3.1.1 Household Debt as a Percent of Disposable Personal Income

As Of: 2021 Q2

Percent

As of 2021 Q2, household debt as a percent of disposable personal income was at a peak. The chart shows the contribution of different types of debt: Other Household Credit, Consumer Credit, and Mortgages. The data is sourced from BEA, Federal Reserve, and Haver Analytics.

Note: Other Household Credit includes debts of both households and nonprofits.
3.1.2 Household Personal Savings Rate

As Of: Sep-2021

Note: Ratio of personal saving to disposable personal income.

Source: BEA, FRED
3.1.3 Household Debt Service Ratio

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

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

As Of: 2021 Q2

Source: Federal Reserve, Haver Analytics

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

Billions of US$

As Of: 2021 Q3

Billions of US$

Source: FRBNY Consumer Credit Panel/Equifax, Haver Analytics

Note: Other includes consumer finance and retail loans. Gray bars signify NBER recessions.
3.1.6 Percentage of Mortgages in Forbearance

As Of: 26-Sep-2021

Source: Mortgage Bankers Association
3.1.7 Transition to Delinquency (30+ Days) by Loan Type

As Of: 2021 Q3

Percent

Student Loans
Auto Loans
Credit Card Debt
Other Household Debt

Source: FRBNY Consumer Credit Panel/Equifax, Haver Analytics

Note: Four-quarter moving sum. Student loan data are not reported prior to 2004 due to uneven reporting. Other includes consumer finance and retail loans. Gray bars signify NBER recessions.
3.2.1.1 Nonfinancial Corporate Credit as Percent of GDP

Percent

As Of: 2021 Q2

Percent

Source: Federal Reserve, Haver Analytics

Note: Gray bars signify NBER recessions.
3.2.1.2 Corporate Leverage: Debt / EBITDA

Note: Ratio of debt-to-EBITDA for companies included in Bloomberg Barclays Investment Grade and High-Yield Indices. Gray bars signify NBER recessions.
3.2.1.3 Interest Coverage Ratios

Ratio

Source: Bloomberg, L.P.

As Of: 2021 Q2

Investment Grade

High-Yield

Note: Ratio of earnings-to-interest expenses for companies included in Bloomberg Barclays Investment Grade and High-Yield Indices. Gray bars signify NBER recessions.
3.2.1.4 Nonfinancial Corporations Liquid Assets

Percent of Total Assets

As Of: 2021 Q2

Percent of Total Assets


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.

Source: Federal Reserve, Haver Analytics
3.2.1.5 U.S. Corporate Defaults

Source: Moody’s Investors Service, OFR

Note: Issuer weighted 12-month trailing default rate for speculative grade U.S. corporates.
3.2.1.6 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.
3.2.1.7 Investment Grade Corporate Bond Spreads

As Of: 30-Sep-2021

Percent

BBB US Corporate Index
Single-A US Corporate Index
AA US Corporate Index

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.
3.2.1.8 High-Yield Corporate Bond Spreads

As Of: 30-Sep-2021

Percent

Percent

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.
3.2.1.9 Gross Issuance of Corporate Bonds

As Of: Sep-2021

Trillions of US$

Source: Refinitiv, SIFMA

Note: Includes all non-convertible corporate debt, MTNs, and Yankee bonds, but excludes all issues with maturities of one year or less and CDs. 2021 figures are through September.
3.2.1.10 Leveraged Loan Spreads

Percent

As Of: 30-Sep-2021

Percent

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

Source: S&P LCD
3.2.1.11 Leveraged Loan Issuance

Billions of US$ As Of: 30-Sep-2021 Billions of US$

- Institutional
- Pro-Rata

Source: S&P LCD
Note: 2021 figures are through September.
3.2.3.1 Performance of U.S. Stock Indices

As Of: 30-Sep-2021

Source: Bloomberg, L.P.

Note: Indexed to 31-Dec-2019.
3.2.3.2 S&P 500 Forward Price-to-Earnings

As Of: 30-Sep-2021

Source: Bloomberg, L.P.
3.2.3.3 S&P 500 Volatility

As Of: 24-Sep-2021

Source: Bloomberg, L.P.

Note: 30-day realized and implied volatility.
3.2.3.4 SPAC Issuances

Billions of US$  As Of: 2021 Q3  Count

Source: Bloomberg, L.P.
### 3.2.3.5 Returns in Selected Equities Indices

**As Of: 30-Sep-2021**

<table>
<thead>
<tr>
<th>U.S. Indices</th>
<th>YTD</th>
<th>Since YE 2019</th>
<th>5 Year (Annualized)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;P 500</td>
<td>14.7%</td>
<td>33.3%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Nasdaq Composite</td>
<td>12.1%</td>
<td>61.0%</td>
<td>22.1%</td>
</tr>
<tr>
<td>Russell 2000</td>
<td>11.6%</td>
<td>32.1%</td>
<td>12.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Major Indices</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Topix</td>
<td>12.5%</td>
<td>17.9%</td>
<td>8.9%</td>
</tr>
<tr>
<td>FTSE 100</td>
<td>9.7%</td>
<td>-6.0%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Euro Stoxx 50</td>
<td>13.9%</td>
<td>8.1%</td>
<td>6.2%</td>
</tr>
<tr>
<td>DAX</td>
<td>11.2%</td>
<td>15.2%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emerging Markets</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MSCI Emerging Market Index</td>
<td>-3.0%</td>
<td>12.4%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Brazil (Bovespa)</td>
<td>-6.8%</td>
<td>-4.0%</td>
<td>13.7%</td>
</tr>
<tr>
<td>India (S&amp;P BSE Sensex)</td>
<td>23.8%</td>
<td>43.3%</td>
<td>16.2%</td>
</tr>
<tr>
<td>MSCI China</td>
<td>-17.4%</td>
<td>4.6%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Onshore China (CSI 300)</td>
<td>-6.6%</td>
<td>18.8%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Taiwan (TAIEX)</td>
<td>14.9%</td>
<td>41.2%</td>
<td>13.1%</td>
</tr>
<tr>
<td>South Korea (KOSPI)</td>
<td>7.2%</td>
<td>39.6%</td>
<td>8.5%</td>
</tr>
</tbody>
</table>

**Source:** Bloomberg, L.P.
3.3.1.1 Federal Budget Surplus/Deficit

Note: Data for fiscal years. Years after 2020 are projected as of July 2021.

Source: CBO, Haver Analytics
3.3.1.2 Federal Debt Held by the Public

Historical

CBO July 2021 Baseline Projection

Note: Data for fiscal years. Years after 2020 are projected.

Source: CBO, Haver Analytics
3.3.1.3 Net Issuance of Treasury Securities

As Of: 2021 Q3

Source: U.S. Department of the Treasury, Bureau of the Fiscal Service, SIFMA, Haver Analytics

Note: Includes marketable securities only.
3.3.1.4 Treasury General Account Balance

As Of: 29-Sep-2021

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

As Of: 30-Sep-2021

Source: U.S. Department of the Treasury
3.3.1.6 10-Year TIPS Yield and Breakeven

As Of: 30-Sep-2021

Source: U.S. Department of the Treasury

Note: Breakeven represents the difference between the nominal and TIPS yield.
3.3.1.7 Intraday Volatility for 10-Year Treasury Yields

Intraday Volatility for 10-Year Treasury Yields

Basis Points

As Of: 24-Sep-2021

Basis Points

99th Percentile

95th Percentile

Intraday Volatility


Source: Bloomberg, L.P.
3.3.2.1 Municipal Bond Issuance

Billions of US$

As Of: Sep-2021

Source: Refinitiv, SIFMA

Note: Excludes maturities of less than 13 months. 2021 figures are through September.
3.3.2.2 Monthly Municipal Bond Mutual Fund Flows

Billions of US$  As Of: Sep-2021  Billions of US$

Source: ICI, Haver Analytics

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

As Of: 30-Sep-2021

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 Changes in State and Local Government Tax Revenues

Percent

As Of: 2021 Q2

Percent

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.
3.4.1.1 CP Outstanding by Issuer Type

Trillions of US$  As Of: Sep-2021  Trillions of US$

- Other
- Foreign Nonfinancial
- Foreign Financial
- Domestic Nonfinancial
- Domestic Financial
- ABCP

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 Investors

As Of: 2021 Q2

Source: Federal Reserve, Haver Analytics
3.4.1.3 3-Month CP Interest Rate Spreads

As Of: 30-Sep-2021

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

Source: Federal Reserve, Bloomberg, L.P.

Note: Spread to 3-Month Overnight Index Swap (OIS) rate.
3.4.1.4 Commercial Bank Deposit Growth

As Of: Sep-2021

Total Deposits

Large Time Deposits

Source: Federal Reserve

Note: Year-over-year percentage change.
3.4.2.1 Repo Volumes

Billions of US$ As Of: 30-Sep-2021 Billions of US$

|----------|----------|----------|----------|

Source: FRBNY

Note: TGCR = Tri-Party General Collateral Rate; SOFR = Secured Overnight Financing Rate.
3.4.2.2 Sponsored Repo Activity

Billions of US$  As Of: Sep-2021  Billions of US$

- Repo Borrowing
- Repo Lending
- Aggregate

Source: DTCC

Note: Average daily volume. Breakdown of repo lending and repo borrowing unavailable prior to April 2020.
3.4.2.3 Primary Dealer Repo Agreements

As Of: 29-Sep-2021

Source: FRBNY, Haver Analytics
3.4.2.4 Primary Dealer Repo Collateral

Trillions of US$

As Of: 29-Sep-2021

Trillions of US$

Source: FRBNY, Haver Analytics

Note: U.S. Treasuries includes TIPS. Other includes ABS.
3.4.2.5 Primary Dealer Reverse Repo Agreements

Trillions of US$  As Of: 29-Sep-2021  Trillions of US$

Overnight/Continuing
Term

Source: FRBNY, Haver Analytics
3.4.2.6 Repo Borrowing of Qualifying Hedge Funds

Billions of US$ As Of: 2021 Q1 Billions of US$


Source: SEC Form PF Statistics Report

Note: Repo borrowing as reported on Question 43 of Form PF.
3.4.2.7 Repo Rates

As Of: 30-Sep-2021

SOFR
TGCR

Source: FRBNY

Note: TGCR = Tri-party General Collateral Rate; SOFR = Secured Overnight Financing Rate.
As Of: 30-Sep-2021

Note: Overnight Reverse Repurchase Agreement Facility.

Source: FRBNY
3.4.2.9 Value of Securities on Loan

As Of: 30-Sep-2021

Note: Data is based on a survey of agent-based lenders.

Source: Markit
3.4.2.10 Value of U.S. Securities on Loan

As Of: 30-Sep-2021

<table>
<thead>
<tr>
<th>Year</th>
<th>Trillions of US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.8</td>
</tr>
<tr>
<td>2016</td>
<td>1.0</td>
</tr>
<tr>
<td>2017</td>
<td>1.2</td>
</tr>
<tr>
<td>2018</td>
<td>1.4</td>
</tr>
<tr>
<td>2019</td>
<td>1.6</td>
</tr>
<tr>
<td>2020</td>
<td>2.0</td>
</tr>
<tr>
<td>2021</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Note: Data is based on a survey of agent-based lenders.

Source: Markit
3.4.2.11 Securities Lending Cash Collateral

As Of: 30-Sep-2021

Source: Markit

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

Trillions of US$

As Of: 2021 Q2

Source: The Risk Management Association

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

As Of: 2021 Q2

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

Note: 2016–2020 figures represent full year volumes. 2021 figure represents year-to-date volume through September 30, 2021.

Source: CFTC
3.4.3.2 U.S. Futures Markets Open Interest

As Of: 30-Sep-2021

Note: Open interest as of September 30 for all years.

Source: CFTC
3.4.3.3 Futures 60-Day Historical Volatility

Source: Bloomberg, L.P.
3.4.3.4 Micro Futures Contracts Open Interest

As Of: 30-Sep-2021

Source: CFTC

Note: Open interest as of September 30 for all years.
<table>
<thead>
<tr>
<th>Futures Contract</th>
<th>Number of Contracts (YTD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 3-Month Eurodollars</td>
<td>439 Million</td>
</tr>
<tr>
<td>2. 10-Year Treasury Notes</td>
<td>357 Million</td>
</tr>
<tr>
<td>3. E-Mini S&amp;P 500 Stock Index</td>
<td>300 Million</td>
</tr>
<tr>
<td>4. 5-Year Treasury Notes</td>
<td>209 Million</td>
</tr>
<tr>
<td>5. WTI Crude Oil</td>
<td>183 Million</td>
</tr>
<tr>
<td><strong>6. Micro E-Mini NASDAQ 100</strong></td>
<td><strong>174 Million</strong></td>
</tr>
<tr>
<td><strong>7. Micro E-Mini S&amp;P 500 Index</strong></td>
<td><strong>161 Million</strong></td>
</tr>
<tr>
<td>8. E-mini NASDAQ 100 Index</td>
<td>103 Million</td>
</tr>
<tr>
<td>9. U.S. Treasury Bonds</td>
<td>86 Million</td>
</tr>
<tr>
<td>10. 2-Year U.S. Treasury Notes</td>
<td>82 Million</td>
</tr>
</tbody>
</table>

Source: CFTC  
Note: Total futures volume through September 30, 2021.
3.4.3.6 U.S. Treasury Futures Open Interest: Asset Manager

Billions of US$

As Of: 28-Sep-2021

Source: CFTC, Haver Analytics

Note: Net notional amount of open interest. 10-Year includes 10-Year and 10-Year Ultra Treasury Note Futures; 30-Year includes Treasury Bond and Ultra Treasury Bond Futures.
3.4.3.7 U.S. Treasury Futures Open Interest: Leveraged Funds

Billions of US$ As Of: 28-Sep-2021 Billions of US$

[Graph]

Source: CFTC, Haver Analytics

Note: Net notional amount of open interest. 10-Year includes 10-Year and 10-Year Ultra Treasury Note Futures; 30-Year includes Treasury Bond and Ultra Treasury Bond Futures.
3.4.3.8 CME Bitcoin Futures Open Interest

Thousands of Bitcoin As Of: 30-Sep-2021 Thousands of Bitcoin

Note: Includes Bitcoin Futures and Micro Bitcoin Futures contracts. Open interest converted into Bitcoin equivalents using respective futures contract units.

Source: Bloomberg, L.P.
3.4.3.9 Bitcoin Futures and Reference Index Volume

Thousands of Bitcoin

As Of: Sep-2021

Thousands of Bitcoin

CME CF Bitcoin Real-Time Index
CME Futures Volume

Note: Average daily volume. Includes CME Bitcoin and Micro Bitcoin volumes converted into bitcoin equivalents. Spot volumes are Bitcoin/USD pairs from underlying spot exchanges referenced by the CME CF Bitcoin Real-Time Index.

Source: Bloomberg L.P., Bitcoinity.org
3.4.3.10 Growth of USD ESG and Emissions Derivatives Markets

Billions of US$

As Of: 30-Sep-2021

Billions of US$

Source: CFTC
3.4.3.11 Growth of the ESG Indices Futures Markets

Billions of US$

As Of: 30-Sep-2021

Billions of US$


Source: CFTC
3.4.3.12 Exchange-Traded Equity Option Volume

Millions of Contracts

As Of: Sep-2021

Millions of Contracts

Note: Average daily volume. Includes FLEX, excludes index and ETF options.

Source: Options Clearing Corp.
3.4.3.13 Options on Futures: Open Interest

Source: CFTC
3.4.3.14 Options on Futures: Volume

Millions of Contracts

As Of: Sep-2021

Millions of Contracts

[Bar chart showing the volume of options on futures from 2015 to 2021, with separate sections for Other Options and Eurodollar Options.]

Source: CFTC
3.4.3.15 3-Month Implied Volatility for Select Commodities Options

As Of: 30-Sep-2021

Source: Bloomberg, L.P.
3.4.3.16 Global OTC Positions

Trillions of US$  As Of: 2021 Q2  Trillions of US$

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

Source: BIS, Haver Analytics
3.4.3.17 Global OTC Equity Derivatives Outstanding

As Of: 2021 Q2

Source: BIS, Haver Analytics

Note: Gross notional amounts outstanding.
3.4.3.18 Derivatives Notional Volume

Credit Default Swaps
(left axis)

Interest Rate Swaps
(right axis)

As Of: 24-Sep-2021

Note: 12-week moving-averages. Excludes security-based swaps. ISDA adjusted numbers since Nov 2020.

Source: CFTC, ISDA
3.4.3.19 Derivatives Notional Amount Outstanding

Trillions of US$  As Of: 24-Sep-2021  Trillions of US$

[Chart showing the notional amount outstanding for Interest Rate Swaps and Index CDS over a period from 2014 to 2021.


Source: CFTC]
3.4.3.20 Commodity Swaps: Open Interest

As Of: Sep-2021

Billions of US$

Source: CFTC

Note: Estimated notional value.
Figures as of end of September.
3.4.3.21 Commodity Index Swaps Gross Notional Value

<table>
<thead>
<tr>
<th>Year</th>
<th>As Of: Sep-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>350</td>
</tr>
<tr>
<td>2017</td>
<td>450</td>
</tr>
<tr>
<td>2018</td>
<td>600</td>
</tr>
<tr>
<td>2019</td>
<td>500</td>
</tr>
<tr>
<td>2020</td>
<td>380</td>
</tr>
<tr>
<td>2021</td>
<td>580</td>
</tr>
</tbody>
</table>

Billions of US$

Source: CFTC

Note: Estimated notional value. Figures as of end of September.
3.4.3.22 Customer Margin Funds Held at FCMs

Billions of US$

As Of: Sep-2021

Billions of US$

Source: CFTC

Note: Includes CFTC registered FCMs.
3.4.3.23 FCM Concentration: Customer Futures Balances

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.

Source: CFTC
3.4.3.24 FCM Concentration: Customer Swap Balances

As Of: 2021 Q3

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

Source: CFTC
3.4.3.25 Concentration of Swap Positions for Registered SDs

As Of: 2021 Q3

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).
3.4.3.26 SEF Trading Volumes: Interest Rate Swaps

Billions of US$ As Of: Sep-2021

Percent

Source: CFTC

Note: Average daily notional volume. Data have been adjusted to correct a DDR data issue.
Billions of US$ As Of: Sep-2021

3.4.3.27 SEF Trading Volumes: CDS Index

Source: CFTC

Note: Average daily notional volume. Excludes security-based swaps. Data have been adjusted to correct a DDR data issue.
3.4.4.1 Relative Performance of Commodity Indices

As Of: 24-Sep-2021

Index

Agriculture & Livestock
Industrial Metals
Energy
Precious Metals

Note: S&P GSCI Spot Indices. Indexed to 100 as of January 1, 2016.

Source: S&P GSCI, Haver Analytics
3.4.4.2 Relative Performance of Precious Metals

As Of: 30-Sep-2021

Source: Bloomberg, L.P.

Note: Indexed to 100 as of September 30, 2020.
3.4.4.3 Relative Performance of Industrial Metals

As Of: 30-Sep-2021

Source: S&P GSCI, Haver Analytics

Note: S&P GSCI Spot Indices. Indexed to 100 as of January 2, 2020.
3.4.4.4 Relative Performance of Agriculture Products

Index

As Of: 24-Sep-2021

Cotton
Wheat
Live Cattle
Coffee
Lean Hogs
Corn
Soybeans


Source: S&P GSCI, Haver Analytics
3.4.4.5 U.S. Drought Conditions

As Of: 28-Sep-2021

Source: University of Nebraska-Lincoln

Note: Limited to Continental U.S.
3.4.4.6 CME Lumber Futures


Source: CME, Haver Analytics

Note: US$ per 1,000 Board Feed.
Crude Oil Inventories (left axis)

Crude Oil Production (right axis)

Note: Crude oil production presented as millions of barrels per day.
3.4.4.8 WTI Crude Oil Futures Curve

Source: Bloomberg, L.P.

Note: CME WTI Crude Oil Futures. X axis represents the number of months until expiry.
3.4.4.9 Natural Gas Futures Curve

US$ Per MMBtu

Source: Bloomberg, L.P.

Note: NYMEX Henry Hub Natural Gas Futures. X axis represents the number of months until expiry.
3.4.4.10 U.S. Natural Gas Prices

As Of: 30-Sep-2021


Front Month Future
Spot Price

Source: Bloomberg, L.P.
3.4.4.11 European & U.S. Natural Gas Prices

US$ Per MMBtu

As Of: Sep-2021

Europe
United States

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

Source: FHFA

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

As Of: Sep-2021

Source: NAR, Census Bureau, Haver Analytics

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-2021  Percentage Change

Housing Starts (left axis)

House Price Changes (right axis)

Source: U.S. Census Bureau, FHFA, Haver Analytics

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.
Homeownership Rate (left axis) and Rental Vacancy Rate (right axis) as of 2021 Q3.

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

Note: Data are non-seasonally adjusted quarterly percentages.
3.4.5.5 30-Year Fixed Rate Mortgage Rate and Spread

As Of: 24-Sep-2021

Source: Bankrate.com, Bloomberg, L.P.
3.4.5.6 Mortgage Originations and Rates

As Of: 2021 Q1

30-Year Mortgage Rate (left axis)

Refinance (right axis)

Purchase (right axis)

Source: NMDB®, Bankrate.com

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

Source: NMDB®

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

Source: NMDB®

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

As Of: 2021 Q2

Percent

30 or 60 Days Past Due

90 to 180 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®
3.4.5.10 Forbearance Rates by Investor Type

As Of: Aug-2021

Percent

GSE

FHA, VA, and RHS

Other (PLS, Portfolio, etc.)

Total

Source: NMDB®

Note: Rates are the weekly percentage of servicing portfolio volume in forbearance by investor type over time.
B.1 House Price Growth

As of: Aug-2021

Source: S&P CoreLogic Real Estate Data, FHFA, Haver Analytics

Note: Year-over-year percentage change.
B.2 Inventory of Homes Listed for Sale

Thousands

As of: Aug-2021

Thousand

2500


Note: Seasonally adjusted.

Source: Redfin, Haver Analytics
B.3 Price-to-Rent Ratios

As of: Aug-2021

Case-Shiller Home Price Index

FHFA House Price Index

Source: S&P CoreLogic Real Estate Data, FHFA, BLS, Haver Analytics

Note: Seasonally adjusted; indexed to January 1996. Rental data are owners’ equivalent rent.
3.4.5.11 Mortgage Originations by Product

As Of: 2020 Q4

Percent of Originations

Percent of Originations

Private Portfolio and Securitized

GSE

FHA, VA & RHS

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

Source: NMDB®
3.4.5.12 RMBS Issuance

Trillions of US$

As Of: Sep-2021

Non-Agency

Agency

Source: FHLMC, FNMA, GNMA, NCUA, FDIC, Bloomberg, L.P., Dealogic, Thomson Reuters, SIFMA

Note: 2021 figures are through September.
Cumulative MBS Purchases by the Federal Reserve

As Of: 24-Sep-2021

Source: FRBNY

Note: Cumulative purchases beginning in March 2020. Weekly series are aggregated from daily Agency MBS operations in the TBA pool.
3.4.6.1 Commercial Property Price Growth

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

Note: Year-over-year price change.
3.4.6.2 Conduit CMBS Delinquency and Foreclosure Rate

As Of: Sep-2021

Percent

Source: JPMorgan, Trepp

Note: 60+ Days Delinquent includes Foreclosure/Real Estate Owned.
3.4.6.3 Average Capitalization Rates and Spreads

As Of: Sep-2021

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

Note: Dotted lines represent 2001–present averages.
3.4.6.4 CMBS Issuance

Billions of US$ As Of: Sep-2021 Billions of US$

Non-Agency Agency

Source: Inside Mortgage Finance

Note: 2021 figures are through September. Agency includes multifamily CMBS.
### 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> (U.S. G-SIBs)</td>
<td>Bank of America</td>
</tr>
<tr>
<td></td>
<td>Bank of New York Mellon</td>
</tr>
<tr>
<td></td>
<td>Citigroup</td>
</tr>
<tr>
<td></td>
<td>Goldman Sachs</td>
</tr>
<tr>
<td><strong>Category II</strong> (Large complex, ≥$700b Total assets, or ≥ $75b in Cross-Jurisdictional Activity)</td>
<td>Northern Trust</td>
</tr>
<tr>
<td><strong>Category III</strong> (Large complex, ≥$250b Total assets or ≥ $75b in NBA, wSTWF, or Off-balance sheet exposure)</td>
<td>Capital One</td>
</tr>
<tr>
<td></td>
<td>Charles Schwab</td>
</tr>
<tr>
<td></td>
<td>PNC Financial</td>
</tr>
<tr>
<td><strong>Category IV</strong> (Large noncomplex, other firms with $100b to $250b Total assets)</td>
<td>Ally Financial</td>
</tr>
<tr>
<td></td>
<td>American Express</td>
</tr>
<tr>
<td></td>
<td>Citizens Financial</td>
</tr>
<tr>
<td></td>
<td>Discover</td>
</tr>
<tr>
<td></td>
<td>Fifth Third</td>
</tr>
</tbody>
</table>

*Note: Northern Trust is in Category II due to its cross-jurisdictional activity. Synchrony Financial dropped out of Category IV in 2021:Q2 and did not participate in the 2020 or 2021 stress tests.*
3.5.1.2 Total Assets by BHC Type/IHC

As Of: 2021 Q2

<table>
<thead>
<tr>
<th>Category</th>
<th>Trillions of US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-SIBs</td>
<td>14.00</td>
</tr>
<tr>
<td>Large Complex</td>
<td>2.00</td>
</tr>
<tr>
<td>Large Noncomplex</td>
<td>1.00</td>
</tr>
<tr>
<td>Other</td>
<td>3.50</td>
</tr>
<tr>
<td>IHCs</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Source: FR Y-9C
3.5.1.3 Common Equity Tier 1 Ratios

As Of: 2021 Q2

Percent of RWA

Source: FR Y-9C, Haver Analytics

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.
## 3.5.1.4 Common Equity Tier 1 Ratios at U.S. G-SIBs

<table>
<thead>
<tr>
<th>Bank</th>
<th>2020 Q2</th>
<th>2021 Q1</th>
<th>2021 Q2</th>
<th>2021 minimum including U.S. G-SIB surcharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAC</td>
<td>11.5</td>
<td>12.0</td>
<td>12.5</td>
<td>13.0</td>
</tr>
<tr>
<td>BK</td>
<td>11.8</td>
<td>12.2</td>
<td>12.8</td>
<td>13.3</td>
</tr>
<tr>
<td>C</td>
<td>11.6</td>
<td>12.1</td>
<td>12.6</td>
<td>13.1</td>
</tr>
<tr>
<td>GS</td>
<td>12.5</td>
<td>12.7</td>
<td>13.0</td>
<td>13.5</td>
</tr>
<tr>
<td>JPM</td>
<td>12.0</td>
<td>12.3</td>
<td>12.7</td>
<td>13.2</td>
</tr>
<tr>
<td>MS</td>
<td>13.5</td>
<td>13.7</td>
<td>14.0</td>
<td>14.5</td>
</tr>
<tr>
<td>STT</td>
<td>12.2</td>
<td>12.5</td>
<td>12.8</td>
<td>13.3</td>
</tr>
<tr>
<td>WFC</td>
<td>11.7</td>
<td>12.0</td>
<td>12.4</td>
<td>12.9</td>
</tr>
</tbody>
</table>

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

As Of: 2021 Q2

Source: FR Y-9C

Note: Net income available to common shareholders (NIAC) is net income minus preferred dividends. 2021 data represents YTD data through Q2.
3.5.1.6 Supplementary Leverage Ratios at U.S. G-SIBs

As Of: 2021 Q2

Percent

Note: Enhanced SLR is only required for the G-SIBs. The ratio is equal to tier 1 capital divided by total assets plus off-balance sheet exposures. The ratio excludes Treasury securities and reserves from the denominator during 2020:Q2 and 2021:Q1, reflecting a temporary change to the SLR rule to ease strains in the Treasury market resulting from the COVID-19 pandemic.

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

As Of: 2021 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

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Short-Term Funding</th>
<th>Core Deposits</th>
<th>Long-Term Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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: Jun-2021

Source: Federal Reserve, Haver Analytics

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: 2021 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

<table>
<thead>
<tr>
<th></th>
<th>Percent</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>As Of: 2021 Q2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: FRY-9C, Call Report

3.5.1.14 Provisions to Loans Ratios at BHCs

As of: 2021 Q2

<table>
<thead>
<tr>
<th>Percent</th>
<th>Credit Cards</th>
<th>Other Consumer</th>
<th>Residential Real Estate</th>
<th>Commercial Real Estate</th>
<th>C&amp;I</th>
</tr>
</thead>
</table>

Source: FR Y-9C

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

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: 2021 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: 2021 Q2  Percent of Assets

Other
Large Noncomplex
Large Complex
G-SIBs

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

Percent of Assets

As Of: 2021 Q2

Percent of Assets

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

Note: Not seasonally adjusted.

Source: FR Y-9C, FR 2900
3.5.1.19 Liquidity Coverage Ratios at U.S. G-SIBs

Source: LCR Disclosures from each banks’ websites

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

Held-to-Maturity Securities plus Available-for-Sale Securities.

Other
Large Noncomplex
Large Complex
G-SIBs

Percent of Investment Securities

As Of: 2021 Q2

Source: Call Report, Haver Analytics

Note: Investment securities are held-to-maturity securities plus available-for-sale securities.
3.5.1.21 Duration Gap

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.
3.5.1.22 Bank Stock Performance

As Of: 29-Jun-2021

Source: Yahoo! Finance, Bloomberg, L.P.

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-2021

Source: SNL

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

Basis Points

As Of: Jun-2021

Basis Points

Source: Markit

Note: Monthly averages.
3.5.1.25 5-Year CDS Premiums Select Foreign Banks

As Of: Jun-2021

Source: Markit

Note: Monthly averages.
3.5.1.26 Initial and Stressed Capital Ratios

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 2016-2021 bars show Common Equity Tier 1 Ratio. The x-axis labels represent the number of banks tested within a given year.
As Of: 2020


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

Billions of US$

As Of: 2021 Q2

Net Interest Income
Noninterest Income
Realized Gains/Losses
Net Income
Provisions
Noninterest Expense

Note: Includes all commercial banks and thrift institutions. All items are annualized.
3.5.1.29 Total Assets of Largest Insured Depository Institutions

Trillions of US$  As Of: 2021 Q2  Count (‘000s)

- Top 10 IDIs (left axis)
- Top 11-100 IDIs (left axis)
- Other IDIs (left axis)

Number of Insured Depository Institutions (right axis)

Source: FFIEC Call Report

Note: Fourth quarter data was used for years 1984-2020 and second quarter data was used for 2021.
Source: Federal Reserve, Haver Analytics

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

As Of: 2021 Q2

- Other Liabilities
- Securities Sold with Repos & Fed Funds Purchased
- Deposits & Credit Balances
- Net Due to Related Depository Institutions

Source: Federal Reserve, Haver Analytics

Note: Other liabilities includes transaction accounts, non-transaction accounts, and other borrowed money.
3.5.1.33 Loans as a Percent of Total Deposits

Percent of Total Assets

Source: NCUA

As Of: 2021 Q2

Percent of Total Assets

Source: NCUA
3.5.2.1 Number of Broker-Dealers

Number of Firms

As Of: 2021 Q2

Number of Firms

Source: FINRA
3.5.2.2 Broker-Dealer Revenues and Net Income

As Of: 2021 Q2

Billions of US$

Source: FINRA
3.5.2.3 Broker-Dealer Assets and Leverage

As Of: 2021 Q2

Trillions of US$ vs. Ratio

- **Total Assets (left axis)**
- **Leverage (right axis)**

Source: FINRA

Note: Leverage is the ratio of total assets to total regulatory capital.
3.5.2.4 Broker-Dealer Assets and Leverage by Affiliation

Note: Data covers BHC and FBO-affiliated broker-dealers that are among the 25 largest broker-dealers by assets at year-end 2020.
3.5.2.5 mREIT Financial Assets

Billions of US$  
As Of: 2021 Q2  
Billions of US$

- Other
- Mortgages
- Agency & GSE-Backed Securities

Source: Federal Reserve, Haver Analytics
3.5.2.6 REIT Stock Performance

As Of: 30-Sep-2021

Source: NAREIT, Bloomberg, L.P.

Note: Indexed to 100 as of year-end 2019; mREITs represents the FTSE Nareit Mortgage REITs Index; Equity REITs represents the FTSE Nareit Equity REITs Index; Financials represents the S&P 500 Financials Subindex.
3.5.2.8 Liquid Asset Shares of Prime MMFs

Percent of Total Assets

As Of: Sep-2021

Percent of Total Assets

- Weekly Liquid - Institutional
- Weekly Liquid - Retail
- Daily Liquid - Institutional
- Daily Liquid - Retail

Source: SEC
3.5.2.9 Weighted Average Maturities by Fund Type

As Of: Sep-2021

Note: Weighted by fund size.

Source: SEC
3.5.2.10 Net Assets of the Investment Company Industry

As Of: 2021 Q3

Trillions of US$

UITs
Closed-End Funds
ETFs
MMFs
Bond/Hybrid Mutual Funds
Equity Mutual Funds

Source: ICI, Federal Reserve, SEC
Note: Excludes non ’40 Act ETPs.
3.5.2.11 Monthly Bond Mutual Fund Flows

Billions of US$  As Of: Sep-2021  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-2021 Billions of US$

Source: ICI, Haver Analytics

Note: Net fund flows.
3.5.2.13 Monthly Bank Loan and High-Yield Mutual Fund Flows

Billions of US$

As Of: Sep-2021

Billions of US$

<table>
<thead>
<tr>
<th>Year</th>
<th>High-Yield</th>
<th>Bank Loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Morningstar, Inc.

Note: Net fund flows.
3.5.2.14 Cumulative Equity Fund Flows

Billions of US$  
As Of: Sep-2021  
Billions of US$

- Passively Managed ETPs
- Actively Managed ETPs
- Passively Managed Mutual Funds
- Actively Managed Mutual Funds

Note: Cumulative net fund flows. Includes U.S., international, sector, and nontraditional equity funds.
3.5.2.15 Cumulative Fixed Income Fund Flows

Billions of US$ As Of: Sep-2021 Billions of US$

Passively Managed ETPs
Actively Managed ETPs
Passively Managed Mutual Funds
Actively Managed Mutual Funds

Source: Morningstar, Inc.

Note: Cumulative net fund flows. Includes taxable and municipal bond funds.
3.5.2.16 ETP Assets by Category of Investment

As Of: Sep-2021

- Equity
- Fixed Income
- Commodities
- Other

Source: Morningstar, Inc.
3.5.2.17 Monthly ETP Flows: Fixed Income Funds

As Of: Sep-2021

Source: Morningstar, Inc.

Note: Net fund flows.
3.5.2.18 Monthly ETP Flows: Equity Funds

As Of: Sep-2021

Billions of US$

Source: Morningstar, Inc.

Note: Net fund flows.
3.5.2.19 Monthly Inverse and Leveraged ETP Flows

Billions of US$  As Of: Sep-2021  Billions of US$

Source: Morningstar, Inc.

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

Trillions of US$

As Of: 2021 Q1

Leverage: GAV/NAV (right axis)

Source: SEC Form PF, OFR

Note: Qualifying Hedge Fund gross and net assets as reported on Form PF Questions 8 and 9.
3.5.2.21 Private Equity AUM

As Of: 31-Dec-2020

Source: Preqin
3.5.2.22 M&A Loan Volume for Private Equity-Backed Issuers

As Of: 30-Sep-2021

Billions of US$

Source: S&P LCD
D.1 Static Margin Model Example

Position size: $100
- Initial margin: $20 = 20%
- Financed: $80

Position size: $140
- $40 variation margin paid
- Initial margin: $20 = 14.3%
- Financed: $120

Share Price at Inception

$40 Increase in Share Price
3.5.2.23 Public Plan Allocation to Alternative Assets

Source: publicplansdata.org

Note: Includes public plans that reported investment allocations from 2002-2020. Simple average.
3.5.2.24 Insurance Industry Net Income

As Of: 2020

Source: NAIC
3.5.2.25 Consumer Loans and Leases Outstanding

Trillions of US$

As Of: Aug-2021

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.
3.5.2.26 Business Loans and Leases Outstanding

As Of: Aug-2021

Trillions of US$

Commercial Banks

Finance Companies

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

Source: Federal Reserve, Haver Analytics
3.5.2.27 AAA Securitization Spreads

As Of: 30-Sep-2021

Source: JPMorgan
3.5.2.28 ABS Issuance

Billions of US$

As Of: Sep-2021

Source: Thomson Reuters, SIFMA

Note: Figures are as of year end through 2020. 2021 figures are through September.
3.6.1.1 DTCC Clearing Fund Requirements

As Of: 2021 Q2

Source: PFMI Quantitative Disclosures, Clarus FT
3.6.1.2 Maximum Uncovered Exposure for DTCC

As Of: 2021 Q1

Note: Peak uncovered exposure for preceding 12 months as reported on question 6.5.4 of PFMI quarterly disclosures.
3.6.1.3 Initial Margin: U.S. Exchange Traded Derivatives

Billions of US$

Source: PFMI Quantitative Disclosures, Clarus FT

Note: Initial margin required as reported in quantitative disclosures; includes house and client accounts.
3.6.1.4 Initial Margin: Centrally Cleared OTC Derivatives

Billions of US$

As Of: 2021 Q2

Billions of US$

Credit Default Swaps
Interest Rate Swaps

Source: PFMI Quantitative Disclosures, Clarus FT

Note: Initial margin required as reported in quantitative disclosures; includes house and client accounts. Interest rate swaps margin includes LCH Ltd. and CME. CDS margin include CME, ICC, ICEU, and LCH SA). CME ceased clearing CDS in March 2018.
3.6.1.5 Initial Margin by Segregation Type

As Of: 2021 Q2

Billions of US$

House
Customer

Note: Initial margin required as reported in quantitative disclosures; includes exchange-traded derivatives (Options Clearing Corp., CME, and ICUS), interest rate swaps (LCH Ltd. and CME), and CDS (CME, ICC, ICEU, and LCH SA). CME ceased clearing CDS in March 2018.

Source: PFMI Quantitative Disclosures, Clarus FT
3.6.1.6 Average Clearing Rates for OTC Trading

As Of: 2021 Q3

Source: CFTC

Note: Gross notional of new transactions. Excludes security-based swaps.
E.1 SOFR Futures Volume

Millions of Contracts  As Of: Sep-2021  Percent

3-Month SOFR Futures (left axis)
1-Month SOFR Futures (left axis)

As a Percent of Eurodollar Volume (right axis)

Source: CME, Bloomberg, L.P.
3.7.1.1 Federal Reserve Swap Lines

Source: Federal Reserve

Note: Wednesday levels.
3.7.1.2 Nominal U.S. Dollar Trade-Weighted Index

Index

As Of: 30-Sep-2021

Emerging Markets
Broad
Advanced

Source: Federal Reserve, Haver Analytics
3.7.1.3 YTD Change in USD Exchange Rates, EMEs

As Of: 30-Sep-2021

Note: Percent change relative to end-2020. 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.
Index

As Of: Sep-2021

Source: Federal Reserve, Haver Analytics

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.
3.7.2.1 Advanced Economies Real GDP Growth

As Of: Oct-2021

Source: IMF WEO, Haver Analytics

Note: Annual change in GDP, constant prices. Dotted lines represent the October 2021 projections for 2021-2023.
3.7.2.2 Discretionary Fiscal Response to the COVID-19 Pandemic

Percent of GDP

As Of: Oct-2021

3.7.2.3 Advanced Economy Interest Expense and Government Debt

As Of: Apr-2021

Percent of GDP

Government Debt (left axis)

Interest Expense (right axis)

Source: IMF Fiscal Monitor

Note: 2021 projected.
3.7.2.4 Advanced Economy Headline Inflation Rate

As Of: Sep-2021

Note: Data represents year-over-year percentage change in headline inflation.

Source: Bloomberg, L.P.
3.7.2.5 Euro Area Business and Consumer Surveys

As Of: Sep-2021

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 Real GDP for Select Euro Area Economies

As Of: 2021 Q3

Index


Note: Seasonally adjusted real GDP. Indexed to 100 as of 2019:Q4.
3.7.2.7 Euro Area 10-Year Sovereign Yields

As Of: 30-Sep-2021

Source: Reuters, Haver Analytics
3.7.2.8 Japanese Consumer Price Inflation

As Of: Sep-2021

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.

Source: Bank of Japan, Haver Analytics
3.7.2.9 Japan 10-Year Government Bond Yield

Source: Bloomberg, L.P.
3.7.3.1 EME GDP Growth

As Of: Oct-2021

Source: IMF WEO
3.7.3.2 Emerging Market Sovereign Bond Spreads

Source: JP Morgan, Haver Analytics

Note: JP Morgan EMBI+ Sovereign Spreads indices for each region.
3.7.3.3 Emerging Market Non-Local Bond Issuance

Billions of US$  As Of: 30-Sep-2021  Billions of US$

<table>
<thead>
<tr>
<th>Year</th>
<th>Public</th>
<th>Private</th>
<th>Sovereign</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>150</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>2007</td>
<td>100</td>
<td>75</td>
<td>25</td>
</tr>
<tr>
<td>2009</td>
<td>120</td>
<td>90</td>
<td>30</td>
</tr>
<tr>
<td>2011</td>
<td>140</td>
<td>100</td>
<td>40</td>
</tr>
<tr>
<td>2013</td>
<td>160</td>
<td>120</td>
<td>40</td>
</tr>
<tr>
<td>2015</td>
<td>180</td>
<td>140</td>
<td>60</td>
</tr>
<tr>
<td>2017</td>
<td>200</td>
<td>160</td>
<td>60</td>
</tr>
<tr>
<td>2019</td>
<td>220</td>
<td>180</td>
<td>40</td>
</tr>
<tr>
<td>2021</td>
<td>250</td>
<td>200</td>
<td>50</td>
</tr>
</tbody>
</table>

Note: Bonds have maturities greater than one-year and have been internationally marketed or placed. “Public” includes issuance by municipal and state-owned enterprises. 2021 figures are through September.

Source: Dealogic
3.7.3.4 Foreign Investor Inflows to EMEs

Billions of US$  As Of: 2021 Q2  Billions of US$

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

As Of: 2021 Q2

Emerging Markets (ex-China)
China

Source: IMF, Haver Analytics
3.7.3.6 Chinese Real GDP Growth and its Components

As Of: 2021 Q3

Agriculture
Services
Manufacturing
Total

Note: Year-over-year percentage change.

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

Percent of GDP

As Of: 2021 Q1

Percent of GDP

Nonbank Lending
Bank Lending

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

Note: Rolling 4-quarter sum of GDP.
3.7.3.8 Chinese Credit Growth

Source: PBOC, CCDC, Haver Analytics, Staff Calculations

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.
F.1 Annual Expected Damage from Tropical Cyclones

As Of: Jun-2021

Source: NGFS CA Climate Impact Explorer

Note: Percent change in annual damages under NGFS current policies scenario; relative to 2020.
F.2 Fraction of Population Exposed to Heatwaves

Source: NGFS CA Climate Impact Explorer

Note: Change in fraction of U.S. population annually exposed to heatwaves under NGFS current policies scenario. Percent change relative to 1986-2006 average.