4.1.1 Federal Debt Held by the Public

As Of: Mar-2016

Percent of GDP

Source: CBO, Haver Analytics

Note: Data for fiscal years. Years after 2015 are projected.
4.1.2 10-Year Treasury Yields

Source: U.S. Department of the Treasury
4.1.3 2-Year Treasury Yields

As Of: 31-Mar-2016

Source: U.S. Department of the Treasury
4.1.4 Fixed Income Implied Volatility

Basis Points

As Of: 31-Mar-2016

Basis Points


Merrill Lynch Option Volatility Estimate (MOVE) Index

1994-Present MOVE Average

Note: Implied volatility is calculated using a yield curve-weighted index of the normalized implied volatility on 1-month Treasury options.

Source: Bloomberg, L.P.
A.1 Selected Swap Spreads

Basis Points

As Of: 31-Mar-2016

Basis Points


3-Year
5-Year
10-Year
30-Year

Source: Bloomberg, L.P.
4.2.1 Advanced Economies Real GDP Growth

As Of: 2015 Q4

Source: Eurostat, CAO, BEA, Haver Analytics

Note: Data represents seasonally adjusted quarter-over-quarter annualized real GDP growth rates.
4.2.2 Real GDP Growth

As Of: Apr-2016

Note: Year-over-year percent change. Data after 2015 are projected.
4.2.3 Euro Area Real GDP Growth

As Of: Apr-2016

Source: IMF, Haver Analytics

Note: Year-over-year percent change.
Data after 2015 are projected.
4.2.4 Contributions to Japanese GDP Growth

As Of: 2015 Q4

Percent

Source: Cabinet Office of Japan, Haver Analytics

Note: Data represents seasonally adjusted quarter-over-quarter annualized real GDP growth rates.
Japanese Consumer Price Inflation

As Of: Mar-2016

Current Target

Source: Bank of Japan, Haver Analytics

Note: Data represents year-over-year percent change. CPI is adjusted for the consumption tax increase that took effect in April 2014.
4.2.6 European 10-Year Yields

As Of: 31-Mar-2016

Source: Bloomberg, L.P.
4.2.7 Chinese Real GDP Growth

Source: China National Bureau of Statistics, Haver Analytics

Note: Year-over-year percent change from the fourth quarter of the previous year.
4.2.8 Chinese Manufacturing and Services Growth

As Of: 2015

Percent Growth


Source: China National Bureau of Statistics, Haver Analytics

Note: Year-over-year percent change.
4.2.9 Chinese Equity Market (CSI 300 Index)

As Of: 31-Mar-2016

Source: Capital IQ
4.2.10 Chinese Credit Growth

Note: 12-month percentage change of 3-month rolling average. Total credit is defined as total social financing, a broad measure that includes some equity financing.

Source: The People’s Bank of China, Haver Analytics
4.2.11 Components of Chinese Nonbank Credit Growth

As Of: Mar-2016

- Other
- Nonfinancial Equity Financing
- Bankers’ Acceptance Bills
- Trust Loans
- Entrusted Loans

Source: The People’s Bank of China, Haver Analytics

Note: 12-month percentage change of 3-month rolling average.
4.2.12 Credit to the Chinese Nonfinancial Private Sector

Percent of GDP

As Of: 2015 Q3

Percent of GDP

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

Note: Rolling 4-quarter sum of GDP.
4.2.13 Gross Capital Flows to EMEs

Billions of US$ As Of: 2015 Q4 Billions of US$


Source: IMF, Haver Analytics
4.2.14 Emerging Market Gross Global Bond Issuance

Billions of US$  As Of: 2015  Billions of US$

- Public
- Private
- Sovereign

Source: Dealogic

Note: Public includes issuance by municipal and state-owned enterprises. Bonds with a maturity of greater than 1 year.
4.2.15 Emerging Market Bond Spreads

As Of: 31-Mar-2016

Source: JP Morgan, Haver Analytics

Note: JP Morgan EMBI+ Sovereign Spreads indices for each region.
4.2.16 Change in State and Local Government Tax Revenues

Source: Census Bureau

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

Billions of US$ As Of: Mar-2016 Billions of US$


Source: ICI, Haver Analytics
4.2.18 Municipal Bond Spreads

As of: 31-Mar-2016

Source: Thomson Reuters MMD, Haver Analytics

Note: Spreads between municipal and Treasury securities of comparable maturities.
4.2.19 Municipal Bond Issuance

Billions of US$ As Of: 2015 Billions of US$


Refunding
New Capital

Source: Thomson Reuters, SIFMA

Note: Excludes maturities of 13 months or less and private placements.
C.1 Municipal Bond Yields

20-Year AAA GO (left axis)

Puerto Rico (right axis)

As Of: 31-May-2016

Note: Puerto Rico yields based on 8 percent GO bonds maturing 7/1/2035.

Source: Bloomberg, L.P.
4.3.1 Debt to Assets for Nonfinancial Corporations

As Of: 2015 Q4

Percent


Source: Federal Reserve, Haver Analytics

Note: Gray bars signify NBER recessions.
4.3.2 Bank Business Lending Standards and Demand

Net Percentage

As Of: Jan-2016

Net Percentage

Reporting Stronger Demand from Large and Medium-Sized Firms

Reporting Tighter Standards for Large and Medium-Sized Firms

Source: SLOOS, Haver Analytics

Note: Data includes firms with annual sales of $50 million or more over the last 3 months. Net percentage balance of responses. Gray bars signify NBER recessions.
4.3.3 Covenant-Lite Volume as a Percent of Total Issuance

As Of: 2015

Source: S&P LCD
4.3.4 Leveraged Loans: Debt to EBITDA Ratios

As Of: 2015

Note: Large Corporate Loans captures loans to issuers with EBITDA of more than $50 million. Middle Market Loans captures loans to issuers with EBITDA of $50 million or less.
4.3.5 Noncurrent Commercial and Industrial Loans

As Of: 2015 Q4

Percent

Source: FDIC, Haver Analytics

Note: Percent of total C&I loans. Gray bars signify NBER recessions.
4.3.6 Corporate Bond Issuance

As Of: 2015

Source: Thomson Reuters, 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.
4.3.7 Corporate Credit Spreads

Source: Bank of America Merrill Lynch, Federal Reserve, S&P LCD

As Of: 31-Mar-2016

Leveraged Loans (right axis)
High-Yield (right axis)
Investment Grade (left axis)

Note: Secondary market spreads. Investment grade and high-yield data represent option-adjusted spreads. Dotted lines represent 1997-present median.
4.3.8 Rolling 12-Month Default Rate Rate

As Of: Mar-2016

Source: Moody’s Investors Service

Note: Issuer-weighted default rate.
4.3.9 Distressed Ratios

Source: S&P LCD, Merrill Lynch

Note: S&P LSTA Index Distress Ratio depicts the percentage of performing loans trading below 80. Merrill Lynch High-Yield Index Distress Ratio depicts the percentage of performing high-yield bonds with yields over Treasuries of 1,000 or more basis points.
4.3.10 CLO Issuance

As Of: 2015

Billions of US$

Source: S&P LCD
4.4.1 Household Debt as a Percent of Disposable Personal Income

As Of: 2015 Q4

Percent

Other Household Credit
Consumer Credit
Mortgages

Source: BEA, Federal Reserve, Haver Analytics
Note: Other Household Credit includes debts of both households and nonprofits.
4.4.2 Household Debt Service Ratio

Source: Federal Reserve, Haver Analytics

Note: Ratio of debt service payments to disposable personal income. Seasonally adjusted. Gray bars signify NBER recessions.
4.4.3 Share of Household Debt by Delinquency Status

Percent

As Of: 2015 Q4

Percent

Severely Derogatory
120+ Days Late
90 Days Late
60 Days Late
30 Days Late

Source: FRBNY Consumer Credit Panel/Equifax, Haver Analytics

Note: Severely derogatory loans are loans for which there are reports of a repossession, charge off to bad debt, or foreclosure.
4.4.4 Components of Consumer Credit

Billions of US$  As Of: 2015 Q4  Billions of US$

- Auto Loans
- Credit Card Debt
- Student Loans
- Other Household Debt

Source: FRBNY Consumer Credit Panel/Equifax, Haver Analytics
Note: Gray bar signifies NBER recession.
4.4.5 90+ Day Delinquency Rate by Loan Type

As Of: 2015 Q4

Percent

Credit Card Loans

Mortgage Loans

Student Loans

Auto Loans

HELOCs

Source: FRBNY Consumer Credit Panel/Equifax, Haver Analytics

Note: Student loan delinquency rates in 2012 Q3 are inflated by the reposting of a large number of delinquent loans by a single servicer. Gray bar signifies NBER recession.
4.5.1 National Repeat Sales Home Price Indices

As Of: Feb-2016

Source: CoreLogic, FHFA, Haver Analytics

Note: Jan-2000 = 100. Gray bars signify NBER recessions.
4.5.2 Mortgage Originations and Rates

Billions of US$  As Of: 2015 Q4  Percent

- Refinance (left axis)
- Purchase (left axis)

30-Year Mortgage Rate (right axis)

Source: Mortgage Bankers Association, Freddie Mac Primary Mortgage Market Survey

Note: Originations represent all 1-4 family homes. Originations calculated as 4-quarter moving averages. Mortgage rates calculated as quarterly averages.
4.5.3 Mortgage Delinquency and Foreclosure

As Of: 2015 Q4

Percent

Percent


Source: Mortgage Bankers Association, Haver Analytics

Note: Percent of all mortgages.
4.5.4 Mortgages with Negative Equity

Billions of US$  
As Of: 2015 Q4

Value of Negative Equity in Residential Mortgages (left axis)

Percent of Residential Mortgages with Negative Equity (right axis)

Source: CoreLogic
4.5.5 Purchase Origination Volume by Credit Score

Percent of Originations

As Of: 2015

Percent of Originations

Source: McDash, FHFA calculations

Note: Includes first lien purchases only.
4.5.6 Mortgage Originations by Product

Source: Inside Mortgage Finance
4.5.7 RMBS Issuance

Trillions of US$

As Of: 2015

Trillions of US$

Non-Agency
Agency

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Bloomberg, L.P., Dealogic, Thomson Reuters, SIFMA
4.5.8 Agency MBS Yield and Spread

As Of: 31-Mar-2016

Source: Bloomberg, L.P.
4.5.9 Mortgage Servicing Market

As Of: 2015 Q4

Source: Inside Mortgage Finance

Note: Data covers top 25 servicers in each quarter.
4.5.10 Commercial Property Price Indices

As Of: Feb-2016

Moody’s/RCA CPPI – Major Markets
Moody’s/RCA CPPI – National

Source: Real Capital Analytics, Moody’s Investors Service

Note: Jan-2008 = 100.
4.5.11 CRE Capitalization Rates and Spreads

As Of: 2015 Q4

Source: CoStar Group

Note: Dotted lines represent 1995-present average.
4.5.12 CMBS Issuance

As Of: 2015

Source: Inside Mortgage Finance
4.5.13 CMBS Senior Debt Spreads

Source: Barclays

As Of: 31-Mar-2016

Note: Cash spread of new issue, non-agency, 3.0 duper, 10-year last cash flow CMBS.
4.6.1 Nominal U.S. Dollar Trade-Weighted Index

As Of: Mar-2016

Note: Nominal U.S. Dollar Trade-Weighted Index is a weighted average of the FX value of the U.S. dollar against the currencies of a broad group of major U.S. trading partners.

Source: Federal Reserve, Haver Analytics
4.6.2 U.S. Dollar Exchange Rates

As Of: 31-Mar-2016

Index

Euro-Dollar
Major Dollar Index
EM
Yen-Dollar

Source: Federal Reserve, Haver Analytics

Note: 1-Jan-2008 = 100. EM is a weighted average of the FX values of the dollar against a subset of currencies in the broad index that do not circulate widely outside the country of issue.
4.6.3 Change in U.S. Dollar Exchange Rates

As Of: 31-Mar-2016

Source: Wall Street Journal, Haver Analytics
### 4.7.1 Returns in Selected Equities Indices

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major Economies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. (S&amp;P)</td>
<td>-0.4%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Euro (Euro Stoxx)</td>
<td>-14.9%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Japan (Nikkei)</td>
<td>-12.7%</td>
<td>11.4%</td>
</tr>
<tr>
<td>U.K. (FTSE)</td>
<td>-8.8%</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>Selected Europe</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany (DAX)</td>
<td>-16.7%</td>
<td>7.2%</td>
</tr>
<tr>
<td>France (CAC)</td>
<td>-12.9%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Italy (FTSE MIB)</td>
<td>-21.8%</td>
<td>-3.6%</td>
</tr>
<tr>
<td>Spain (IBEX)</td>
<td>-24.3%</td>
<td>-3.8%</td>
</tr>
<tr>
<td><strong>Emerging Markets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSCI Emerging Market Index</td>
<td>-14.1%</td>
<td>-6.5%</td>
</tr>
<tr>
<td>Brazil (Bovespa)</td>
<td>-2.1%</td>
<td>-6.1%</td>
</tr>
<tr>
<td>Russia (RTS)</td>
<td>-0.5%</td>
<td>-15.6%</td>
</tr>
<tr>
<td>India (Sensex)</td>
<td>-9.4%</td>
<td>5.4%</td>
</tr>
<tr>
<td>China (Shanghai SE)</td>
<td>-19.9%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Hong Kong (Hang Seng)</td>
<td>-16.6%</td>
<td>-2.5%</td>
</tr>
</tbody>
</table>

Source: Capital IQ
4.7.2 S&P 500 Key Ratios

As Of: 31-Mar-2016

- **P/B Ratio** (right axis)
- **Trailing P/E Ratio** (left axis)

Note: Dotted lines represent 1995-present median.

Source: Bloomberg, L.P.
4.7.3 Equity Market Volatility

As Of: 31-Mar-2016

VIX

1995-Present Average

Source: Capital IQ
4.8.1 Commodities

As Of: 31-Mar-2016

Index

Agriculture (S&P GSCI Agricultural Spot Index)
Industrial Metals (S&P GSCI Industrial Metals Spot Index)
Crude Oil (WTI)
Natural Gas

Source: Energy Information Administration, S&P, Haver Analytics

Note: 02-Jan-2008 = 100.
4.9.1 Commercial Paper Outstanding

Trillions of US$

As Of: 30-Mar-2016

Source: Federal Reserve

Note: Domestic includes CP issued in the U.S. by entities with foreign parents.
4.9.2 Commercial Paper Interest Rates

As Of: 31-Mar-2016

<table>
<thead>
<tr>
<th>Percentage Rates</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-Day AA-Rated ABCP</td>
<td>0.7</td>
</tr>
<tr>
<td>90-Day AA-Rated Financial</td>
<td>0.6</td>
</tr>
<tr>
<td>90-Day AA-Rated Nonfinancial</td>
<td>0.5</td>
</tr>
<tr>
<td>Overnight AA-Rated ABCP</td>
<td>0.4</td>
</tr>
<tr>
<td>Overnight AA-Rated Financial</td>
<td>0.3</td>
</tr>
<tr>
<td>Overnight AA-Rated Nonfinancial</td>
<td>0.2</td>
</tr>
<tr>
<td>Source: Federal Reserve</td>
<td></td>
</tr>
</tbody>
</table>

Source: Federal Reserve
4.9.3 Primary Dealer Repo Agreements

As Of: 30-Mar-2016

Source: FRBNY
4.9.4 Value of the Repo Market

Trillions of US$  As Of: 31-Mar-2016  Trillions of US$

Source: FRBNY

Note: Limited data were provided by the clearing banks prior to April 2008. These figures are estimates based on the data provided. Daily Federal Reserve RRP operations beginning in September 2013 are depicted; small-scale RRP test operations undertaken periodically at earlier dates are not depicted. Gray bar signifies NBER recession.
4.9.5 Collateral in the Tri-Party Repo Market

As Of: 9-Mar-2016

Source: FRBNY, Haver Analytics

Note: Other includes CDOs, international securities, money markets, municipal debt, and whole loans.
<table>
<thead>
<tr>
<th></th>
<th>10th Percentile</th>
<th>Median</th>
<th>90th Percentile</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>U.S. Treasuries</strong> (including Strips)</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Government Agency</strong></td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Corporate</strong></td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Private Label CMO, MBS, and ABS</strong></td>
<td>0%</td>
<td>2%</td>
<td>3%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Source: OFR/Federal Reserve/SEC Bilateral Repo Data Collection Pilot

Note: Excludes interaffiliate transactions and transactions using securities lending contracts.
4.9.7 Treasury Tri-Party and GCF Repo Rates

As Of: 31-Mar-2016

Overnight Treasury GCF Repo
Treasury Tri-Party Repo

Source: Bank of New York Mellon, DTCC, Bloomberg, L.P.
4.9.8 Value of Securities on Loan

As Of: 31-Mar-2016

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

Source: Markit Group Limited

Global Market (including U.S.)

U.S. Market
4.9.9 Global Securities Lending by Security Type

Percent of Lending

As Of: 31-Mar-2016

Percent of Lending

Source: Markit Group Limited

Note: Data is based on a survey of agent-based lenders. Other includes ETFs, emerging market bonds, and depository receipts.
4.9.10 U.S. Securities Lending Cash Reinvestment

Trillions of US$

As Of: 2015 Q4

Source: The Risk Management Association

Note: Data is based on a survey of agent-based lenders.
4.10.1 Normalized Future Prices

As Of: 31-Mar-2016

Source: Bloomberg, L.P.
4.10.2 Market Volatility Indices

Source: Bloomberg, L.P.
4.10.3 Selected Exchange Open Interest

Source: CFTC
4.10.5 Selected Futures Open Interest

Millions of US$  As Of: Mar-2016  Millions of US$

10-Year Treasury (left axis)
E-Mini (left axis)
WTI Crude (right axis)

Source: Bloomberg, L.P.
4.10.7 WTI Crude COT

As Of: 29-Mar-2016

Managed Money
Swap Dealers
Producer/Merchants

Source: Bloomberg, L.P.
4.10.8 10-Year Treasury Traders in Financial Futures

Source: Bloomberg, L.P.
4.10.9 CME Rate Swap Futures Open Interest

Thousands of US$ As Of: Mar-2016 Thousands of US$

- **30-Year Deliverable**
- **5-Year Deliverable**
- **10-Year Deliverable**

Source: Bloomberg, L.P.
4.10.10 OTC Equity Options: Global Notional Outstanding

As Of: 2015 Q4

Source: BIS, Haver Analytics
4.10.11 OTC Equity Option Share of All OTC Derivatives

As of 2015 Q4

Percent


Source: BIS, Haver Analytics
4.10.12 OTC Equity Options: Global Market Value

Billions of US$  As Of: 2015 Q4  Billions of US$

- Non-Financial Customers
- Other Financial Institutions
- Reporting Dealers

Source: BIS, Haver Analytics
4.10.13 BHC OTC Equity Option Exposure

As Of: 2015 Q4

Percent

Share of Sector
OTC Equity Options

Share of
Sector Assets

Number of BHCs

Source: FR Y-9C

Note: Ten largest U.S. BHCs. Share of options calculated as notional amounts outstanding.
4.10.15 Credit Derivatives Outstanding

As Of: 2015 Q4

Trillions of US$

Note: Notional amounts.
4.10.16 Global Central Clearing Market Share

As Of: 2015 Q4

Note: Percentage of the total outstanding notional. Adjusted for double-counted cleared notional outstanding data.

Source: DTCC
D.1 Bilateral Compression Process

1. PARTICIPATION
Counterparties agree to participate in compression.

2. ELIGIBLE SWAPS SELECTION
Counterparties specify which swap positions are to be considered for compression.

3. COMPRESSION PROPOSAL
List of termination and replacement trades is created.

4. VALIDATION AND CONFIRMATION
Counterparties review and agree to proposal.

5. MARGIN EXCHANGE
Required initial and variation margins are exchanged, as needed.

6. EXECUTION OF PROPOSAL
Existing positions are terminated and replacement swap positions are created.

7. NOTIFICATION AND COMPLETION
Counterparties are notified of completion of compression and resulting positions.

Note: One of the counterparties may be a CCP that clears swaps.
## D.2 Currently Available Compression Options

<table>
<thead>
<tr>
<th>Provider</th>
<th>Non-cleared Swaps</th>
<th>Cleared Swaps</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bilateral</td>
<td>Duo / Bilateral</td>
</tr>
<tr>
<td>Bilateral <em>(no service provider)</em></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>TriOptima <em>(private service provider)</em></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>CME <em>(CCP)</em></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>EUREX <em>(CCP)</em></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>LCH <em>(CCP)</em></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Swap Execution Facilities (SEFs)**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: TriOptima, CME, EUREX, LCH

Note: *There are 30-40 compression cycles annually, each with a single currency. ** SEFs are trading venues that offer trade execution services for swaps that are mandated for central clearing and SEF trading. Compression trades can be executed on SEFs, but the compression itself is performed by CCPs.*
D.3 Interest Rate Derivative Compression Volume

Source: TriOptima

As Of: 2015

Note: Gross notional is represented as single-counted for notional compressed outside of a CCP and double-counted for notional compressed inside of a CCP.
4.10.17 U.S. Central Clearing Market Share

Source: SwapsInfo (ISDA)

Note: Percentage of transaction dollar volume.
4.10.18 U.S. On-SEF Trading Share

As Of: 31-Mar-2016

Source: SwapsInfo (ISDA)

Note: Share of notional volume. 5-day moving averages.
Billions of US$ As Of: 31-Mar-2016

4.10.19 U.S. On-SEF Trading Volume

CDS Indices (left axis)
Interest Rate Derivatives (right axis)

Source: SwapsInfo (ISDA)

Note: 10-day moving averages.
4.10.20 Interest Rate Derivatives Market Activity by Currency

As Of: 31-Mar-2016

Billions of US$

Source: SwapsInfo (ISDA)

Note: 10-day moving averages.
4.11.1 BHC Total Assets

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

As Of: 2015 Q4

Note: Prior to 2014 Q1, the numerator of this ratio is tier 1 common capital. Beginning 2014 Q1 for “advanced approaches” BHCs and in 2015 Q1 for all other BHCs, the numerator is common equity tier 1 capital. For advanced approaches BHCs that have exited their parallel run, the denominator is total RWAs calculated under the advanced approaches framework (the standardized approach is used otherwise).
4.11.3 Return on Equity and Return on Assets

**As Of: 2015 Q4**

- **ROE (right axis)**
- **ROA (left axis)**

Note: Return on equity is equal to net income divided by average equity. Return on assets is equal to net income divided by average assets.

Source: FR Y-9C
4.11.4 Net Interest Margins

As Of: 2015 Q4

Less than $50B

Greater than $50B

Source: FR Y-9C

Note: Bank holding companies must have completed the FR Y-9C form for the entire period between Q1 2010 and Q2 2015 to be included in this figure.
4.11.5 Litigation Expenses at Selected BHCs

As Of: 2015 Q4

Billions of US$

Note: Includes litigation expenses at Bank of America, Citigroup, Goldman Sachs, JPMorgan Chase, Morgan Stanley, and Wells Fargo.

Source: FR Y-9C
4.11.6 Loan-to-Asset Ratios

Share of Total Loans (right axis)

Share of C&I and CRE (left axis)

Share of Residential Mortgages (left axis)

Source: FR Y-9C
4.11.7 Loan Loss Reserves

Percent of NPLs

As Of: 2015 Q4

Percent of NPLs

Less than $50B

Greater than $50B

Source: FR Y-9C
4.11.8 Non-Performing Loans

As Of: 2015 Q4

Source: FR Y-9C
4.11.9 Higher-Risk Securities

Source: FR Y-9C
Pre-Stress
Post-Stress Minimum

Note: Aggregate ratios shown for all participants in each year. Post-stress ratios reflect the minimum ratio observed at any point under the severely adverse supervisory scenario. Ratios are calculated using standardized approach RWAs.
### Non-Objection to Capital Plan

<table>
<thead>
<tr>
<th>Ally Financial</th>
<th>Comerica</th>
<th>MUFG Americas</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Express</td>
<td>Discover Financial</td>
<td>Northern Trust</td>
</tr>
<tr>
<td>Bank of America**</td>
<td>Fifth Third Bancorp</td>
<td>PNC Financial</td>
</tr>
<tr>
<td>Bank of New York Mellon</td>
<td>Goldman Sachs*</td>
<td>Regions Financial</td>
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<tr>
<td>BB&amp;T</td>
<td>HSBC North America</td>
<td>State Street</td>
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<tr>
<td>BBVA Compass</td>
<td>Huntington Bancshares</td>
<td>SunTrust</td>
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<tr>
<td>BMO Financial</td>
<td>JPMorgan Chase*</td>
<td>U.S. Bancorp</td>
</tr>
<tr>
<td>Capital One Financial</td>
<td>KeyCorp</td>
<td>Wells Fargo</td>
</tr>
<tr>
<td>Citigroup</td>
<td>M&amp;T Bank</td>
<td>Zions</td>
</tr>
<tr>
<td>Citizens Financial</td>
<td>Morgan Stanley*</td>
<td></td>
</tr>
</tbody>
</table>

### Objection to Capital Plan

<table>
<thead>
<tr>
<th>Deutsche Bank</th>
<th>Santander Holdings USA</th>
</tr>
</thead>
</table>

Note: *Goldman Sachs, JPMorgan Chase, and Morgan Stanley met minimum capital requirements on a post-stress basis after submitting adjusted capital actions. **Bank of America submitted a new capital plan to address certain weaknesses in its capital planning processes at the end of September 2015 as required by the Federal Reserve, and, in December 2015, the Federal Reserve announced that it did not object to the resubmitted capital plan.

Source: Federal Reserve
4.11.12 Selected High-Quality Liquid Assets at BHCs

Percent of Assets

As Of: 2015 Q4

Percent of Assets

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
4.11.13 Selected Liquid Assets at Standard LCR BHCs

Percent of Assets

As Of: 2015 Q4

Percent of Assets

Reserves

Fannie Mae and Freddie Mac MBS

Treasury Securities

Source: FR Y-9C
As Of: 2015 Q4

Note: NSFR is estimated using quarter-end balances reported in FR Y-9C and FR 2900 filings.

Source: FR Y-9C, FR 2900

Minimum NSFR
4.11.16 P/B and P/E Ratios of Six Large Complex BHCs

As Of: 31-Mar-2016

Note: Market cap-weighted average of BAC, C, GS, JPM, MS, and WFC.
4.11.17 CDS Spreads of Six Large Complex BHCs

As Of: 31-Mar-2016

Basis Points

Source: Markit Group Limited

Note: CDS spreads of BAC, C, GS, JPM, MS, and WFC.
4.11.18 Number of Deals by Size of Pro Forma Bank

Number of Deals by Size of Pro Forma Bank (As Of: 2015)

- Greater than $50B
- Less than $10B
- Between $10B and $50B

Note: Contains deals that did not involve FDIC assistance. Pro forma bank size is calculated as the sum of total assets of the buyer and the target as of the deal announcement.

Source: SNL Financial
4.11.19 FDIC-Insured Failed Institutions

Number of Institutions As Of: 2015 Percent

- Number of Institutions (left axis)
- Assets of Failed Institutions as a Percent of Nominal GDP (right axis)

Source: BEA, FDIC, Haver Analytics
Note: No FDIC-insured institutions failed during 2005 and 2006.
As Of: 2015 Q4

Note: Other assets includes government securities, asset-backed securities, and other trading assets.

Source: Federal Reserve, Haver Analytics
4.11.22 Cash Assets of U.S. Branches and Agencies of Foreign Banks

Source: Federal Reserve
4.11.23 U.S. Branches and Agencies of Foreign Banks: Liabilities

As Of: 2015 Q4

Trillions of US$

<table>
<thead>
<tr>
<th>Deposits &amp; Credit Balances</th>
<th>Net Due to Related Depository Institutions</th>
<th>Other Liabilities</th>
<th>Securities Sold with Repos &amp; Fed Funds Purchased</th>
</tr>
</thead>
</table>

Source: Federal Reserve, Haver Analytics

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

Billions of US$

As Of: 2015

Billions of US$

Noninterest Income

Net Interest Income

Net Income

Provisions

Noninterest Expense

Realized Gains/Losses on Investments

Source: NCUA

Note: Federally insured credit unions.
4.11.25 Credit Union Deposits

Percent

As Of: 2015 Q4

Percent

Money Market and IRA Deposit Share (left axis)

Interest-Sensitive Deposit Share (right axis)

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

Source: NCUA
4.11.26 Credit Union Net Long-Term Assets

Percent of Total Assets

As Of: 2015 Q4

Percent of Total Assets

Source: NCUA

Note: Federally insured credit unions. Long-term investments mature in three or more years.
4.11.27 Credit Union Investments by Maturity

Source: NCUA

Note: Federally insured credit unions. Investments <1 year exclude securities with maturities <3 months.
4.12.1 Number of Broker-Dealers and Industry Net Income

Number of Firms | As Of: 2015 | Billions of US$
--- | --- | ---
2009 | 4800 | Net Income (right axis)
2010 | 4600 |
2011 | 4400 |
2012 | 4200 |
2013 | 4000 |
2014 | 3800 |
2015 | 3600 |

Source: FINRA
4.12.2 Broker-Dealer Revenues

Billions of US$ As Of: 2015

- Fees – Supervision, Advisory, Administration
- Other
- Margin Interest
- Underwriting
- Commissions
- Sale of Investment Company Shares

Source: FINRA
4.12.3 Broker-Dealer Assets and Leverage

Trillions of US$

As Of: 2015

Leverage (right axis)

Total Assets (left axis)

Note: Leverage is the ratio of total assets to total ownership equity.

Source: FINRA
4.12.4 Large Broker-Dealer Assets and Leverage by Affiliation

Trillions of US$

As Of: 2015

Ratio

Source: FINRA

Note: Data covers BHC- and FBO-affiliated broker-dealers that are among the 25 largest broker-dealers by assets as of 2015.
4.12.5 Primary Dealer Securities

Source: FRBNY

Note: Corporate Securities includes corporate bonds, commercial paper, non-agency residential MBS, and other CMBS.
<table>
<thead>
<tr>
<th>Name</th>
<th>Total Assets</th>
<th>Name</th>
<th>Total Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPMorgan Chase</td>
<td>2,351,698,000</td>
<td>Capital One</td>
<td>334,179,916</td>
</tr>
<tr>
<td>Bank of America</td>
<td>2,147,391,000</td>
<td>GE Capital</td>
<td>318,826,145</td>
</tr>
<tr>
<td>Wells Fargo</td>
<td>1,787,632,000</td>
<td>New York Life</td>
<td>301,657,000</td>
</tr>
<tr>
<td>Citigroup</td>
<td>1,731,210,000</td>
<td>TIAA</td>
<td>288,956,000</td>
</tr>
<tr>
<td>MetLife</td>
<td>877,933,000</td>
<td>HSBC North America</td>
<td>271,888,608</td>
</tr>
<tr>
<td>Goldman Sachs</td>
<td>861,419,000</td>
<td>TD Group</td>
<td>267,143,521</td>
</tr>
<tr>
<td>Morgan Stanley</td>
<td>787,465,000</td>
<td>Manulife/John Hancock</td>
<td>253,994,000</td>
</tr>
<tr>
<td>Prudential Financial</td>
<td>757,388,000</td>
<td>Lincoln</td>
<td>251,937,000</td>
</tr>
<tr>
<td>Berkshire Hathaway</td>
<td>552,257,000</td>
<td>State Street</td>
<td>245,198,879</td>
</tr>
<tr>
<td>AIG</td>
<td>496,943,000</td>
<td>Northwestern Mutual</td>
<td>239,514,000</td>
</tr>
<tr>
<td>U.S. Bancorp</td>
<td>421,853,000</td>
<td>State Farm</td>
<td>231,690,000</td>
</tr>
<tr>
<td>Bank of New York Mellon</td>
<td>393,780,000</td>
<td>The Hartford</td>
<td>228,348,000</td>
</tr>
<tr>
<td>PNC</td>
<td>358,690,085</td>
<td>BlackRock</td>
<td>225,261,000</td>
</tr>
</tbody>
</table>

Source: National Information Center, SNL Financial, Company Filings

Note: Thousands of U.S. dollars. Data as of 2015 Q4. GAAP and SAP accounting. Insurers listed in blue. Entity classifications correspond to those used by the National Information Center and SNL Financial. Asset levels correspond to consolidated financial reporting.
4.12.7 Insurance Industry Net Income

Billions of US$

As Of: 2015

Source: SNL Financial

Note: Life includes accident and health.
4.12.8 Net Yield on Invested Assets

**Percent**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>8.0</td>
</tr>
<tr>
<td>2010</td>
<td>7.5</td>
</tr>
<tr>
<td>2011</td>
<td>7.0</td>
</tr>
<tr>
<td>2012</td>
<td>6.5</td>
</tr>
<tr>
<td>2013</td>
<td>6.0</td>
</tr>
<tr>
<td>2014</td>
<td>5.5</td>
</tr>
<tr>
<td>2015</td>
<td>5.0</td>
</tr>
</tbody>
</table>

**As Of: 2015 Q4**

- **Yield on A-Rated Corporate Debt**: Decreasing trend over the years.
- **Life**: Higher yields compared to others.
- **P&C**: Lower yields compared to others.

**Source**: SNL Financial, Bank of America Merrill Lynch, Haver Analytics

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

**Billions of US$**

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Capital and Surplus / Assets (right axis)</td>
<td>450</td>
<td>500</td>
<td>550</td>
<td>600</td>
<td>650</td>
<td>700</td>
<td>750</td>
</tr>
<tr>
<td>P&amp;C Capital and Surplus / Assets (right axis)</td>
<td>300</td>
<td>350</td>
<td>400</td>
<td>450</td>
<td>500</td>
<td>550</td>
<td>600</td>
</tr>
<tr>
<td>Life Capital and Surplus (left axis)</td>
<td>200</td>
<td>250</td>
<td>300</td>
<td>350</td>
<td>400</td>
<td>450</td>
<td>500</td>
</tr>
<tr>
<td>P&amp;C Capital and Surplus (left axis)</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>300</td>
<td>350</td>
<td>400</td>
<td>450</td>
</tr>
</tbody>
</table>

**As Of: 2015**

**Percent of Total Assets**

**Source:** SNL Financial

**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.
4.12.10 Consumer Loans and Leases Outstanding

Trillions of US$

As Of: Mar-2016

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 2014 due to change in data collection methodology. Gray bars signify NBER recessions.
4.12.11 Business Loans and Leases Outstanding

As Of: Mar-2016

Trillions of US$

2.5
2.0
1.5
1.0
0.5
0.0

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.
4.12.12 Subprime Auto Lending

As Of: 2016 Q1

Bank/Credit Union Share of Subprime Auto Lending
Finance Company Share of Subprime Auto Lending
Finance Company Share of Total Auto Lending
Bank/Credit Union Share of Total Auto Lending

Source: Experian

Note: Finance company category excludes captive auto lenders and buy-here, pay-here dealers.
4.12.13 ABS Issuance

As Of: 2015

Billions of US$

Source: Thomson Reuters, SIFMA
4.12.14 Selected ABS Spreads

As Of: 31-Mar-2016

Source: Barclays

Note: Spreads to Treasury securities.
4.12.15 Agency REIT Assets and Leverage

As Of: 2015 Q4

Note: Data for 16 publicly traded agency REITs. Leverage is the ratio of total assets to equity. Not all agency REITs existed in all time periods in the figure.

Source: Bloomberg, L.P.
4.12.16 Agency REIT Price-to-Book Ratio

As Of: 2015 Q4

Note: Data for 16 publicly traded agency REITs. Price-to-book ratio is weighted by market capitalization. Not all agency REITs existed in all time periods in the figure.

Source: Bloomberg, L.P.
4.13.1 MMF Assets by Fund Type

As Of: Mar-2016

- **Trillions of US$**
- **Source: SEC**

- **Prime**
- **Government and Treasury**
- **Tax-Exempt**
4.13.2 Liquid Asset Shares of Prime MMFs

Percent of Total Assets

As Of: Mar-2016

Percent of Total Assets

Source: SEC

Note: Weighted by fund size.
4.13.3 Weighted-Average Maturity of MMFs

As Of: Mar-2016

Source: SEC

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

Trillions of US$

As Of: 2015

Trillions of US$

Note: Other is composed of unit investment trusts and closed-end funds.

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

As Of: Mar-2016

Billions of US$

Source: ICI, Haver Analytics
4.13.6 Monthly Equity Mutual Fund Flows

As Of: Mar-2016

Billions of US$ 

Source: ICI, Haver Analytics
4.13.7 Bank Loan Mutual Funds: Annual Flows

Billions of US$  As Of: 2015  Billions of US$

Source: Morningstar, Inc.
4.13.8 High-Yield Mutual Funds: Annual Flows

Billions of US$

As Of: 2015

Source: Morningstar, Inc.
4.13.9 Alternative Mutual Funds: Annual Flows

Billions of US$ As Of: 2015 Billions of US$

Source: Morningstar, Inc.
4.13.10 Cumulative Equity Fund Flows

Billions of US$ As Of: Mar-2016 Billions of US$

International Passively Managed
U.S. Passively Managed
International Actively Managed
U.S. Actively Managed

Source: Morningstar, Inc.
Note: Includes ETFs and mutual funds.
4.13.11 U.S.-Listed ETP AUM and Count

As Of: 2015

Source: Morningstar, Inc.
4.13.12 Retirement Fund Assets by Plan Type

Source: Federal Reserve, Haver Analytics
4.13.13 Public and Private Pension Funding Levels

Source: Public Fund Survey, Milliman 2016 Pension Funding Study
4.13.14 U.S. Private Equity AUM

Source: Preqin

As Of: 2015 Q3

Trillions of US$

Undeployed Capital
Existing Investments
4.13.15 M&A Loan Volume for Private Equity-Backed Issuers

As Of: 2015

Source: S&P LCD
6.1.1 Systemic Risk Measures

Source: Bloomberg, L.P., OFR calculations

Note: Sample consists of BAC, C, GS, JPM, MS, and WFC. Measures are standardized by their historical volatility.
6.3.1 Equity Prices and Volatility

As Of: 31-Mar-2016

Index

S&P 500 (left axis)
CBOE VIX (right axis)

Source: Capital IQ
6.3.2 Crude Oil Prices and Volatility

WTI Spot Price (left axis)

Crude Oil VIX (right axis)

As Of: 31-Mar-2016

Source: Bloomberg, L.P., Energy Information Administration, Haver Analytics
6.3.3 Aggregate Tier 1 Capital Ratio at Domestic BHCs

Percent of Total Assets

As Of: 2015 Q4

Percent of Total Assets

Source: FR Y-9C
F.1 Selected Sector High-Yield Spreads

As Of: 31-Mar-2016

Basis Points

Source: Bloomberg, L.P.

Note: Spreads are option adjusted to the U.S. dollar swap curve.
F.2 Expected Year-Ahead Defaults of Oil Firms

Percent of Liabilities  As Of: Mar-2016  Percent of Liabilities

Source: Moody’s Analytics CreditEdge

Note: Firm-level estimates of default weighted by firm liabilities as a percent of total liabilities, excluding defaulted firms.
H.1 Corporate Bond Turnover

Source: FINRA

Note: Median daily turnover. More Active consists of 1,000 most active issues each year with respect to par volumes of trades. Less Active consists of the remainder of issues.

Source: FINRA
H.2 Primary Dealer Positions and Transactions

Source: FRBNY

Note: Corporate Securities includes corporate bonds, commercial paper, non-agency residential MBS, and other CMBS.
H.3 U.S. Treasury Security Turnover and Official Sector Holdings

Percent

As Of: Feb-2016

Trillions of US$

Source: U.S. Department of the Treasury, Federal Reserve, FRBNY, Haver Analytics
Note: 21-day rolling averages. For Treasury securities, quoted bid/offer spreads for on-the-run 10-year note (in basis points in price terms). For swaps, quoted bid/offer spreads for 10-year interest rate swaps (in basis points in yield terms). For corporate bonds, realized bid/offer spreads (as a percent of par). Corporate bond spreads computed daily for each bond as the difference between the average (volume-weighted) dealer-to-client buy price and the average (volume-weighted) dealer-to-client sell price. This difference is then averaged (on an equal-weighted basis) across bonds within each credit category.

Source: BrokerTec, Bloomberg, L.P., Mergent FISD, FINRA, FRBNY staff calculations