3.1.1 Household Debt as a Percent of Disposable Personal Income

Source: BEA, Federal Reserve, Haver Analytics

Note: Other Household Credit includes debts of both households and nonprofits.
3.1.2 Household Debt Service Ratio

Percent

As Of: 2020 Q2

Percent

Note: Ratio of debt-service payments to disposable personal income. Seasonally adjusted. Gray bars signify NBER recessions.

Source: Federal Reserve, Haver Analytics
3.1.3 Owners’ Equity as Share of Household Real Estate

As Of: 2020 Q2

Source: Federal Reserve, Haver Analytics

Note: Gray bars signify NBER recessions.
3.1.4 Components of Consumer Credit

Billions of US$

Source: FRBNY Consumer Credit Panel/Equifax, Haver Analytics

Note: Gray bars signify NBER recessions.
3.1.5 Change in Inquiries Relative to First Week of March 2020

Source: CFPB
3.1.6 Percentage of Mortgages in Forbearance

As Of: 27-Sep-2020

Source: Mortgage Bankers Association
3.1.7 Share of Open Accounts that Transitioned to Delinquent

As Of: Jun-2020

Source: CFPB
3.2.1.1 Nonfinancial Corporate Credit as Percent of GDP

As Of: 2020 Q2

Source: Federal Reserve, Haver Analytics

Note: Gray bars signify NBER recessions.
3.2.1.2 U.S. Nonfinancial Business Leverage

As Of: 2020 Q2

Ratio

<table>
<thead>
<tr>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.35</td>
</tr>
<tr>
<td>0.30</td>
</tr>
<tr>
<td>0.25</td>
</tr>
<tr>
<td>0.20</td>
</tr>
<tr>
<td>0.15</td>
</tr>
<tr>
<td>0.10</td>
</tr>
</tbody>
</table>


Gross Debt / Assets (left axis)

Gross Debt / EBITDA (right axis)

Note: Four-quarter moving average of the median ratio.
Includes rated and unrated nonfinancial businesses.
Gray bars signify NBER recessions.

Source: Compustat, Haver Analytics
3.2.1.3 Bank Business Lending Standards

Source: Federal Reserve Senior Loan Officer Opinion Survey

Note: Represents net percentage of banks reporting tightening standards for C&I loans. Large and middle-market firms are those with annual sales of $50 million or more. Gray bars signify NBER recessions.
3.2.1.4 Investment Grade Corporate Bond Spreads

As Of: 30-Sep-2020

Source: Ice Data Indices, ICE BofA US, FRED

Note: The ICE BofA Option-Adjusted Spreads (OASs) are the calculated spreads between a computed OAS index of all bonds in a given rating category and a spot Treasury curve.
3.2.1.5 Gross Issuance of Corporate Bonds

Source: Refinitiv, SIFMA

Note: Includes all non-convertible corporate debt, MTNs, and Yankee bonds, but excludes all issues with maturities of 1 year or less and CDs.
3.2.1.6 High-Yield Corporate Bond Spreads

As Of: 30-Sep-2020

Source: Ice Data Indices, ICE BofA US, FRED

Note: The ICE BofA Option-Adjusted Spreads (OASs) are the calculated spreads between a computed OAS index of all bonds in a given rating category and a spot Treasury curve.
3.2.1.7 Leveraged Loan Spreads

As Of: 30-Sep-2020

Source: S&P LCD

Note: Spread-to-maturity for syndicated loans included in the S&P LCD Leveraged Loan Index.
3.2.1.8 Institutional Leveraged Loan Issuance

Billions of US$  As Of: 30-Sep-2020  Billions of US$

2020 Monthly Issuance (left axis)
2016-2019 Monthly Average Issuance (left axis)

2016-2019 Average Cumulative Issuance (right axis)
2020 Cumulative Issuance (right axis)

Source: S&P LCD

As Of: 30-Sep-2020

Billions of US$
3.2.1.9 Nonfinancial Corporations Liquid Assets

Source: Federal Reserve, Haver Analytics

Note: Liquid assets includes foreign deposits, checkable deposits and currency, time and savings deposits, money market fund shares, security repurchase agreements, debt securities, and mutual fund shares. Gray bars signify NBER recessions.
3.2.1.10 Maturity Profile of U.S. Nonfinancial Corporate Debt

As Of: July-2020

Billions of US$

Speculative Grade
Investment Grade

Note: Includes bonds, loans, and revolving credit facilities that are rated by S&P Global Ratings.
A.1 U.S. Corporate Defaults

Billions of US$  As Of: 2020 Q3  Percent

Default Rate (right axis)

Total Defaulted Debt (left axis)

Source: Moody's Investors Service, OFR

Note: Issuer weighted four quarter trailing default rate for speculative grade U.S. corporates.
A.2 Chapter 11 Bankruptcy Filings

Source: ABI, AACER

A.3 U.S. Nonfinancial Corporate Downgrade-Upgrade Ratio

As Of: Sep-2020

Note: Ratio is trailing 3-month downgrades divided by upgrades. Gray bars signify NBER recessions.
A.4 Fallen Angel Debt

Billions of US$ As Of: Sep-2020 Billions of US$

Source: BofA Global Research, ICE Data Services, OFR

Note: Rolling three months beginning in March 2020. Includes financial issuers. Fallen angels above refer to issuers previously included in the BofA U.S. Corporate Index.
3.2.2.1 S&P 500 Volatility

As Of: 30-Sep-2020

Source: Bloomberg, L.P.
3.2.2.2 S&P 500 Forward Price-to-Earnings

As Of: 30-Sep-2020

Source: Bloomberg, L.P.
3.2.2.3 S&P 500 1-Year Price Returns by Sector

As Of: 30-Sep-2020

Source: Bloomberg, L.P.
3.2.2.4 Performance of Global Stock Indices

As Of: 30-Sep-2020

Source: Bloomberg, L.P.

Note: Indexed to 01-Jan-2019.
3.3.1.1 Federal Debt Held by the Public

Percent of GDP

Percent of GDP

CBO September 2020 Baseline Projection

Source: CBO, Haver Analytics

Note: Data for fiscal years. Years after 2019 are projected.
3.3.1.2 Publicly Held Treasury Securities Outstanding

Source: Federal Reserve, Haver Analytics

Note: Other marketable securities includes notes, bonds, TIPS, and FRNs.
3.3.1.3 Treasury General Account Balance

As Of: 30-Sep-2020

Source: Federal Reserve, Haver Analytics
3.3.1.4 U.S. Treasury Yields

Source: U.S. Department of the Treasury
3.3.1.5 Ten-Year TIPS Yield and Breakeven

As Of: 30-Sep-2020

Source: U.S. Department of the Treasury

Note: Breakeven represents the difference between the nominal and TIPS yield.
3.3.1.6 FRBNY Open Market Operations: Treasury Purchases

Billions of US$

As Of: 03-Oct-2020

Billions of US$


Source: FRBNY

Note: Weekly amount of Treasury securities purchased by the Federal Reserve Bank of New York in accordance with the FOMC directive.
B.1 Intraday Volatility for 10-Year Treasury Yields


Source: Bloomberg, L.P.
B.2 Bid-Ask Spread for 30-Year Treasury Bonds

Basis Points

As Of: 30-Sep-2020

Basis Points

Off-the-run (2\textsuperscript{nd})

Off-the-run (1\textsuperscript{st})

On-the-run

Source: Bloomberg, L.P.

Note: Represents the bid YTM minus the ask YTM for on- and off-the-run U.S. Treasury bonds.
B.3 Primary Dealer Inventories

Billions of US$  As Of: 30-Sep-2020  Billions of US$

[Graph showing inventory levels for Treasury Notes and Bonds and Treasury Bills from 2015 to 2020.]

Source: FRBNY
3.3.2.1 Changes in State and Local Government Tax Revenues

Source: U.S. Census Bureau, Haver Analytics

Note: Data represents year-over-year percentage change. Revenue measures includes revenues from property, individual income, corporate income, and sales taxes. Gray bars signify NBER recessions.
3.3.2.2 Municipal Bond Mutual Fund Flows

As Of: Sep-2020

Source: ICI, Haver Analytics

Note: Net fund flows.
3.3.2.3 Municipal Bonds to U.S. Treasuries

As Of: 25-Sep-2020

Note: Percentage of municipal yields against equivalent Treasury yields. Bloomberg's BVAL AAA Benchmark replaced MMA as the provider for municipal yields on September 1, 2010.
3.3.2.4 Municipal Bond Issuance

As Of: Sep-2020

Billions of US$

Source: Thomson Reuters, SIFMA

Note: Excludes maturities of less than 13 months.
C.1 Breakdown of State Tax Revenues

As Of: 2019

- Individual Income: 38%
- Sales: 47%
- Property: 9%
- Corporate Income: 5%
- Other: 2%

Source: U.S. Census Bureau
C.2 Breakdown of Local Tax Revenues

As Of: 2019

- Property: 72%
- Sales: 18%
- Corporate Income: 5%
- Individual Income: 5%
- Other: 1%

Source: U.S. Census Bureau
C.3 Liabilities of Severely Underfunded Public Pension Plans

As Of: 2018

Billions of US$

Local unfunded liability (left axis)
State unfunded liability (left axis)

Contributed rate (right axis)

Note: Includes state and local pension plans with UAAL below 50 percent as of 2018. Contribution rate calculated as the weighted average contribution as a percent of actuarially required contribution.

Source: publicplansdata.org
3.4.1.1 CP Outstanding by Issuer Type

As Of: Sep-2020

Trillions of US$

- Other
- Foreign Nonfinancial
- Foreign Financial
- Domestic Nonfinancial
- Domestic Financial
- Asset-Backed

Source: Federal Reserve, Haver Analytics

Note: Not seasonally adjusted; domestic includes CP issued in the U.S. by entities with foreign parents.
3.4.1.2 CP Issuance by Issuer Type and Rating

As Of: Sep-2020

Billions of US$  Billions of US$


Source: Federal Reserve, Haver Analytics

Note: Monthly average.
3.4.1.3 CP Outstanding & MMF Holdings

Billions of US$

As Of: Sep-2020

Billions of US$

Source: Federal Reserve, SEC Form N-MFP, Haver Analytics
3.4.1.4 Three Month CP Interest Rate Spreads

As Of: 30-Sep-2020

A2/P2-Rated Nonfinancial
AA-Rated ABCP
AA-Rated Financial
AA-Rated Nonfinancial

Source: FRBNY, Bloomberg L.P., Haver Analytics, OFR

Note: Spread to 3-Month Overnight Index Swap (OIS) rate.
3.4.1.5 Weekly CP Issuance by Tenor

As Of: 25-Sep-2020

Source: Federal Reserve, Haver Analytics

Note: Weekly average.
3.4.1.6 Commercial Bank Deposit Growth

As Of: 30-Sep-2020

Source: Federal Reserve, Haver Analytics

Note: Year-over-year percentage change.
3.4.2.1 FICC Repo Balances and MMF Holdings

Billions of US$ As Of: Sep-2020 Billions of US$

Source: FRBNY, SEC Form N-MFP, Bloomberg L.P.

Note: FICC cleared bilateral excludes term repo and repo backed by agency collateral.
3.4.2.2 Primary Dealer Repo Agreements

As Of: 30-Sep-2020

Overnight/Continuing

Term

Source: FRBNY, Haver Analytics

Note: Aggregation method removes missing data when occurs due to disclosure edits or non-trading days for specific security repo agreements.
3.4.2.3 Overnight Repo Volumes and Dealer Inventories

Billions of US$  As Of: 30-Sep-2020  Billions of US$

Primary Dealer Treasury Inventories (left axis)
Overnight Treasury Repo Volume (right axis)

Source: FRBNY, Staff Calculations, Haver Analytics
Note: Overnight Treasury repo volume includes published volumes for SOFR.
3.4.2.4 Primary Dealer Reverse Repo Agreements

Source: FRBNY, Haver Analytics
3.4.2.5 Primary Dealer Repo Collateral

As Of: 30-Sep-2020

Source: FRBNY, Haver Analytics

Note: U.S. Treasuries includes TIPS; other includes ABS
3.4.2.6 Collateral in the Tri-Party Repo Market

As Of: Sep-2020

Source: FRBNY, Haver Analytics

Note: Other includes ABS, CDOs, private label CMOs, international securities, money markets, municipal debt, and whole loans.
3.4.2.7 Repo Rate Spreads

Source: FRBNY, Bloomberg, L.P.
3.4.2.8 Value of Securities on Loan

Trillions of US$

Global Market (including U.S.)

U.S. Market

Source: Markit

Note: Data is based on a survey of agent-based lenders.
3.4.2.9 U.S. Securities Lending Cash Reinvestment

As Of: 2020 Q3

- **Total Cash Reinvestment** (left axis)
- **Mean WAM** (right axis)
- **Median WAM** (right axis)

Source: The Risk Management Association

Note: Data is based on a survey of agent-based lenders.
3.4.2.10 U.S. Securities Lending Cash Reinvestment Collateral

As Of: 2020 Q3

Percent of Total

Source: The Risk Management Association, OFR

Note: Nongovernment repos have collateral of whole loans, equity, and corporate debt. Other includes ABS, funding agreements, other funds, and other vehicles. Data is based on a survey of agent-based lenders.
3.4.3.1 U.S. Futures Markets Volume

Billions of Contracts

As Of: Jul-2020

Billions of Contracts

Source: CFTC

Note: 2020 volume annualized.
3.4.3.2 3-Month Implied Volatility

As Of: 30-Sep-2020

Source: Bloomberg, L.P., CFTC
3.4.3.3 U.S. Futures Markets Open Interest

Trillions of US$

As Of: Jun-2020

Trillions of US$

Source: CFTC

Note: Futures contracts are dollarized using prices from contract definitions and other relevant data.
3.4.3.4 Micro Futures Open Interest

Billions of US$  As Of: Jun-2020  Billions of US$

- Energy
- Stock Indices
- Metals
- Currencies

Source: CFTC

Note: Futures contracts are dollarized using prices from contract definitions and other relevant data.
3.4.3.5 U.S Treasury Futures Open Interest

Billions of US$ As Of: 29-Sep-2020 Billions of US$

Asset Managers

- 5Y
- 30Y

Leveraged Funds

- 5Y
- 30Y

Note: Net notional amount of open interest by trader type. 10Y includes 10Y and 10Y Ultra Treasury Note Futures; 30Y includes Treasury Bond and Ultra Treasury Bond Futures.

Source: CFTC
3.4.3.6 Exchange-Traded Equity Option Volume

Millions of Contracts

Source: The OCC

Note: Average daily volume. Excludes index and ETF options.
3.4.3.7 Call Option Volume for Select Technology Stocks

Millions of Contracts

As Of: 30-Sep-2020

Millions of Contracts

2016 2017 2018 2019 2020

Source: Bloomberg, L.P.

Note: Includes daily call option volume for TSLA, AAPL, NFLX, GOOG, FB, and MSFT.
3.4.3.8 Options on Futures: Open Interest

Trillions of US$

As Of: Jun-2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Agriculture</th>
<th>Energy</th>
<th>Stock Indices</th>
<th>Currencies</th>
<th>Treasur Futures</th>
<th>Metals</th>
</tr>
</thead>
<tbody>
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<td>2015</td>
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<tr>
<td>2020</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Source: CFTC

Note: Excludes Eurodollar futures on options.
3.4.3.9 Options on Futures: Volume

Millions of Contracts

As Of: Jun-2020

Millions of Contracts

Other Options

Eurodollar Options

Source: CFTC
3.4.3.10 Options on Futures: Delta Adjusted Open Interest

Trillions of US$

As Of: Jun-2020

Trillions of US$

2020

2019

2018

2017

2016

2015

Source: CFTC

Note: Delta adjusted open interest as of June 30 of each year. Includes Eurodollar futures on options.
3.4.3.11 Delta Adjusted Options on Futures by Asset Class

As Of: Jul-2020

- Stock Index: $115.7B
- Energy: $44.4B
- Agriculture: $83.9B
- Metals: $81.3B
- Treasuries: $29.7B
- Currencies: $16.3B
- Other: $0.7B

Note: Delta adjusted open interest. Excludes Eurodollar options.

Source: CFTC
3.4.3.12 Options on 10-Year Treasury Futures

Millions of Contracts

As Of: 28-Jul-2020

Source: CFTC
3.4.3.13 OTC Options: BHC Gross Notional Outstanding

Trillions of US$  As Of: 2020 Q2  Percent

- Other (left axis)
- Equity (left axis)
- Foreign Exchange (left axis)
- Interest Rate (left axis)

Percent Held by 6 Largest BHCs by Total Assets (right axis)

Note: Other includes credit, commodity, and other OTC options.
3.4.3.14 OTC Options: BHC Net Notional Outstanding

Trillions of US$ As Of: 2020 Q2 Trillions of US$

- Other
- Equity
- Foreign Exchange
- Interest Rate

Source: FR Y-9C, Staff Calculations

Note: Other includes credit, commodity, and other OTC options.
3.4.3.15 Derivatives Notional Volume

As Of: 25-Sep-2020

Credit Default Swaps (left axis)

Interest Rate Swaps (right axis)

Source: CFTC

Note: 12-week moving-averages. Excludes security-based swaps.
3.4.3.16 Derivatives Notional Amount Outstanding

As Of: 25-Sep-2020


Source: CFTC
3.4.3.17 Size of Interest Rate Swap Market

Source: CFTC Office of Chief Economist

Note: Total notional amount and entity-netted notional amount as reported in “Introducing ENNs: A Measure of the Size of Interest Rate Swap Markets.”
3.4.3.18 Global OTC Positions

Notional Amounts (left axis)
Gross Market Values (right axis)
Gross Credit Exposures (right axis)

Source: BIS, Haver Analytics
3.4.3.19 Commodity Index Swaps: Annual Open Interest

Billion of US$

As Of: Jun-2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Billions of US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>25</td>
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<td>2016</td>
<td>15</td>
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<tr>
<td>2017</td>
<td>20</td>
</tr>
<tr>
<td>2018</td>
<td>30</td>
</tr>
<tr>
<td>2019</td>
<td>60</td>
</tr>
<tr>
<td>2020</td>
<td>45</td>
</tr>
</tbody>
</table>

Source: CFTC

Note: Notional exposure of commodity index swaps.
3.4.3.20 Commodity Index Swaps: Monthly Open Interest

Billions of US$ As Of: Jul-2020 Billions of US$

Aug:2019 84
Nov:2019 80
Feb:2020 80
May:2020 60

Source: CFTC

Note: Month-end notional exposure of commodity index swaps.
3.4.3.21 Commodity Swaps: Open Interest

Billions of US$ As Of: Jun-2020 Billions of US$

Source: CFTC

Note: Average month-end notional exposure across 25 key contracts.
3.4.3.22 Commodity Swaps by Asset Class

As Of: Jul-2020

- Natural Gas: $204B
- Crude: $189B
- Metals: $59B
- Oil Seeds: $57B
- Grains: $56B
- Other Energy: $59B
- Other Softs: $43B

Note: 5-year average notional contribution of the major commodity categories.

Source: CFTC
3.4.3.23 Margin Funds Held at CFTC Registered FCMs

Billions of US$

As Of: Sep-2020

Billions of US$

Swaps
Foreign Futures
U.S. Futures

Source: CFTC

Source: CFTC
3.4.3.24 FCM Concentration: Customer Futures Balances

Source: CFTC

Note: Represents total amount of funds that an FCM is required to segregate on behalf of customers who are trading futures and options on futures at US exchanges.
3.4.3.25 FCM Concentration: Customer Swap Balances

As Of: 2020 Q3

Top 10  Top 5  Top 3

Note: Represents the amount of funds an FCM is required to segregate for customers who trade cleared swaps.

Source: CFTC
3.4.3.26 Concentration of Swap Positions for Registered SDs

As Of: 2020 Q3

Percent

Q3 2014 Q3 2015 Q3 2016 Q3 2017 Q3 2018 Q3 2019 Q3 2020

Top 10 Top 5 Top 3

Note: Positions between two Swap Dealers (SDs) in the same category (e.g., Top 3 or Top 5) are double-counted (i.e., a trade between the #1 SD and #3 SD would be counted twice).

Source: CFTC
Billions of US$ As Of: Sep-2020

3.4.3.27 Interest Rate Swap SEF Trading Volumes

Source: CFTC

Note: Average daily notional volume.
Billions of US$
As Of: Sep-2020

3.4.3.28 Credit Default Swap SEF Trading Volumes

Source: CFTC

Note: Average daily notional volume. Excludes security-based swaps.
3.4.4.1 Commodities Futures & Options: Open Interest

Trillions of US$

As Of: Jul-2020

Trillions of US$

Options
Futures

2015
2016
2017
2018
2019
2020

Source: CFTC

Note: Notional amount outstanding. Options are not delta-adjusted
3.4.4.2 Total Net Asset Value: Commodity ETFs

Billions of US$ As Of: Sep-2020 Billions of US$

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value (Billions of US$)</td>
<td>40</td>
<td>60</td>
<td>60</td>
<td>50</td>
<td>80</td>
<td>150</td>
</tr>
</tbody>
</table>

Source: Morningstar, Inc.

Note: Data are as of end of September in each given year.
3.4.4.3 Metals Indices

As Of: 30-Sep-2020

Bloomberg Precious Metals Index

Bloomberg Industrial Metals Index

Source: Bloomberg, L.P.

Note: Indexed to 01-Jan-2015.
3.4.4.4 Cash-Futures Spread: Gold

Price Per Ounce (US$)  As Of: 31-Jul-2020  Spread Per Ounce (US$)

Source: Bloomberg, L.P., CFTC

Note: London 4:00pm fix minus COMEX 10:00am volume weighted average price.
3.4.4.5 Agriculture Prices

As Of: 24-Sep-2020

Source: Bloomberg, L.P., CFTC

Note: Indexed to year-end 2019.
3.4.4.6 Cash-Futures Spread: Cattle

Price Per 100lbs

As Of: 30-Sep-2020

Price Per 100lbs

Cash: Boxed Beef (left axis)

Spread (left axis)

Futures: Live Cattle (right axis)

Note: Box beef choice cut prices minus live cattle front month contract

Source: Bloomberg, L.P., CFTC
3.4.4.7 Net Farm Income

Billions of US$  As Of: 2-Sep-2020  Billions of US$

- Other Direct Farm Programs
- Market Facilitation Program
- COVID-19 Programs
- Net Income (excl. Direct Farm Programs)

Note: The Market Facilitation Program provides direct payments to help producers who have been directly impacted by illegal retaliatory tariffs. COVID-19 Programs include $16 billion in Coronavirus Food Assistance Program payments and $5.8 billion in PPP payments.

Source: USDA
3.4.4.8 Energy Futures & Options: Open Interest

As Of: Jul-2020

Source: CFTC
3.4.4.9 Energy Futures & Options by Product

Percent

As Of: Jul-2020

Percent


Electricity Natural Gas Petroleum

Source: CFTC
3.4.4.10 Global Petroleum Consumption and Production

Source: U.S. Energy Information Administration

Note: Millions of barrels per day. Change in inventories represents the difference between production and consumption.
3.4.4.11 WTI Crude Oil Futures

Source: U.S. Energy Information Administration
3.4.4.12 Natural Gas Inventories

Weekly Natural Gas Inventories

As Of: 25-Sep-2020

Billions of Cubic Feet

Source: U.S. Energy Information Administration

Note: The shaded area and dotted line indicate the rolling 5-year range and average.
3.4.4.13 Natural Gas Forward Curves

Price Per MMBtu (US$)  As Of: 26-Jun-2020  Spread per MMBtu (US$)

Jan 2021 Futures Contract (left axis)
July 2020 Futures Contract (left axis)

Spread (right axis)

Source: Bloomberg, L.P.
3.4.5.1 House Prices by Census Division

Source: Federal Housing Finance Agency

Note: Purchase-only, seasonally adjusted, nominal, constant-quality price index. January 1991 = 100.
3.4.5.2 Home Sales

As Of: Aug-2020

Source: NAR, Census Bureau, HUD

Note: Series are seasonally adjusted annual rates and are expressed in millions of single-family housing units.
3.4.5.3 New Housing Starts and Price Changes

Millions of Housing Units

As Of: Aug-2020

Percentage Change

Housing Starts
(left axis)

House Price Changes
(right axis)

Source: U.S. Census Bureau, FHFA, HUD

Note: Data are seasonally adjusted annual rates. House Price Changes series is the year-over-year percentage change of the FHFA National House Price Index.
3.4.5.4 Homeownership and Vacancy Rates

As Of: 2020 Q1

Homeownership Rate (left axis)

Rental Vacancy Rate (right axis)

Source: U.S. Census Bureau, Current Population Survey/Housing Vacancy Survey

Note: Data are non-seasonally adjusted quarterly percentages.
3.4.5.5 Mortgage Originations and Rates

Billions of US$  As Of: 2020 Q2  Percent

Refinance (left axis)  Purchase (left axis)

30-Year Mortgage Rate (right axis)

Source: NMDB®, Freddie Mac Primary Mortgage Market Survey®

Note: Quarterly originations represent all 1-4 family homes with first-lien, closed-end residential mortgages.
3.4.5.6 Purchase Origination Volume by Credit Score

Source: NMDB®

Note: Based on first-borrower VantageScore 3.0 for first-lien, closed-end residential purchase mortgages.
3.4.5.7 Shares of Mortgages by Equity Percentage

As Of: 2020 Q2

Percentage of mortgages with 20% or more equity

Source: NMDB®

Note: Quarterly percentage of all mortgage loans that are not closed or terminated.
3.4.5.8 Mortgage Delinquency

As Of: 2020 Q2

Percent

90 to 180 Days Past Due

30 or 60 Days Past Due

In process of foreclosure, bankruptcy or deed-in-lieu

Note: Quarterly percentage of all mortgage loans that are not closed or terminated.

Source: NMDB®
3.4.5.9 Forbearance Rates by Investor Type

As Of: Sep-2020

Percent

Percent

FHA, VA, and RHS
Total
GSE
Other (PLS, Portfolio, etc.)

Source: NMDB®

Note: Rates are the weekly percentage of servicing portfolio volume in forbearance by investor type over time.
3.4.5.10 Mortgage Originations by Product

Percent of Originations  As Of: 2019 Q4  Percent of Originations

0  20  40  60  80  100  0  20  40  60  80  100

Private Portfolio and Securitized

GSE

FHA, VA & RHS

Note: Quarterly data for first-lien, closed-end residential mortgages.

Source: NMDB®
3.4.5.11 RMBS Issuance

As Of: Sep-2020

Source: FHLMC, FNMA, GNMA, NCUA, FDIC, Bloomberg, L.P., Dealogic, Thomson Reuters, SIFMA
3.4.5.12 Cumulative MBS Purchases by the Federal Reserve

Billions of US$

As Of: 30-Sep-2020

Billions of US$

Source: FRBNY

Note: Cumulative 2020 purchases. Weekly series are aggregated from daily Agency MBS operations in the TBA pool.
3.4.6.1 Conduit CMBS Delinquency and Foreclosure Rate

As Of: Sep-2020

Source: JPMorgan, Trepp

Note: Delinquency rate includes FC/REO.
3.4.6.2 Conduit CMBS Delinquency Rates by Industry

As Of: Sep-2020

Note: 60+ delinquency rate; includes FC/REO.

Source: JPMorgan, Trepp

Note: 60+ delinquency rate; includes FC/REO.
3.4.6.3 CMBS Issuance

As Of: 2020 Q3

Sources: Inside Mortgage Finance

Billions of US$

Billions of US$

Non-Agency
Agency

Source: Inside Mortgage Finance
3.4.6.4 Commercial Property Price Growth

As Of: Sep-2020

Source: Real Capital Analytics, Bloomberg, L.P.

Note: Year-over-year price change.
3.4.6.5 Capitalization Rates and Spreads

As Of: Sep-2020

Source: Real Capital Analytics, Bloomberg, L.P.
E.1 Sector Equity REIT Indices

Source: NAREIT, Bloomberg, L.P.

Note: Indexed to February 14, 2020.
# 3.5.1.1 Categorization of Large U.S. BHCs

<table>
<thead>
<tr>
<th>Description</th>
<th>U.S. Domestic Banking Org.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category I</strong></td>
<td>Bank of America</td>
</tr>
<tr>
<td>(U.S. G-SIBs)</td>
<td>JPMorgan Chase</td>
</tr>
<tr>
<td></td>
<td>Bank of New York Mellon</td>
</tr>
<tr>
<td></td>
<td>Morgan Stanley</td>
</tr>
<tr>
<td></td>
<td>Citigroup</td>
</tr>
<tr>
<td></td>
<td>State Street</td>
</tr>
<tr>
<td></td>
<td>Goldman Sachs</td>
</tr>
<tr>
<td></td>
<td>Wells Fargo</td>
</tr>
<tr>
<td><strong>Category II</strong></td>
<td>Northern Trust</td>
</tr>
<tr>
<td>(Large complex, ≥$700b Total assets, or ≥</td>
<td>Capital One</td>
</tr>
<tr>
<td>$75b in Cross-Jurisdictional Activity)</td>
<td>Truist Financial</td>
</tr>
<tr>
<td></td>
<td>Charles Schwab</td>
</tr>
<tr>
<td></td>
<td>U.S. Bancorp</td>
</tr>
<tr>
<td></td>
<td>PNC Financial</td>
</tr>
<tr>
<td><strong>Category III</strong></td>
<td>Ally Financial</td>
</tr>
<tr>
<td>(Large complex, ≥$250b Total assets or ≥ $75b</td>
<td>Huntington</td>
</tr>
<tr>
<td>in NBA, wSTWF, or Off-balance sheet exposure)</td>
<td>KeyCorp</td>
</tr>
<tr>
<td></td>
<td>American Express</td>
</tr>
<tr>
<td></td>
<td>M&amp;T Bank</td>
</tr>
<tr>
<td></td>
<td>Citizens Financial</td>
</tr>
<tr>
<td></td>
<td>Regions Financial</td>
</tr>
<tr>
<td></td>
<td>Discover</td>
</tr>
<tr>
<td></td>
<td>Synchrony Financial</td>
</tr>
<tr>
<td><strong>Category IV</strong></td>
<td>Fifth Third</td>
</tr>
<tr>
<td>(Large noncomplex, other firms with $100b to</td>
<td></td>
</tr>
<tr>
<td>$250b Total assets)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Federal Reserve

Note: Northern Trust is in Category II due to its cross-jurisdictional activity.
### 3.5.1.2 Total Assets by BHC Type

**Source:** FR Y-9C

**As Of:** 2020 Q2

- **G-SIBs:** Trillions of US$ [13.5] (-largest)
- **Large Complex:** Trillions of US$ [1.5]
- **Large Noncomplex:** Trillions of US$ [1.0]
- **Other:** Trillions of US$ [3.5]
- **IHCs:** Trillions of US$ [2.0]
3.5.1.3 Common Equity Tier 1 Ratios

Percent of RWA

As Of: 2020 Q2

Percent of RWA

G-SIBs

Large Complex

Large Noncomplex

Other

Note: Tier 1 common capital is used as the numerator of the CET1 ratio prior to 2014:Q1 for G-SIBs and large complex BHCs, and prior to 2015:Q1 for large noncomplex and other BHCs. The denominator is risk-weighted assets (RWA). Shaded areas indicate NBER recessions.

Source: FR Y-9C, Haver Analytics
3.5.1.4 Common Equity Tier 1 Ratios at U.S. G-SIBs

Percent of RWA

As Of: 2020 Q2

Percent of RWA

- **2020 Q2**
- **2020 Q1**
- **2019 Q2**
- **Minimum including U.S. G-SIB surcharge (2020)**

Sources: FR-Y9C
3.5.1.5 Payout Rates at U.S. G-SIBs

Note: Payout rates are the ratios of stock repurchases plus cash dividends to net income available to common shareholders (NIAC). NIAC is net income minus preferred dividends. 2020 data represents YTD data through Q2.

Source: FR Y-9C
3.5.1.6 Supplementary Leverage Ratios at U.S. G-SIBs

As Of: 2020 Q2

Percent

<table>
<thead>
<tr>
<th></th>
<th>2020 Q2 (non-modified)</th>
<th>2020 Q2 (modified)</th>
<th>2019 Q4</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPM</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BK</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Enhanced supplementary leverage ratio is only required for the G-SIBs. The ratio for 2019 Q4 is equal to tier 1 capital divided by total assets plus off-balance sheet exposures. The modified ratio for 2020 Q2 is equal to tier 1 capital divided by total assets minus Treasury securities and reserves.

Source: FR Y-9C, Call Report
3.5.1.7 Return on Assets

As Of: 2020 Q2

Note: Quarterly, seasonally-adjusted annual rate. Return on assets is equal to net income divided by average assets.

Source: FR Y-9C
3.5.1.8 Net Interest Margins

<table>
<thead>
<tr>
<th>Percent</th>
<th>As Of: 2020 Q2</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>G-SIBs</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Large Complex</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Large Noncomplex</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Other</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Quarterly, seasonally-adjusted annual rate. Net interest margin is equal to net interest income divided by the quarterly average of interest-earning assets.

Source: FR Y-9C
3.5.1.9 Sources of Funding at G-SIBs and Large-Complex

Percent of Total Liabilities  
As Of: 2020 Q2  
Percent of Total Liabilities

Short-Term Funding

Core Deposits

Long-Term Funding

Source: FR Y-9C

Note: ST funding: liabilities with maturities <= 1 yr, trading liabilities, repos, CP, and foreign deposits. LT funding: other borrowed money, subordinated notes and large time deposits with maturities > 1 yr. Core deposits: demand deposits, noninterest-bearing balances, transaction accounts, money market deposits and time deposits <$250,000. Gray bars signify NBER recessions.
3.5.1.10 Deposit Growth, All Commercial Banks

As Of: Sep-2020

Source: Federal Reserve, Haver Analytics

Effective Deposit Rates by BHC Category

As Of: 2020 Q2

Note: Effective deposit rates are defined as the ratio of the annualized quarterly-average interest expense on deposits and the one-quarter lag of the quarterly-average deposit balances.

Source: Call Report
3.5.1.12 Delinquency Rates on Real Estate Loans

As Of: 2020 Q2

Source: FR Y-9C

Note: Includes all loans in domestic and foreign offices. Gray bars signify NBER recessions.
3.5.1.13 Delinquency Rates on Selected Loans

As Of: 2020 Q2

Credit Card
Auto
C&I

Source: FRY-9C, Call Report

3.5.1.14 Provisions to Loans Ratios at BHCs

As Of: 2020 Q2

- Credit Cards
- Other Consumer
- Residential Real Estate
- Commercial Real Estate
- C&I

Source: FR Y-9C

Note: Excludes Barclays, Credit Suisse, DB, and UBS.
3.5.1.15 C&I Loan Growth, All Commercial Banks

As Of: Sep-2020

Source: Federal Reserve, Haver Analytics

Note: Statistical Release H.8, “Assets and Liabilities of Commercial Banks in the United States.” Year-over-year percentage change.
3.5.1.16 Loans to Nondepository Financial Institutions

Percent of Total Loans

As Of: 2020 Q2

Percent of Total Loans

- Other
- Large Noncomplex
- Large Complex
- G-SIBs

Source: FR Y-9C
3.5.1.17 High-Quality Liquid Assets by BHC Type

Percent of Assets

As Of: 2020 Q2

Percent of Assets

Other
Large Noncomplex
Large Complex
G-SIB

Note: HQLA is estimated by adding excess reserves to an estimate of securities that qualify for HQLA. Haircuts and level 2 asset limitations are incorporated into the estimate.

Source: FR Y-9C
3.5.1.18 Selected Liquid Assets at All BHCs

As Of: 2020 Q2

Percent of Assets

 Reserve Balances
  Fannie Mae and Freddie Mac MBS
  Treasury Securities
  Ginnie Mae MBS

Source: FR Y-9C, FR 2900

Note: Quarterly, NSA.
3.5.1.19 Liquidity Coverage Ratios at U.S. G-SIBs

As Of: 2020 Q2

Source: LCR Disclosures from each banks’ websites

Note: The solid line represents the regulatory minimum.
3.5.1.20 Held-to-Maturity Securities

Percent of Investment Securities

As Of: 2020 Q2

Percent of Investment Securities

Other
Large Noncomplex
Large Complex
G-SIB

Note: Investment securities are held-to-maturity securities plus available-for-sale securities. Gray bars signify NBER recessions.

Source: Call Report, Haver Analytics
3.5.1.21 Duration Gap

As Of: 2020 Q2

Note: Duration gap is the approximate weighted-average time of cash inflows less the approximate weighted-average time of cash outflows. Gray bars signify NBER recessions.

Source: Call Report, Haver Analytics
3.5.1.22 Bank Stock Performance

As Of: 29-Jun-2020

Large Noncomplex  
Large Complex  
G-SIBs  
S&P 500  
EU Bank Stock Index  
Other

Note: January 2, 2019 = 100. EU Bank Stock Index created from stock prices for the following banks: BCS, BNPQY, CS, ACA, DB, SAN, UBS. All indexes are created by equally weighting banks.
3.5.1.23 Price-to-Book for Select U.S. G-SIBs

As Of: Jun-2020

Source: SNL

Note: Month-end values.
3.5.1.24 5-Year CDS Premiums Select U.S. G-SIBs

As Of: Jun-2020

Note: Monthly averages.

Source: Markit
3.5.1.25 5-Year CDS Premiums Select Foreign Banks

Source: Markit

Note: Monthly averages.
3.5.1.26 Initial and Stressed Capital Ratios

Percent of RWA

Source: Federal Reserve

Note: Regulatory minimum is 5% pre-2016 and 4.5% from 2016 onwards. For DFAST 2013-2015, bars show Tier 1 Common Capital Ratio. DFAST 2016-2020 bars show Common Equity Tier 1 Ratio. The x-axis labels represent the number of banks tested within a given year.
### Minimum CET1 Capital Ratios in the Severely Adverse and Alternative Downside Scenarios

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Minimum CET1 Capital Ratio</th>
<th>25th Percentile</th>
<th>75th Percentile</th>
<th>Aggregate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stress Test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severely Adverse</td>
<td></td>
<td>8</td>
<td>12.3</td>
<td>9.9</td>
</tr>
<tr>
<td><strong>Sensitivity Analysis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-shaped</td>
<td></td>
<td>7.5</td>
<td>11.3</td>
<td>9.5</td>
</tr>
<tr>
<td>U-shaped</td>
<td></td>
<td>5.5</td>
<td>10.8</td>
<td>8.1</td>
</tr>
<tr>
<td>W-shaped</td>
<td></td>
<td>4.8</td>
<td>10.5</td>
<td>7.7</td>
</tr>
</tbody>
</table>

Source: Federal Reserve

Note: Excludes common distributions. Sample consists of the 33 firms participating in DFAST 2020.
3.5.1.28 FDIC-Insured Failed Institutions

Number of Institutions As Of: 2019 Percent

Source: BEA, FDIC, Haver Analytics
3.5.1.29 Commercial Bank and Thrift Net Income

As Of: 2020 Q2

Source: FDIC

Note: Includes all FDIC-insured commercial banks and thrifts. Values are annualized.
3.5.1.30 Total Assets of Largest Insured Depository Institutions

Trillions of US$

As Of: 2020 Q2

Count (‘000s)

Source: FFIEC Call Report

Note: Fourth quarter data was used for years 1984 - 2019 and second quarter data was used for 2020.
3.5.1.31 U.S. Branches and Agencies of Foreign Banks: Assets

Source: Federal Reserve, Haver Analytics

Note: Other assets includes government securities, ABS, and other trading assets.
3.5.1.32 U.S. Branches and Agencies of Foreign Banks: Liabilities

As Of: 2020 Q2

Source: Federal Reserve, Haver Analytics

Note: Other liabilities includes transaction accounts, non-transaction accounts, and other borrowed money.
3.5.1.33 Credit Union Income

Billions of US$  As Of: 2020 Q2  Billions of US$

- Noninterest Income
- Net Interest Income
- Net Income

Note: Federally-insured credit unions. Values are annualized.

Source: NCUA
3.5.1.34 Credit Union Deposits

Percent

As Of: 2020 Q2

Percent

<table>
<thead>
<tr>
<th>Year</th>
<th>Interest-Sensitive Deposit Share (left axis)</th>
<th>Money Market and IRA Deposit Share (right axis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>44%</td>
<td>24%</td>
</tr>
<tr>
<td>2008</td>
<td>48%</td>
<td>26%</td>
</tr>
<tr>
<td>2010</td>
<td>52%</td>
<td>28%</td>
</tr>
<tr>
<td>2012</td>
<td>56%</td>
<td>30%</td>
</tr>
<tr>
<td>2014</td>
<td>60%</td>
<td>32%</td>
</tr>
<tr>
<td>2016</td>
<td>64%</td>
<td>34%</td>
</tr>
<tr>
<td>2018</td>
<td>68%</td>
<td>36%</td>
</tr>
<tr>
<td>2020</td>
<td>68%</td>
<td>36%</td>
</tr>
</tbody>
</table>

Note: Federally-insured credit unions. Interest-sensitive deposit share includes money market and IRA deposit share, share certificates, and certain other deposits.

Source: NCUA
3.5.1.35 Credit Union Net Long-Term Assets

Source: NCUA

As Of: 2020 Q2

Percent of Total Assets

Investments Longer Than 3 Years
Fixed Rate First Mortgages
### 3.5.2.1 Number of Broker-Dealers and Industry Net Income

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Firms</th>
<th>Billions of US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>4900</td>
<td>52</td>
</tr>
<tr>
<td>2011</td>
<td>3600</td>
<td>48</td>
</tr>
<tr>
<td>2013</td>
<td>3800</td>
<td>45</td>
</tr>
<tr>
<td>2015</td>
<td>3500</td>
<td>41</td>
</tr>
<tr>
<td>2017</td>
<td>4000</td>
<td>50</td>
</tr>
<tr>
<td>2019</td>
<td>4800</td>
<td>53</td>
</tr>
</tbody>
</table>

**Note:** 2009 – 2019 data as of Q4 and 2020 net income is YTD through Q2.

Source: FINRA
3.5.2.2 Broker-Dealer Revenues

Billions of US$  As Of: 2020 Q2  Billions of US$

Source: FINRA


Source: FINRA
3.5.2.3 Broker-Dealer Assets and Leverage

**Source:** FINRA

Note: Leverage is the ratio of total assets to total regulatory capital. 2005 – 2019 data as of Q4 and 2020 data as of Q2.
3.5.2.4 REITs Total Assets

Billions of US$  As Of: 2020 Q2  Billions of US$

Equity REITs
mREITs

Source: Federal Reserve, Haver Analytics

Note: Statistical Release Z.1, “Financial Accounts of the United States.”
3.5.2.5 mREIT Stock Performance

As Of: 30-Sep-2020

Note: Indexed to 100 as of 9/30/2019; mREITs represents the BREIT Mortgage Index; Financials represents the S&P 500 Financials Subindex.

Source: Bloomberg, L.P.
3.5.2.6 Agency MBS Spread to Treasuries

Basis Points

As Of: 30-Sep-2020

Basis Points


Source: Bloomberg, L.P.

Note: Fannie Mae 30-year current-coupon spread to the 5/10-year Treasury blend.
3.5.2.7 MMF Assets by Fund Type

Trillions of US$  As Of: Sep-2020  Trillions of US$

- **Tax-Exempt**
- **Government and Treasury**
- **Prime**

Source: SEC
3.5.2.8 Liquid Asset Shares of Prime MMFs

Percent of Total Assets  As Of: Sep-2020  Percent of Total Assets

Source: SEC

Note: Weighted by fund size.
3.5.2.9 Weighted Average Maturities by Fund Type

As Of: Sep-2020

Source: SEC

Note: Weighted by fund size.
3.5.2.10 Net Assets of the Investment Company Industry

Trillions of US$ As Of: 2020 Q3 Trillions of US$

- **Other**
- **ETFs**
- **MMFs**
- **Bond/Hybrid Mutual Funds**
- **Equity Mutual Funds**

Note: Other is composed of unit investment trusts (UIT) and closed-end funds. Q3 2020 figures include 2019 UIT data, which are reported annually and Q2 2020 closed-end fund data, which are reported on a lag.

Source: ICI, Haver Analytics
3.5.2.11 Monthly Bond Mutual Fund Flows

Billions of US$  As Of: Sep-2020  Billions of US$

Source: ICI, Haver Analytics

Note: Net fund flows.
3.5.2.12 Monthly Equity Mutual Fund Flows

Billions of US$  As Of: Sep-2020  Billions of US$

Source: ICI, Haver Analytics

Note: Net fund flows.
3.5.2.13 Monthly Bank Loan Mutual Fund Flows

Billions of US$  As Of: Sep-2020  Billions of US$

Source: Morningstar, Inc.

Note: Net fund flows.
3.5.2.14 Monthly High-Yield Mutual Fund Flows

Billions of US$  As Of: Sep-2020  Billions of US$

Source: Morningstar, Inc.

Note: Net fund flows.
3.5.2.15 Cumulative Equity Fund Flows

Billions of US$  As Of: Sep-2020  Billions of US$

Note: Includes ETFs and mutual funds. Cumulative net fund flows.

Source: Morningstar, Inc.
3.5.2.16 Cumulative Equity and Fixed Income Fund Flows

Billions of US$ as of Sep-2020

Source: Morningstar, Inc.

Note: Includes ETFs and mutual funds. Cumulative net fund flows.
3.5.2.17 U.S.-Listed ETF AUM

As Of: Sep-2020

Trillions of US$

AUM
Cumulative Market Appreciation
Cumulative Flows to ETFs

Source: Morningstar, Inc.
3.5.2.18 ETF Assets by Category of Investment

Trillions of US$  

As Of: Sep-2020

Trillions of US$

Source: Morningstar, Inc.
3.5.2.19 Monthly ETF Flows: Fixed Income Funds

Billions of US$ — As Of: Sep-2020 — Billions of US$

- Tax-Exempt
- Taxable

Note: Net fund flows.

Source: Morningstar Direct
3.5.2.20 Monthly ETF Flows: Equity Funds

Billions of US$  As Of: Sep-2020  Billions of US$

Source: Morningstar Direct

Note: Net fund flows.
3.5.2.21 Monthly Inverse and Leveraged ETF Flows

Billions of US$  

As Of: Sep-2020

Source: Morningstar Direct

Note: Net fund flows.
3.5.2.22 Hedge Fund Gross and Net Assets

Trillions of US$  As Of: 2020 Q1  Leverage

- Gross Assets (left axis)
- Net Assets (left axis)
- Leverage: GAV/NAV (right axis)

Note: QHF gross and net assets as reported on Form PF Questions 8 and 9.

Source: SEC Form PF, OFR
3.5.2.23 Hedge Fund Secured Financing

Trillions of US$

As Of: Mar-2020

Trillions of US$

Note: QHF secured borrowing as reported on Form PF Question 43.

Source: SEC Form PF, OFR
3.5.2.24 Hedge Fund Borrowing: Composition of Creditors

As Of: 2020 Q1

Note: QHF creditors as reported Form PF Question 47.

Source: SEC Form PF, OFR
3.5.2.25 Hedge Fund Financing Liquidity

As Of: 2020 Q1

Source: SEC Form PF, OFR

Note: QHF financing liquidity as reported on Form PF Question 46.
Hedge Fund Gross Exposures by Asset Class
As Of: 2020 Q1

- **Interest Rate Derivatives**: $5.5T
- **Foreign Exchange**: $1.9T
- **Equities**: $3.3T
- **Sovereign Ex U.S. Credit**: $3.2T
- **U.S. Government**: $1.1T
- **Other**: $1.1T
- **Credit**: $2.1T

**Note:** QHF gross notional exposures as reported on Form PF Questions 26 and 30. Excludes repurchase agreements. Options reported as delta adjusted notional value. Interest rate derivatives reported as 10-year bond-equivalents.

*Source: SEC Form PF, OFR*
3.5.2.27 Hedge Fund Treasury Exposures

As Of: Mar-2020

Source: SEC Form PF, OFR

Note: QHF Treasury exposures as reported on Form PF Questions 26 and 30.
3.5.2.28 M&A Loan Volume for Private Equity-Backed Issuers

As Of: 30-Sep-2020

Billions of US$

Source: S&P LCD
3.5.2.29 Public Plan Allocation to Alternative Assets

Percent

As Of: 2018

Percent

Real Estate
Other Alternative
Private Equity
Hedge Fund

Note: Includes public plans that reported investment allocations from 2001-2018. Simple average.

Source: publicplansdata.org
### 3.5.2.30 Insurance Industry Net Income

**Billions of US$**

**As Of: 2019**

<table>
<thead>
<tr>
<th>Year</th>
<th>Health</th>
<th>Life</th>
<th>P&amp;C</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
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<td>2013</td>
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<td></td>
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<tr>
<td>2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** NAIC

**Note:** Life includes accident and health.
3.5.2.31 Insurance Industry Capital and Surplus

Billions of US$

As Of: 2019

Percent of Total Assets

Health Capital and Surplus / Assets (right axis)
P&C Capital and Surplus / Assets (right axis)
Life Capital and Surplus / Assets (right axis)

Source: NAIC

Note: C&S/Assets is calculated as capital and surplus as a percent of net admitted assets less net admitted separate account assets. Life includes accident and health.
3.5.2.32 Consumer Loans and Leases Outstanding

Trillions of US$

As Of: Sep-2020

Trillions of US$


Commercial Banks

Finance Companies

Source: Federal Reserve, Haver Analytics

Note: Loans and leases owned and securitized. Series breaks in December 2010 and December 2015 due to change in data collection methodology. Gray bars signify NBER recessions.
3.5.2.33 Business Loans and Leases Outstanding

Trillions of US$

As Of: Sep-2020

Trillions of US$


Commercial Banks

Finance Companies

Source: Federal Reserve, Haver Analytics

Note: Loans and leases owned and securitized. Series break in December 2010 due to change in data collection methodology. Gray bars signify NBER recessions.
3.5.2.34 ABS Issuance

Billions of US$

As Of: Sep-2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Credit Card</th>
<th>Auto</th>
<th>Equipment</th>
<th>Other</th>
<th>Student Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>125</td>
<td>100</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2008</td>
<td>150</td>
<td>120</td>
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<td>20</td>
<td>20</td>
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<tr>
<td>2010</td>
<td>100</td>
<td>150</td>
<td>10</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>2012</td>
<td>120</td>
<td>120</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2014</td>
<td>150</td>
<td>150</td>
<td>20</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>2016</td>
<td>120</td>
<td>120</td>
<td>20</td>
<td>10</td>
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<tr>
<td>2018</td>
<td>150</td>
<td>150</td>
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<td>15</td>
<td>15</td>
</tr>
<tr>
<td>2020</td>
<td>120</td>
<td>120</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Thomson Reuters, SIFMA

Note: Figures are as of year end through 2019. 2020 figures are through September.
3.6.1.1 Initial Margin Requirements: DTCC

Billions of US$

As Of: 2020 Q2

Billions of US$

NSCC
FICC: MBSD
FICC: GSD

Source: ClarusFT, PFMI Quantitative Disclosures

Note: Total initial margin required as reported in PFMI quantitative disclosures; includes house and client accounts.
3.6.1.2 Maximum Uncovered Exposure for DTCC

As Of: 2020 Q1

Source: DTCC PFMI
Quantitative Disclosures

Note: Peak uncovered exposure between Q3 2015 and Q4 2019 and Q1 2020 as reported on question 6.5.4.
3.6.1.3 Liquidity Demand at Derivatives Clearing Organizations

Billions of US$

Source: CFTC

As Of: 30-Apr-2020

Note: Light blue represents aggregate variation margin payments and dark blue represents net initial margin payments. Series covers February 3, 2020 through April 30, 2020. Excludes OCC.
3.6.1.4 Initial Margin: U.S. Exchange Traded Derivatives

Billions of US$

As Of: 2020 Q2

Source: ClarusFT, PFMI Quantitative Disclosures

Note: Total initial margin required as reported in PFMI quantitative disclosures; includes house and client accounts.
3.6.1.5 Initial Margin: OTC Derivatives

Billions of US$

Credit Default Swaps
Interest Rate Swaps

As Of: 2020 Q2

Note: Total initial margin required as reported in PFMI quantitative disclosures; includes house and client accounts. Interest rate swaps margin includes LCH Ltd. and CME. Credit default swaps margin include CME, ICC, ICEU, and LCH SA). CME ceased clearing credit default swaps in Mar. 2018.

Source: ClarusFT, PFMI
Quantitative Disclosures
3.6.1.6 Global OTC Central Clearing Market Share

As Of: 2020 Q2

Source: BIS

Trillions of US$ (Log)
3.6.1.7 Average Clearing Rates for OTC Trading

As Of: 2020 Q3

Credit Default Swaps
Interest Rate Swaps

Source: CFTC

Note: Gross notional of new transactions. Excludes security-based swaps.
3.6.3.1 Market Capitalization of Certain Blockchain-Based Digital Assets

As Of: 30-Sep-2020

<table>
<thead>
<tr>
<th>Billions of US$</th>
<th>Bitcoin</th>
<th>Etherum</th>
<th>Ripple</th>
<th>Litecoin</th>
<th>Tether</th>
</tr>
</thead>
<tbody>
<tr>
<td>As Of: 30-Sep-2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Coinmarketcap.com; OFR
3.7.1.1 Federal Reserve Swap Lines

Billions of US$ As Of: 30-Sep-2020 Billions of US$


Source: Federal Reserve

Note: Wednesday levels.
3.7.1.2 Change in USD Exchange Rates, Advanced Economies

As Of: 30-Sep-2020

Source: Federal Reserve, Haver Analytics

Note: Percent change relative to end-2019. Positive indicates appreciation of listed currency. Swiss Franc (CHF), Euro (EUR), Swedish Krona (SEK), Japanese Yen (JPY), Australian Dollar (AUD), New Zealand Dollar (NZD), British Pound (GBP), Canadian Dollar (CAD), and Norwegian Krone (NOK).
3.7.1.3 Change in USD Exchange Rates, EMEs

As Of: 30-Sep-2020

Percent change relative to end-2019. Chinese renminbi (RMB), Korean won (KRW), Indian rupee (INR), Indonesian rupiah (IDR), Mexican peso (MXN), South African rand (ZAR), Russian ruble (RUB), Argentine peso (ARS), Turkish lira (TRY), Brazilian real (BRL). Positive indicates appreciation of listed currency.

Source: Federal Reserve, Wall Street Journal, Haver Analytics

Note: Percent change relative to end-2019. Chinese renminbi (RMB), Korean won (KRW), Indian rupee (INR), Indonesian rupiah (IDR), Mexican peso (MXN), South African rand (ZAR), Russian ruble (RUB), Argentine peso (ARS), Turkish lira (TRY), Brazilian real (BRL). Positive indicates appreciation of listed currency.
3.7.1.4 Real U.S. Dollar Trade-Weighted Index

As Of: Sep-2020

Note: Index shown as a share of its 20-year average. Real USD Trade-Weighted Index is a weighted average of the FX value of the USD against the currencies of a broad group of major U.S. trading partners. Gray bars signify NBER recessions.

Source: Federal Reserve, Haver Analytics
3.7.2.1 Advanced Economies Real GDP Growth

Source: IMF WEO, Haver Analytics

Note: Annual change in GDP, constant prices. Dotted lines represent the IMF’s most recent projections for 2020 and 2021.
3.7.2.2 General Government Gross Debt to GDP

Source: IMF WEO
3.7.2.3 Outstanding Negative Yielding Debt

As Of: 30-Sep-2020

Note: Market value of Bloomberg Barclays Global Aggregate Negative Yielding Debt Index, which is a sub-index of the Bloomberg Barclays Aggregate Index. In 2017, SIFMA estimated that the aggregate index covers approximately half of the value of global bonds outstanding.
3.7.2.4 Euro Area H1 2020 Real GDP

Source: Eurostat, Haver Analytics

Note: Percentage change in real GDP Q2 2020 compared with Q4 2019. Seasonally adjusted.
3.7.2.5 Euro Area Business and Consumer Surveys

Percent As Of: Sep-2020

Index

Note: Confidence surveys calculated by subtracting the percentage of negative responses from the percentage of favorable responses. For economic sentiment index, 100 = long-term average.

Source: European Commission, Haver Analytics
3.7.2.6 Euro Area 10-Year Sovereign Yields

As Of: 30-Sep-2020

Source: Reuters, Haver Analytics
3.7.2.7 Euro Area 10-Year Spreads

As Of: 30-Sep-2020

Source: Reuters, Haver Analytics

Note: Calculated as the weekly average spread between local 10Y and German 10Y.
3.7.2.8 UK COVID-19 Business Loan Schemes

Note: Bounce Back Loan Scheme (BBLs), Coronavirus Large Business Interruption Loan Scheme (CLBILS), Coronavirus Business Interruption Loan Scheme (CBILS). Data reported monthly instead of weekly after August 16, 2020.

Source: HM Treasury
3.7.2.9 Japanese Consumer Price Inflation

Source: Bank of Japan, Haver Analytics

Note: Data represents year-over-year percentage change. CPI excludes fresh food and is adjusted for the consumption tax increase that took effect in April 2014.
3.7.2.10 Japan 10-Year Government Bond Yield

Basis Points

As Of: 30-Sep-2020

Source: Bloomberg, L.P.
3.7.3.1 2020 Real GDP Revisions for Developing Economies

Source: IMF WEO
3.7.3.2 COVID-19 Impact on 2020 Current Account Balances

Source: IMF July 2020

External Sector Report

Note: Estimated net direct impact of specific factors on current account balances for select EMEs.
3.7.3.3 Emerging Market Sovereign Bond Spreads

As Of: 30-Sep-2020

Source: JP Morgan, Haver Analytics

Note: JP Morgan EMBI+ Sovereign Spreads indices for each region.
3.7.3.4 Foreign Investor Capital Inflows to EMEs

As Of: 2020 Q2

Billions of US$

Source: IMF, Haver Analytics
3.7.3.5 Foreign Investor Portfolio Inflows to EMEs

Billions of US$

As Of: 2020 Q2

Billions of US$

Debt Inflows
Equity Inflows
Net Portfolio Flows

Source: IMF, Haver Analytics
3.7.3.6 Chinese Overseas Lending

Billions of US$ As Of: 2019

Source: State Administration of Foreign Exchange, Haver Analytics

Note: FDI (Debt) reported from 2011 onwards.
3.7.3.7 Chinese Real GDP Growth and its Components

As Of: 2020 Q3

Percent

-10 -5 0 5 10 15 20


Total

Manufacturing

Services

Agriculture

Note: Year-over-year percentage change.

Source: China National Bureau of Statistics, Haver Analytics
3.7.3.8 Credit to the Chinese Nonfinancial Private Sector

As Of: 2020 Q1

Source: China National Bureau of Statistics, BIS, Haver Analytics

Note: Rolling 4-quarter sum of GDP.
Note: Calculated as the year-over-year percentage change in total social financing (TSF) flows since 2002. TSF refers to the total volume of financing provided by the financial system to the real economy. TSF (old definition) excludes loan write-offs, ABS of depository institutions, and local government special bonds.
4.1.1 Total Assets of the Federal Reserve

Source: Federal Reserve, FRED

Note: Wednesday level.
4.1.2 Net Portfolio Holdings of 13(3) Facilities

Billions of US$

As Of: 30-Sep-2020

- **PMCCF & SMCCF**
- **PPP**
- **MMLF**
- **CPFF**
- **PDCF**
- **MLF**
- **TALF**
- **MLF**
- **TALF**

Source: Federal Reserve, Haver Analytics

Note: Wednesday level.