional	131,519	165,559	211,416	214,788	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	194,848

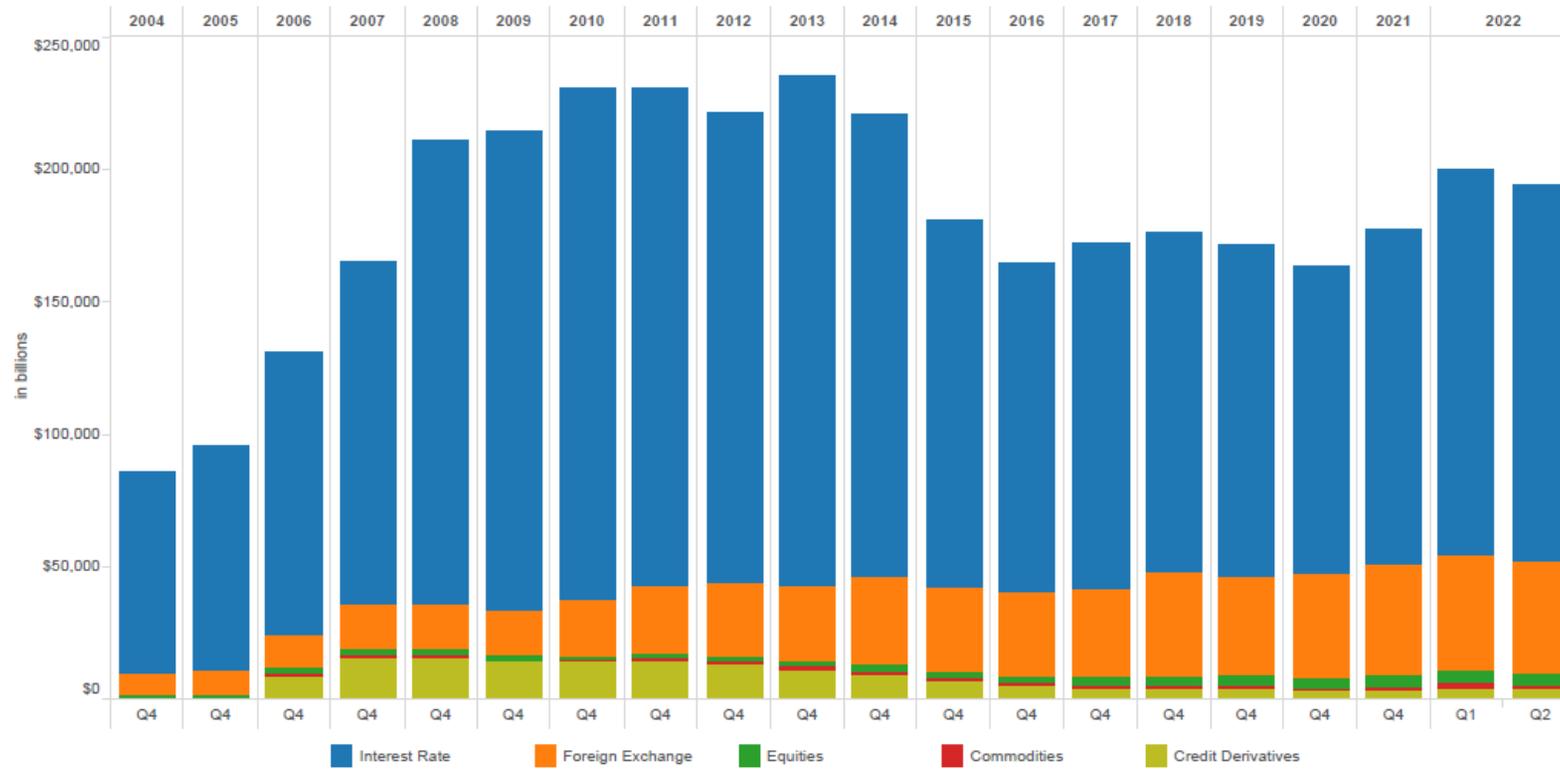
*Notional amount of total: futures, exchange-traded options, over the counter options, forwards and swaps.

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	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
	Q4	Q1	Q2														
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	\$142,880
Foreign Exchange	16,814	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	41,915
Equities	2,524	2,207	1,885	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	4,328
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	1,779
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	3,966
Total Notional	165,559	211,416	214,786	231,099	230,998	221,794	235,992	221,078	180,959	165,252	171,074	178,354	171,465	163,799	177,464	200,354	194,848

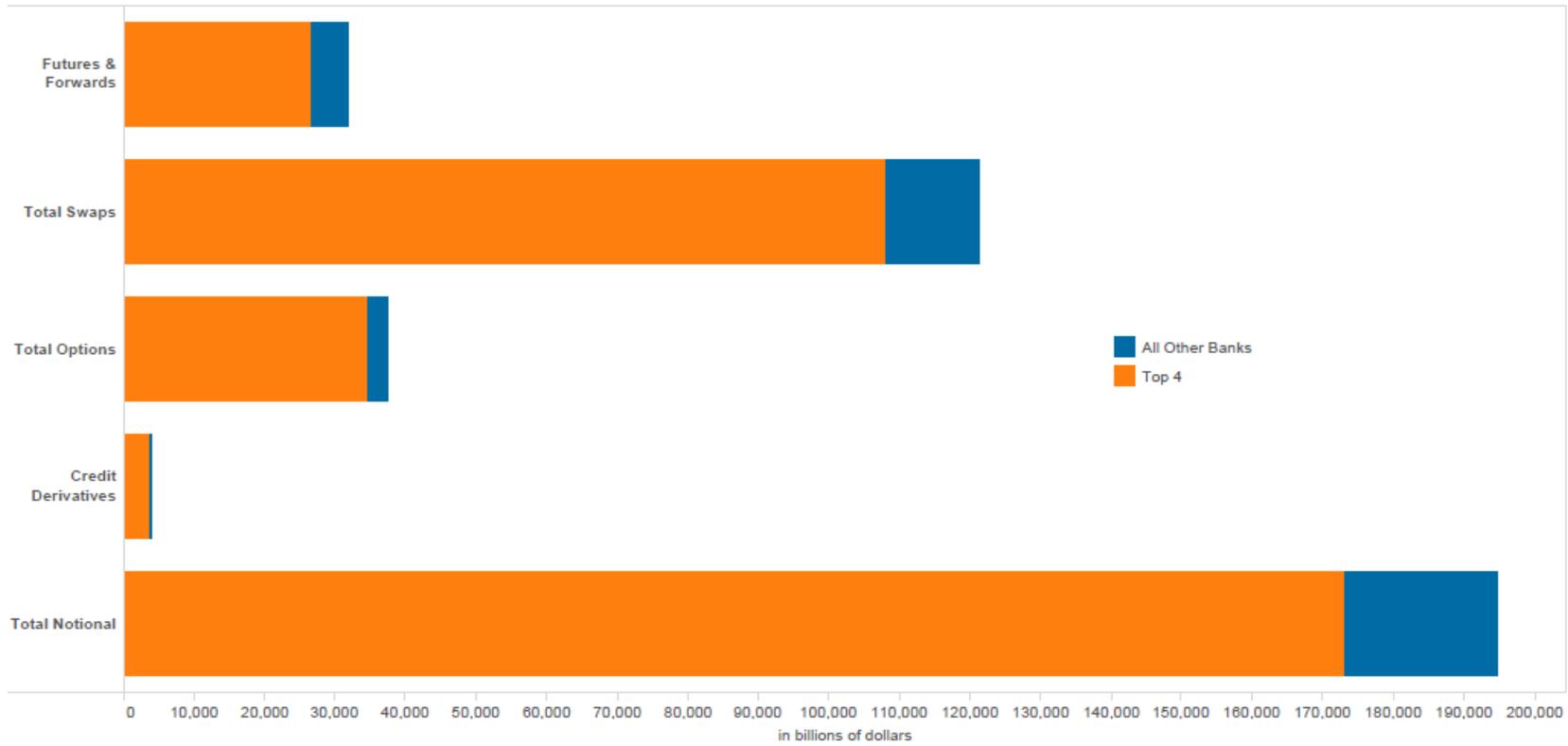
*Notional amount of total: futures, exchange traded options, over the counter options, forwards, and swaps.

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

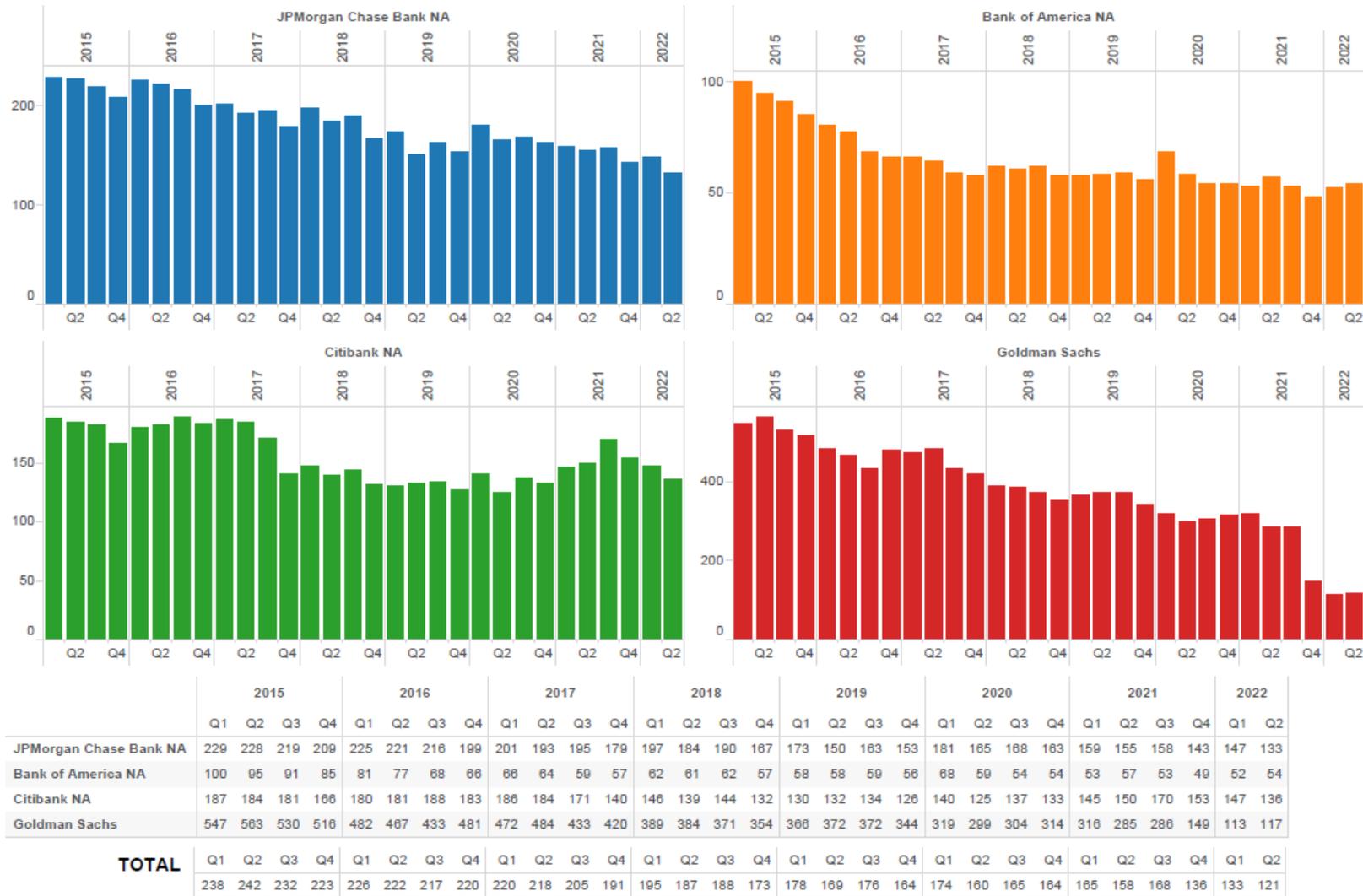
	Top 4	All Other Banks	Grand Total
Futures & Forwards	\$26,678	\$5,367	\$32,045
Total Swaps	108,195	13,090	121,285
Total Options	34,632	2,919	37,552
Credit Derivatives	3,757	208	3,966
Total Notional	173,263	21,585	194,848

*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



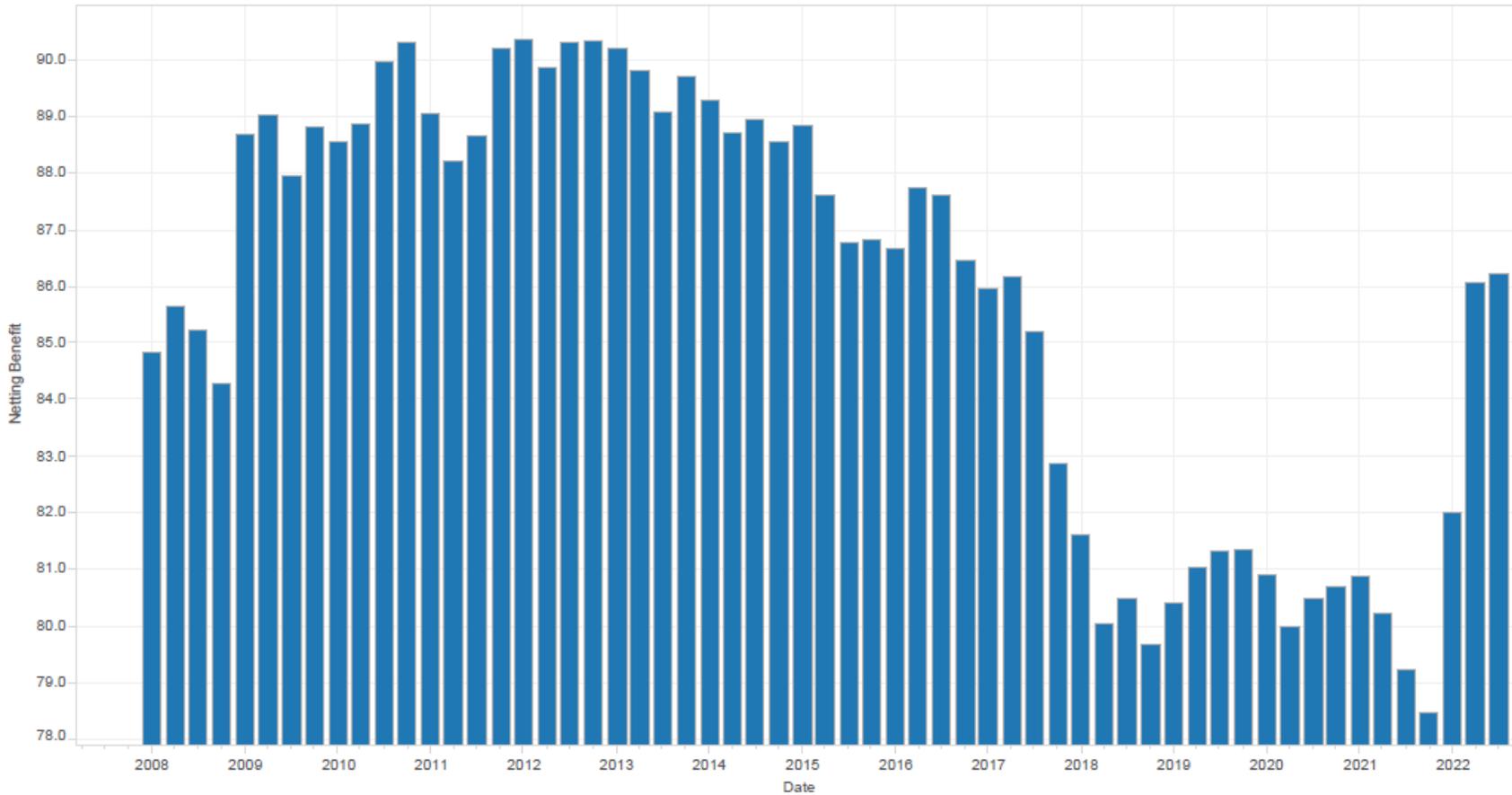
Note: Beginning January 1, 2022, the largest banks are required to calculate their derivative exposure amount for regulatory capital purposes using the Standardized Approach for Counterparty Credit Risk (SA-CCR). Refer to the call report instructions and OCC Bulletin 2020-7, "Standardized Approach for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

2014				2015				2016				2017				2018				2019				2020				2021		2022			
Q1	Q2	Q3	Q4	Q1	Q2																												
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	86.2

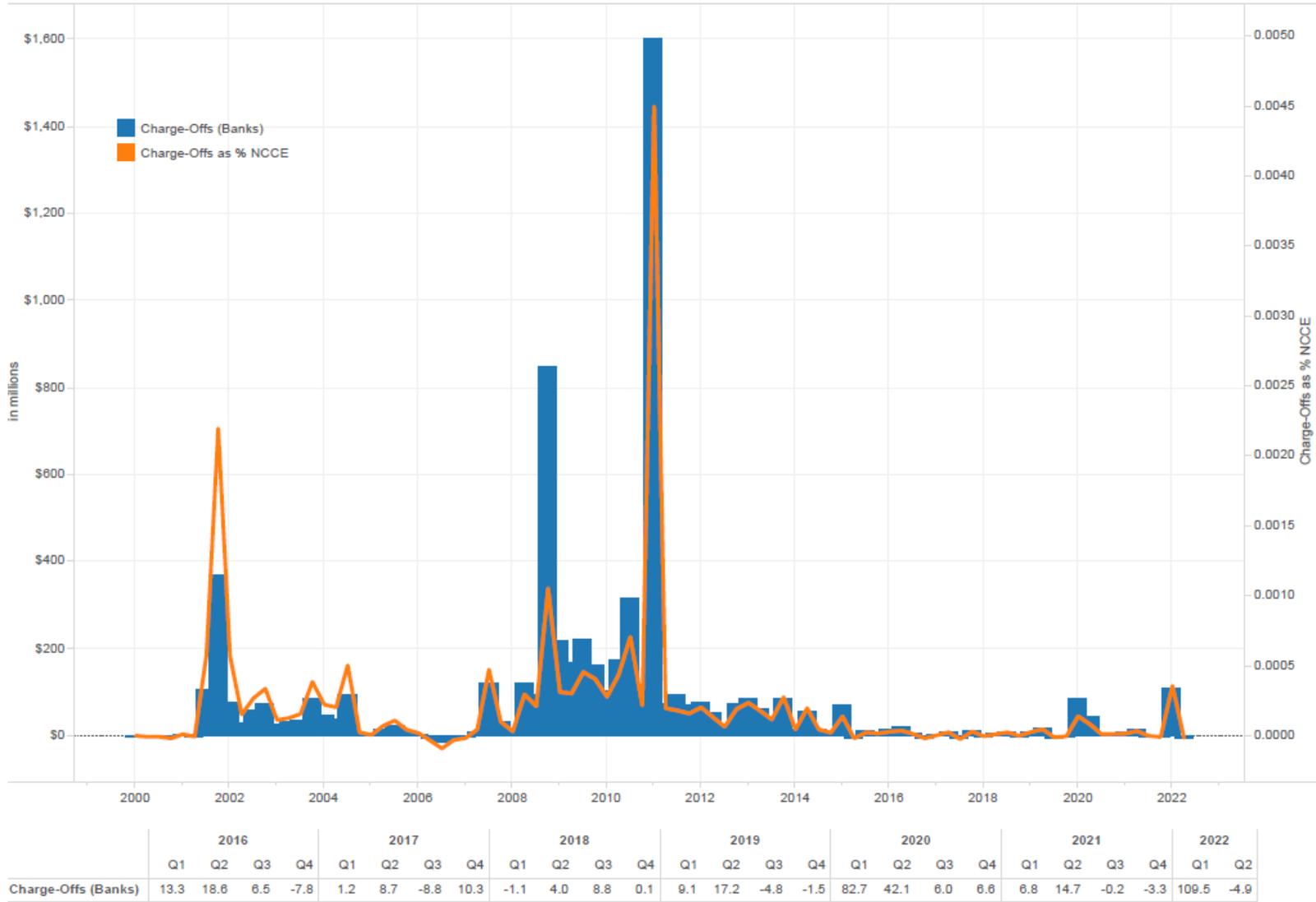
*The netting benefit is defined as the Gross Positive Fair Value (GPFV) from call report Schedule RC-L minus the Net Current Credit Exposure from call report Schedule RC-R divided by the GPFV.

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

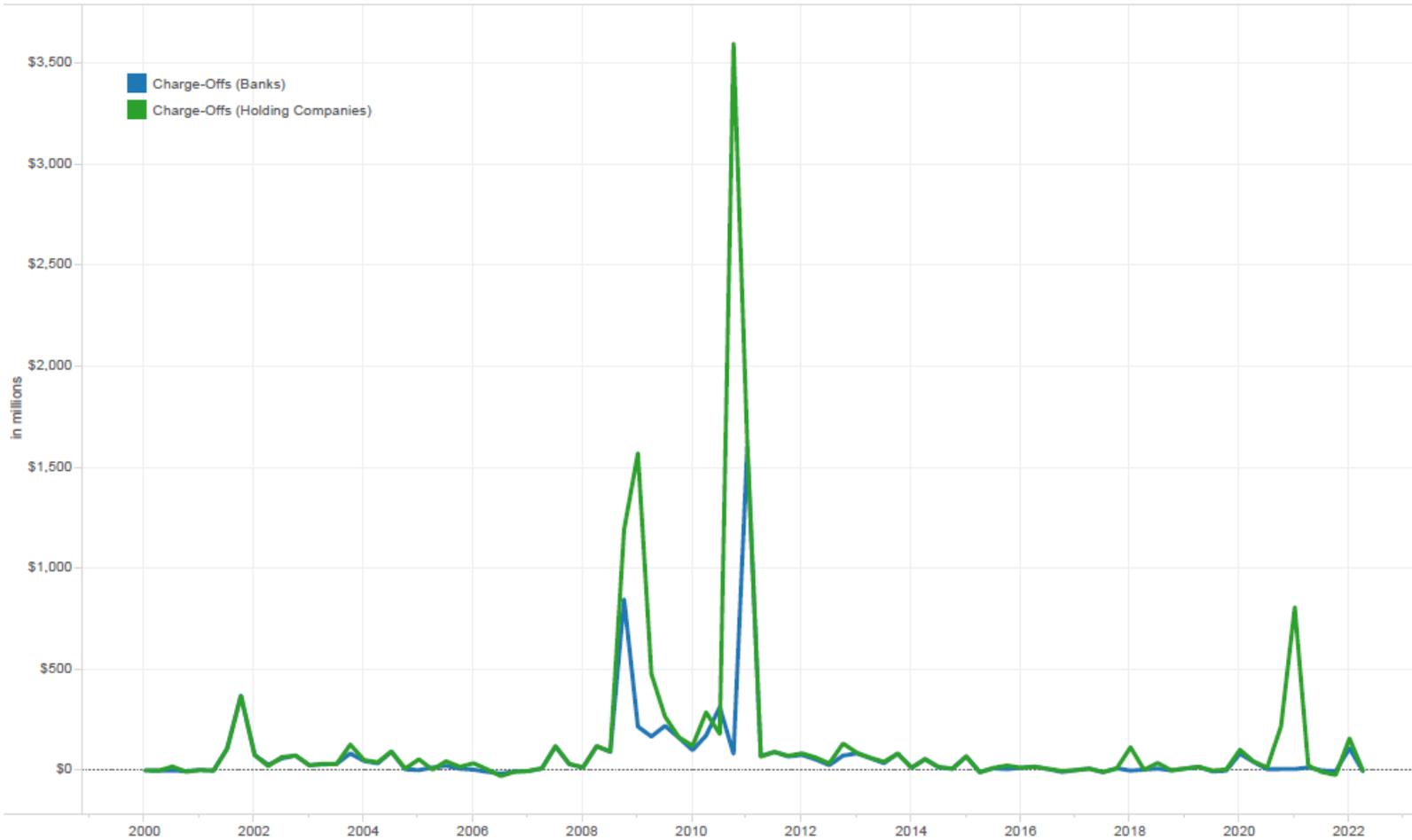


Note: The figures are for each quarter alone, not year-to-date.

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



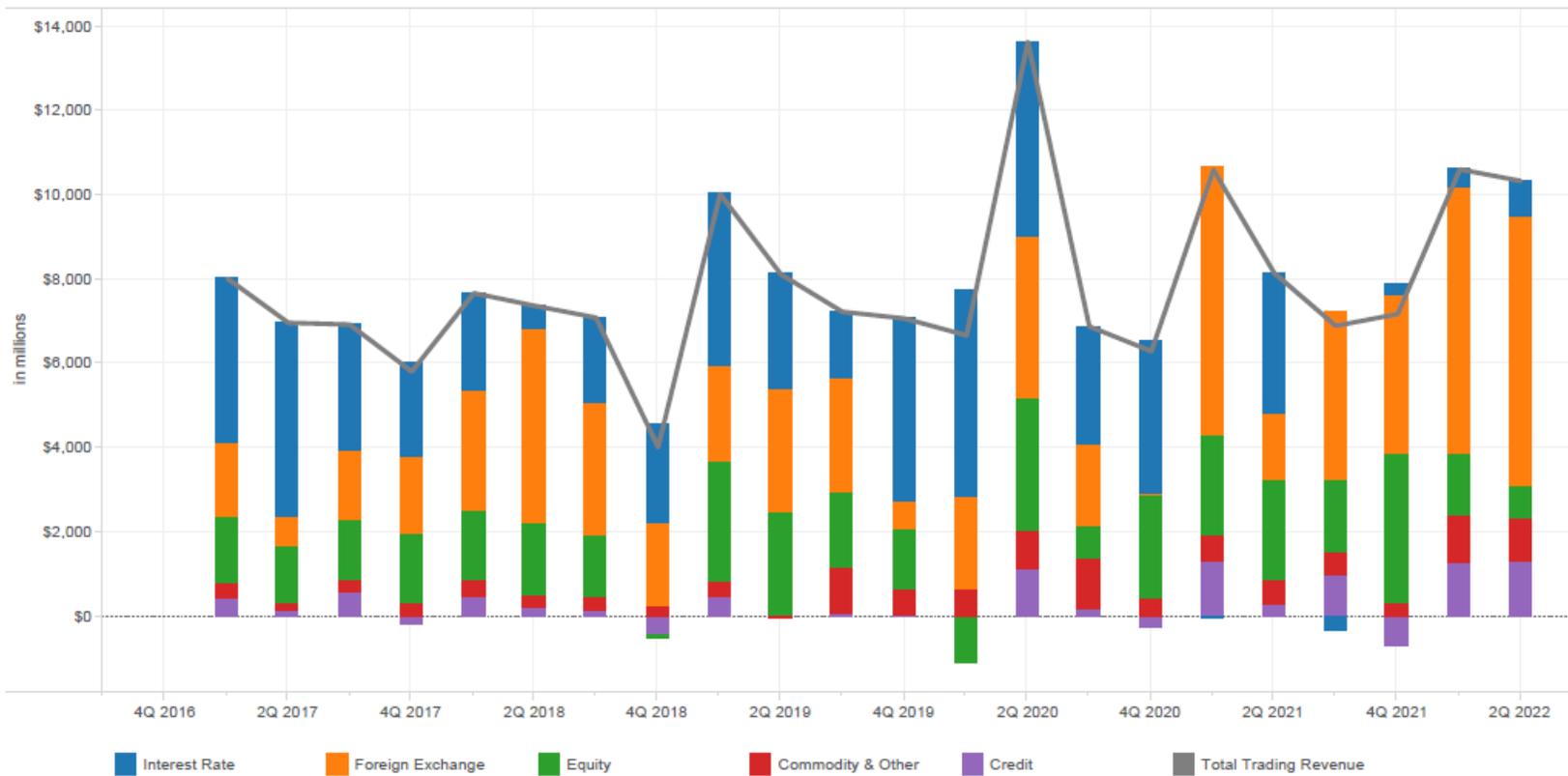
	2017				2018				2019				2020				2021				2022	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Charge-Offs (Banks)	1.2	8.7	-8.8	10.3	-1.1	4.0	8.8	0.1	9.1	17.2	-4.8	-1.5	82.7	42.1	6.0	6.6	6.8	14.7	-0.2	-3.3	109.5	-4.9
Charge-Offs (Holding Companies)	1.4	8.9	-8.3	9.8	114.5	3.5	38.6	0.1	9.5	17.9	-0.3	4.1	102.1	44.2	14.8	218.3	807.7	23.7	-8.2	-22.5	158.0	-1.8

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



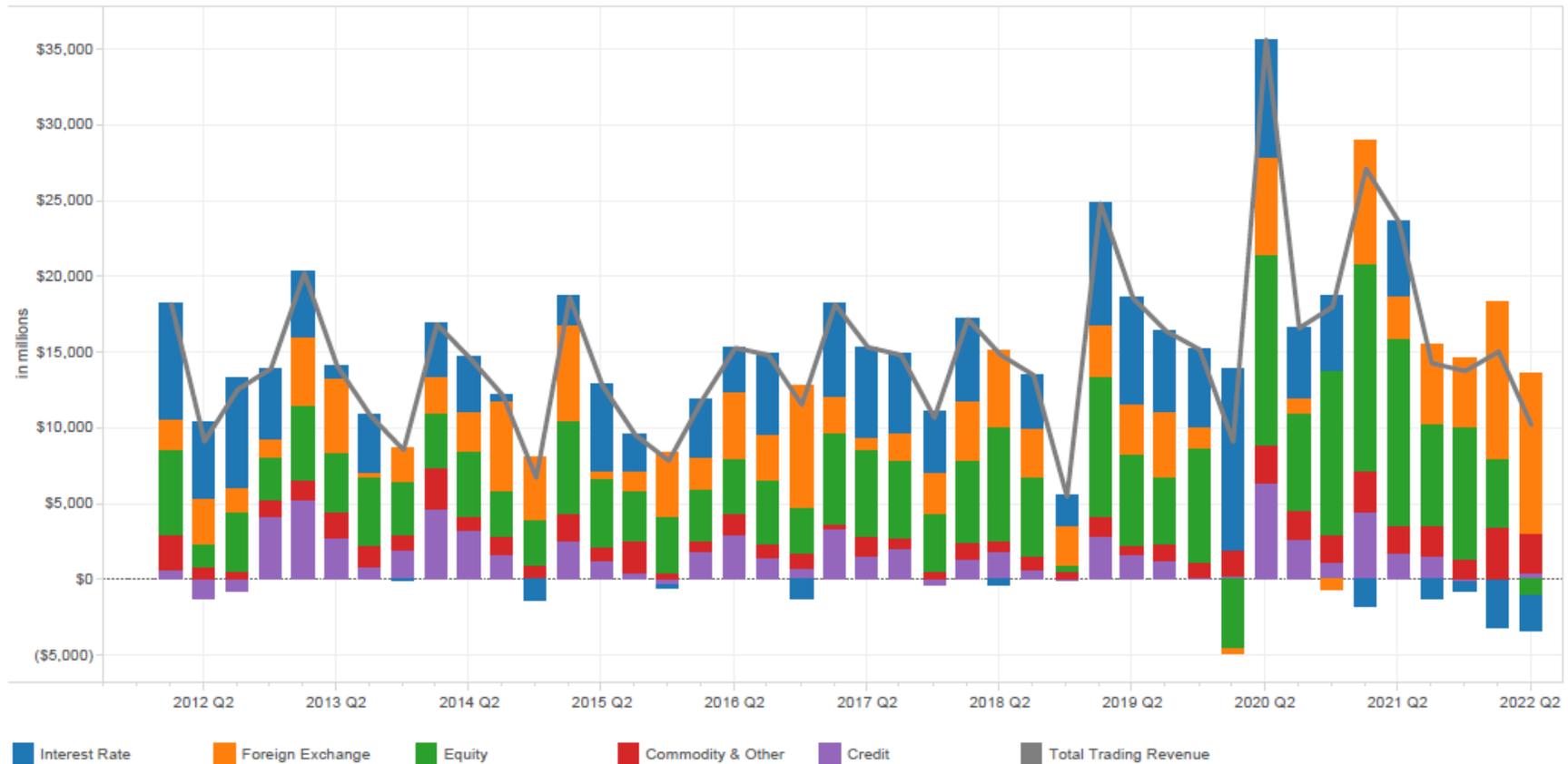
In millions of dollars

	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	Q2
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	\$874
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	6,363
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	773
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	1,029
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	1,310
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	6,881	13,648	6,893	6,305	10,611	8,161	6,908	7,187	10,622	10,349

*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



In millions of dollars

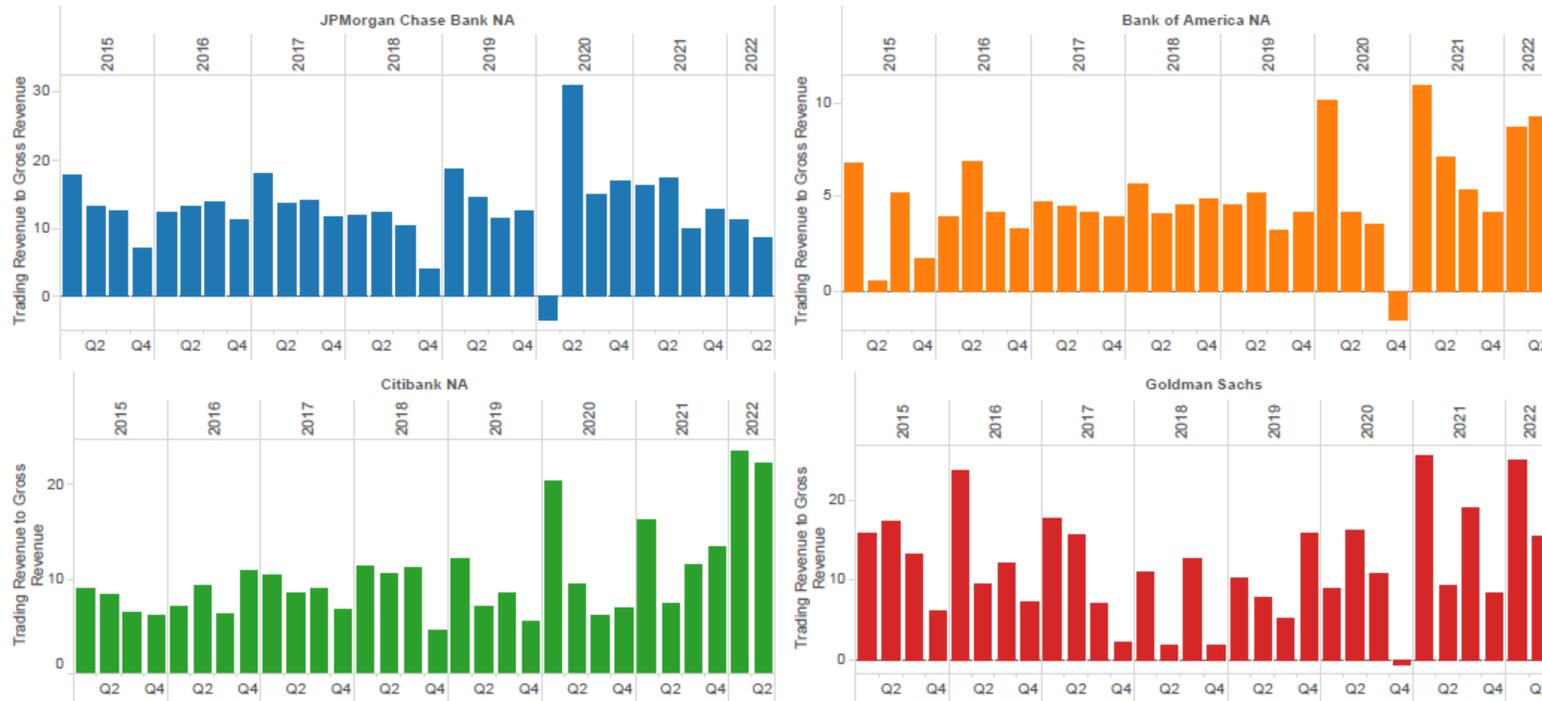
	2018				2019				2020				2021				2022	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Interest Rate	\$5,361	(\$336)	\$3,550	\$1,997	\$8,050	\$6,973	\$5,377	\$5,075	\$12,036	\$7,801	\$4,582	\$4,867	(\$1,792)	\$4,968	(\$1,182)	(\$572)	(\$3,137)	(\$2,380)
Foreign Exchange	3,900	5,133	3,222	2,530	3,396	3,351	4,241	1,463	-302	6,374	1,037	-628	8,051	2,732	5,144	4,496	10,267	10,574
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	-1,063
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	2,709
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	402
Total Trading Revenue	17,229	14,870	13,534	5,513	24,862	18,604	16,437	15,223	9,157	35,669	16,837	18,049	27,152	23,671	14,318	13,805	15,083	10,242

*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*

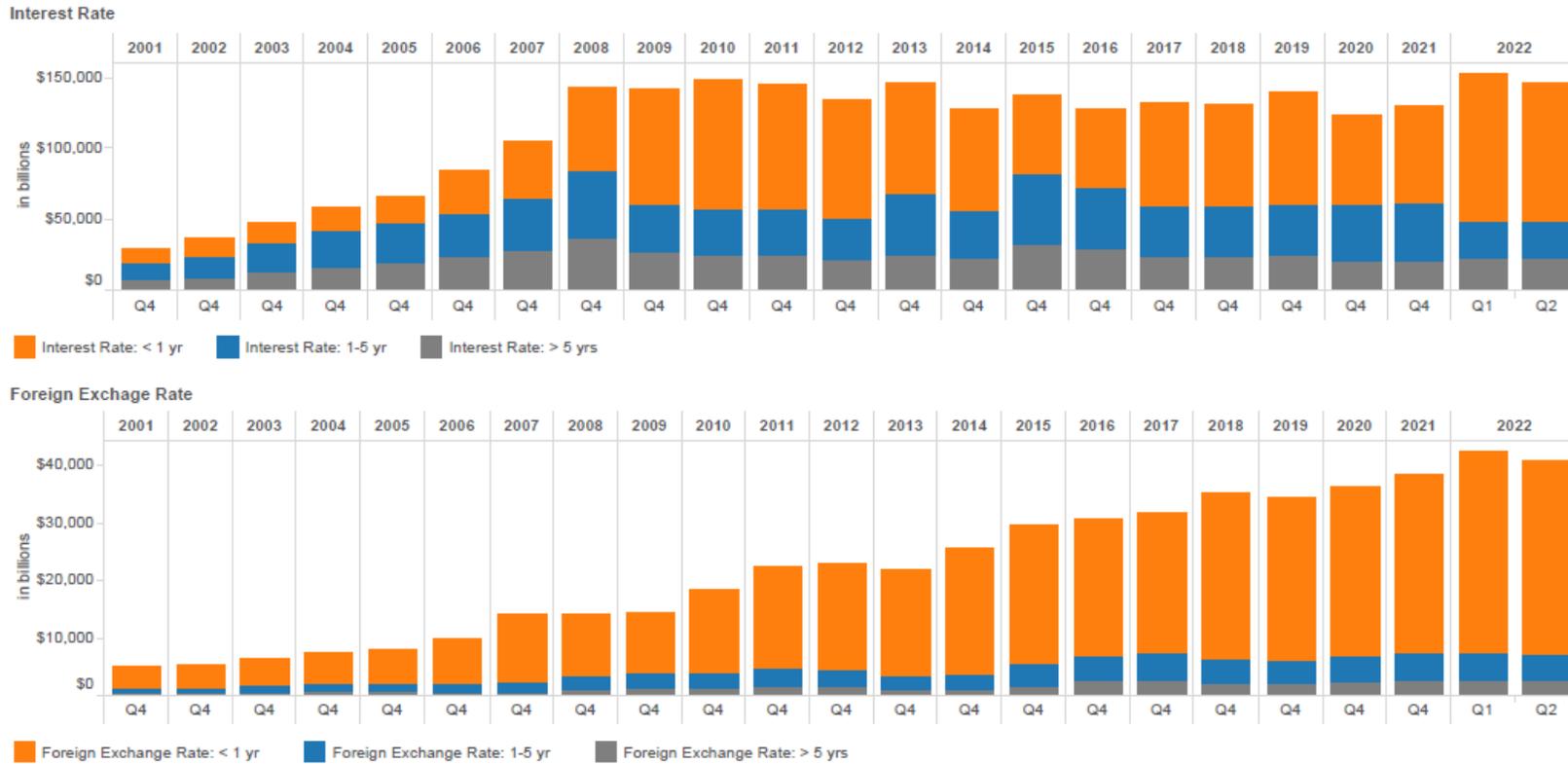
	2016				2017				2018				2019				2020				2021				2022	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
JPMorgan Chase Bank NA	12.26	13.34	13.83	11.17	17.98	13.66	14.01	11.52	11.90	12.19	10.26	3.92	18.57	14.57	11.30	12.62	-3.33	30.88	14.83	16.96	16.12	17.50	9.88	12.79	11.21	8.78
Bank of America NA	3.90	6.87	4.18	3.28	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	9.23
Citibank NA	7.19	9.41	6.47	10.97	10.47	8.50	9.12	6.94	11.33	10.89	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	22.30
Goldman Sachs	23.78	9.54	12.16	7.22	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	15.46
TOTAL																										
	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
	8.45	10.14	8.51	8.51	11.88	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	12.69

*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

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
	Q4	Q1														
Interest Rate: < 1 yr	\$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	\$96,641
Interest Rate: 1-5 yr	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	26,265
Interest Rate: > 5 yrs	36,868	26,374	24,307	24,168	21,175	24,630	22,214	32,981	29,762	23,585	23,244	24,259	20,838	20,468	23,009	22,986
Foreign Exchange Rate: < 1 yr	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	33,883
Foreign Exchange Rate: 1-5 yr	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	4,546
Foreign Exchange Rate: > 5 yrs	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	2,476

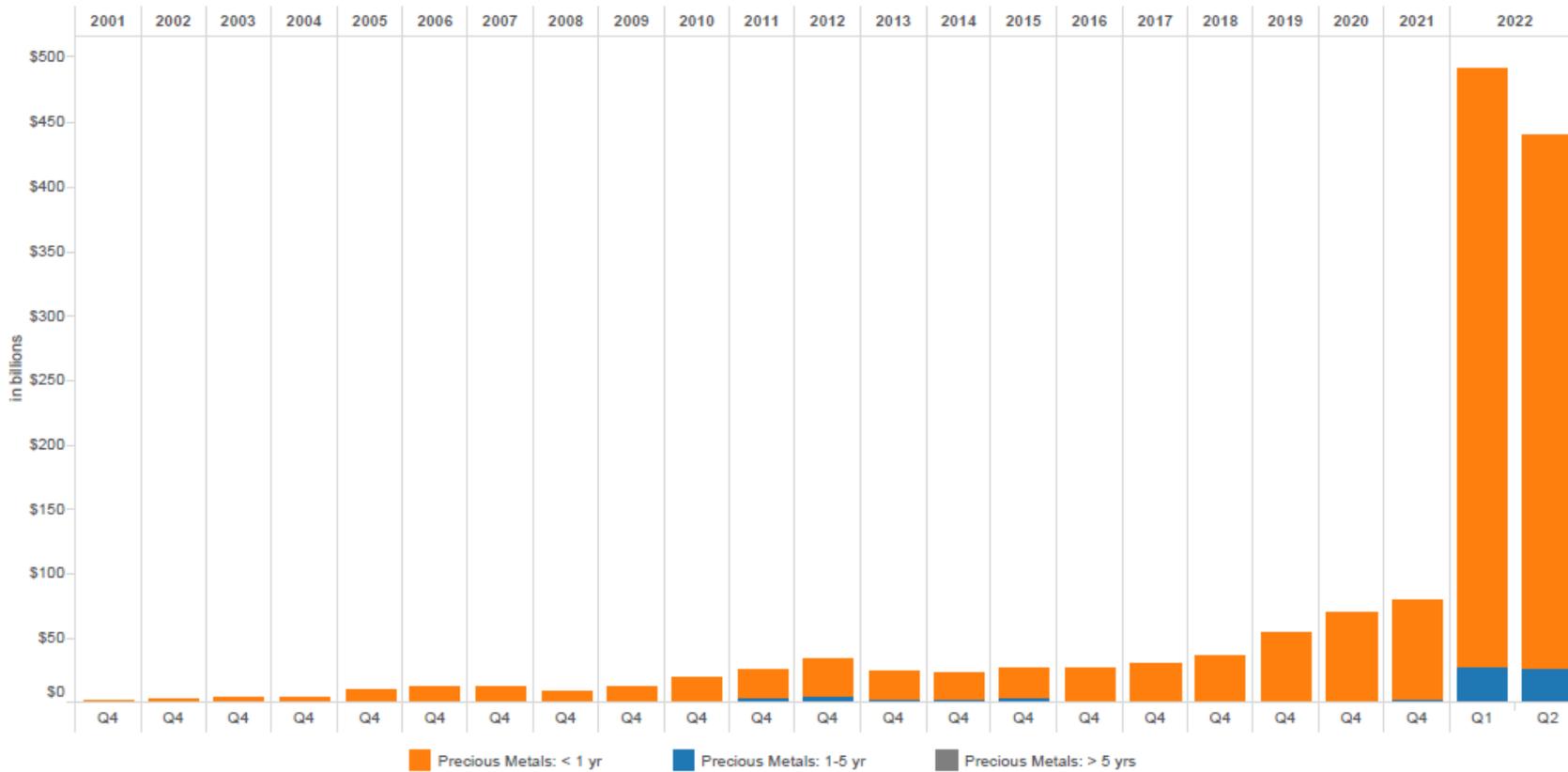
Note: Beginning January 1, 2022, the largest banks are required to calculate their derivative exposure amount for regulatory capital purposes using the Standardized Approach for Counterparty Credit Risk (SA-CCR). Refer to the call report instructions and OCC Bulletin 2020-7, "Standardized Approach for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

Precious Metals



In billions of dollars

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
Precious Metals: < 1 yr	\$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	\$413.25
Precious Metals: 1-5 yr	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	26.8
Precious Metals: > 5 yrs	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	0.5

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

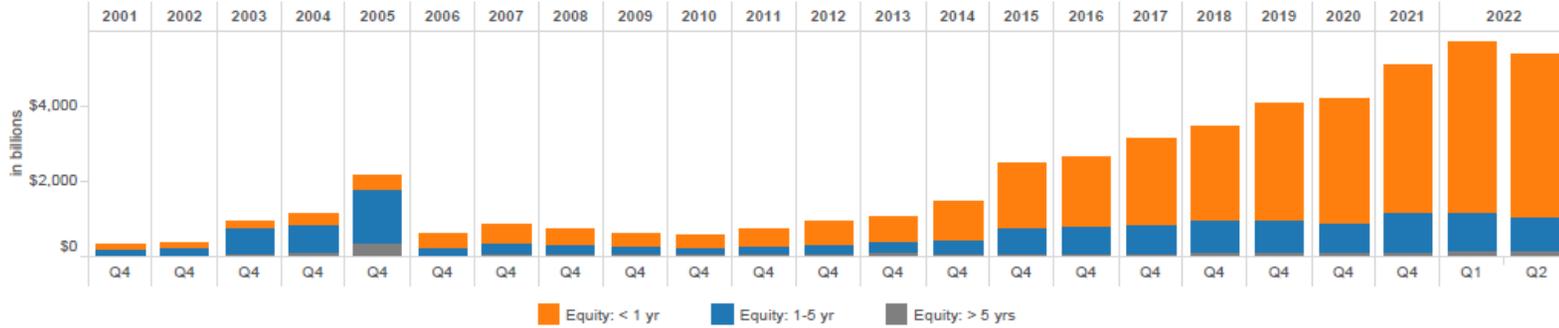
Figure 19: Notional Amounts of Other Commodity and Equity Contracts by Maturity

Insured U.S. Commercial Banks and Savings Associations

Other Commodity



Equity



In billions of dollars

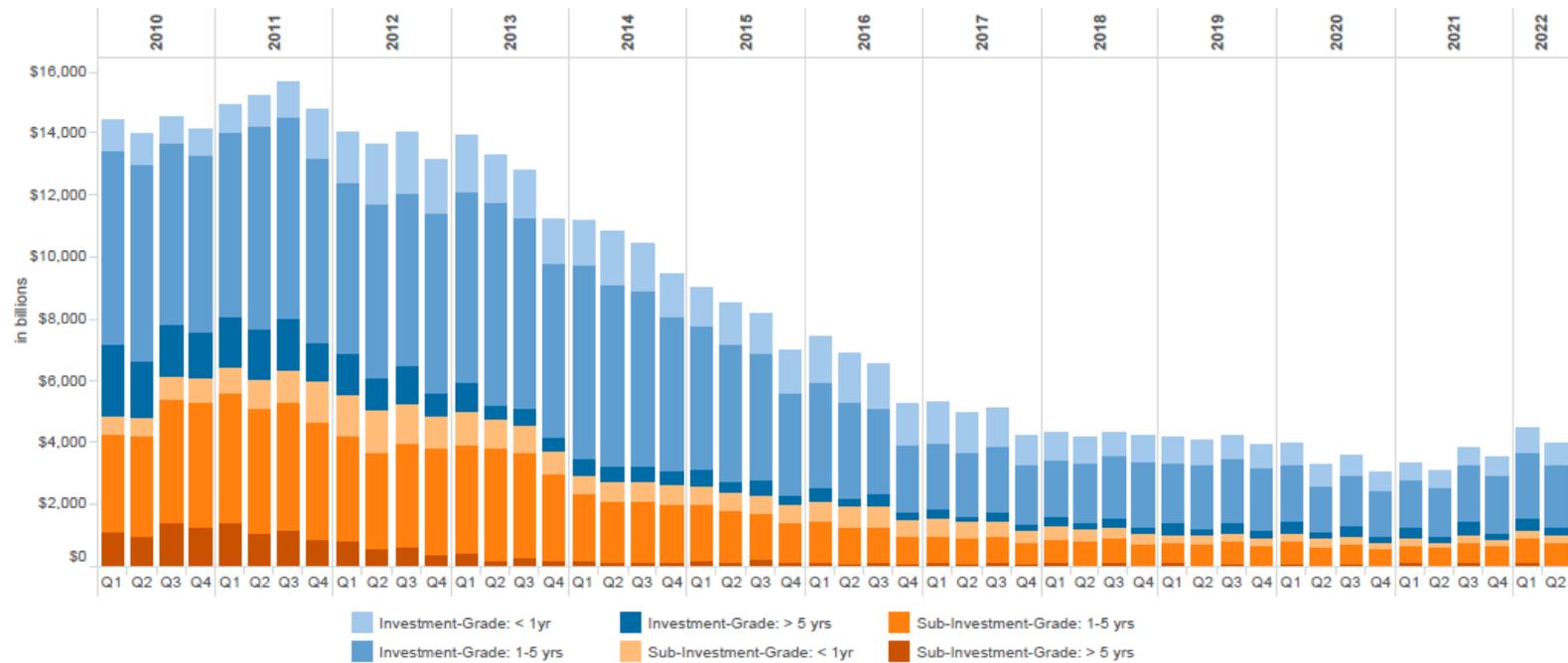
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q1	Q2
Other Commodity: < 1 yr	\$64	\$133	\$185	\$206	\$179	\$176	\$203	\$261	\$261	\$235	\$257	\$668	\$750	\$883	\$688	\$884	\$879	\$1,216	\$1,496	\$1,354
Other Commodity: 1-5 yr	205	707	235	297	233	198	209	209	208	144	164	197	202	198	286	198	279	250	282	
Other Commodity: > 5 yrs	40	175	20	25	43	33	25	46	28	6	20	22	25	9	10	9	7	31	45	
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	4,272
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	911
Equity: > 5 yrs	140	383	45	70	72	82	85	94	82	136	101	130	123	113	139	136	139	145	175	174

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



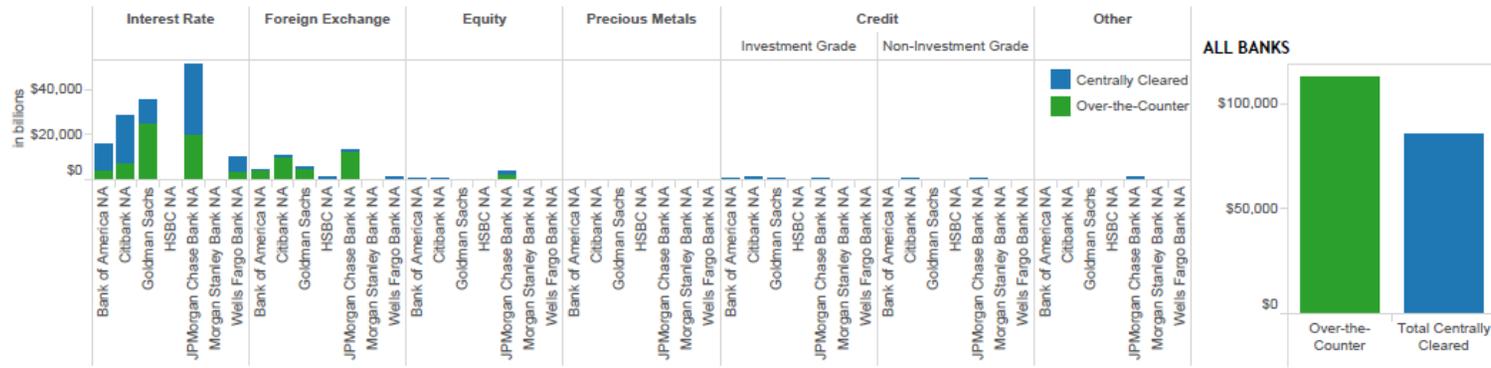
In billions of dollars

	2017				2018				2019				2020				2021				2022	
	Q1	Q2	Q3	Q4	Q1	Q2																
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	\$642
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	1,837	1,521	1,545	1,589	1,846	1,864	2,109	2,076
Investment-Grade: > 5 yrs	309	195	345	186	331	184	338	204	367	189	330	198	367	171	336	180	332	160	418	187	449	198
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	\$2,916
	2017				2018				2019				2020				2021				2022	
	Q1	Q2	Q3	Q4	Q1	Q2																
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	\$248
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	751
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	51
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	\$1,049

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

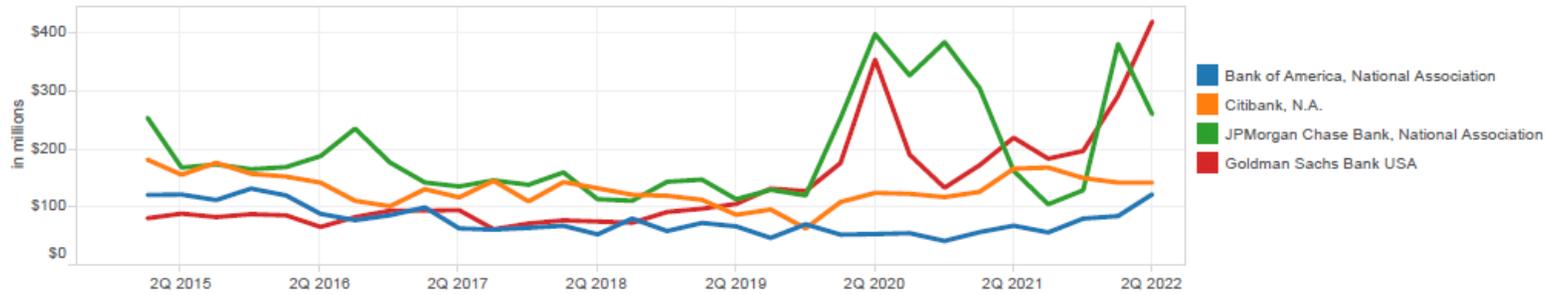
Bank Name	Interest Rate		Foreign Exchange		Equity		Precious Metals		Credit				Other		Total Centrally Cleared	Over-the-Counter	Total Notional
	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Grade		Centrally Cleared	Over-the-Counter									
									Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter					
JPMorgan Chase Bank NA	30,411	20,825	630	12,687	962	2,342	0	248	400	295	166	275	97	1,085	32,667	37,758	70,425
Citibank NA	21,065	7,693	319	10,404	15	639	21	99	235	1,014	59	273	94	112	21,809	20,234	42,042
Bank of America NA	11,082	4,908	133	4,770	216	611	5	34	135	222	39	104	0	30	11,810	10,679	22,289
Goldman Sachs	9,896	25,649	140	6,005	12	235	0	19	27	562	6	282	0	35	9,880	32,787	42,667
HSBC NA	74	79	55	1,160	0	17	0	9	0	3	1	1	0	0	130	1,271	1,401
Wells Fargo Bank NA	6,327	3,650	0	962	123	131	0	5	1	26	0	25	0	107	6,452	4,906	11,357
Morgan Stanley Bank NA	0	40	0	33	0	25	0	0	0	10	0	3	0	0	0	111	111
Grand Total	78,655	62,844	1,277	36,022	1,328	4,000	26	414	799	2,132	272	963	192	1,369	82,548	107,744	190,293
ALL OTHER	2,872	1,521	16	3,590	0	30	0	0	1	28	0	25	15	105	2,904	5,298	8,203
TOTAL	81,527	64,365	1,293	39,612	1,328	4,029	26	415	800	2,160	272	989	207	1,474	85,452	113,043	198,495

% 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
	Centrally Cleared	Over-the-Counter	Investment Grade		Non-Investment Grade		Centrally Cleared	Over-the-Counter								
									Centrally Cleared	Over-the-Counter	Centrally Cleared	Over-the-Counter				
JPMorgan Chase Bank NA	59%	41%	5%	95%	29%	71%	0%	100%	58%	42%	38%	62%	8%	92%	46%	54%
Citibank NA	73%	27%	3%	97%	2%	98%	18%	82%	19%	81%	18%	82%	46%	54%	52%	48%
Bank of America NA	69%	31%	3%	97%	26%	74%	13%	87%	38%	62%	27%	73%	0%	100%	52%	48%
Goldman Sachs	27%	73%	2%	98%	5%	95%	0%	100%	5%	95%	2%	98%	0%	100%	23%	77%
HSBC NA	48%	52%	5%	95%	0%	100%	0%	100%	0%	100%	49%	51%	0%	100%	9%	91%
Wells Fargo Bank NA	63%	37%	0%	100%	48%	52%	0%	100%	5%	95%	2%	98%	0%	100%	57%	43%
Morgan Stanley Bank NA	0%	100%	0%	100%	0%	100%			0%	100%	0%	100%	0%	100%	0%	100%

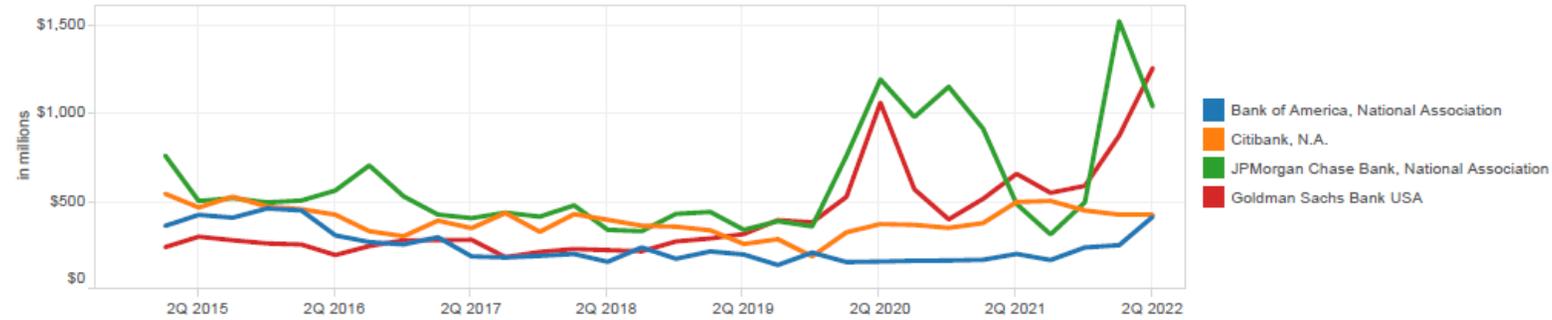
Source: Call reports, Schedule RC-R

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	Q2
Bank of America, National Association	\$100	\$63	\$61	\$64	\$68	\$53	\$81	\$59	\$73	\$67	\$47	\$71	\$53	\$54	\$55	\$42	\$57	\$68	\$57	\$80	\$85	\$122
Citibank, N.A.	131	117	146	110	144	133	122	120	113	87	96	64	109	125	123	118	127	167	169	151	143	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	261
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	421

VaR Capital Requirement



	2017				2018				2019				2020				2021				2022	
	Q1	Q2	Q3	Q4	Q1	Q2																
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	\$416
Citibank, N.A.	394	351	437	330	431	399	365	359	338	261	288	191	327	374	370	353	380	500	506	452	428	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	1,043
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	1,262

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