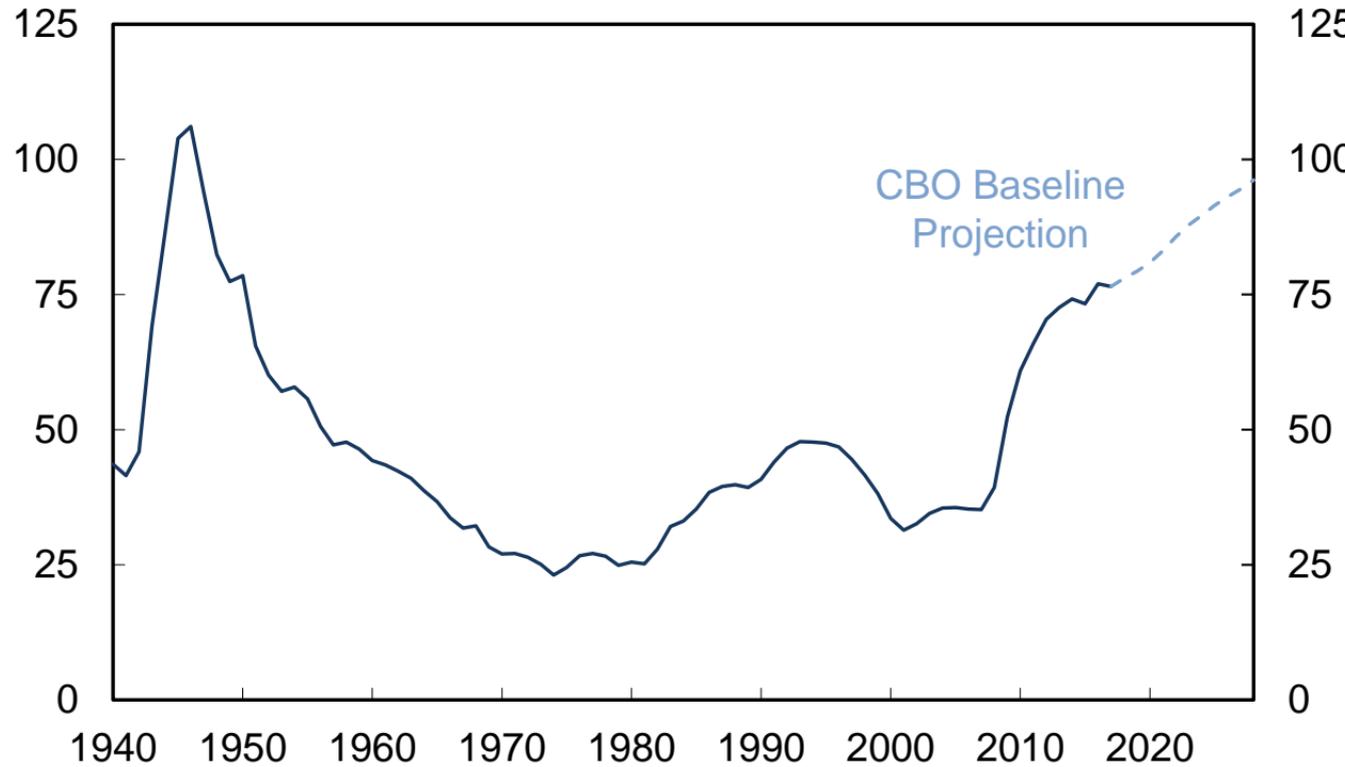


4.1.1 Federal Debt Held by the Public

Percent of GDP

As Of: 2017

Percent of GDP



CBO Baseline
Projection

Note: Data for fiscal years.
Years after 2017 are projected.

Source: CBO, Haver Analytics

4.1.2 U.S. Treasury Yields and Yield Curve

Percent

As Of: 31-Oct-2018

Basis Points



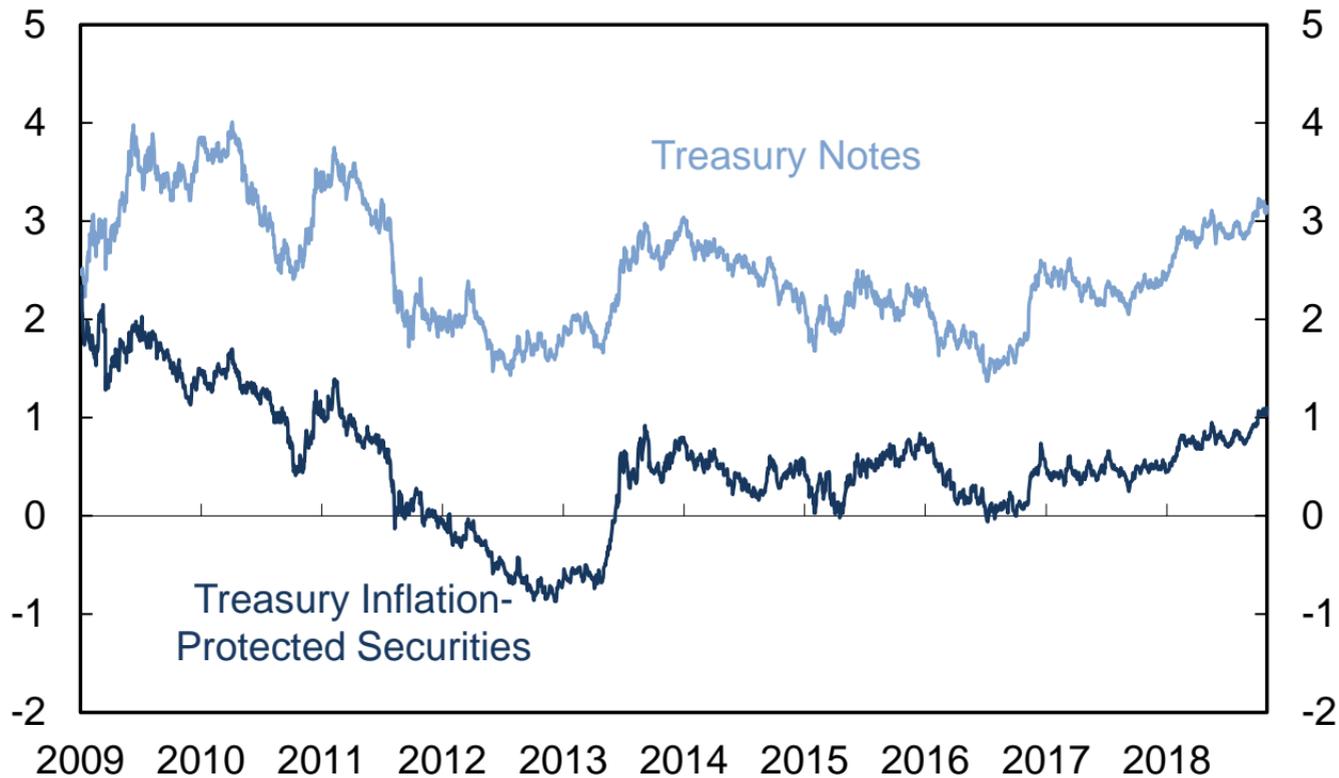
Source: U.S. Department of the Treasury

4.1.3 10-Year Treasury Yields

Percent

As Of: 31-Oct-2018

Percent



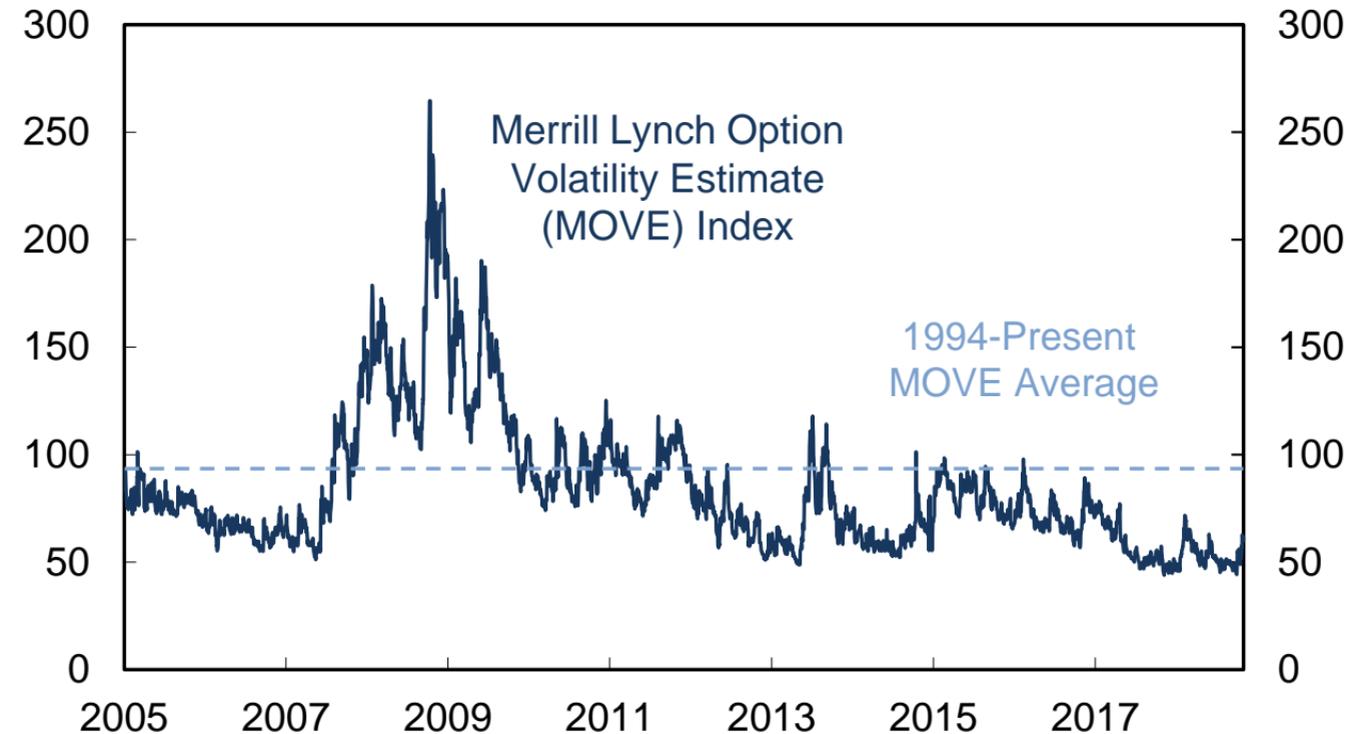
Source: U.S. Department of the Treasury

4.1.4 Fixed Income Implied Volatility

Basis Points

As Of: 31-Oct-2018

Basis Points



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

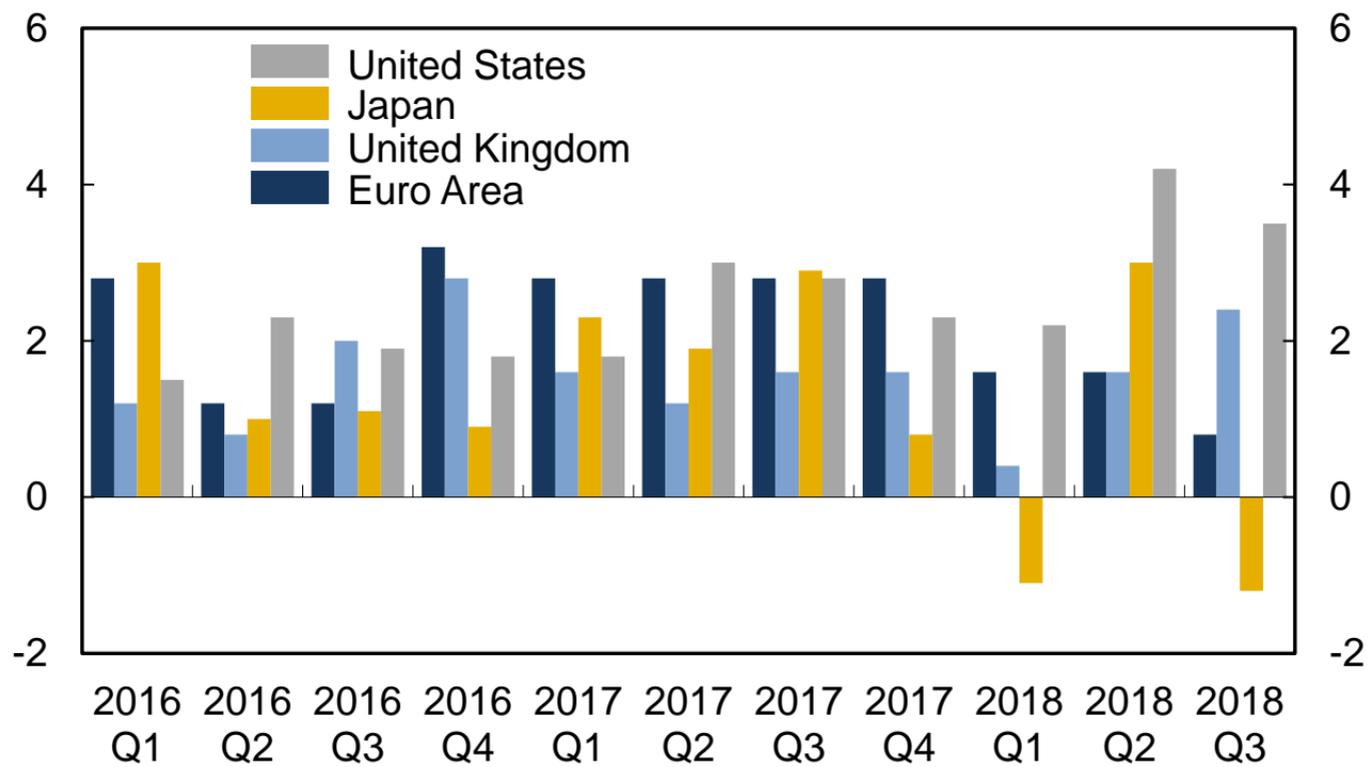
Source: Bloomberg, L.P.

4.2.1 Advanced Economies Real GDP Growth

Percent

As Of: 2018 Q3

Percent



Source: Eurostat, CAO, BEA, Haver Analytics

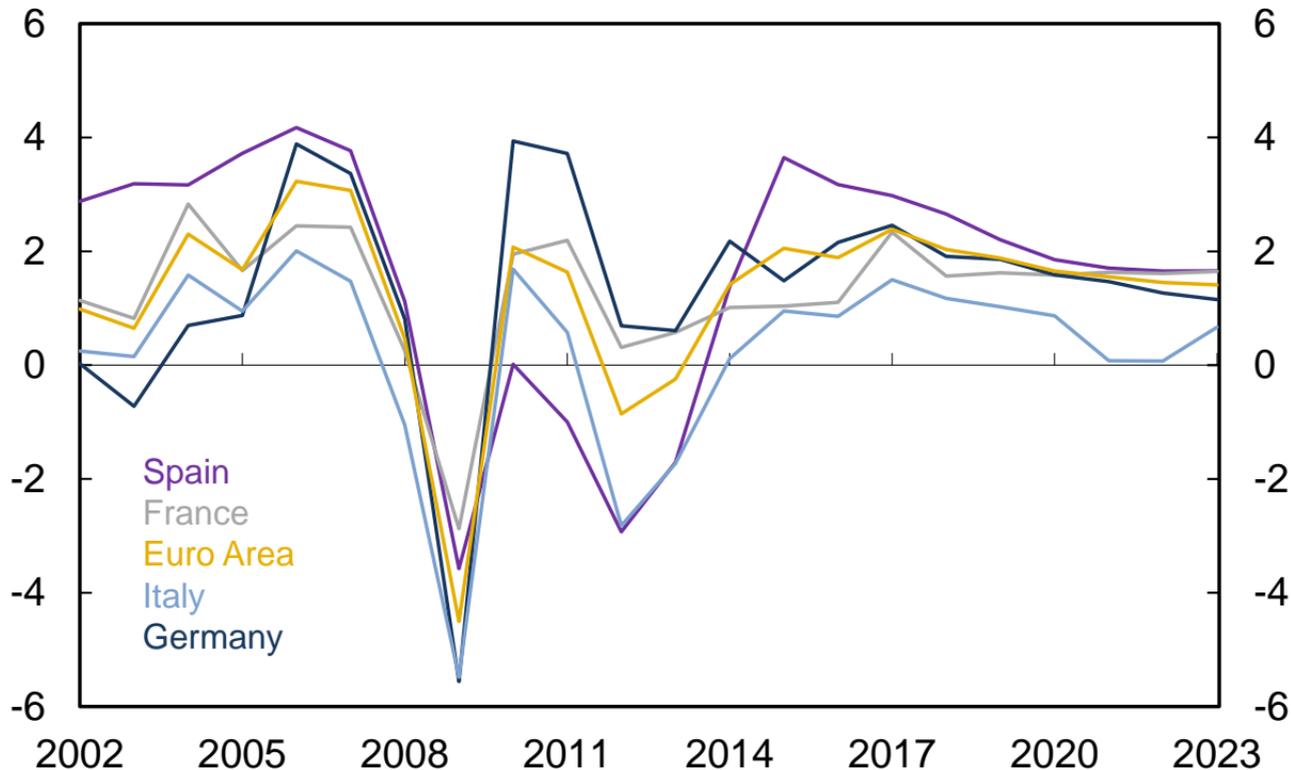
Note: Data represents seasonally adjusted quarter-over-quarter annualized real GDP growth rates.

4.2.2 Euro Area GDP Growth

Percent

As Of: 2017

Percent



Note: Year-over-year percent change.
Data after 2017 are projected.

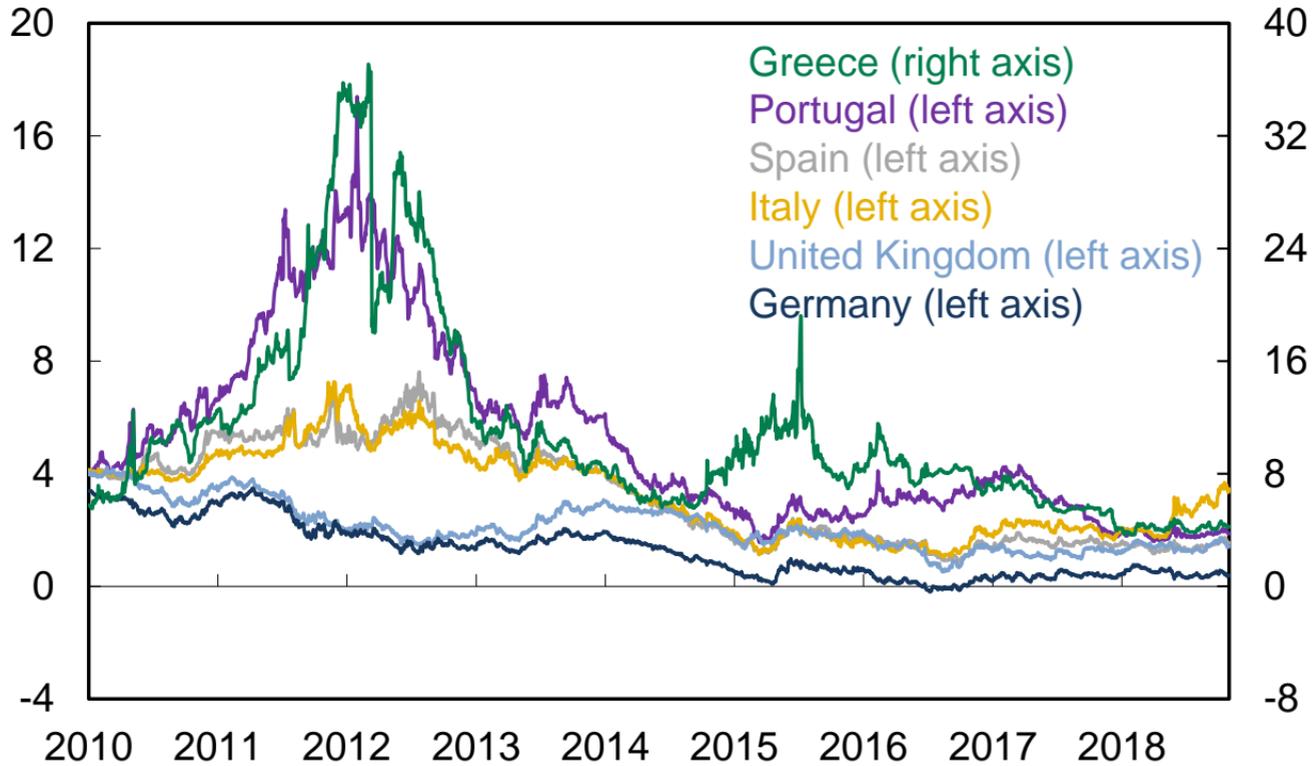
Source: IMF, Haver Analytics

4.2.3 European 10-Year Yields

Percent

As Of: 31-Oct-2018

Percent



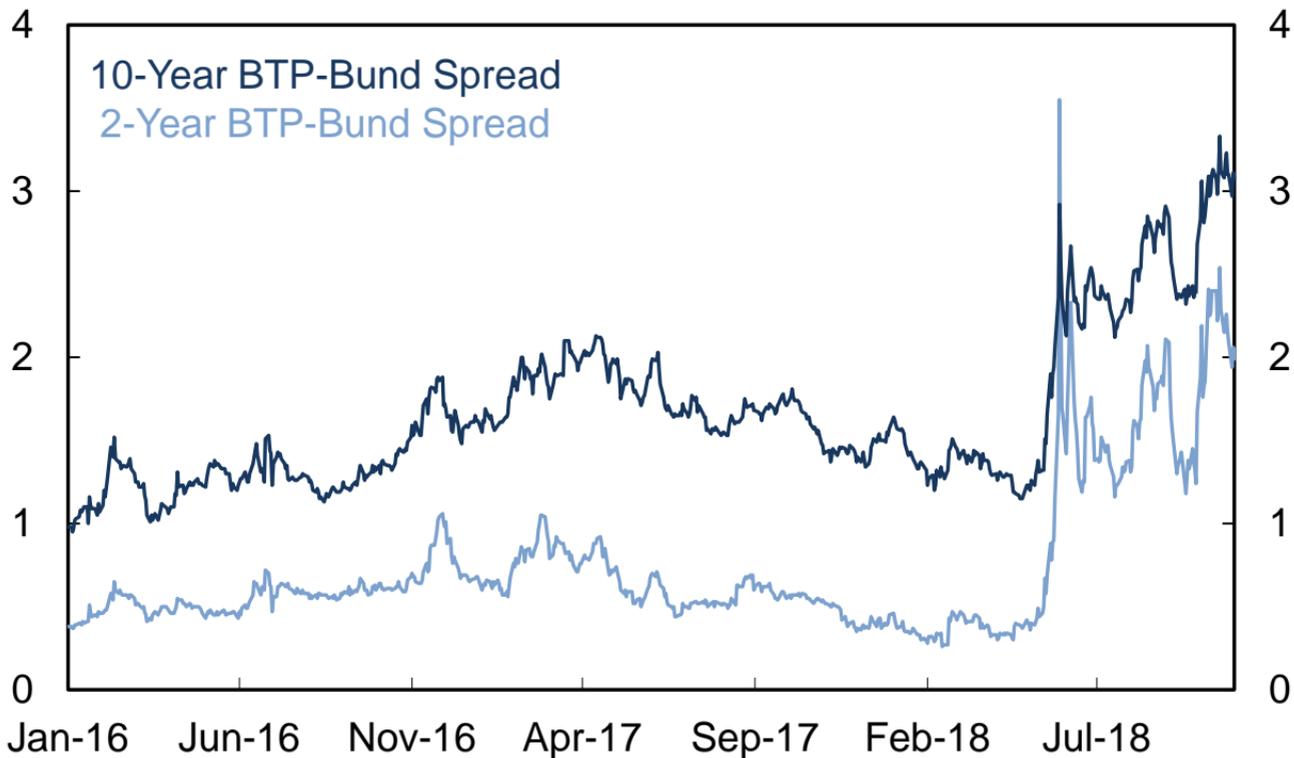
Source: Bloomberg, L.P.

4.2.4 Italian Sovereign Bond Spreads

Percent

As Of: 31-Oct-2018

Percent



Source: Haver Analytics

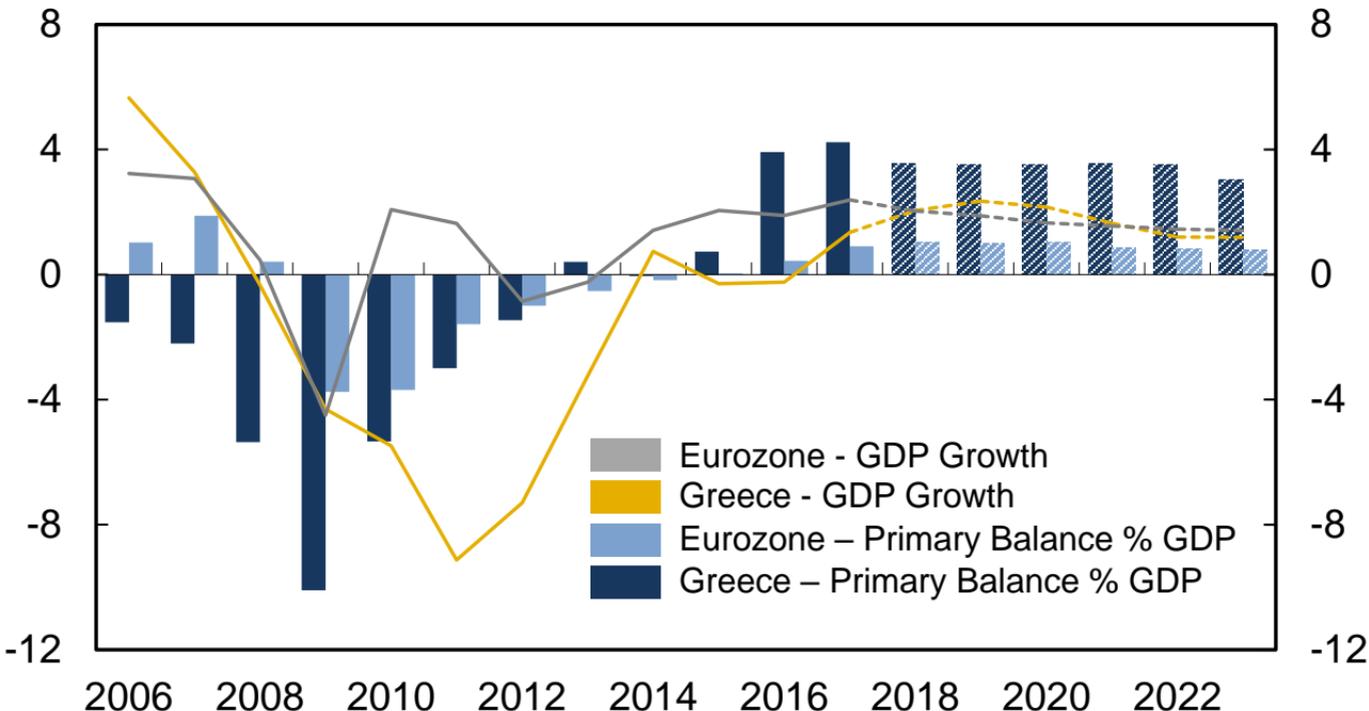
Note: Spreads between Italian and German sovereign bonds.

4.2.5 Greece Fiscal Projections

Percent

As Of: 2017

Percent



Source: IMF, Haver Analytics

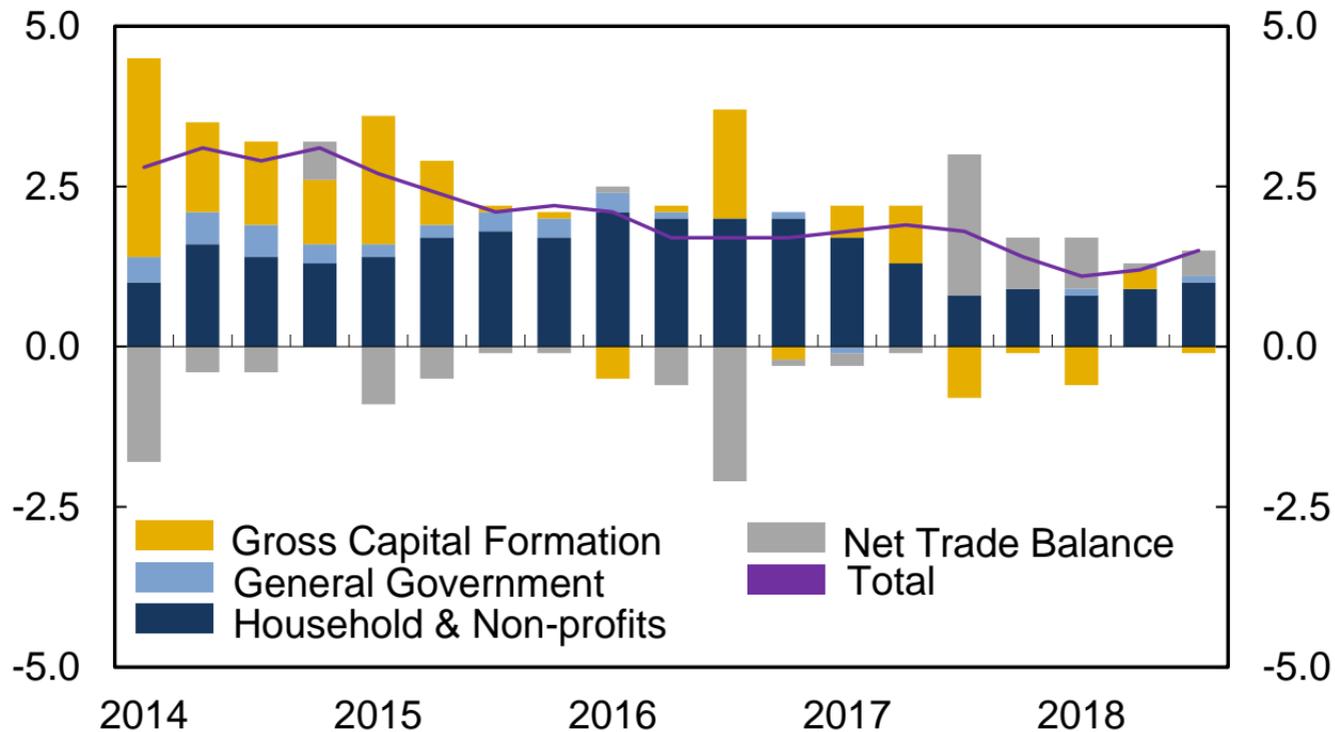
Note: Projections from IMF WEO. Years after 2017 are projected.

4.2.6 Contributions to UK GDP Growth

Percent

As Of: 2018 Q3

Percent



Source: UK Office of National Statistics, Haver Analytics

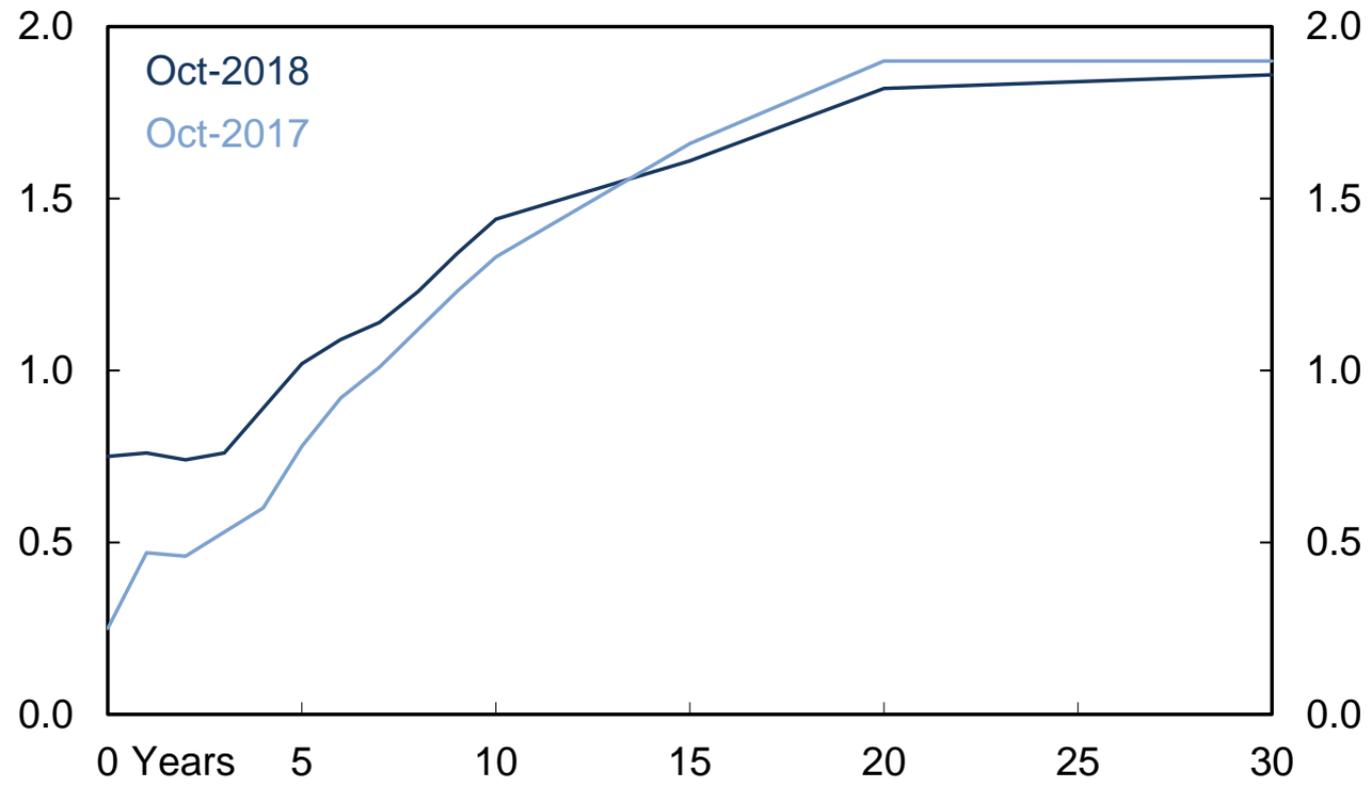
Note: Data represents year-over-year real GDP growth rates. Components may not sum to total due to statistical discrepancies.

4.2.7 UK Yield Curve

Percent

As Of: 31-Oct-2018

Percent



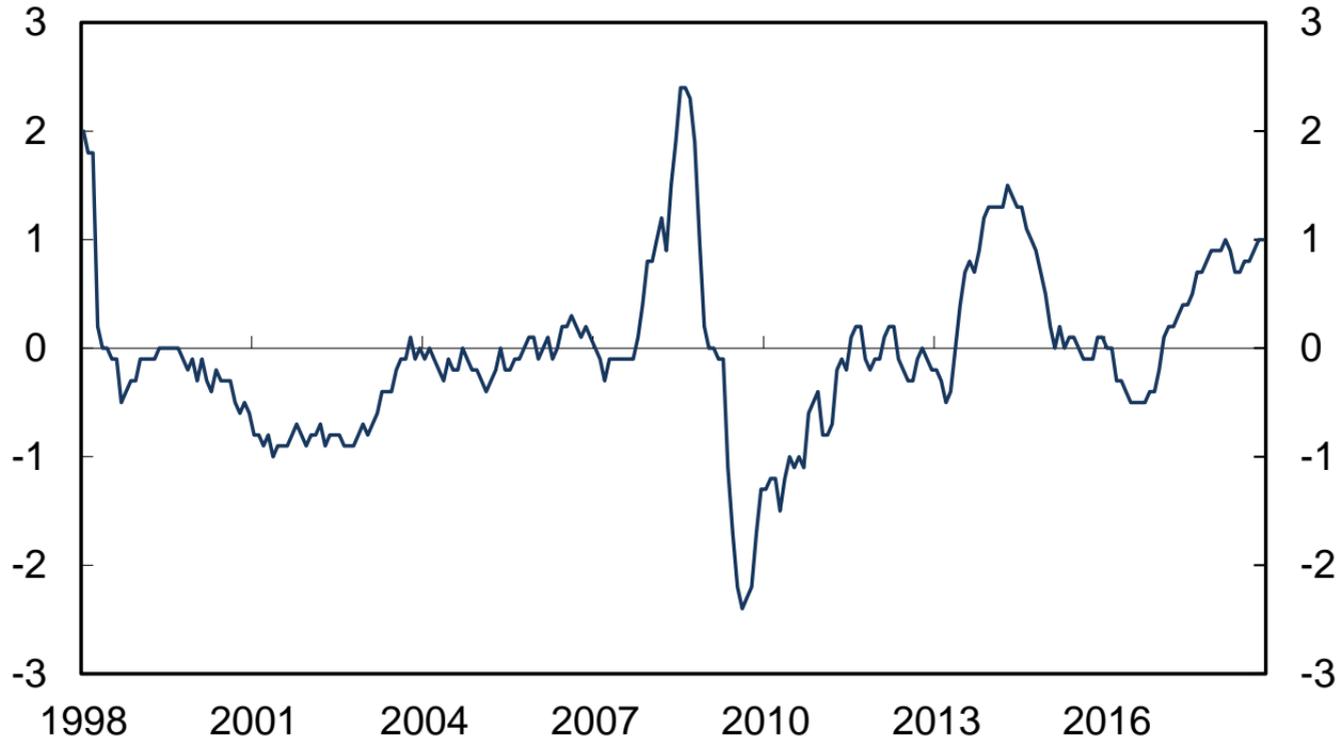
Source: Haver Analytics

4.2.8 Japanese Consumer Price Inflation

Percent

As Of: Oct-2018

Percent



Source: Bank of Japan,
Haver Analytics

Note: Data represents year-over-year percent change.
CPI excludes fresh food and is adjusted for the
consumption tax increase that took effect in April 2014.

4.2.9 Japan 10-Year Government Bond Yield

Basis Points

As Of: 31-Oct-2018

Basis Points



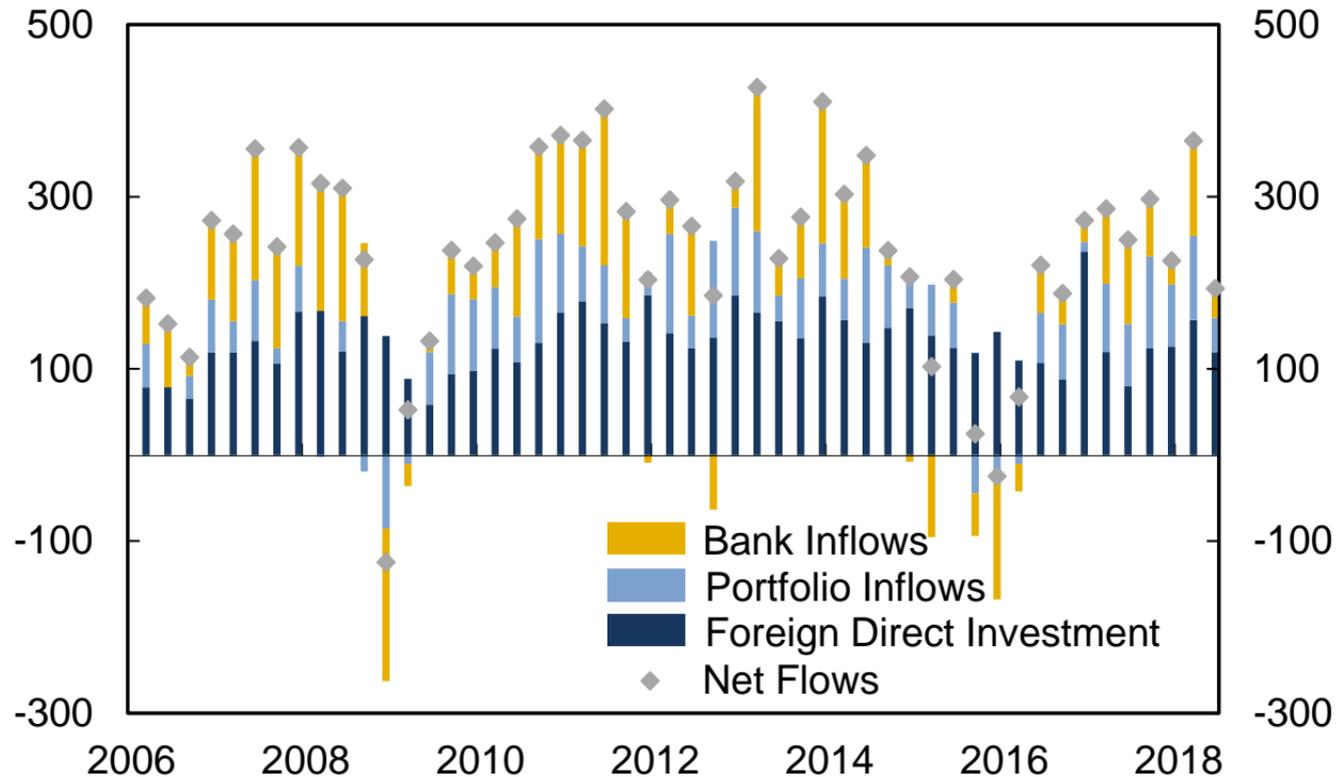
Source: Bloomberg, L.P.

4.2.10 Gross Foreign Investor Capital Inflows to EMEs

Billions of US\$

As Of: 2018 Q2

Billions of US\$



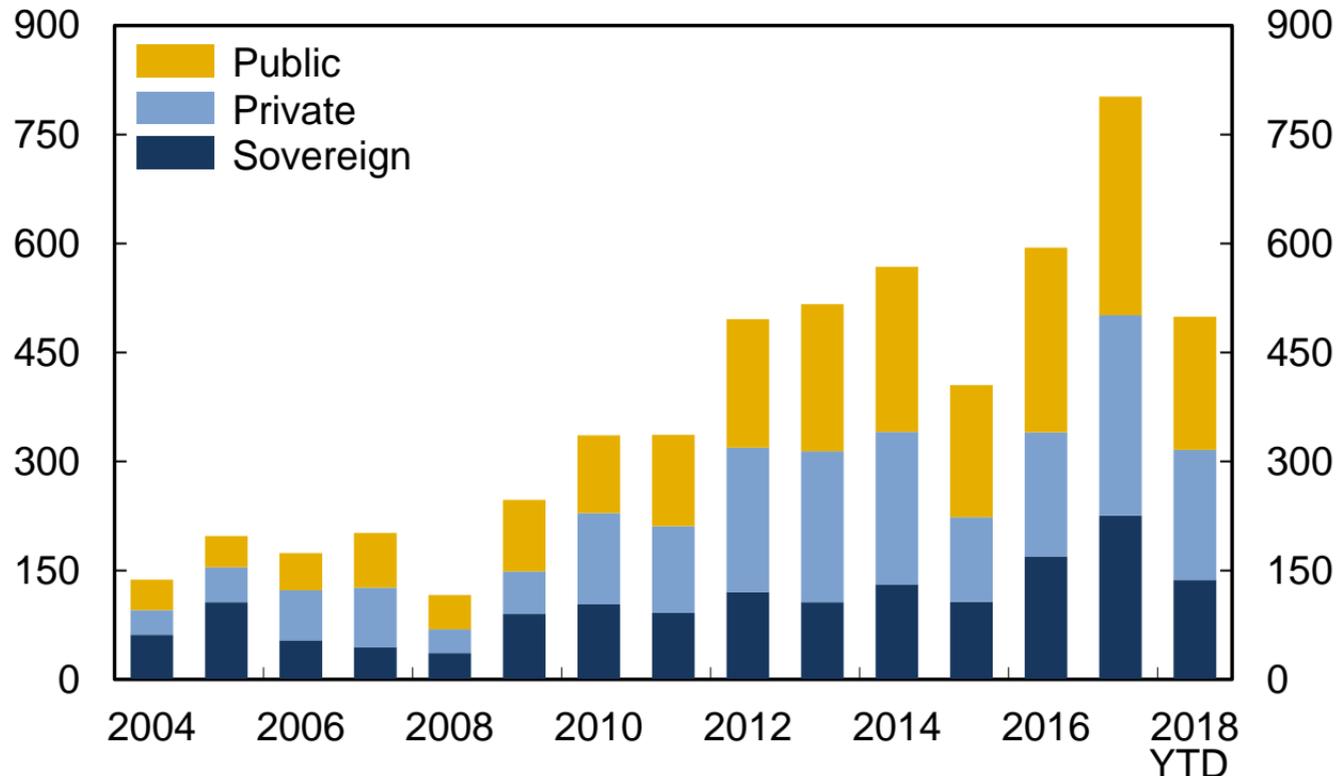
Source: IMF, Haver Analytics

4.2.11 Emerging Market Gross Global Bond Issuance

Billions of US\$

As Of: 30-Sep-2018

Billions of US\$

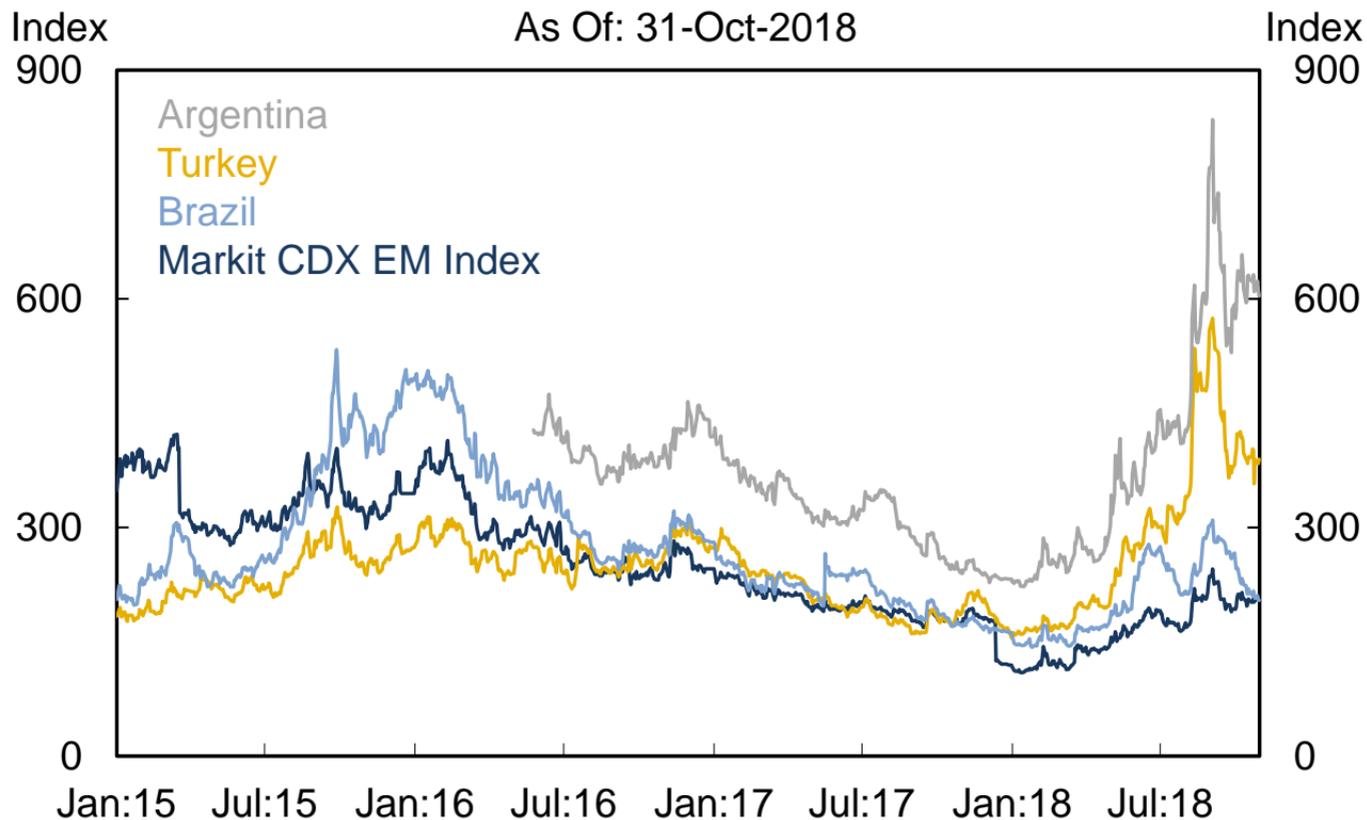


Note: Bonds have maturities greater than one year and have been internationally marketed or placed. "Public" includes issuance by municipal and state-owned enterprises.

Source: Dealogic

4.2.12 Emerging Market Sovereign CDS Spreads

As Of: 31-Oct-2018



Source: Bloomberg, L.P.

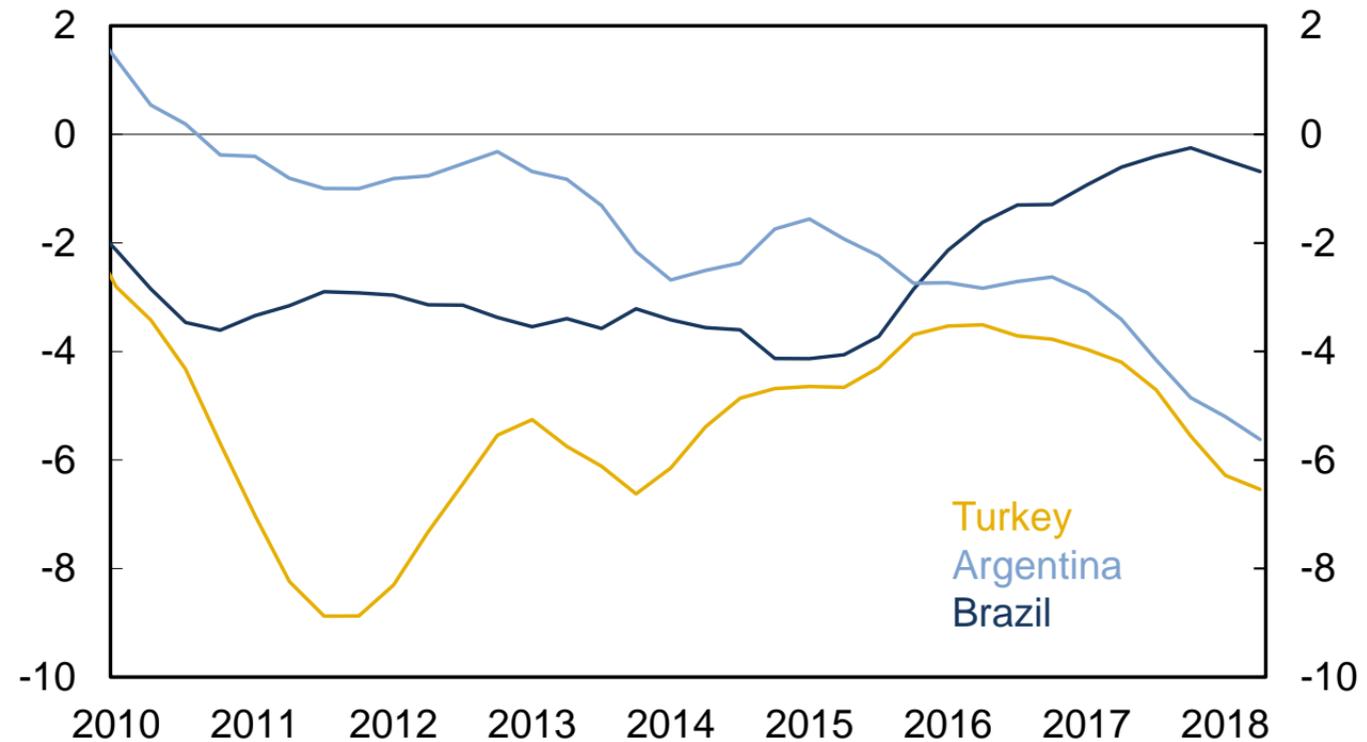
Note: 5-year USD spreads.

4.2.13 Emerging Market Current Account Deficits

Percent

As Of: 2018 Q2

Percent



Source: BCB, CBRT,
INDECM, Haver Analytics

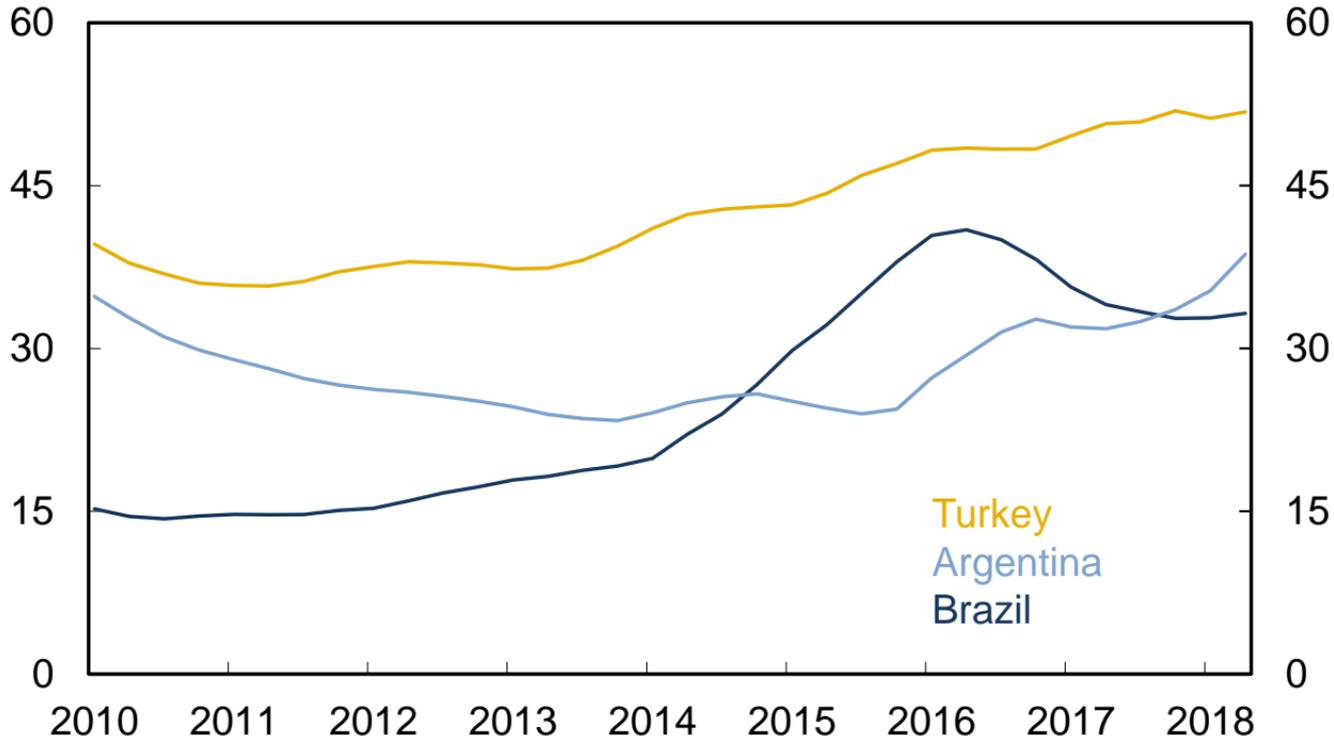
Note: Data represents four quarter rolling
average current account as a % of GDP

4.2.14 Emerging Market External Debt

Percent

As Of: 2018 Q2

Percent



Source: World Bank, BCB, CBRT, INDEC, Haver Analytics

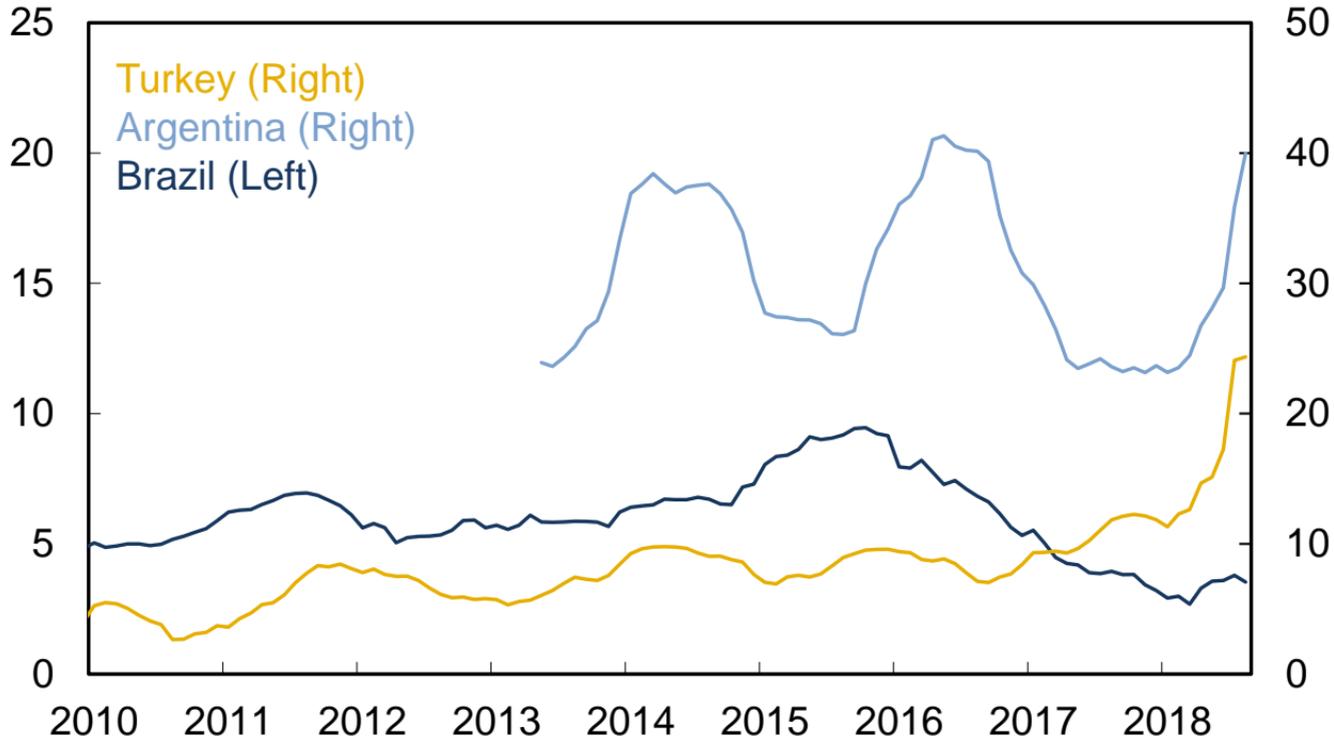
Note: Data represents four quarter rolling average external debt as a % of GDP

4.2.15 Emerging Market Core CPI

Percent

As Of: Oct-2018

Percent



Source: IBGE, DGEC, TRSTAT, INDEC, Haver Analytics

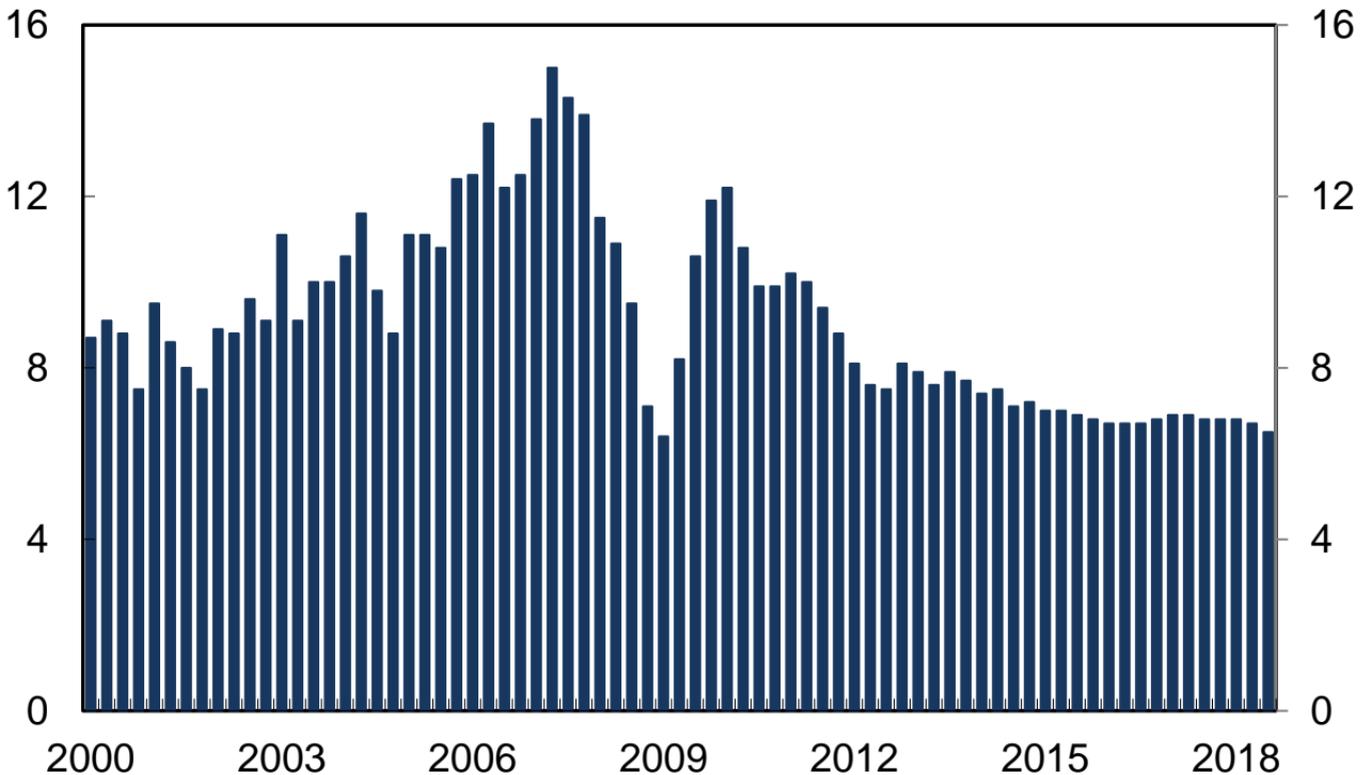
Note: Data represents year-over-year change in core CPI. Argentina represents Buenos Aires CPI Ex seasonal and regulated goods.

4.2.16 Chinese Real GDP Growth

Percent

As Of: 2018 Q3

Percent



Source: China National Bureau of Statistics, Haver Analytics

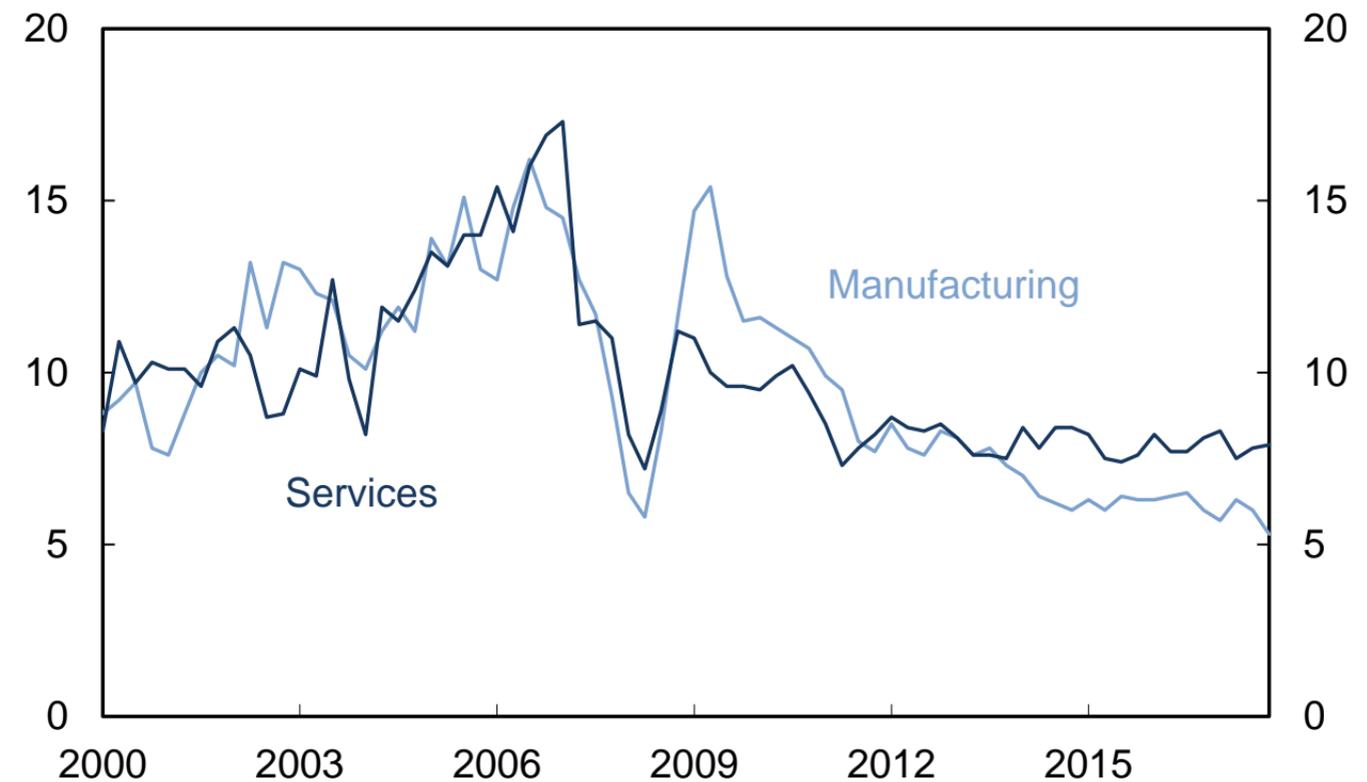
Note: Year-over-year percent change.

4.2.17 Chinese Manufacturing and Services Growth

Percent

As Of: 2018 Q3

Percent



Source: China National Bureau of Statistics, Haver Analytics

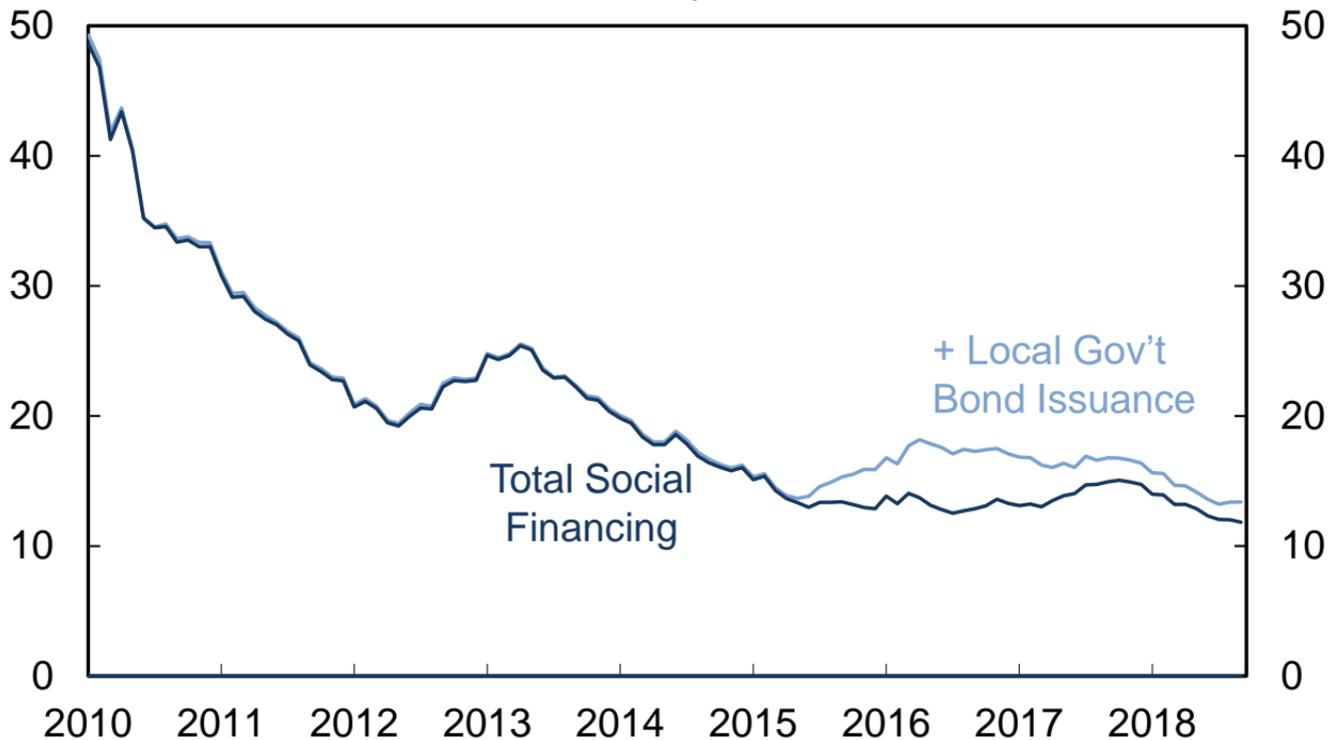
Note: Year-over-year percent change.

4.2.18 Chinese Credit Growth

Percent

As Of: Sep-2018

Percent



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

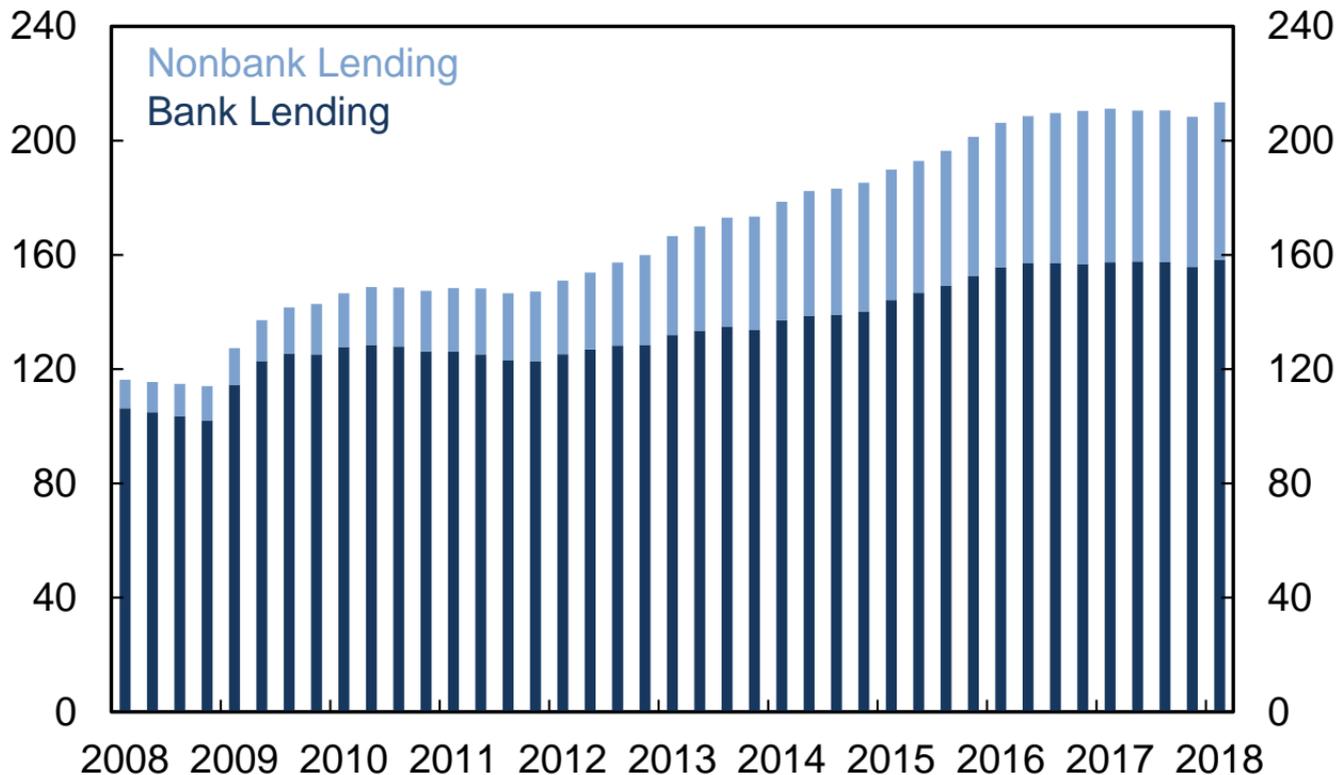
Note: Year-over-year monthly change. Total credit is defined as the sum of total social financing (TSF) and local government bond issuance. TSF refers to the total volume of financing provided by the financial system to the real economy.

4.2.19 Credit to the Chinese Nonfinancial Private Sector

Percent of GDP

As Of: 2018 Q1

Percent of GDP

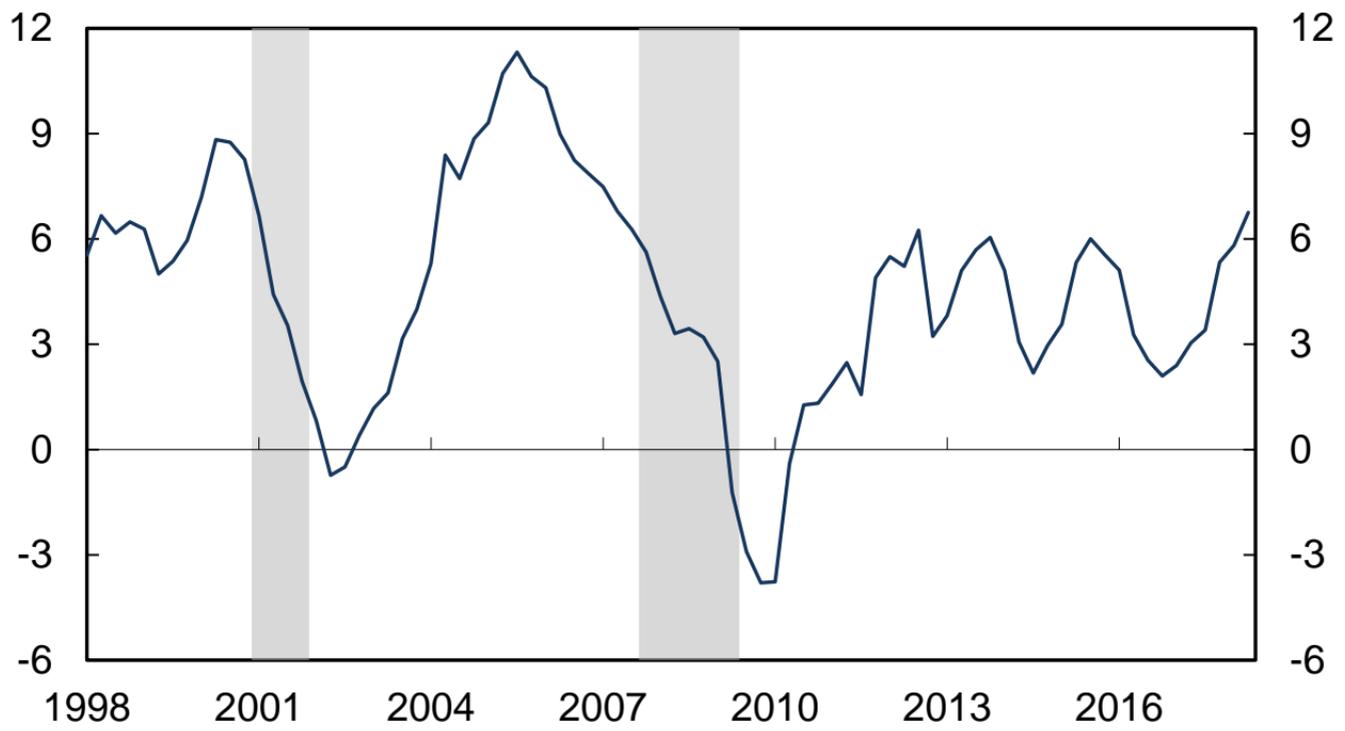


Source: China National Bureau of Statistics, BIS, Haver Analytics

Note: Rolling 4-quarter sum of GDP.

4.2.20 Change in State and Local Government Tax Revenues

Percent As Of: 2018 Q2 Percent



Note: Data represents year-over-year change. Revenue measures includes revenues from property, individual income, corporate income, and sales taxes.

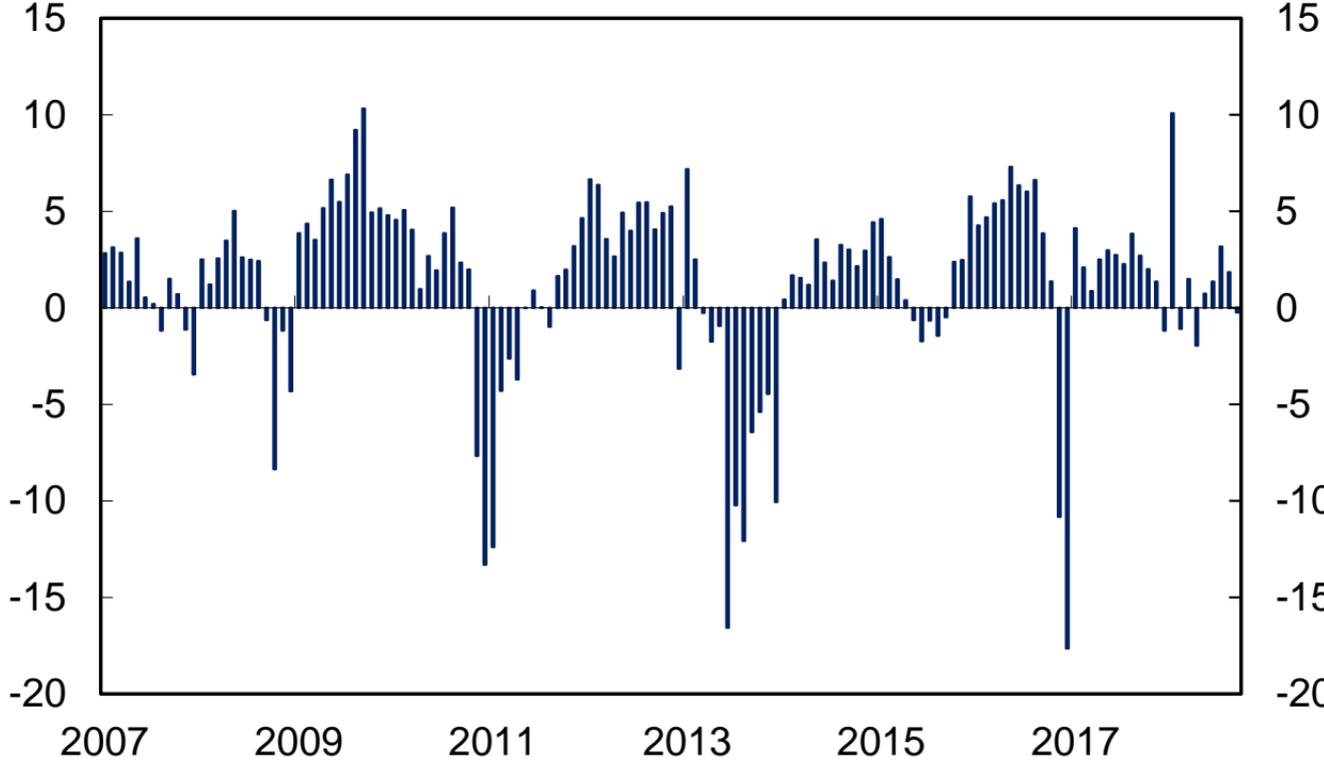
Source: Census Bureau

4.2.21 Long-Term Mutual Fund Flows: Municipal Bonds

Billions of US\$

As Of: Sep-2018

Billions of US\$



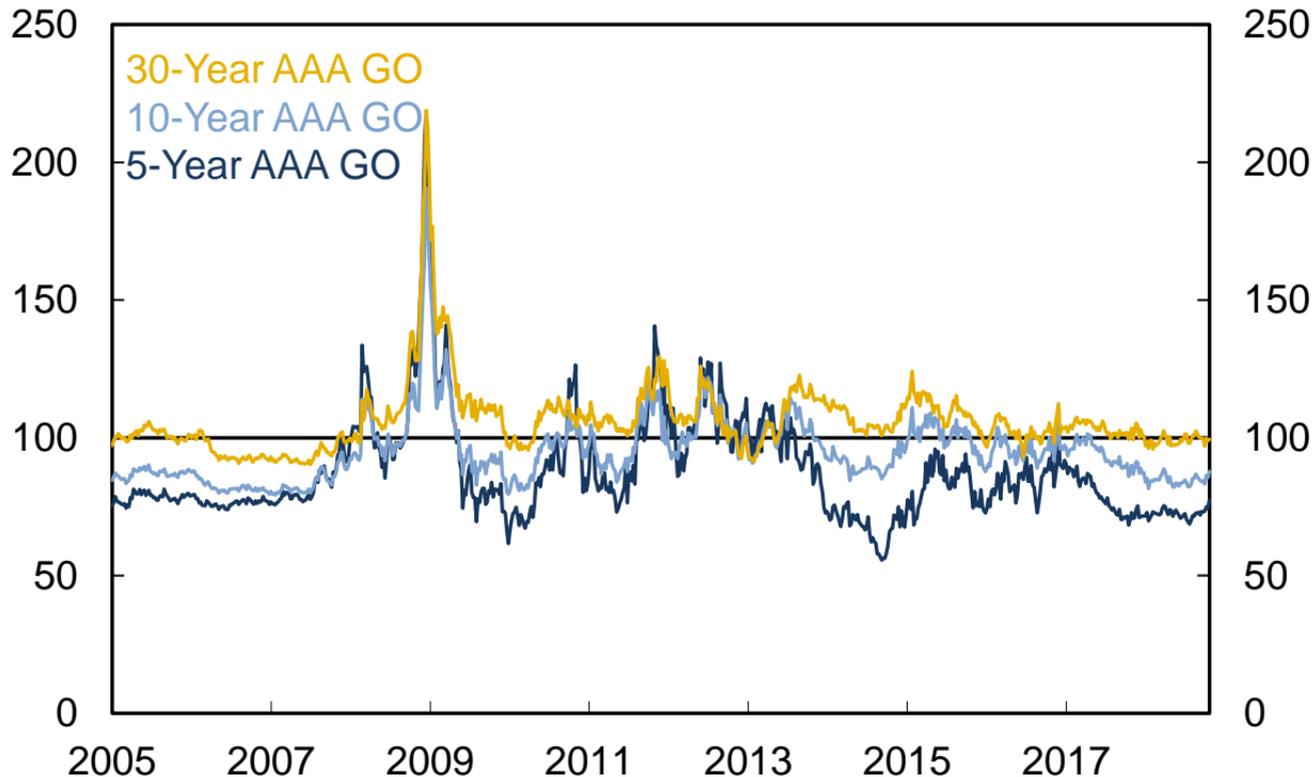
Source: ICI, Haver Analytics

4.2.22 Municipal Bond Spreads

Percent

As Of: 26-Oct-2018

Percent



Source: Municipal Market Analytics, Bloomberg, L.P.

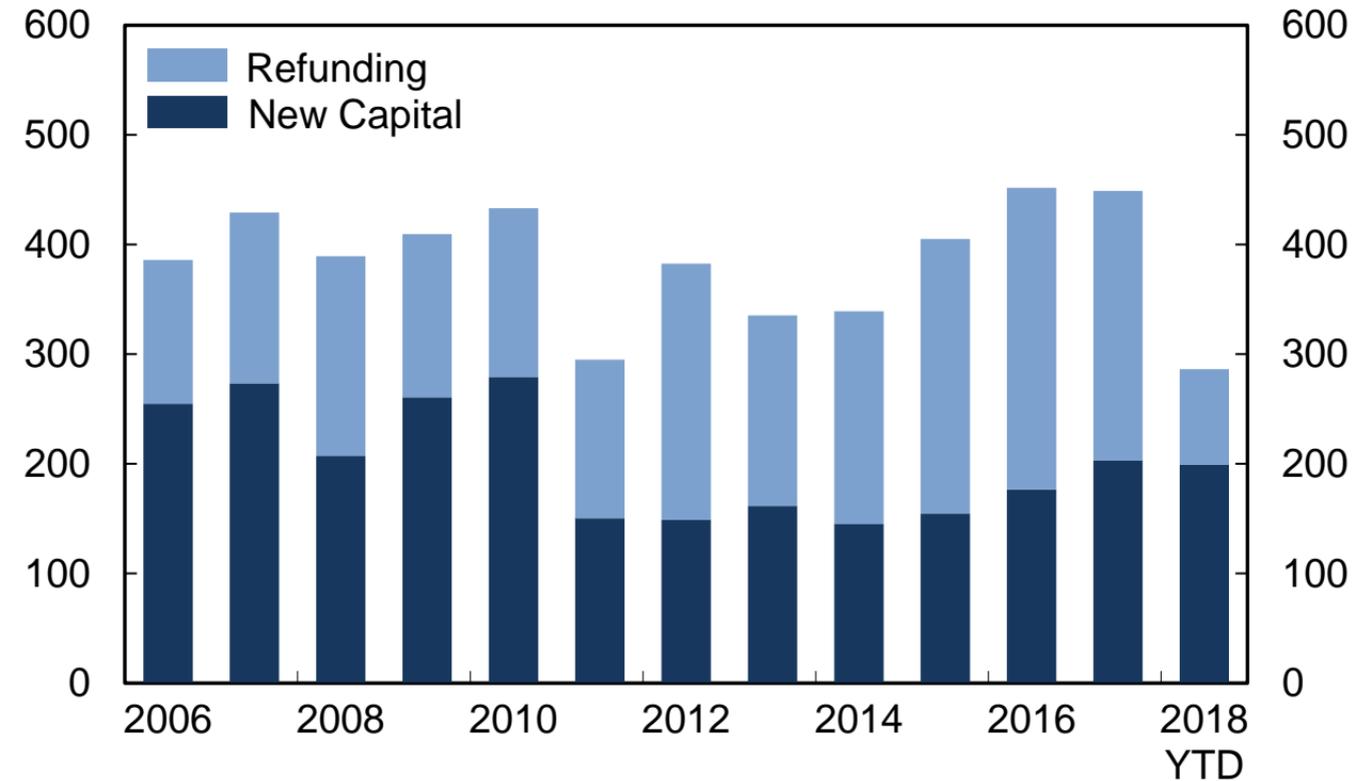
Note: Spreads between municipal and Treasury securities of comparable maturities.

4.2.23 Municipal Bond Issuance

Billions of US\$

As Of: Oct-2018

Billions of US\$



Source: Thomson Reuters, SIFMA

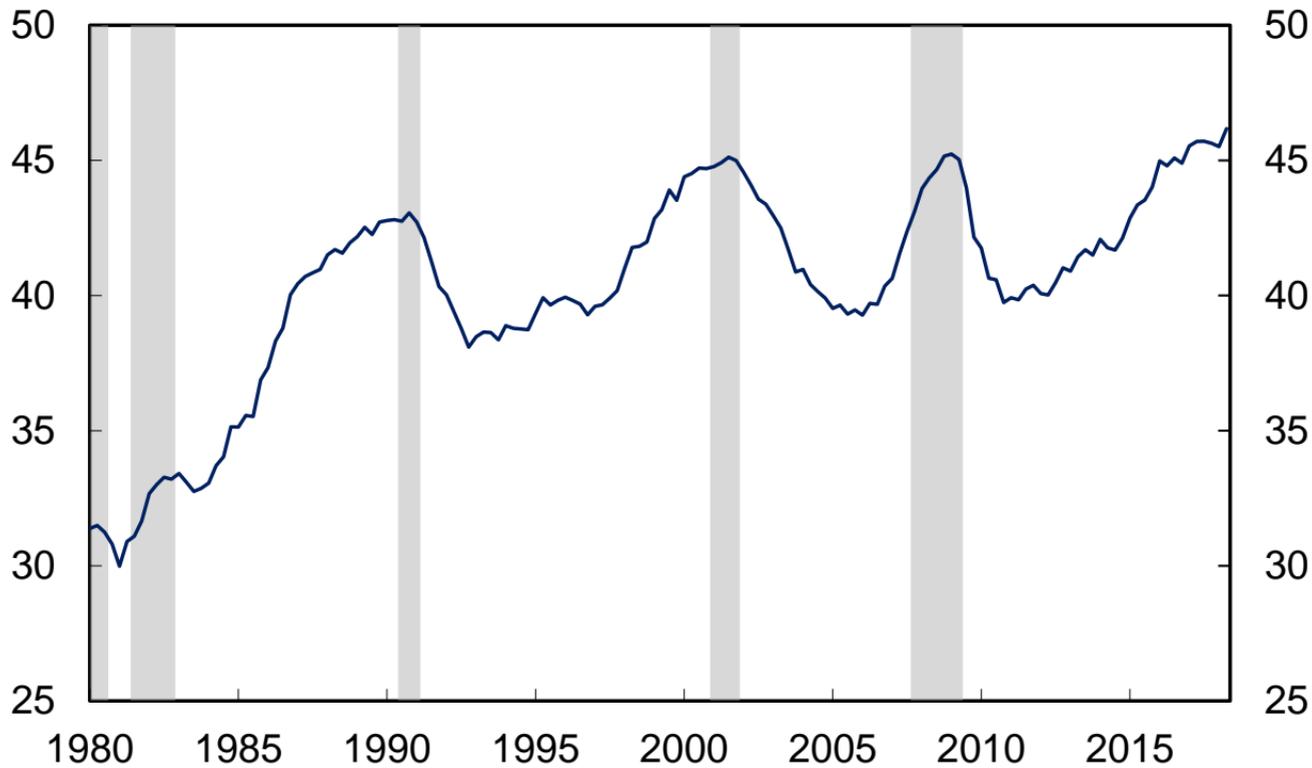
Note: Excludes maturities of 13 months or less.

4.3.1 Debt Ratios for Nonfinancial Corporations

Percent of GDP

As Of: 2018 Q2

Percent of GDP



Source: Federal Reserve,
Haver Analytics

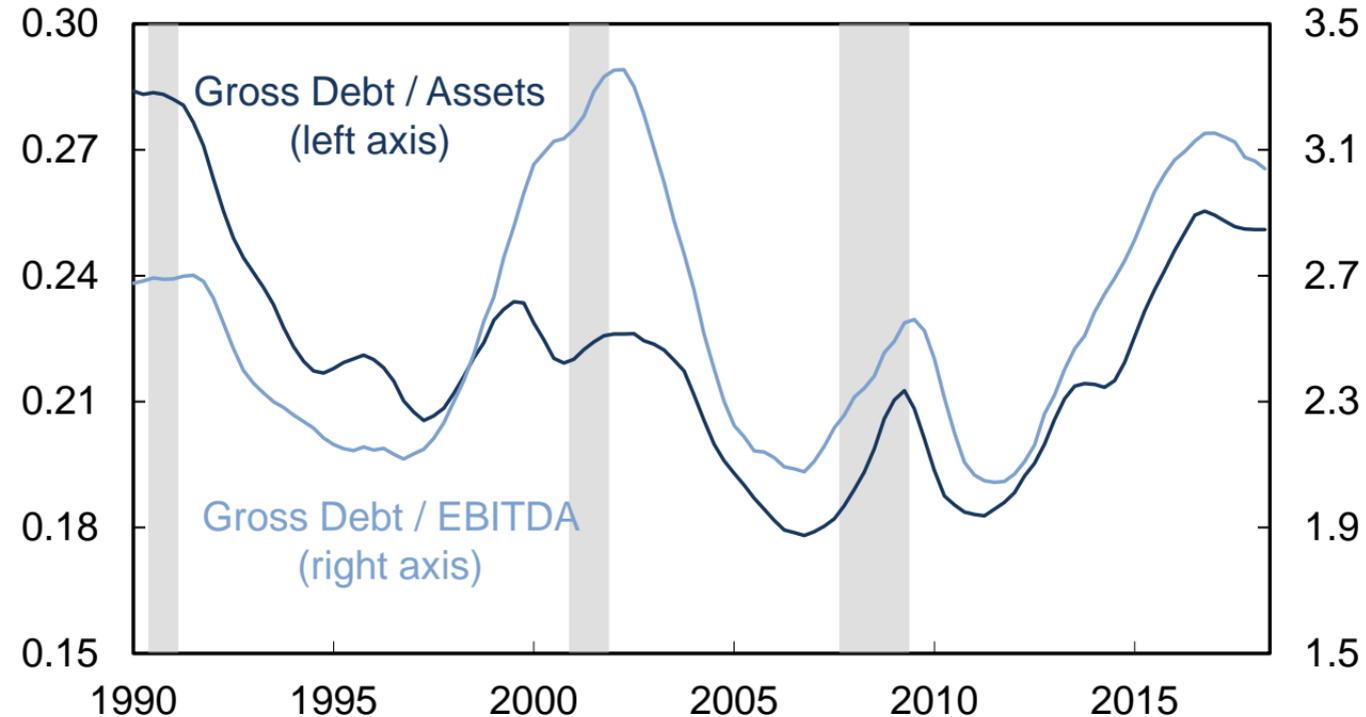
Note: Gray bars signify NBER recessions.

4.3.2 U.S. Nonfinancial Business Leverage

Ratio

As Of: 2018 Q2

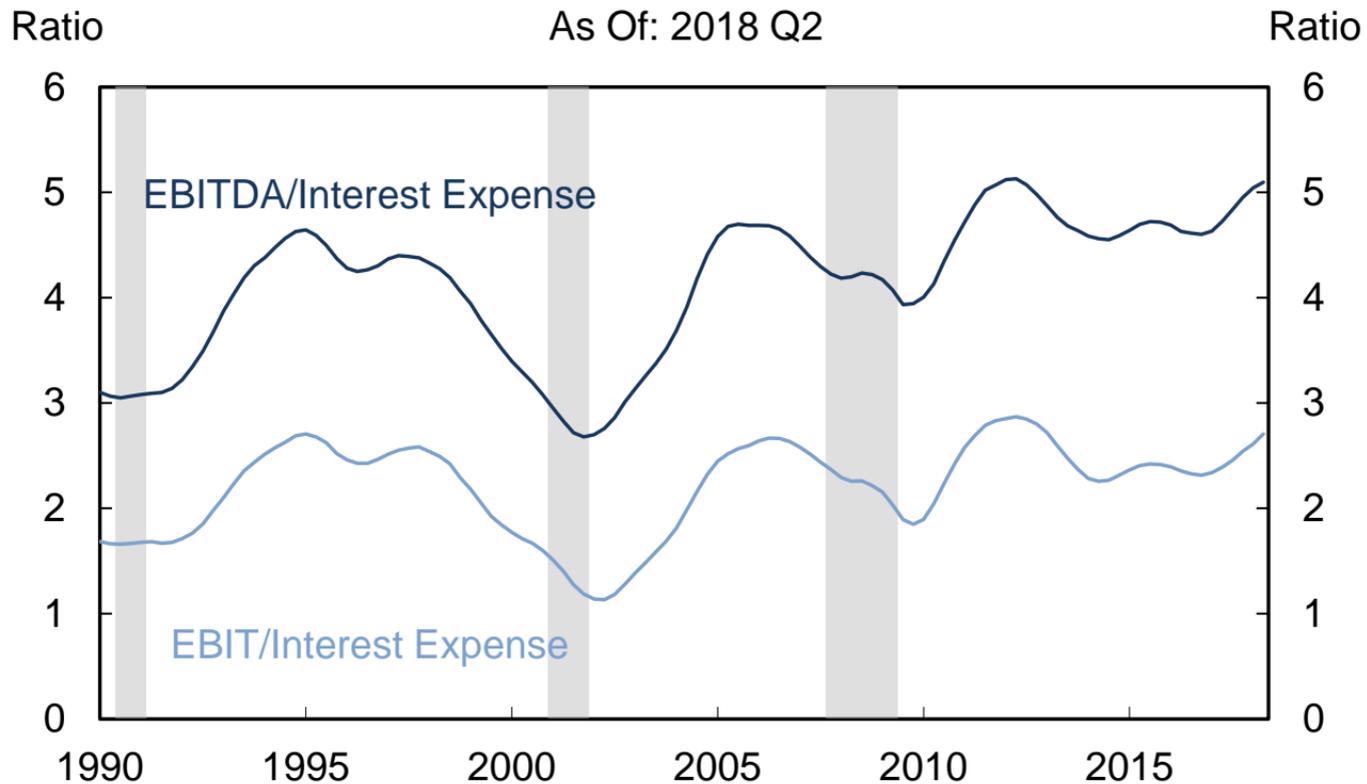
Ratio



Source: Compustat

Note: Four-quarter moving average of the median ratio. Includes rated and unrated nonfinancial businesses.

4.3.3 U.S. Nonfinancial Business Interest Coverage Ratios



Source: Compustat

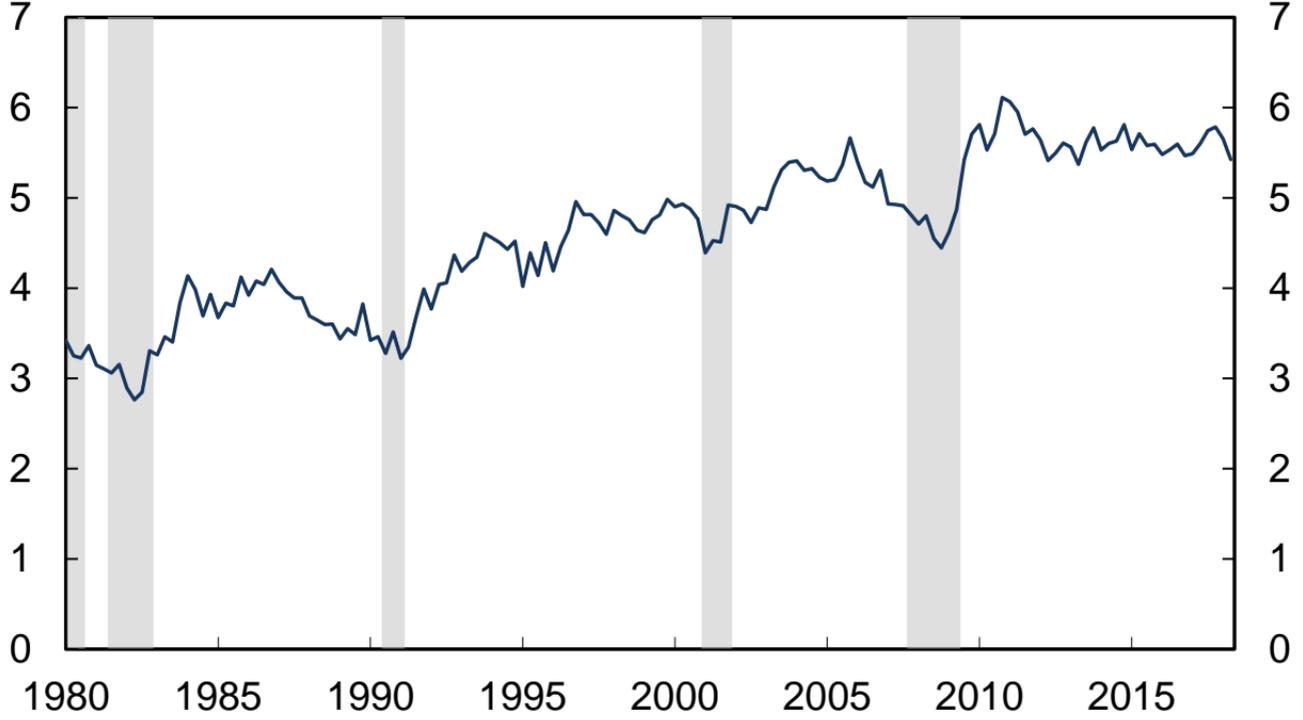
Note: Four-quarter moving average of median ratio.
Includes rated and unrated nonfinancial businesses.

4.3.4 Liquid Assets to Assets for Nonfinancial Corporations

Percent

As Of: 2018 Q2

Percent



Source: Federal Reserve, Haver Analytics

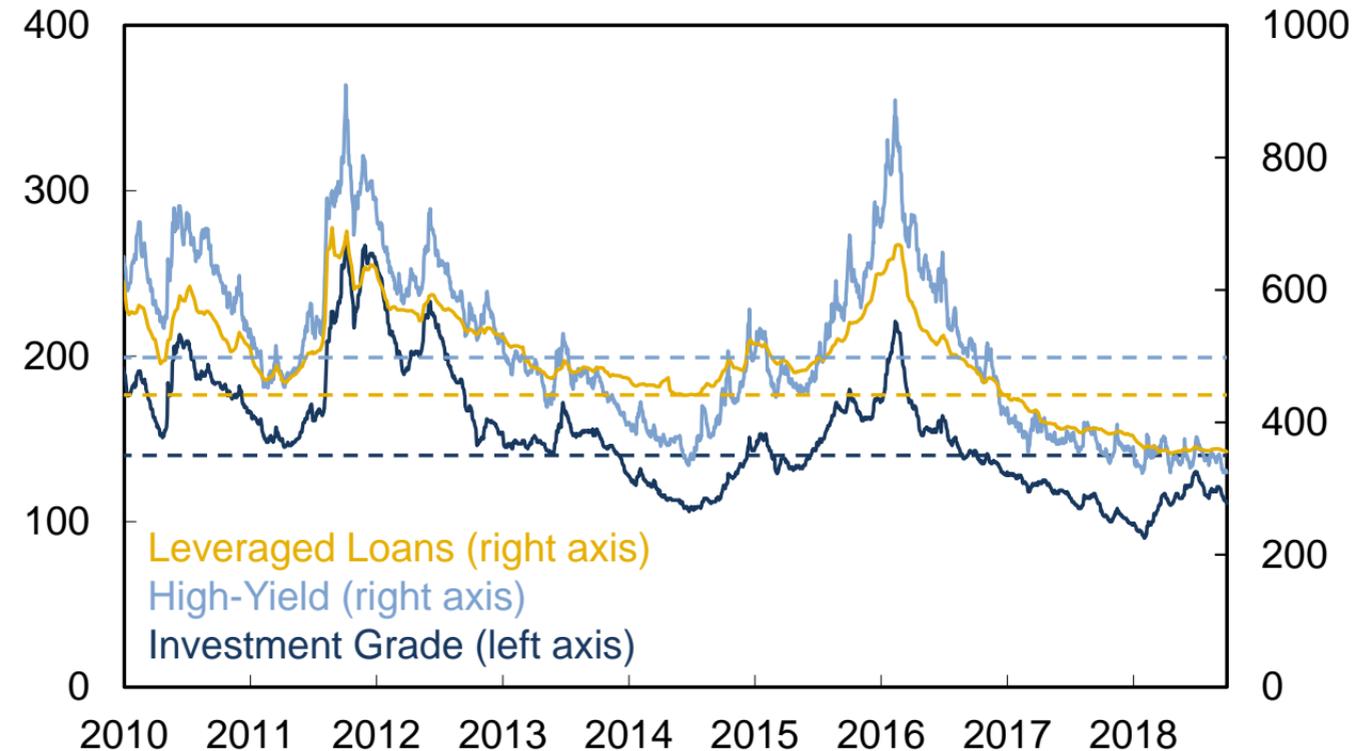
Note: Liquid assets includes foreign deposits, checkable deposits and currency, time and savings deposits, money market fund shares, security repurchase agreements, debt securities, and mutual fund shares.

4.3.5 U.S. Cash Corporate Credit Spreads

Basis Points

As Of: 28-Sep-2018

Basis Points



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

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

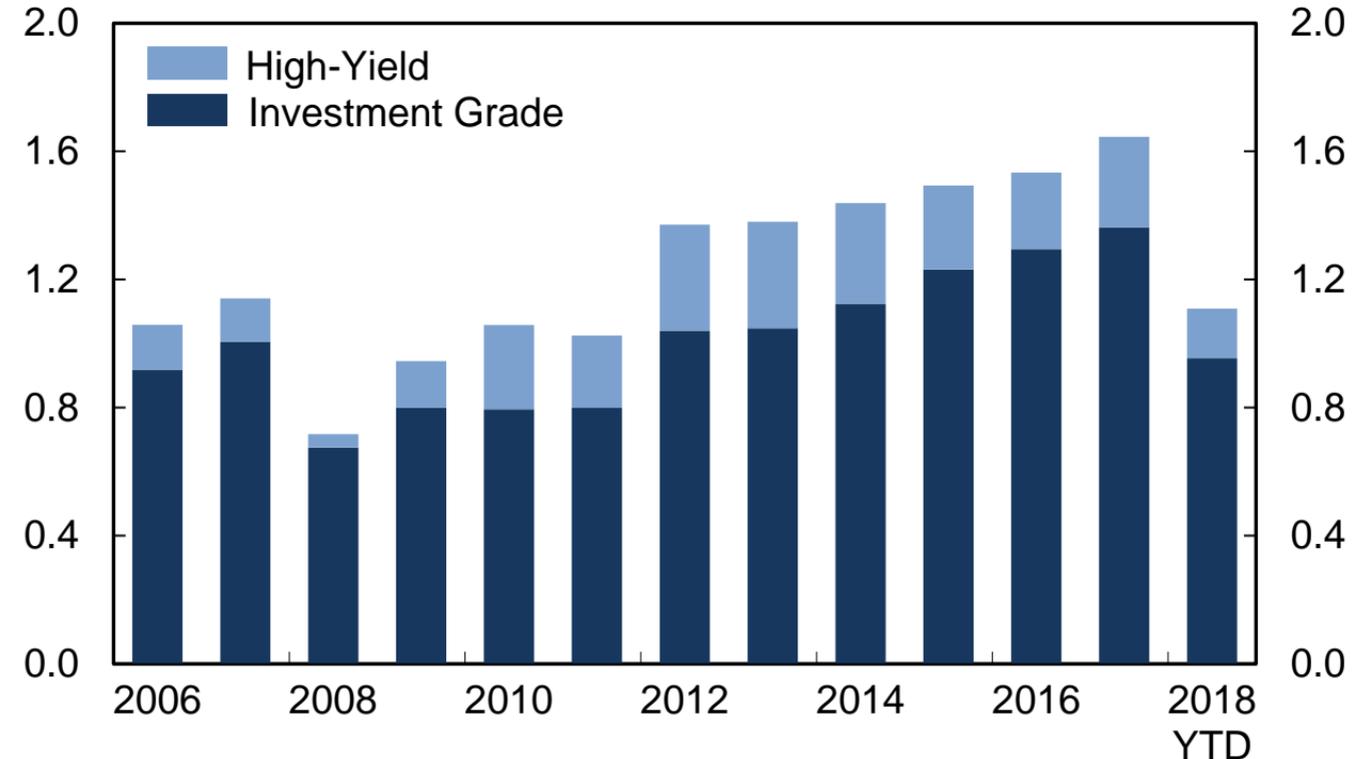
Note: Secondary market spreads. Investment grade and high-yield data represent option-adjusted spreads. Dotted lines represent 1997-present median.

4.3.6 Gross Issuance of Corporate Bonds

Trillions of US\$

As Of: Sep-2018

Trillions of US\$



Source: Thomson
Reuters, SIFMA

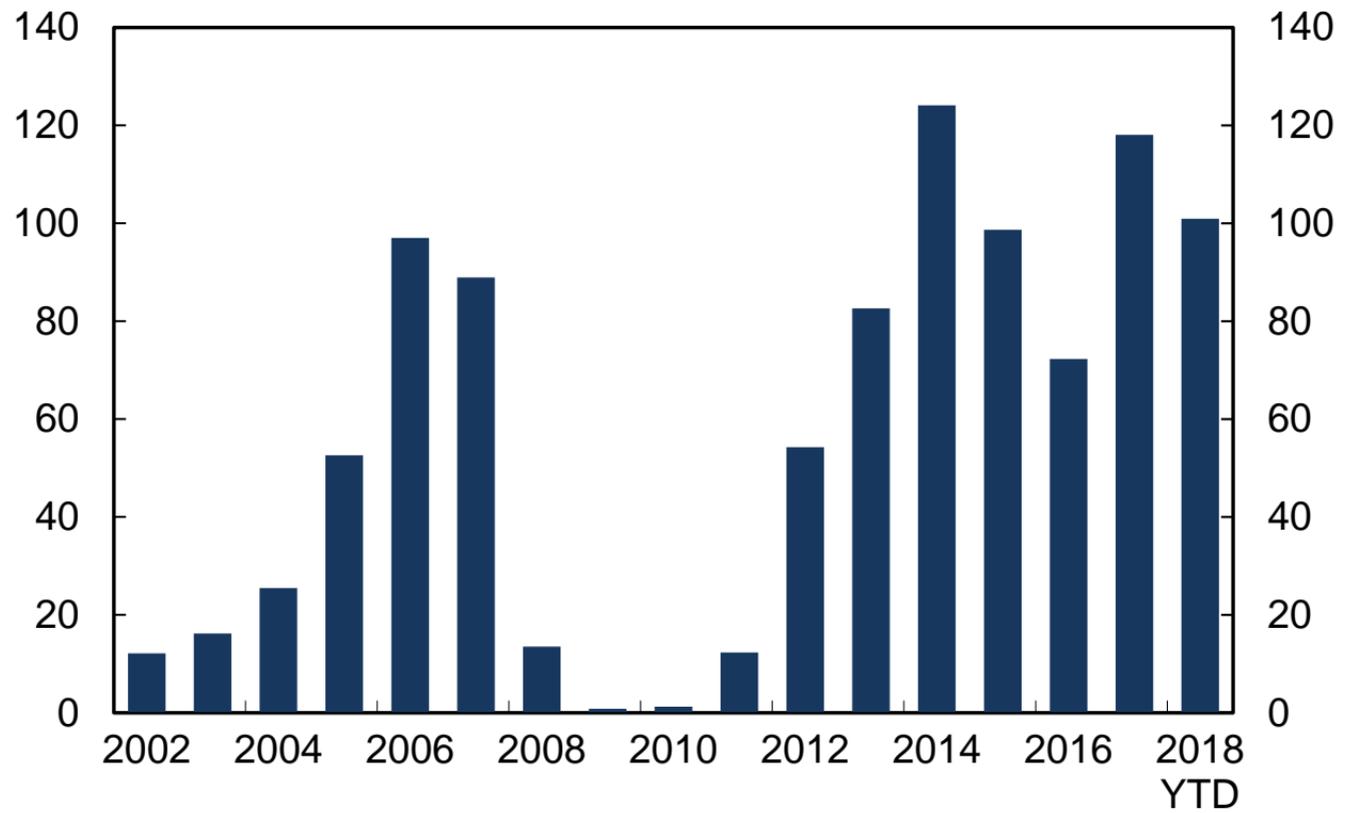
Note: Includes all non-convertible corporate debt, MTNs, and Yankee bonds, but excludes all issues with maturities of 1 year or less and CDs.

4.3.7 CLO Issuance

Billions of US\$

As Of: Sep-2018

Billions of US\$



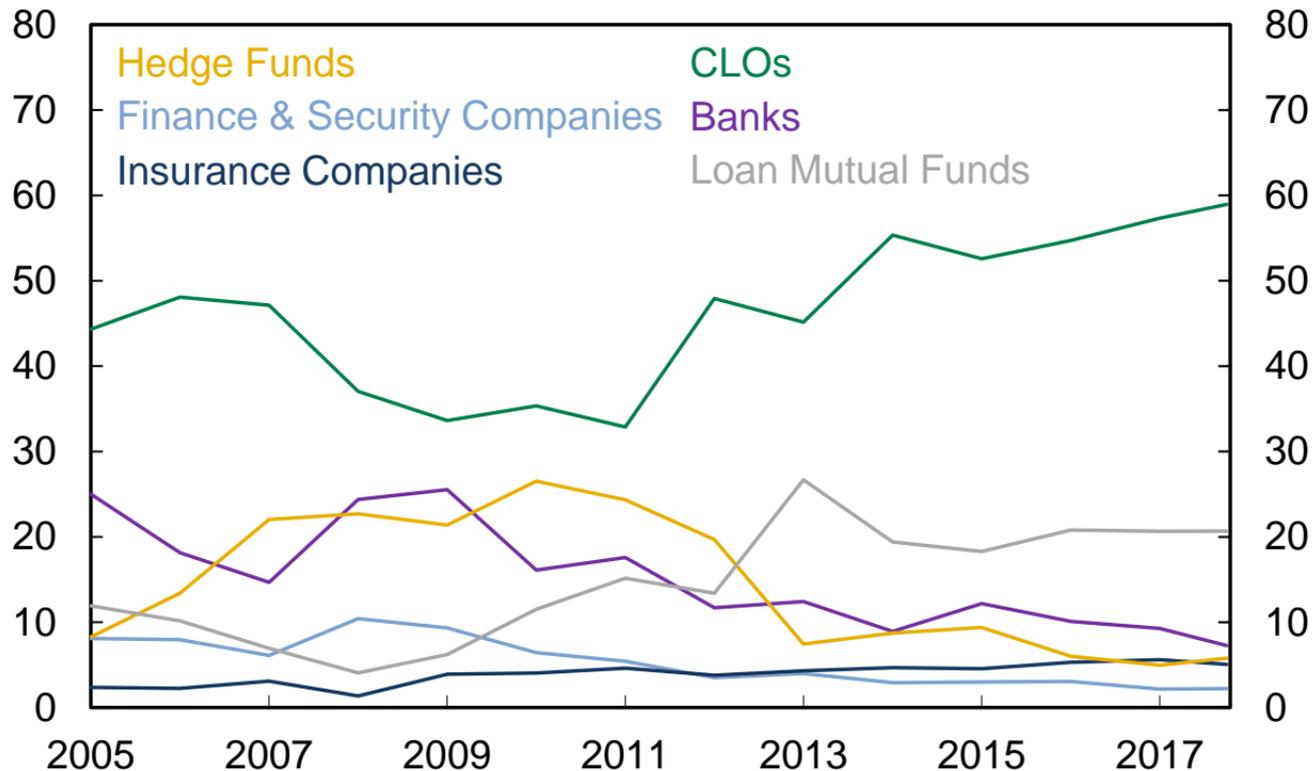
Source: S&P LCD

4.3.8 Leveraged Loan Primary Market by Investor Type

Percent

As Of: 2018 Q3

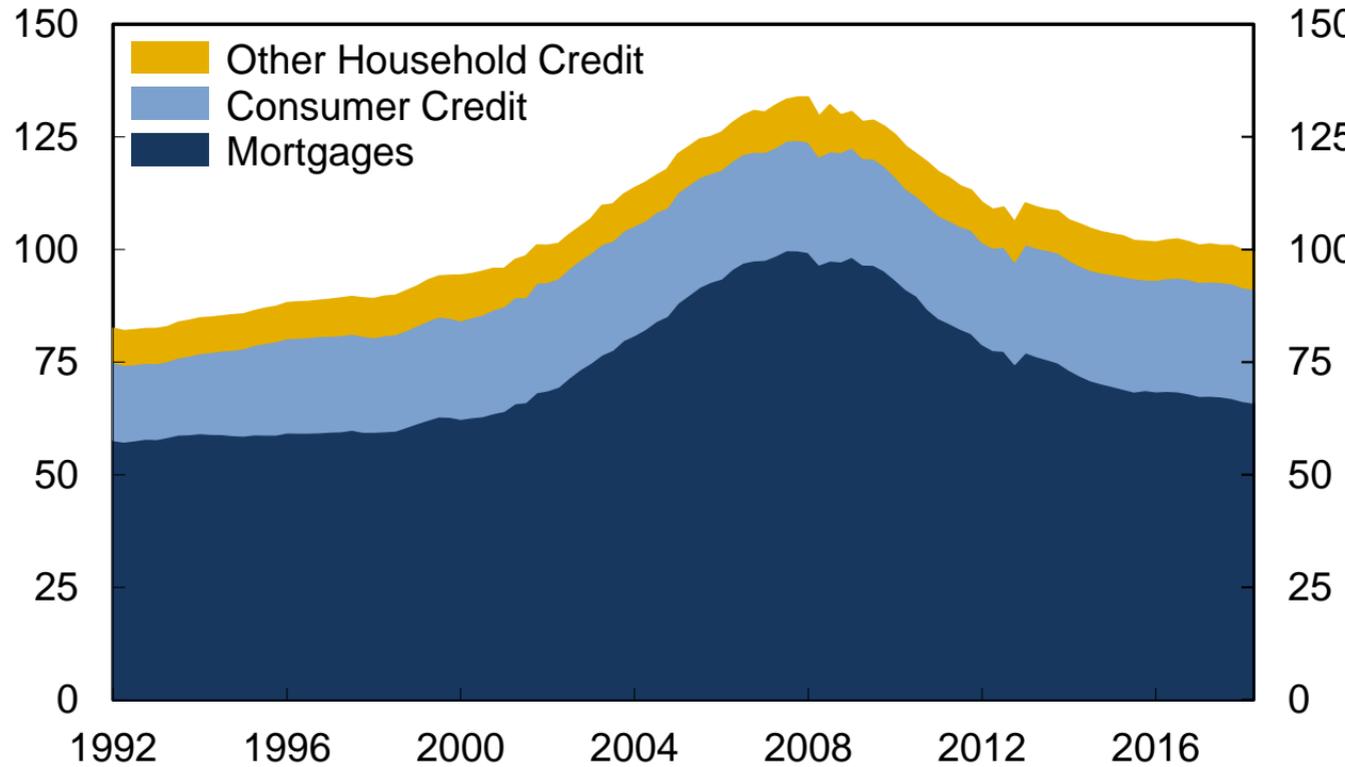
Percent



Source: S&P LCD

4.4.1 Household Debt as a Percent of Disposable Personal Income

Percent As Of: 2018 Q2 Percent



Source: BEA, Federal Reserve, Haver Analytics

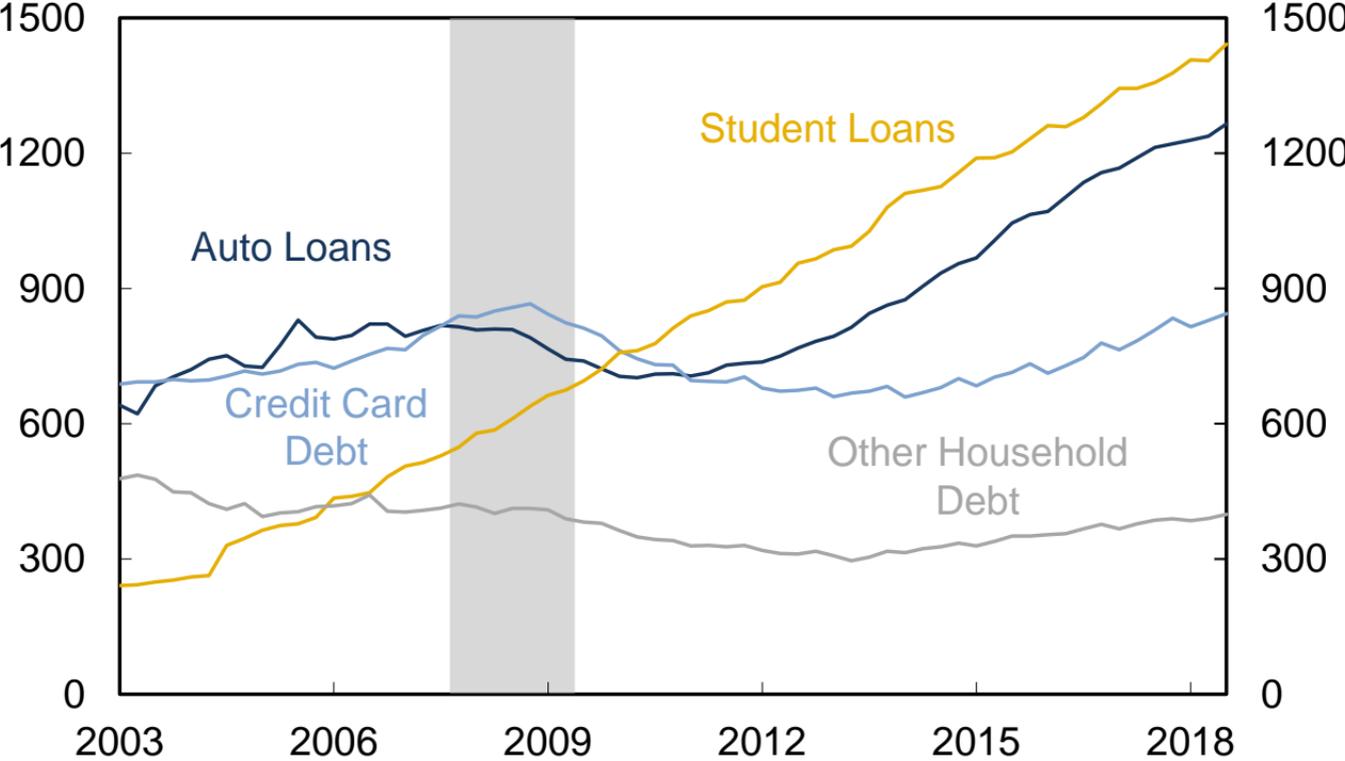
Note: Other Household Credit includes debts of both households and nonprofits.

4.4.2 Components of Consumer Credit

Billions of US\$

As Of: 2018 Q3

Billions of US\$



Source: FRBNY Consumer Credit Panel/Equifax, Haver Analytics

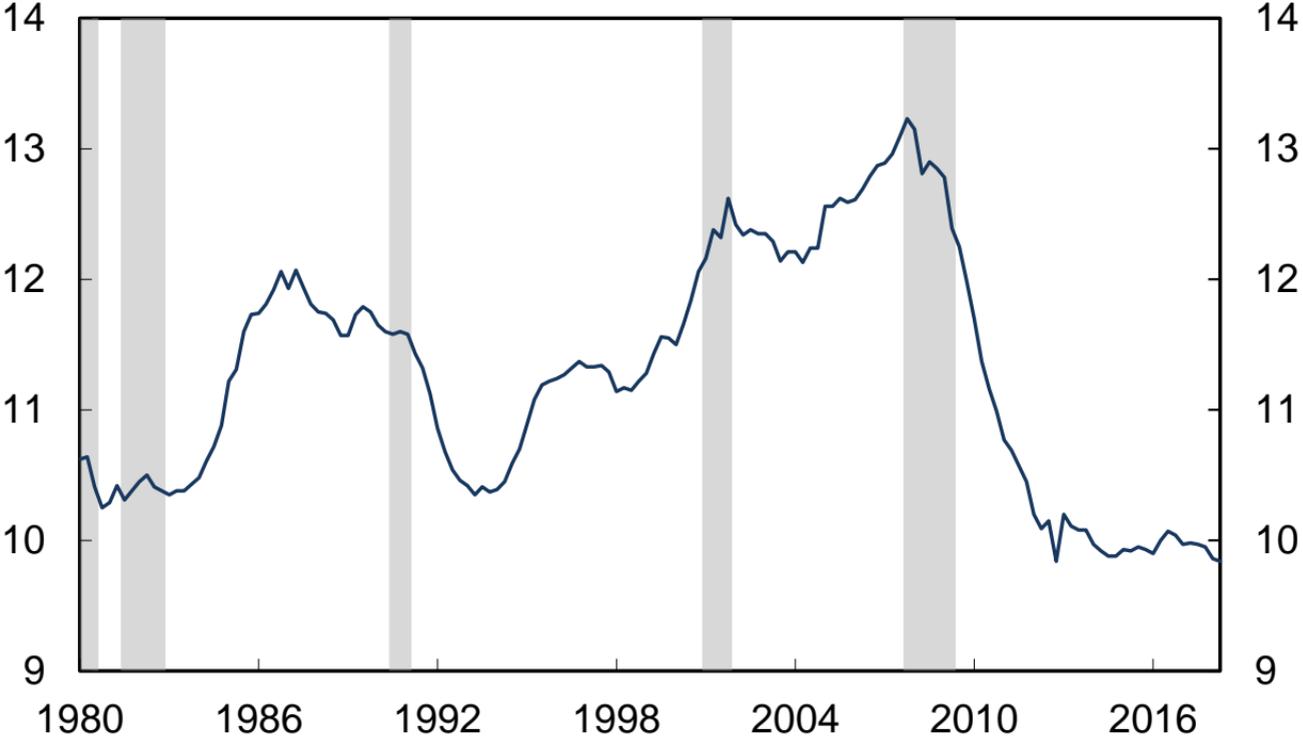
Note: Gray bar signifies NBER recession.

4.4.3 Household Debt Service Ratio

Percent

As Of: 2018 Q2

Percent

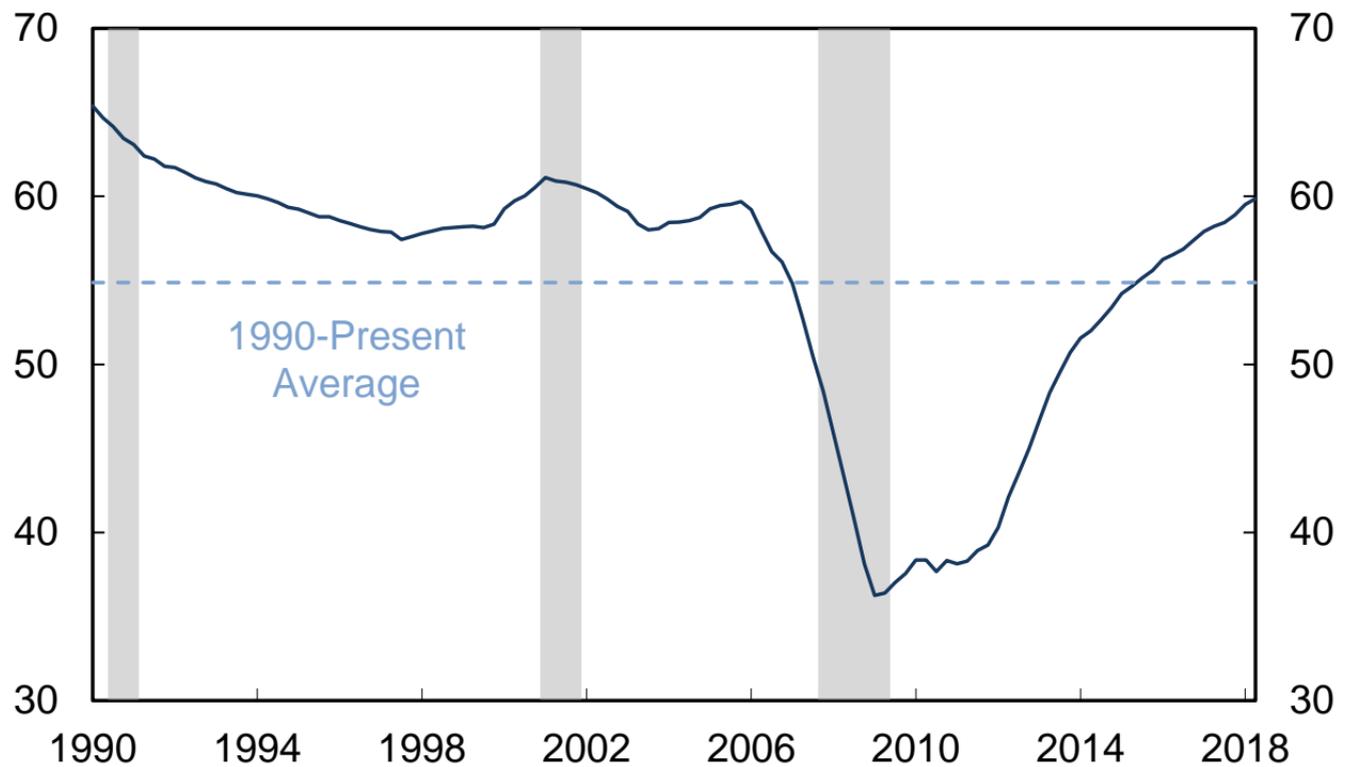


Source: Federal Reserve, Haver Analytics

Note: Ratio of debt-service payments to disposable personal income. Seasonally

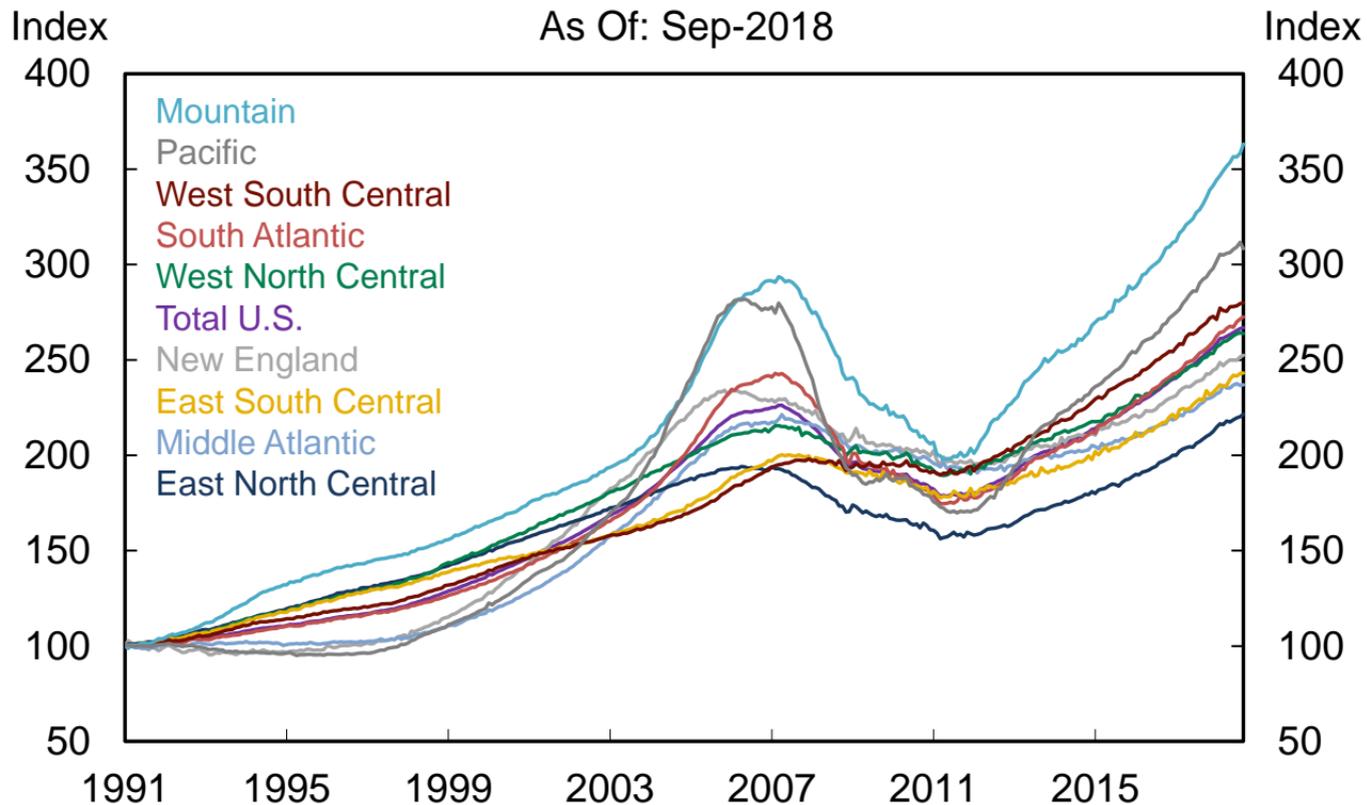
4.4.4 Owners' Equity as Share of Household Real Estate

Percent As Of: 2018 Q2 Percent



Source: Federal Reserve, Haver Analytics

4.5.1 House Prices by Census Region



Note: Purchase-only price index. Jan-1991 = 100.

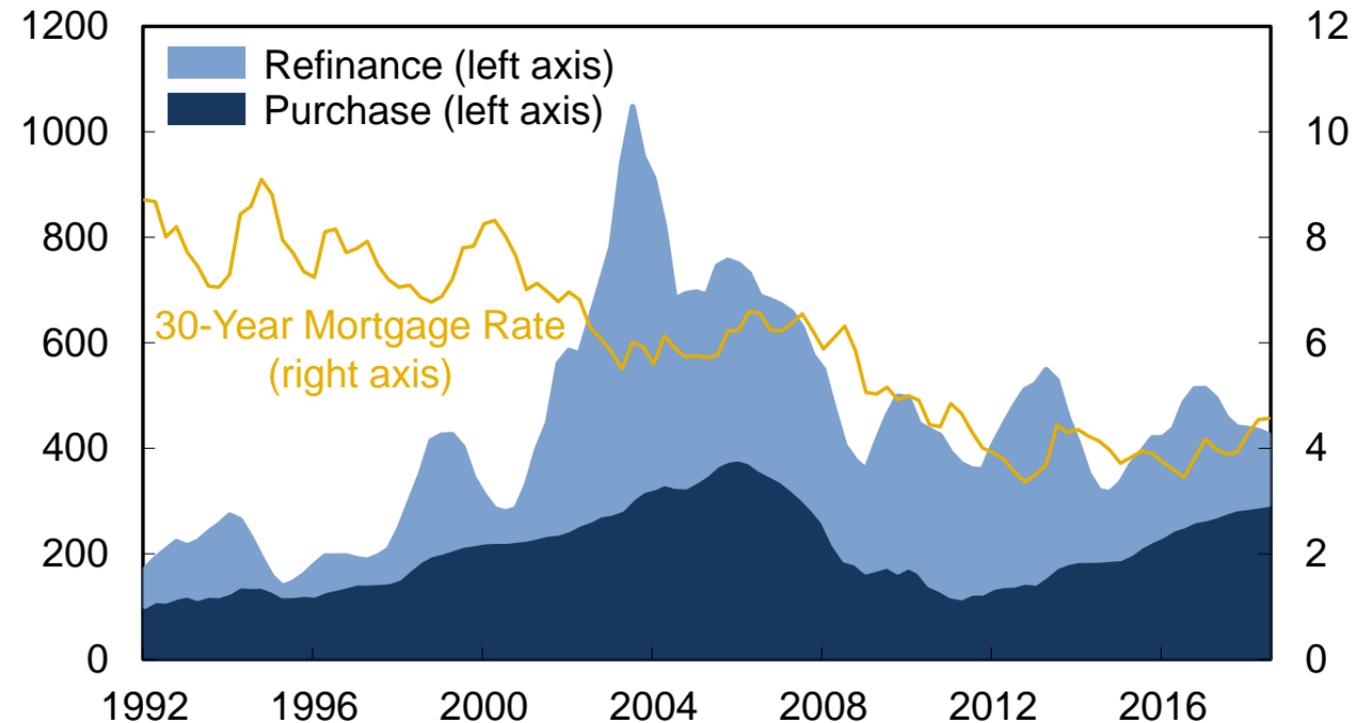
Source: FHFA, Haver Analytics

4.5.2 Mortgage Originations and Rates

Billions of US\$

As Of: 2018 Q3

Percent



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

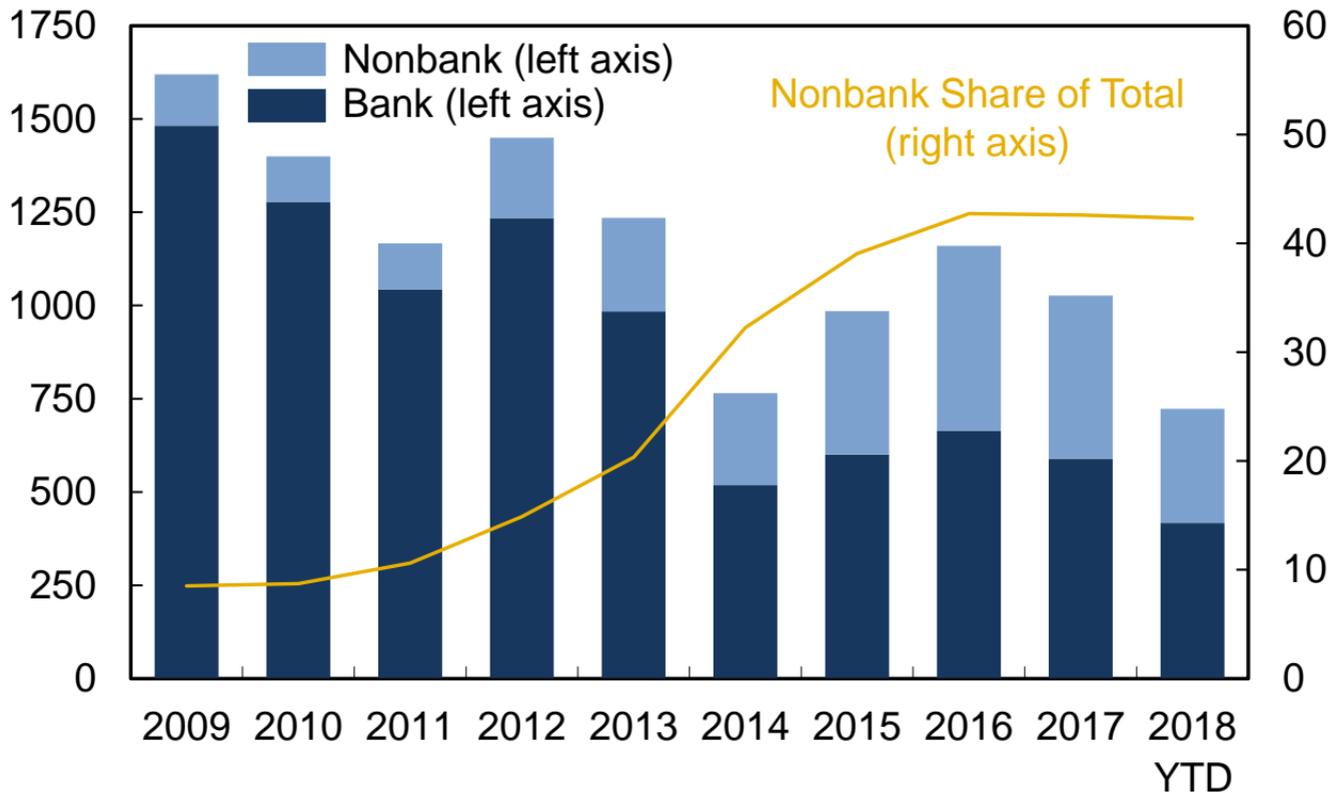
Note: Originations represent all 1-4 family homes. Originations calculated as 4-quarter moving averages. Mortgage rates calculated as quarterly averages.

4.5.3 Mortgage Origination Market

Billions of US\$

As Of: 2018 Q3

Percent



Source: Inside Mortgage Finance

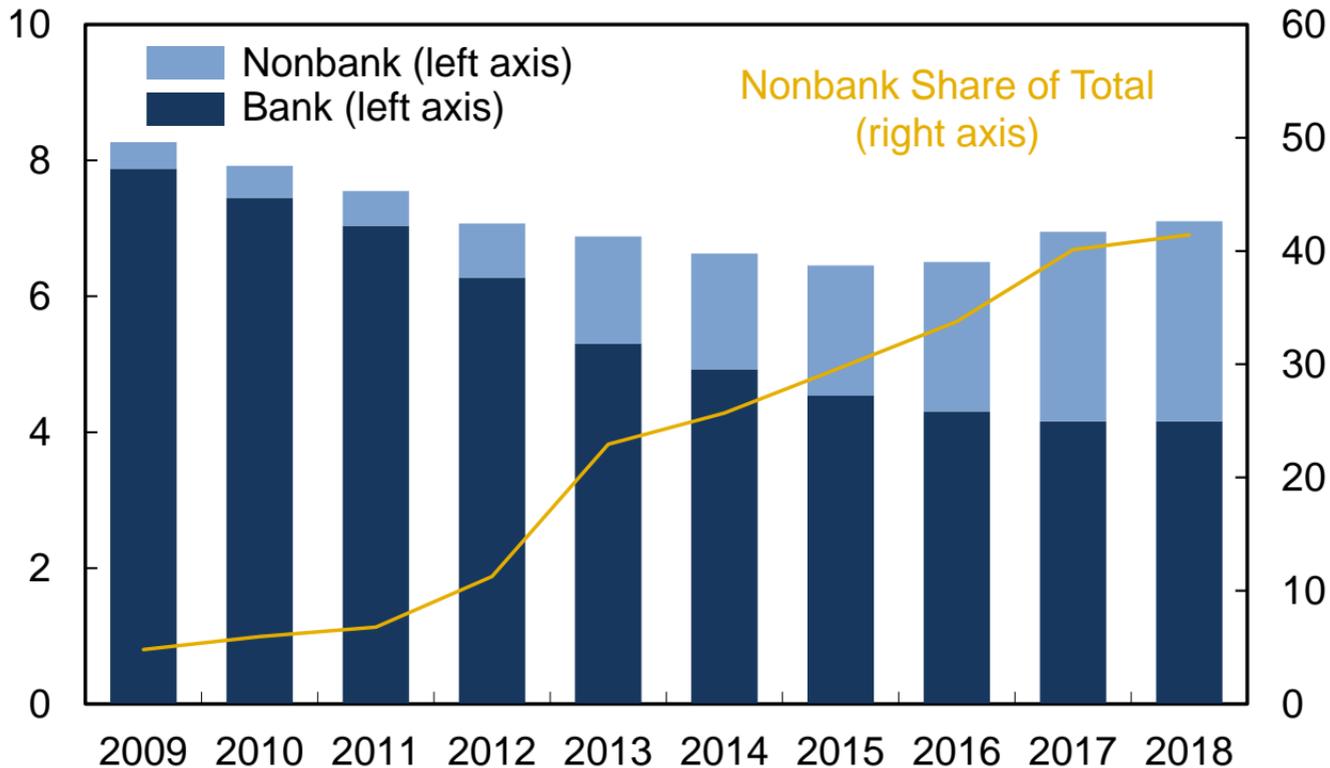
Note: 2018 data through third quarter. Data covers top 25 originators in each year.

4.5.4 Mortgage Servicing Market

Trillions of US\$

As Of: 2018 Q3

Percent



Note: Data is as of fourth quarter each year except 2018 is as of third quarter. Data covers top 25 servicers in each quarter.

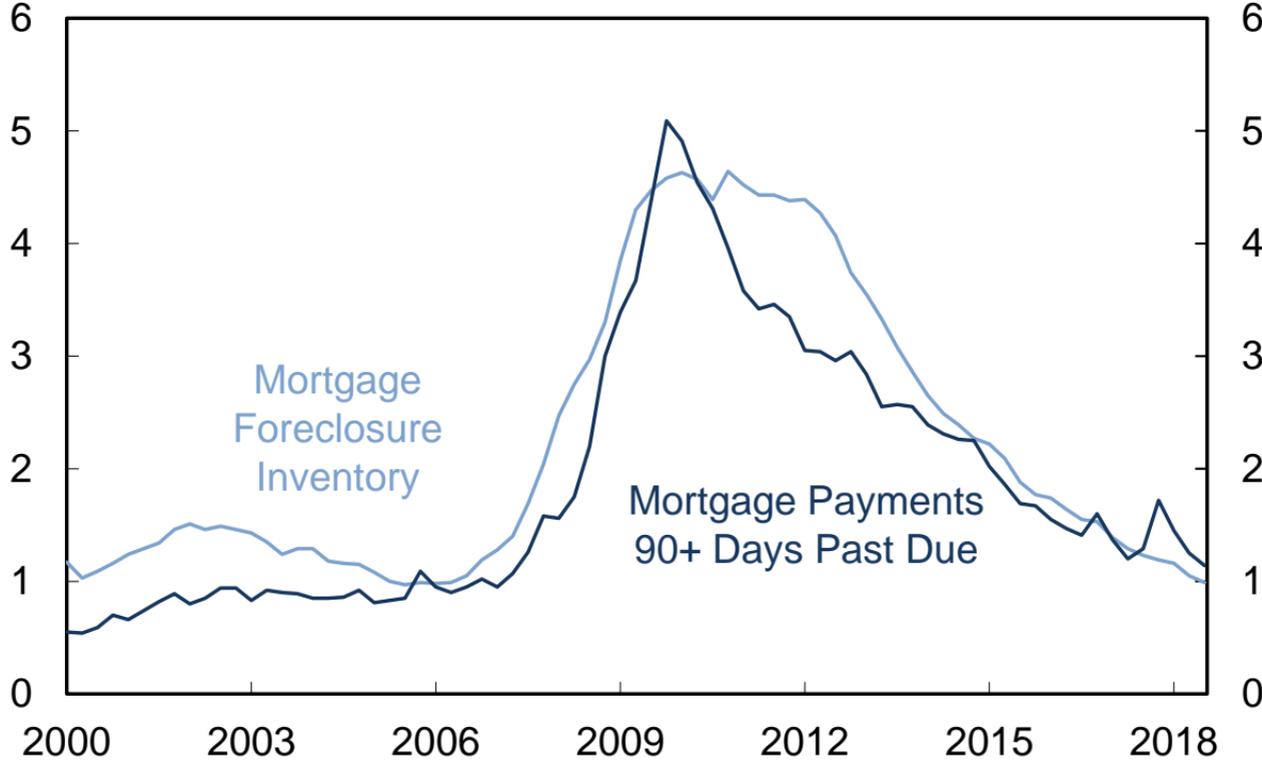
Source: Inside Mortgage Finance

4.5.5 Mortgage Delinquency and Foreclosure

Percent

As Of: 2018 Q3

Percent



Source: Mortgage Bankers Association, Haver Analytics

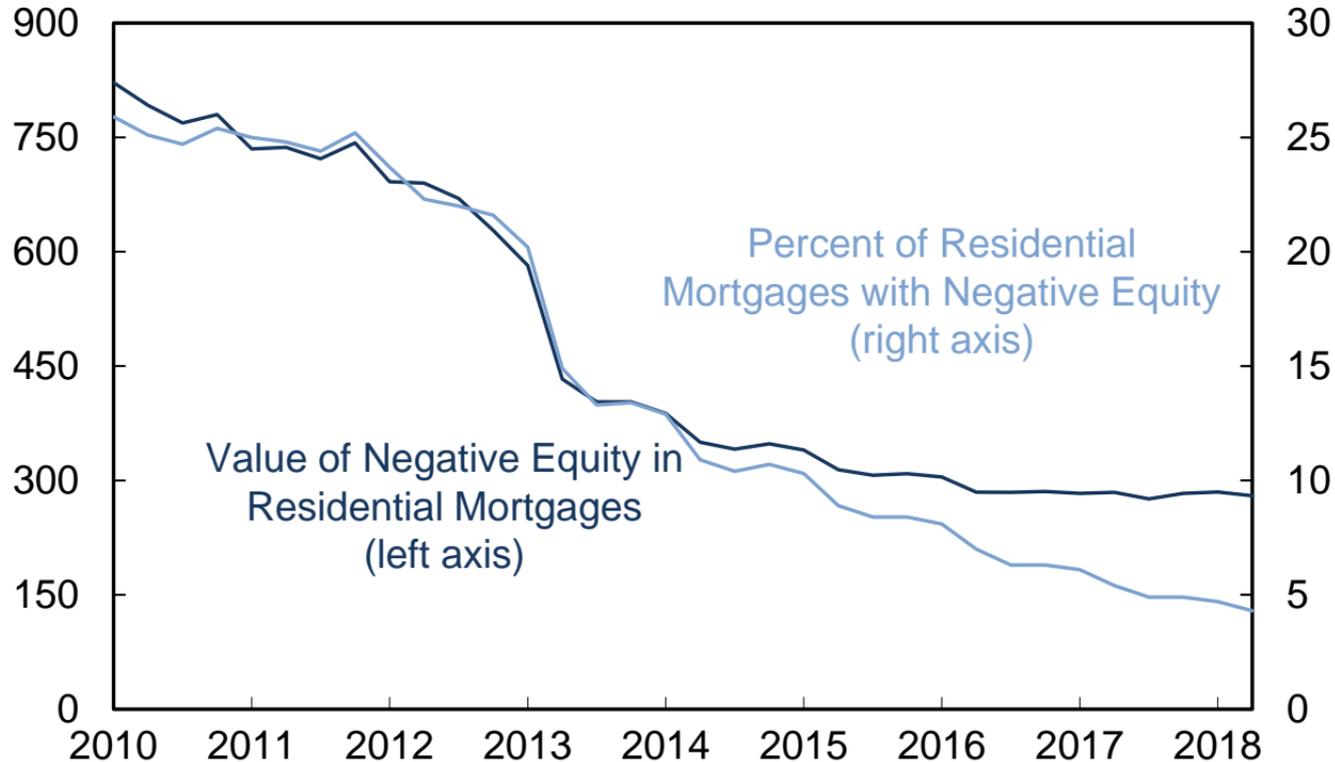
Note: Percent of all mortgages.

4.5.6 Mortgages with Negative Equity

Billions of US\$

As Of: 2018 Q2

Percent



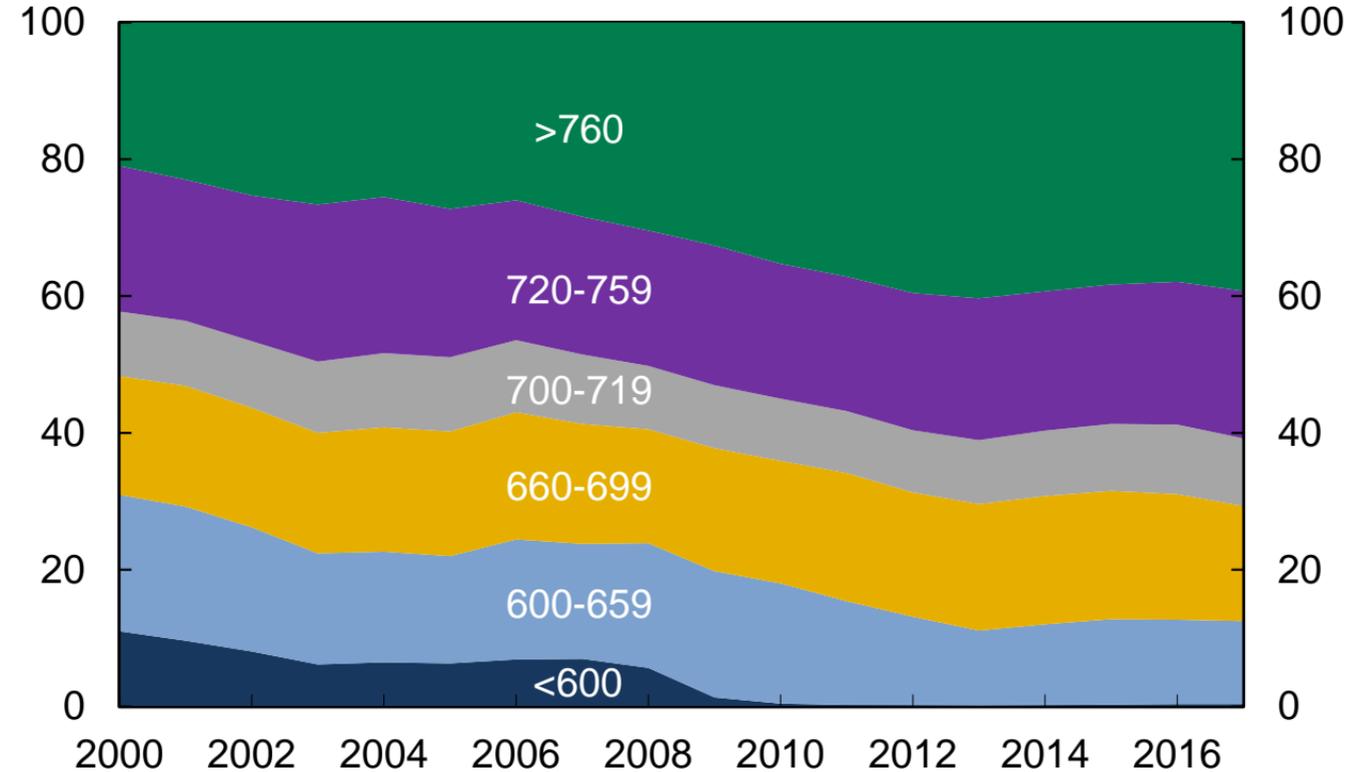
Source: CoreLogic

4.5.7 Purchase Origination Volume by Credit Score

Percent of Originations

As Of: 2017

Percent of Originations



Source: McDash, FHFA calculations

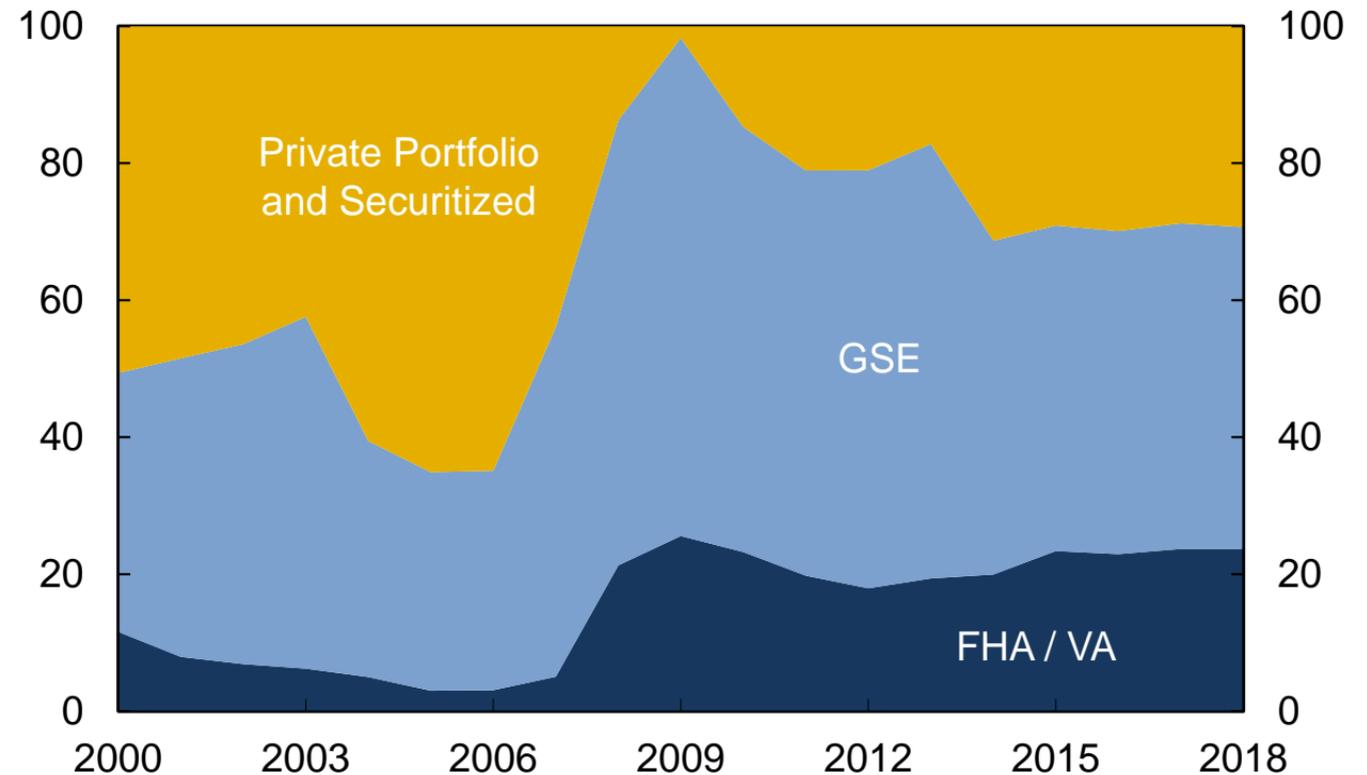
Note: Includes first lien purchases only.

4.5.8 Mortgage Originations by Product

Percent of Originations

As Of: 2018 Q3

Percent of Originations



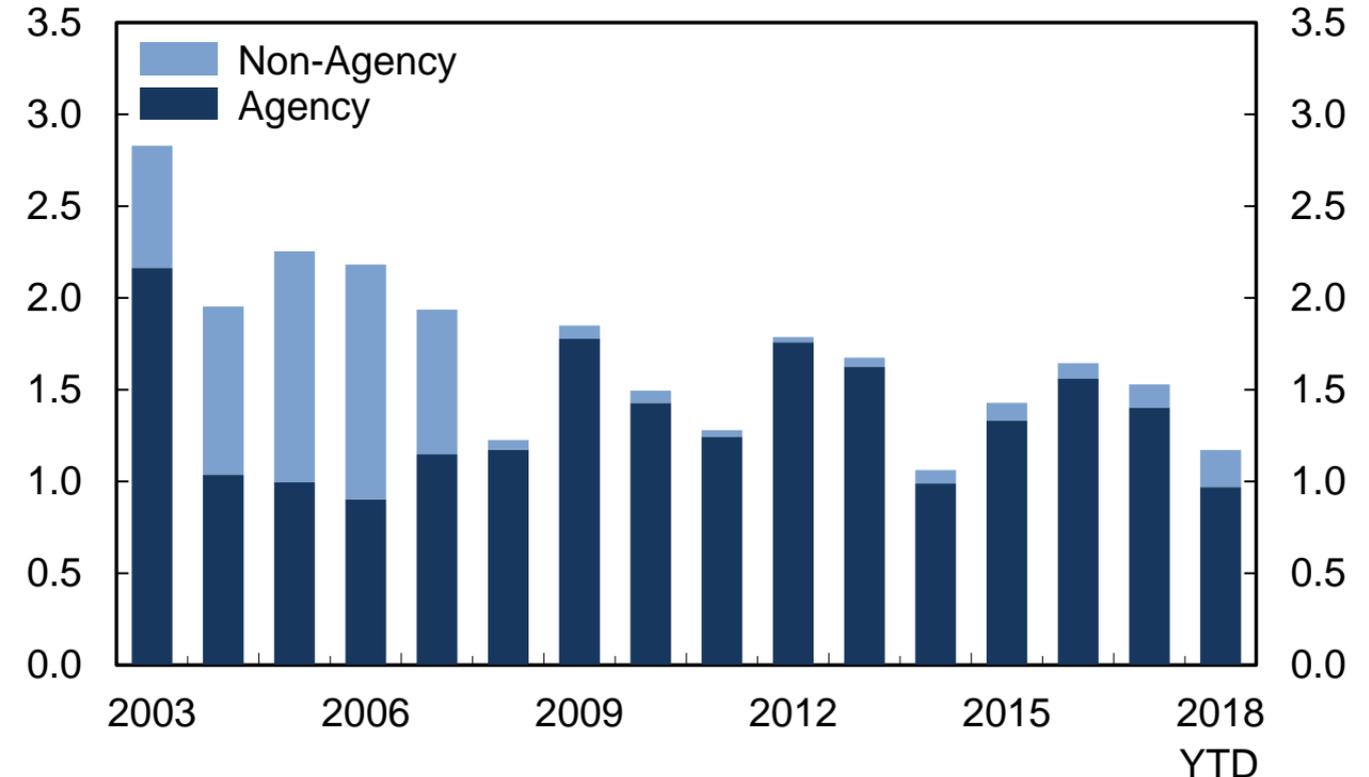
Source: Inside Mortgage Finance

4.5.9 RMBS Issuance

Trillions of US\$

As Of: Sep-2018

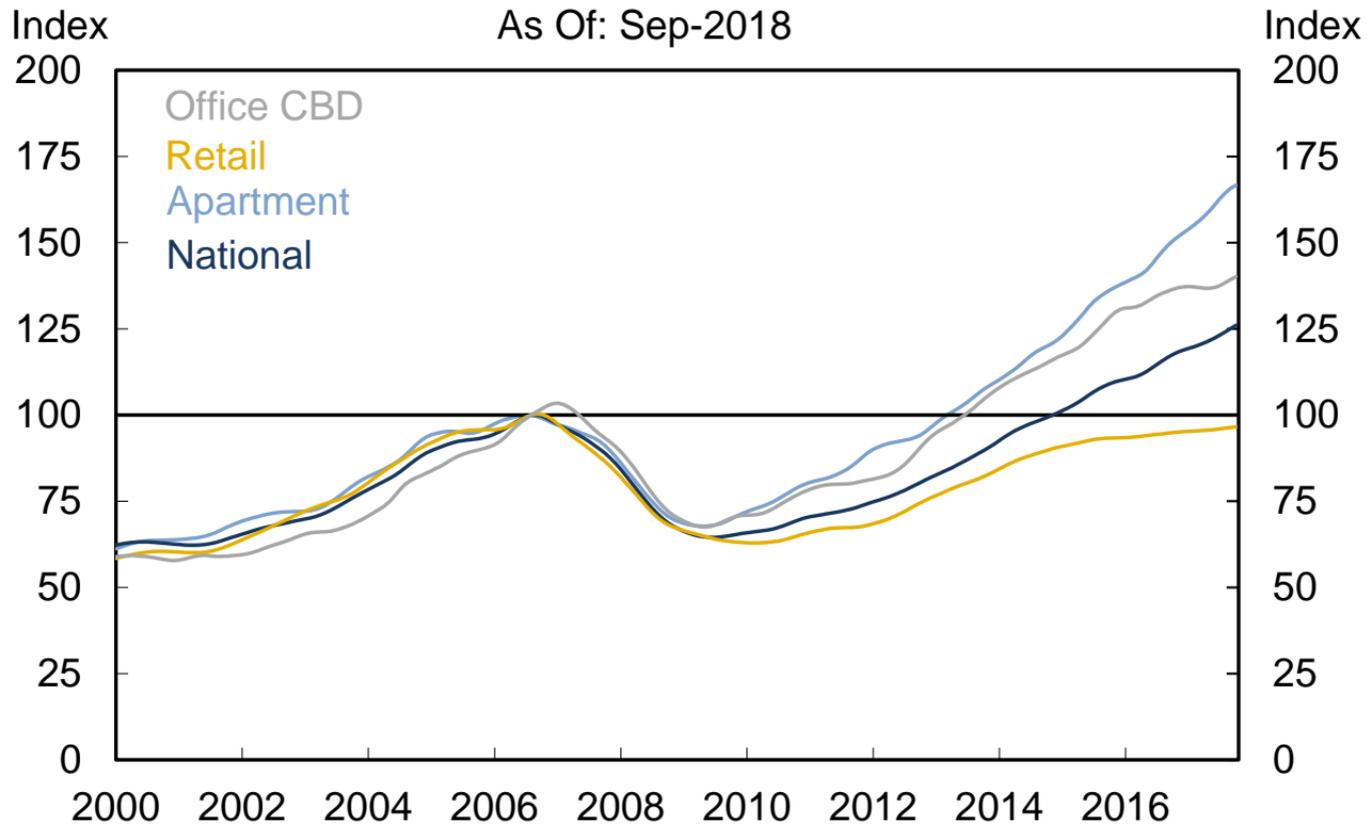
Trillions of US\$



Source: Fannie Mae, Freddie Mac, Ginnie Mae, Bloomberg, L.P., Thomson Reuters, SIFMA

4.5.10 Commercial Property Price Indices

As Of: Sep-2018



Source: Real Capital Analytics

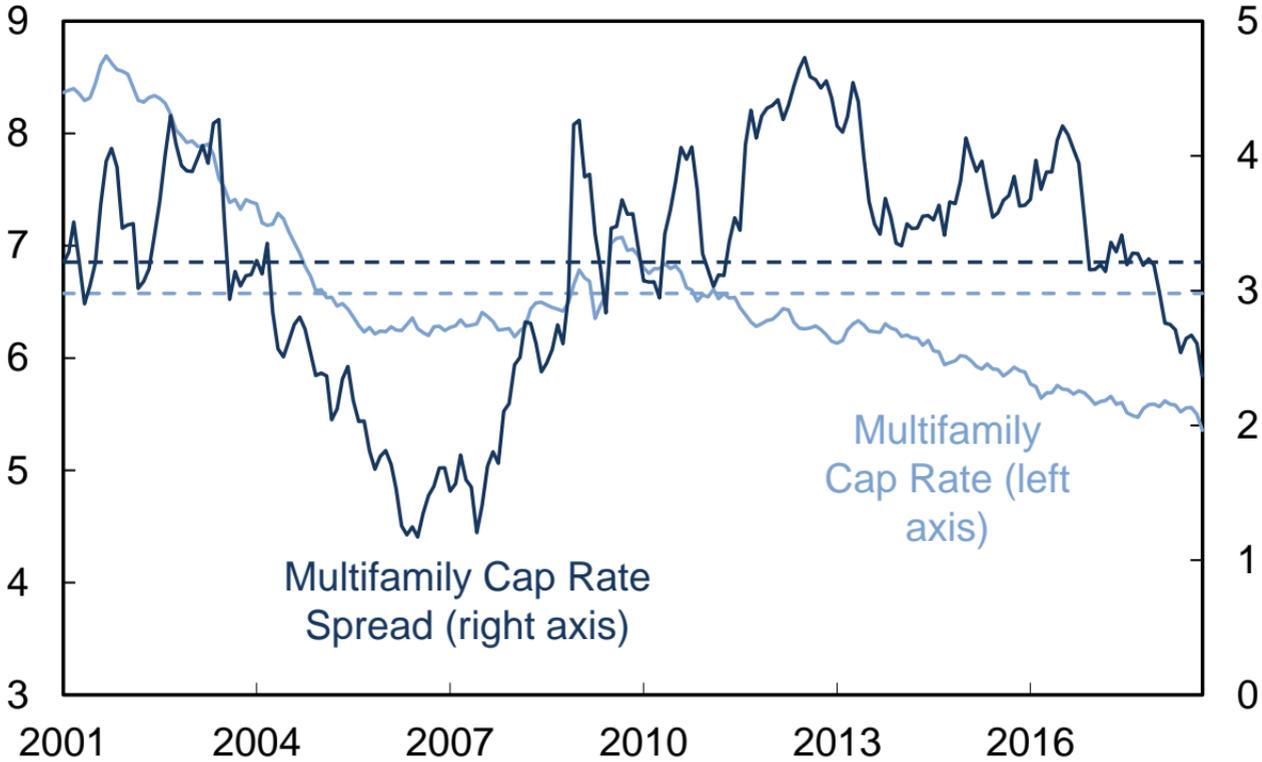
Note: Jul-2007 = 100.

4.5.11 Multifamily Capitalization Rates and Spreads

Percent

As Of: Sep-2018

Percent



Multifamily
Cap Rate (left
axis)

Multifamily Cap Rate
Spread (right axis)

Note: Dotted lines represent 2001-present average.

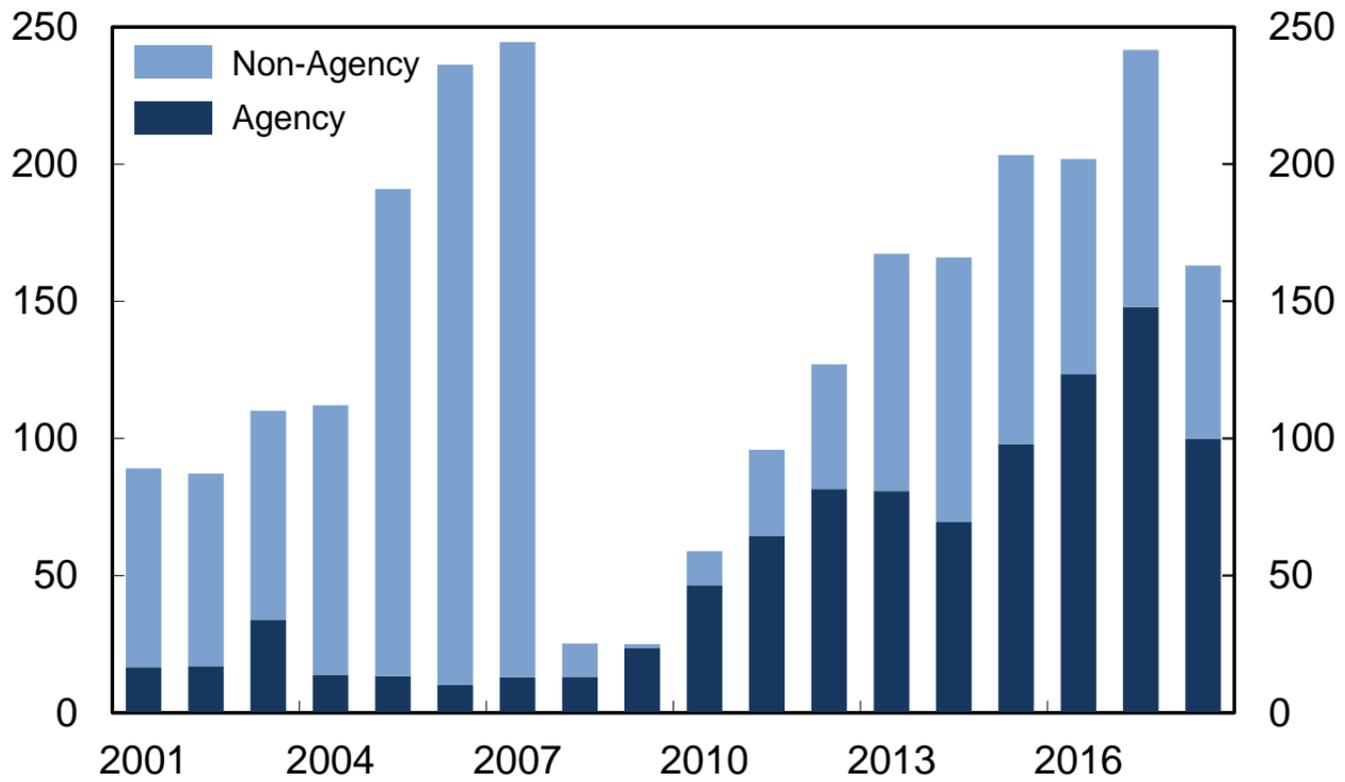
Source: Real Capital Analytics

4.5.12 CMBS Issuance

Billions of US\$

As Of: 2018 Q3

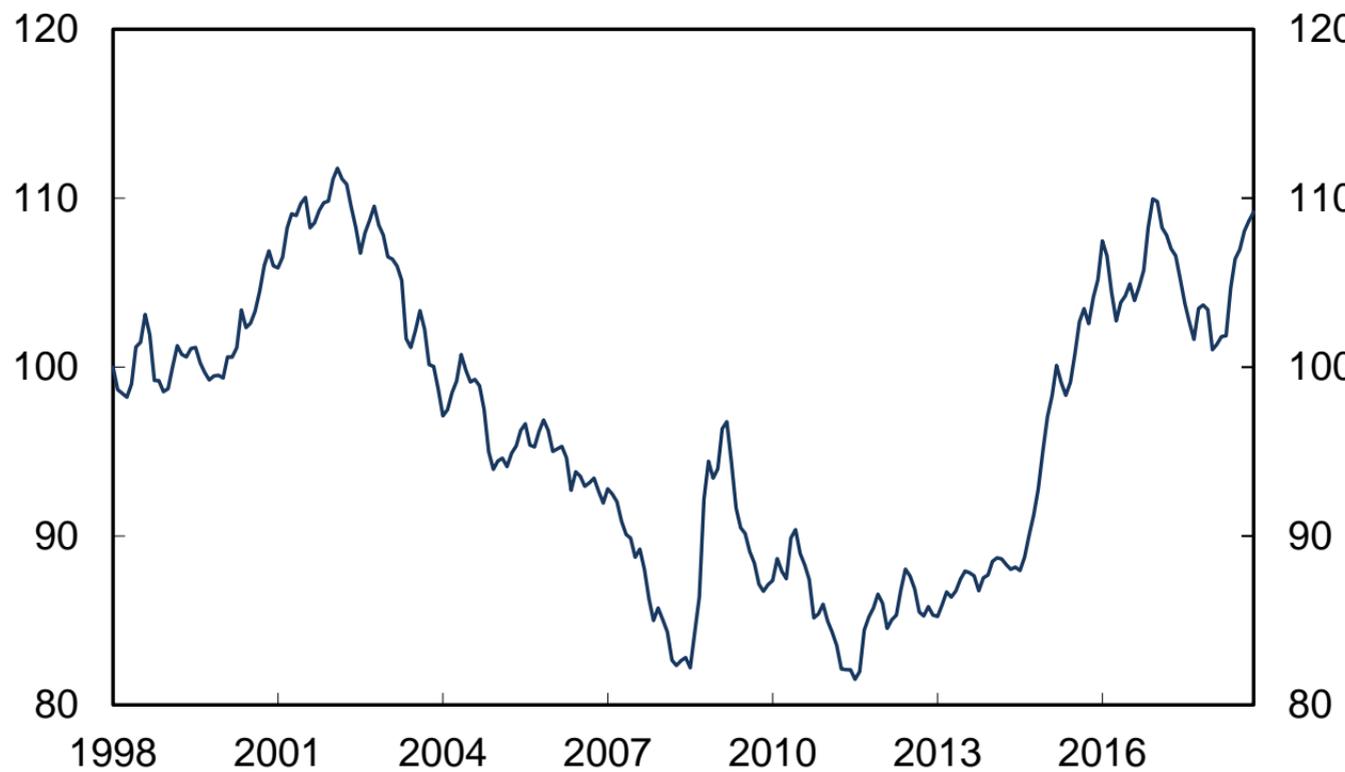
Billions of US\$



Source: Inside Mortgage Finance

4.6.1 Nominal U.S. Dollar Trade-Weighted Index

Index As Of: Oct-2018 Index



Source: Federal Reserve, Haver Analytics

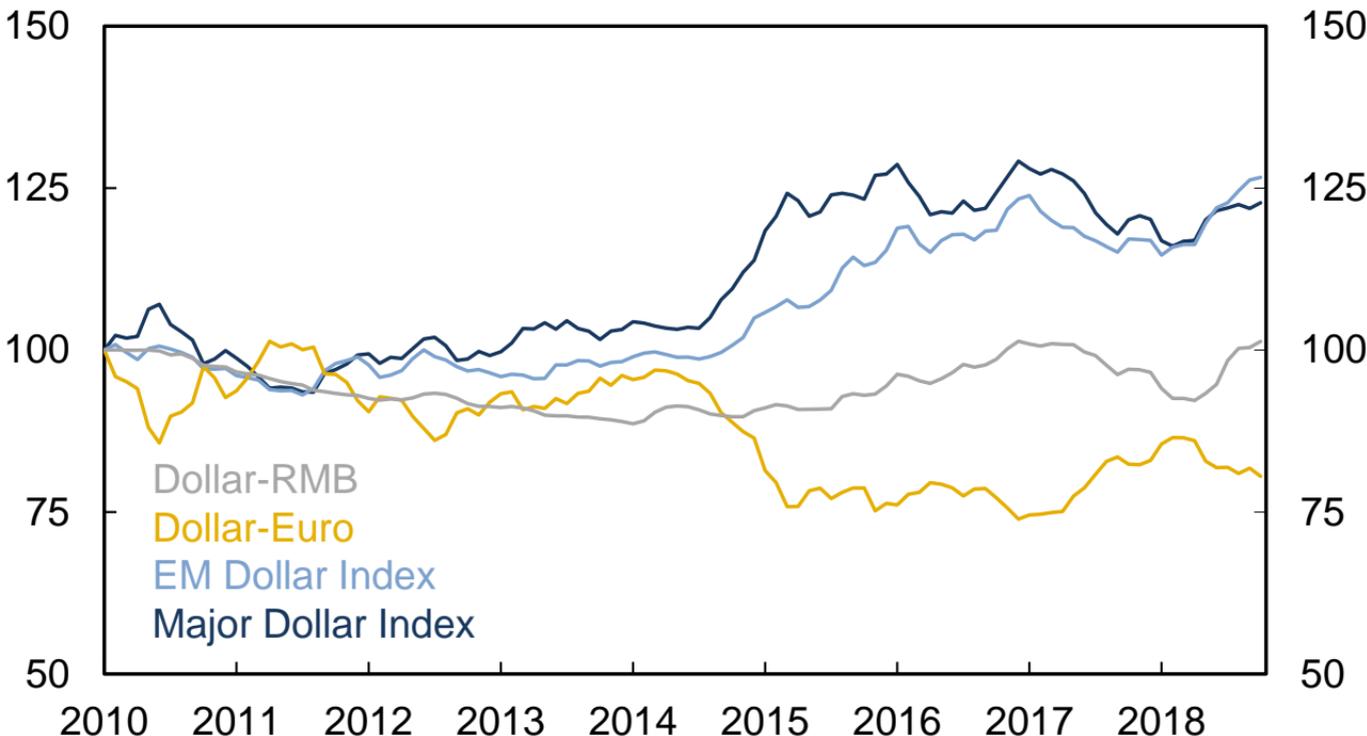
Note: Jan-1998 = 100. Nominal U.S. Dollar Trade-Weighted Index is a weighted average of the foreign exchange value of the U.S. dollar against the currencies of a broad group of major U.S. trading partners.

4.6.2 U.S. Dollar Exchange Rates

Index

As Of: Oct-2018

Index



Source: Federal Reserve,
Haver Analytics

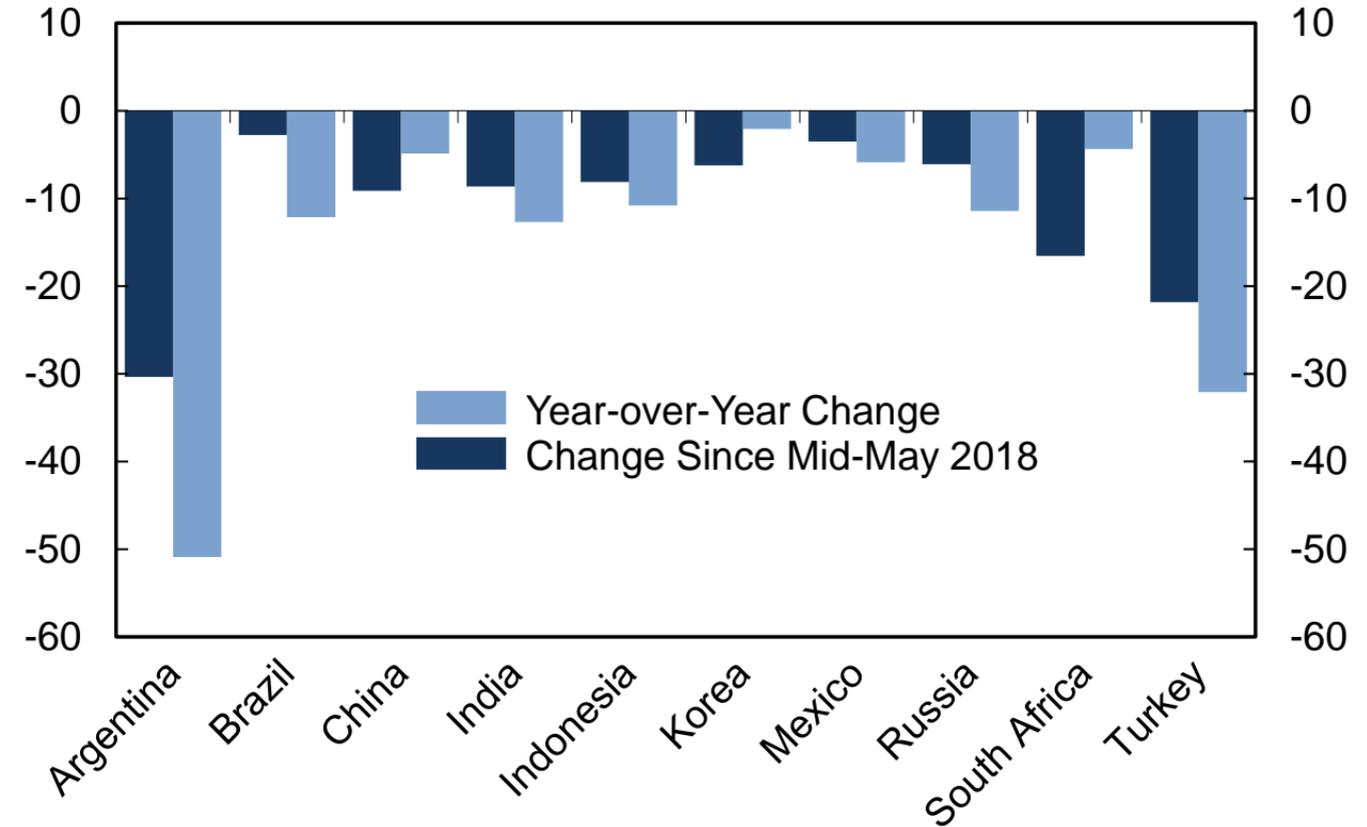
Note: Jan2010 = 100. EM dollar index is a weighted average of the FX values of the dollar against a subset of currencies in the broad index that do not circulate widely outside the country of issue.

4.6.3 Change in U.S. Dollar Exchange Rates

Percent

As Of: 31-Oct-2018

Percent



Source: Wall Street Journal, Haver Analytics

4.7.1 Returns in Selected Equities Indices

As Of: 31-Oct-2018

	6 Month Returns	1 Year Returns	5 Year Annualized Returns
Major Economies			
U.S. (S&P)	2.4%	5.3%	9.1%
Euro (Euro Stoxx)	(9.6%)	(11.2%)	2.7%
Japan (Nikkei)	(2.4%)	(0.4%)	8.9%
U.K. (FTSE)	(5.1%)	(4.9%)	1.2%
Selected Europe			
Germany (DAX)	(9.2%)	(13.5%)	4.8%
France (CAC)	(7.7%)	(7.4%)	3.4%
Italy (FTSE MIB)	(20.6%)	(16.4%)	(0.3%)
Spain (IBEX)	(10.9%)	(15.5%)	(2.1%)
Emerging Markets			
MSCI Emerging Market Index	(17.9%)	(14.6%)	(1.6%)
Brazil (Bovespa)	1.5%	17.6%	10.0%
Russia (MICEX)	2.0%	14.0%	9.3%
India (Sensex)	(2.0%)	3.7%	10.2%
China (Shanghai SE)	(15.6%)	(23.3%)	4.0%
Hong Kong (Hang Seng)	(18.9%)	(11.6%)	1.5%
South Korea (KOSPI)	(19.3%)	(19.6%)	(0.0%)

Source: Capital IQ

4.7.2 U.S. Stock Valuations

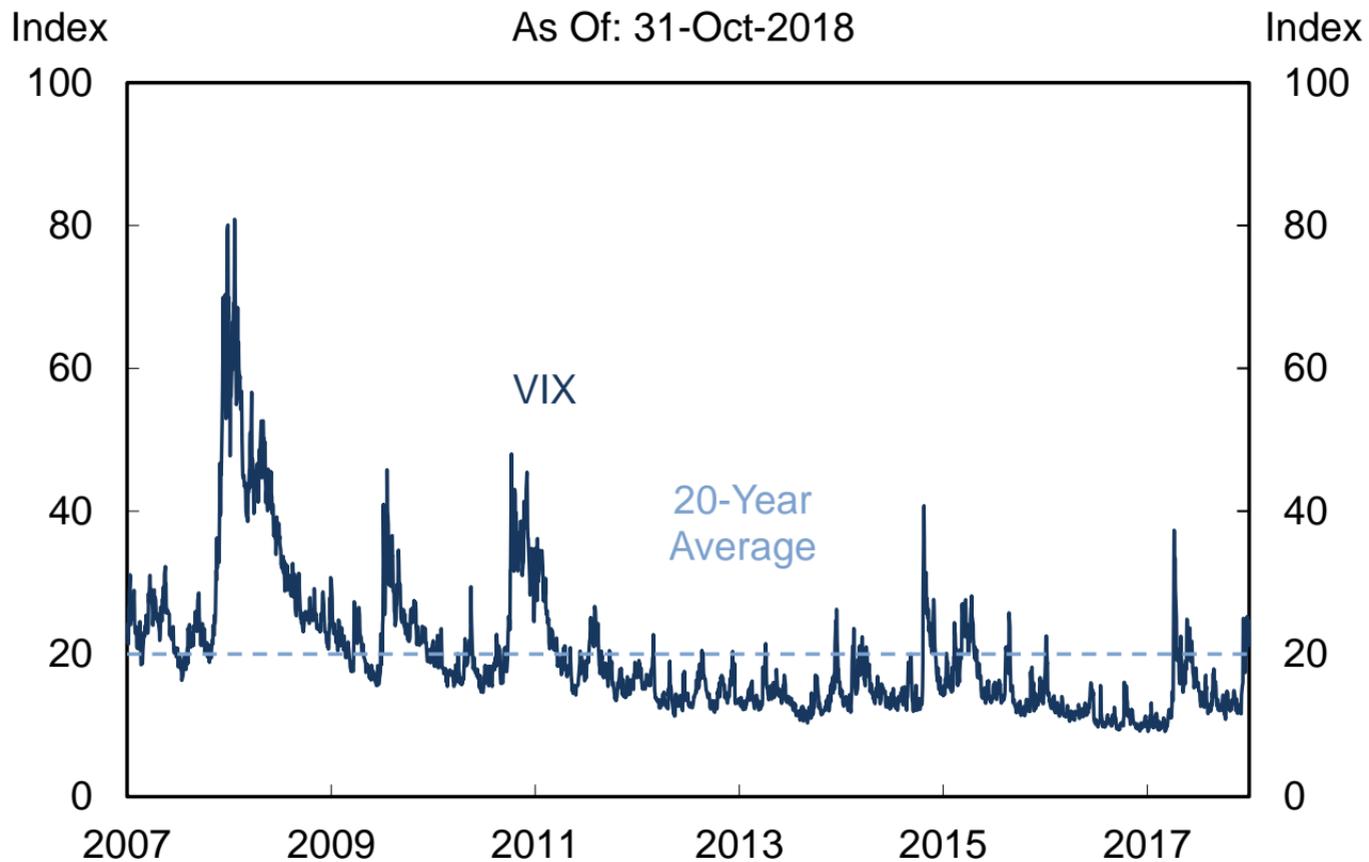
As Of: 30-Nov-2018

Metric	Current	Historical Percentile
CAPE Ratio	30.6	96%
Buffett Indicator	146%	96%
Price-to-Book	3.3%	80%
Price-to-Earnings	18.9	71%
Forward Price-to-Earnings	16.2	62%

Source: Bloomberg L.P.,
Wilshire Associates, Haver
Analytics, OFR

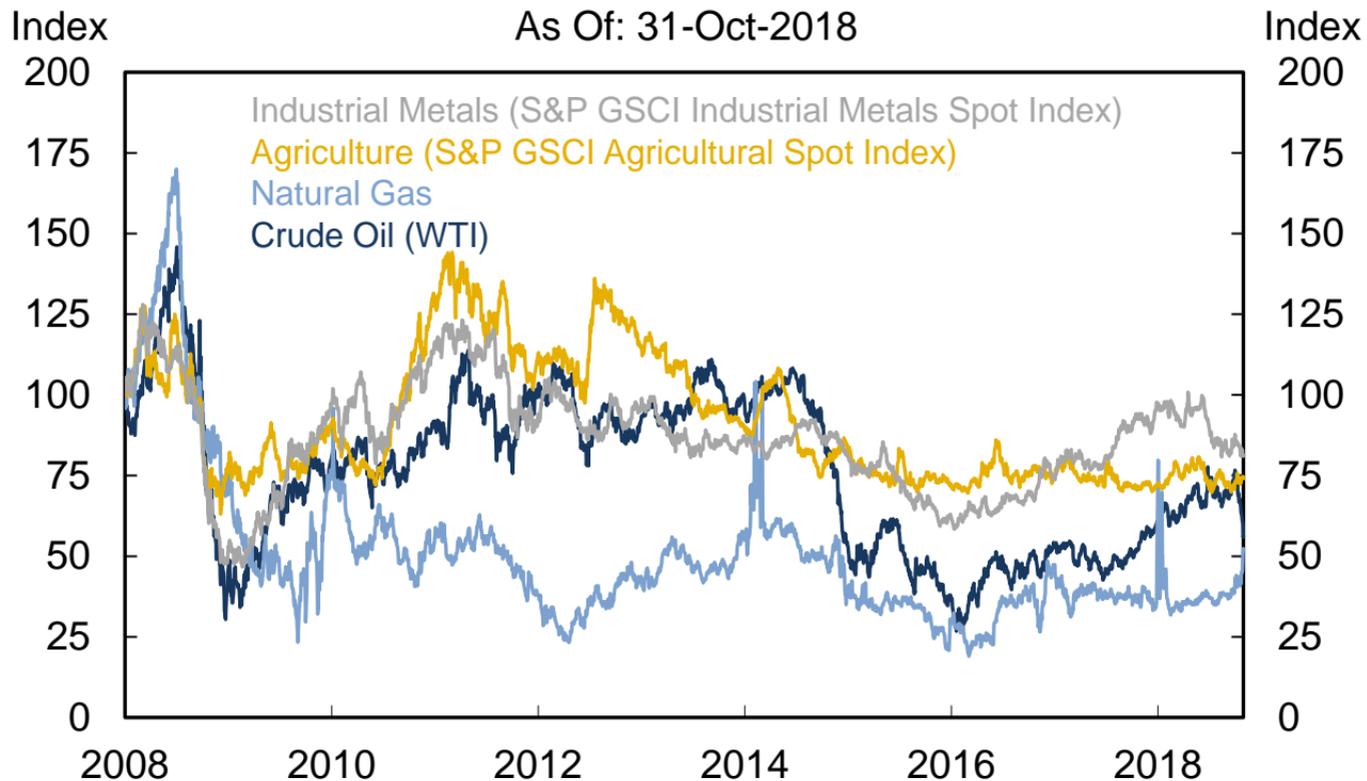
Note: Percentiles are based on historical data since, respectively, 1881, 1970, 1990, 1954, and 1990. CAPE, price-to-book, and price-to-earnings ratios are based on the S&P 500 aggregate index. Buffett Indicator is based on the Wilshire 5000.

4.7.3 S&P 500 Volatility



Source: Bloomberg, L.P.

4.8.1 Commodities



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

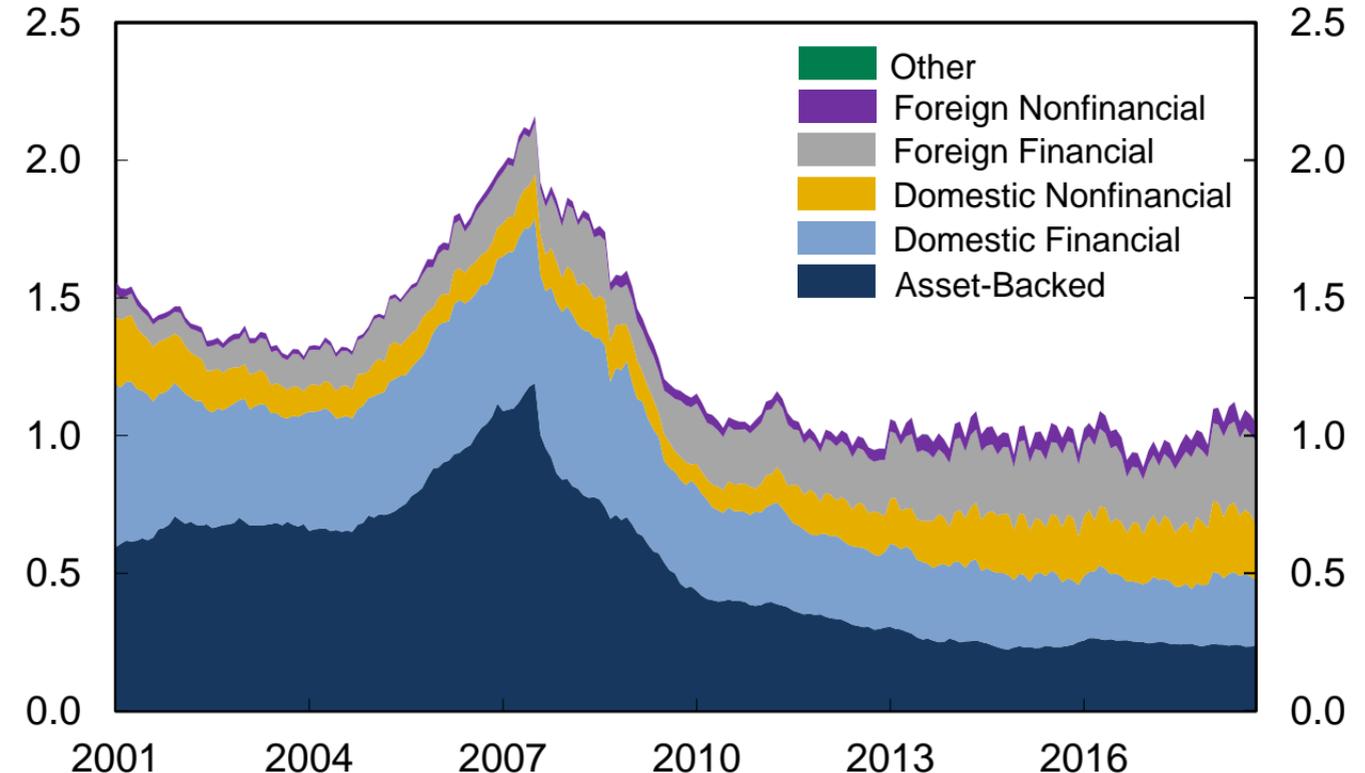
Note: 02-Jan-2008 = 100.

4.9.1 Commercial Paper Outstanding

Trillions of US\$

As Of: Sep-2018

Trillions of US\$



Source: Federal Reserve

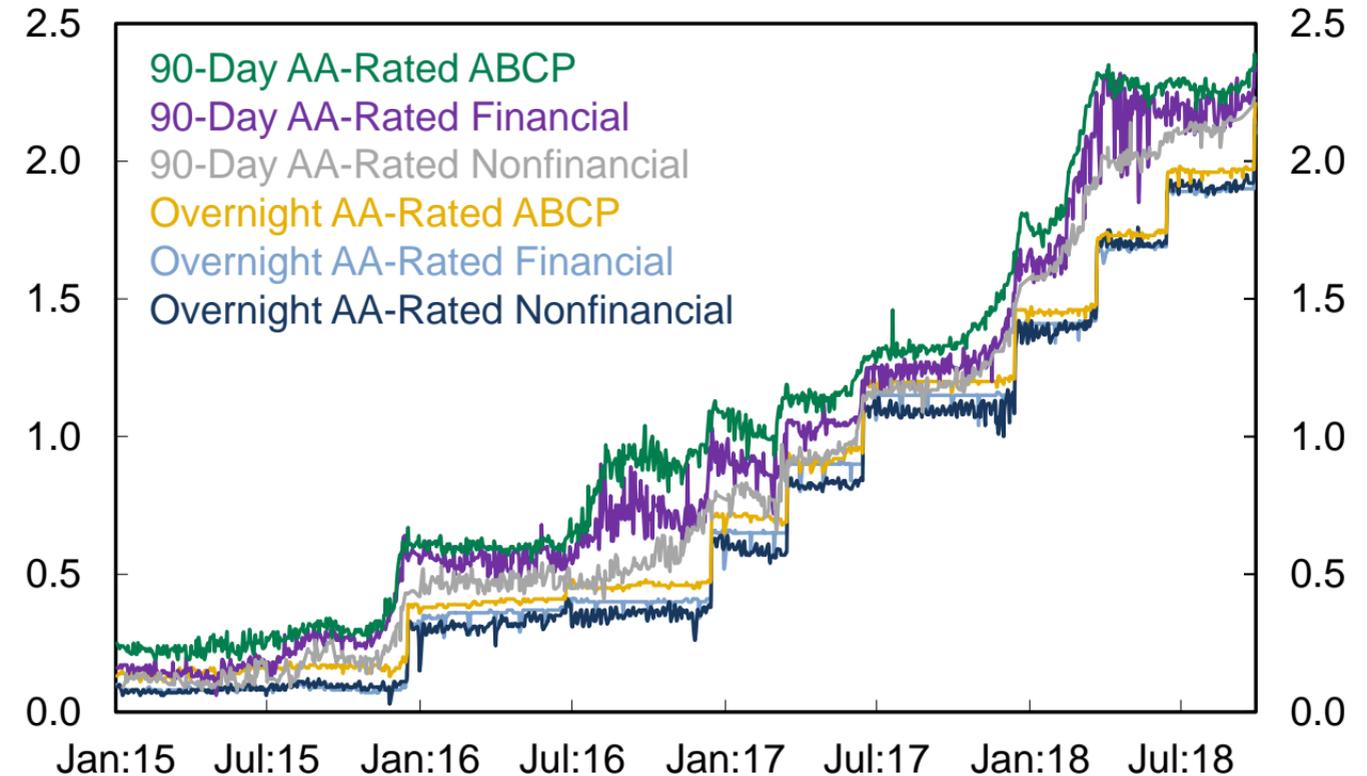
Note: Domestic includes CP issued in the U.S. by entities with foreign parents.

4.9.2 Commercial Paper Interest Rates

Percent

As Of: 28-Sep-2018

Percent



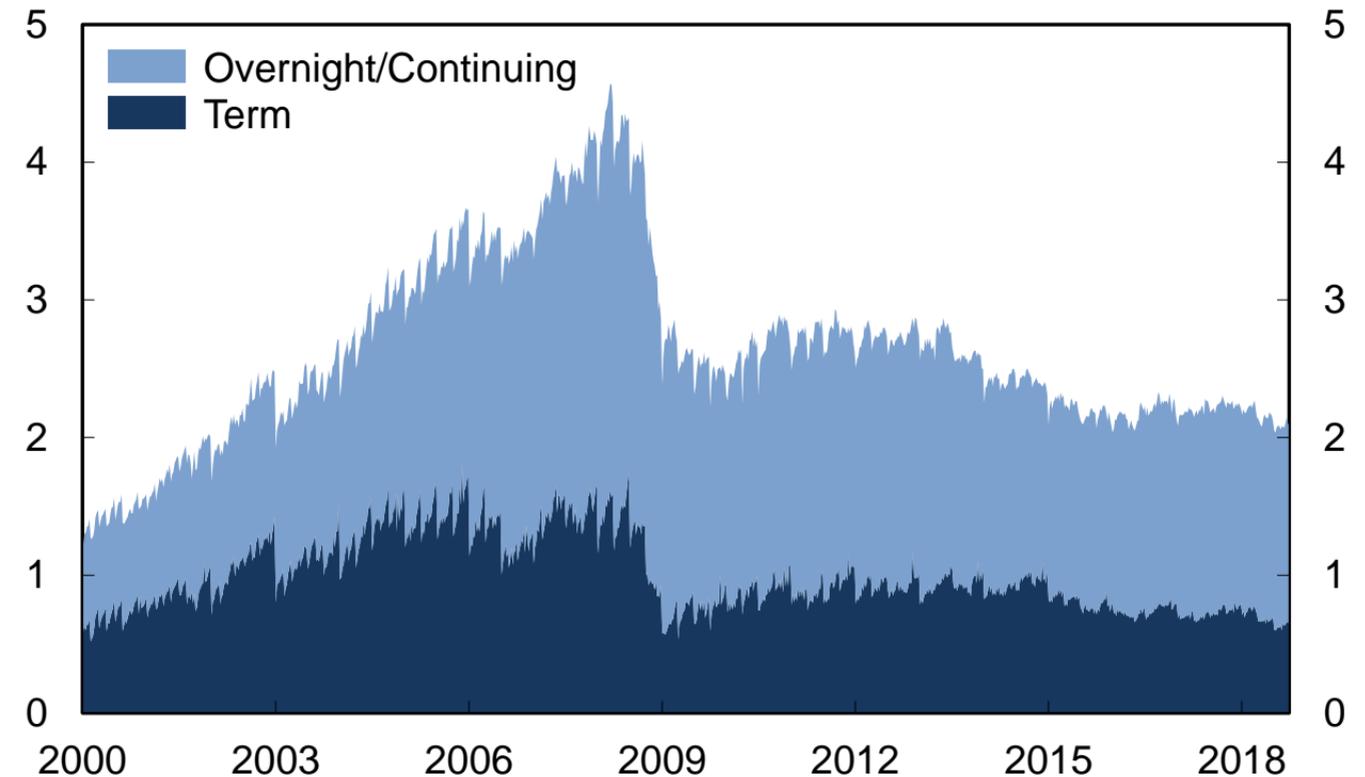
Source: Federal Reserve Bank of St. Louis

4.9.3 Primary Dealer Repo Agreements

Trillions of US\$

As Of: 26-Sep-2018

Trillions of US\$



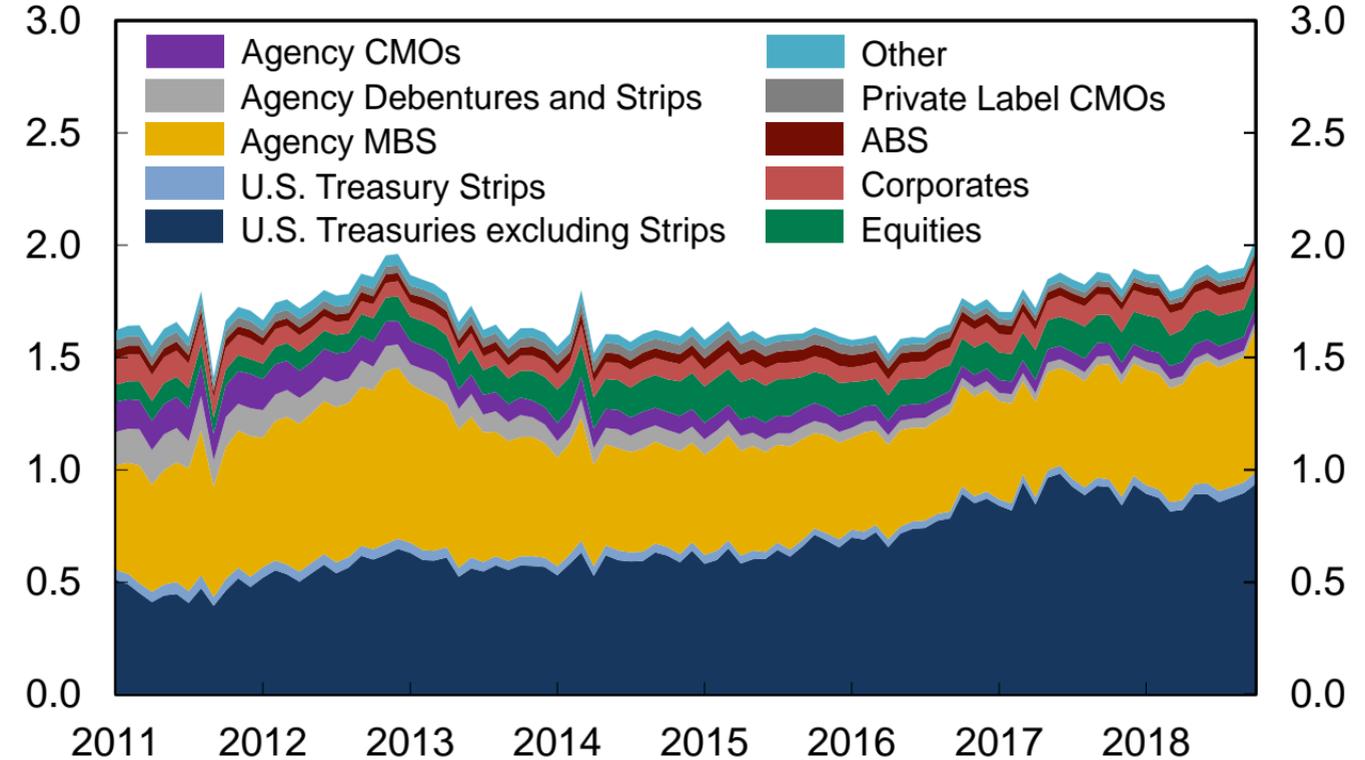
Source: FRBNY

4.9.4 Collateral in the Tri-Party Repo Market

Trillions of US\$

As Of: Sep-2018

Trillions of US\$



Source: FRBNY, Haver Analytics

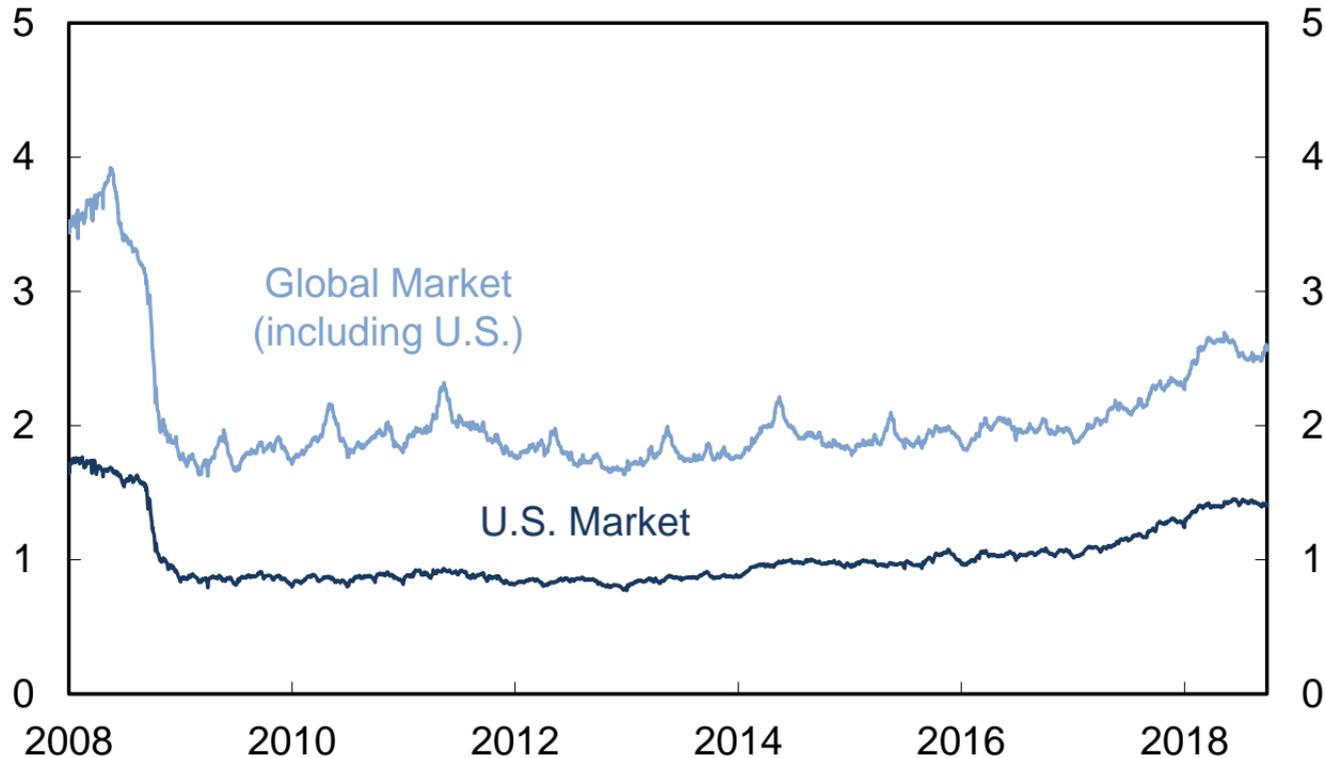
Note: Other includes CDOs, international securities, money markets, municipal debt, and whole loans.

4.9.5 Value of Securities on Loan

Trillions of US\$

As Of: 28-Sep-2018

Trillions of US\$



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

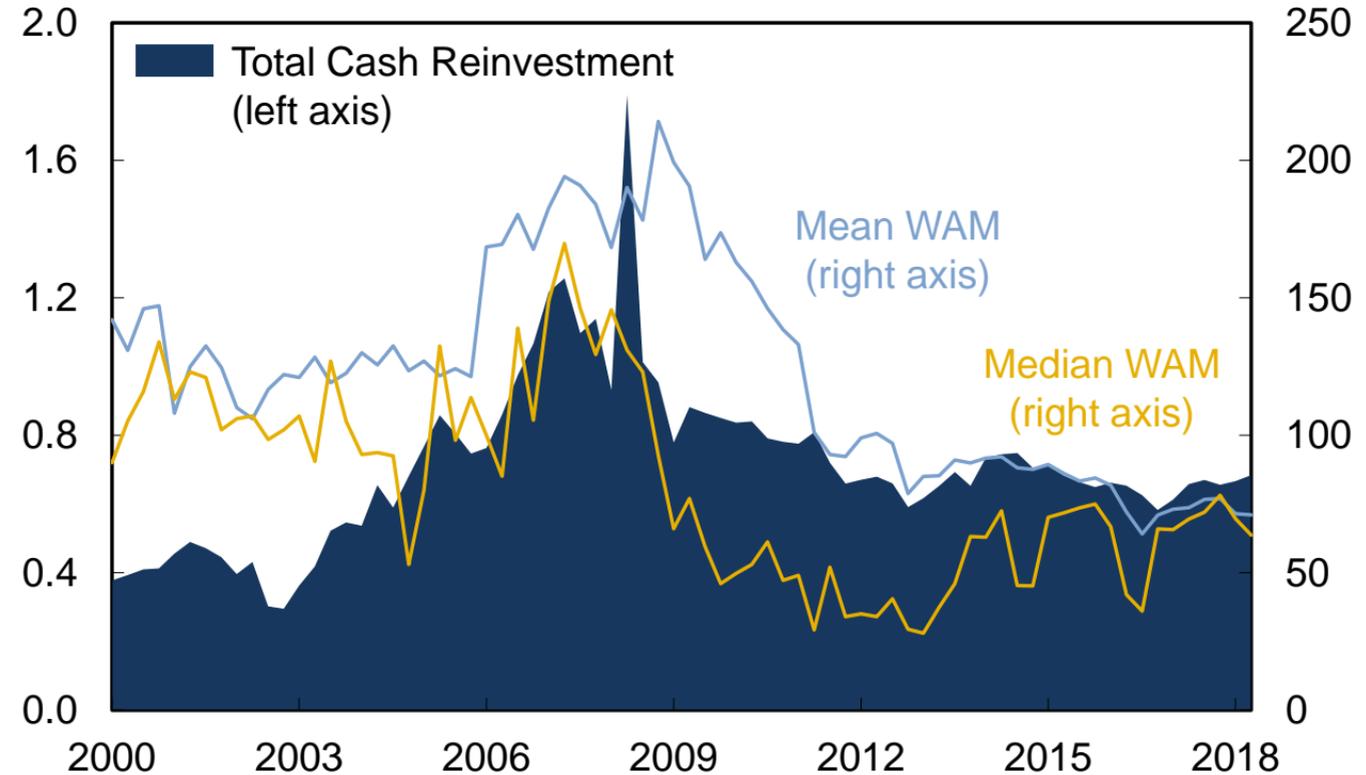
Source: Markit Group Limited

4.9.6 U.S. Securities Lending Cash Reinvestment

Trillions of US\$

As Of: 2018 Q2

Days



Source: The Risk Management Association

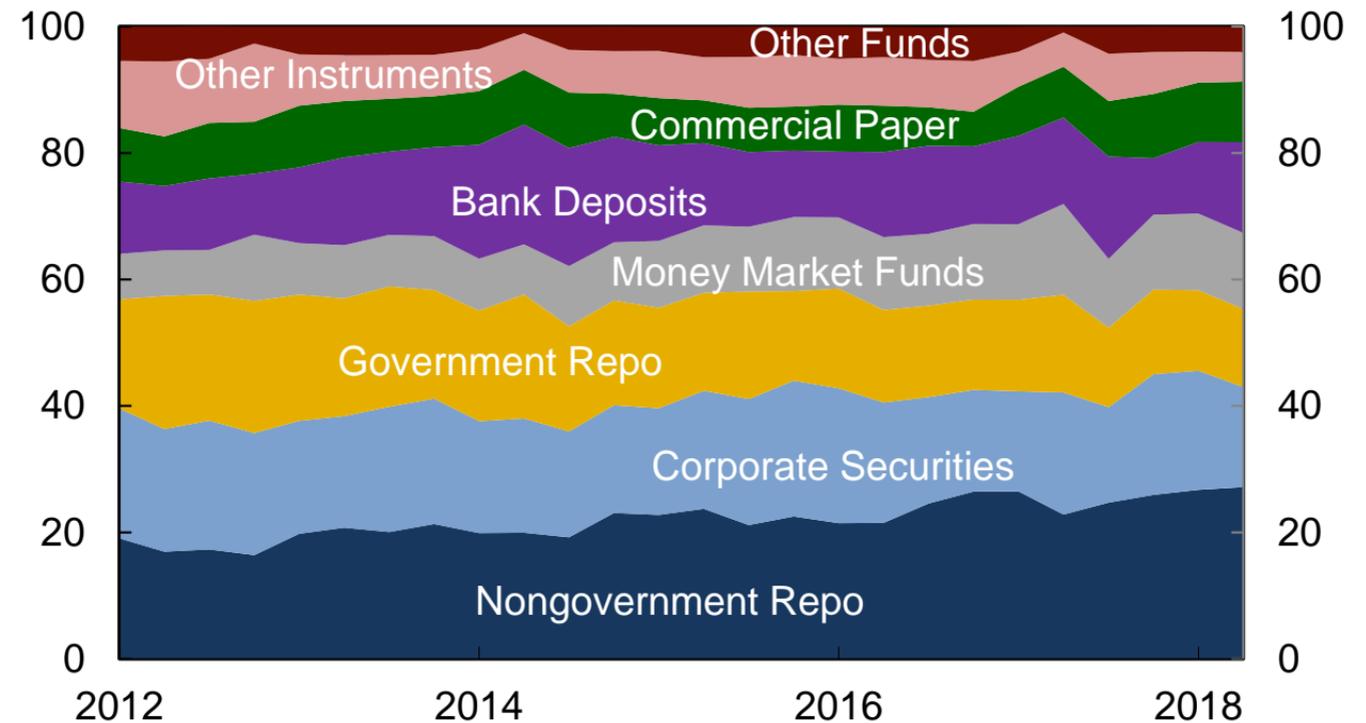
Note: Data is based on a survey of agent-based lenders.

4.9.7 U.S. Securities Lending Cash Reinvestment

Percent of Total

As Of: 2018 Q2

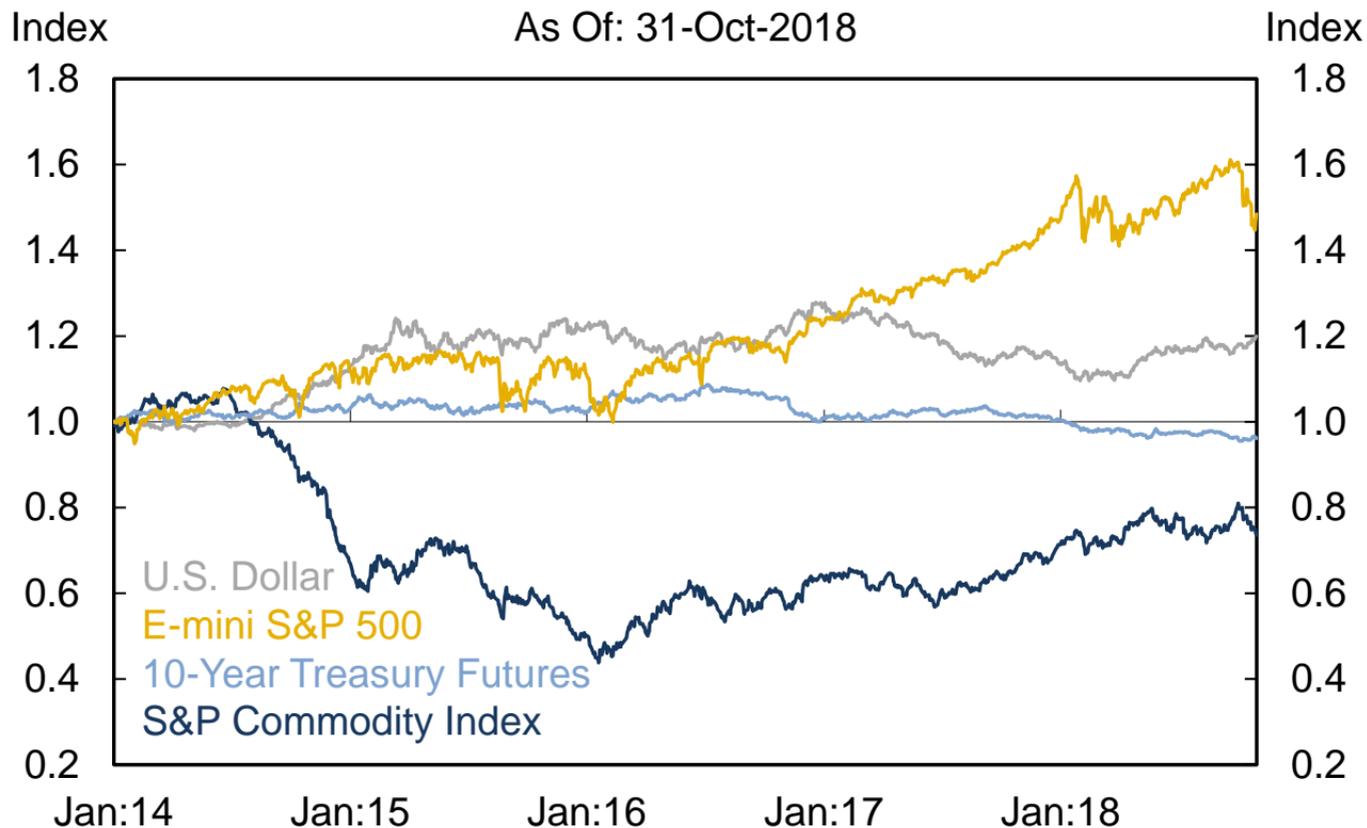
Percent of Total



Source: The Risk Management Association; OFR.

Note: Nongovernment repos have collateral of whole loans, equity, and corporate debt. Data is based on a survey of agent-based lenders.

4.10.1 Normalized Futures Prices



Source: Bloomberg, L.P.

Note: 2-Jan-2014 = 1.0.

4.10.2 Market Volatility Indices

Index

As Of: 31-Oct-2018

Index

15

80

Treasury VIX (left axis)

VIX (right axis)

Crude Oil VIX (right axis)

12

70

9

60

6

50

3

40

0

30

Jan:14

Jan:15

Jan:16

Jan:17

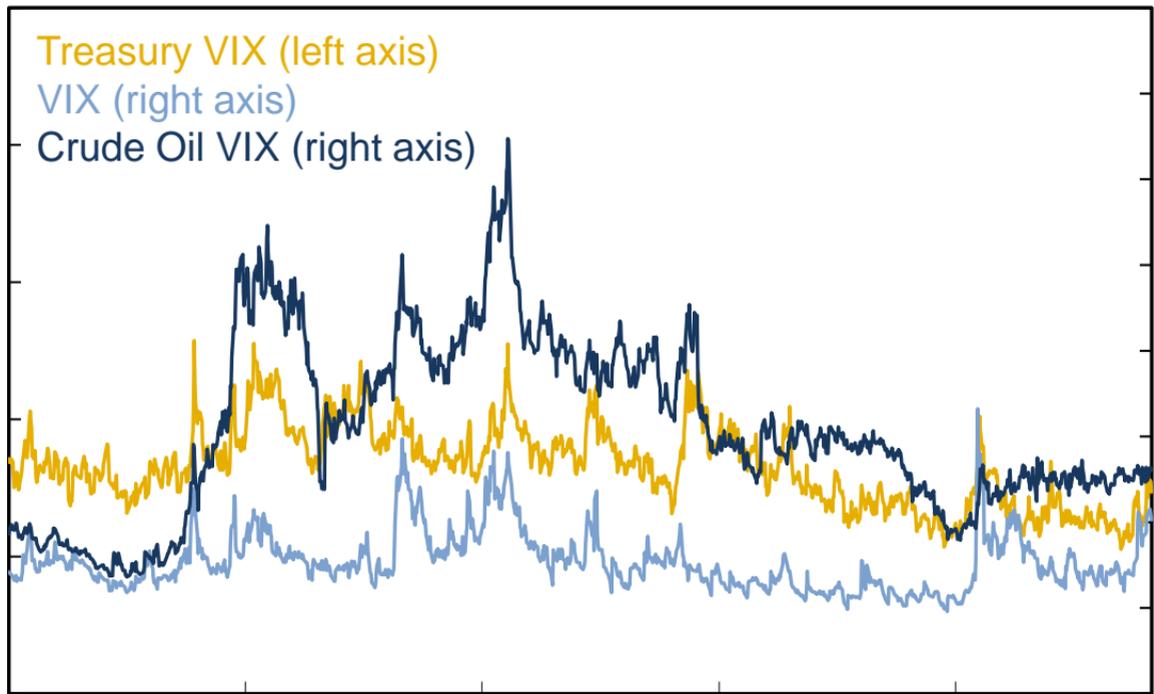
Jan:18

20

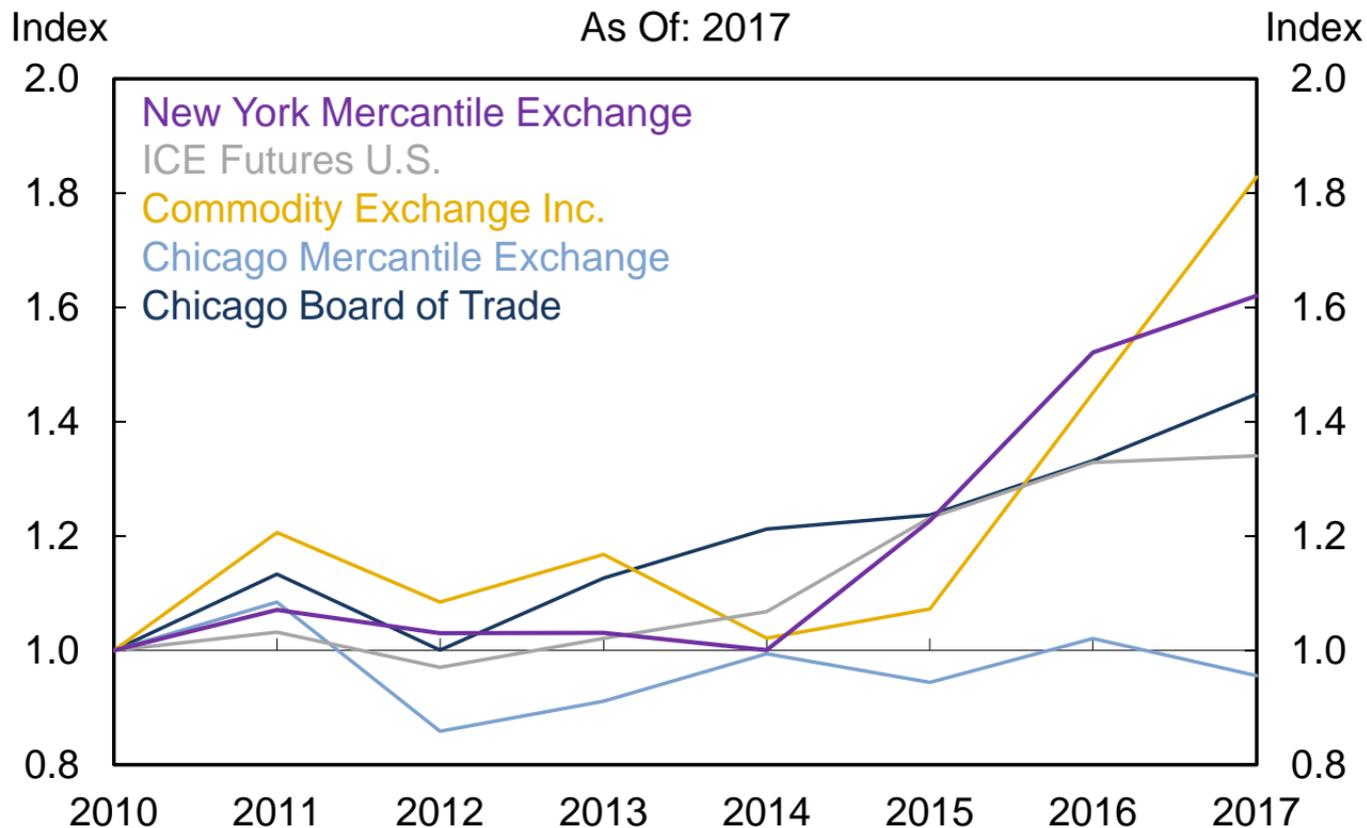
10

0

Source: Bloomberg, L.P.

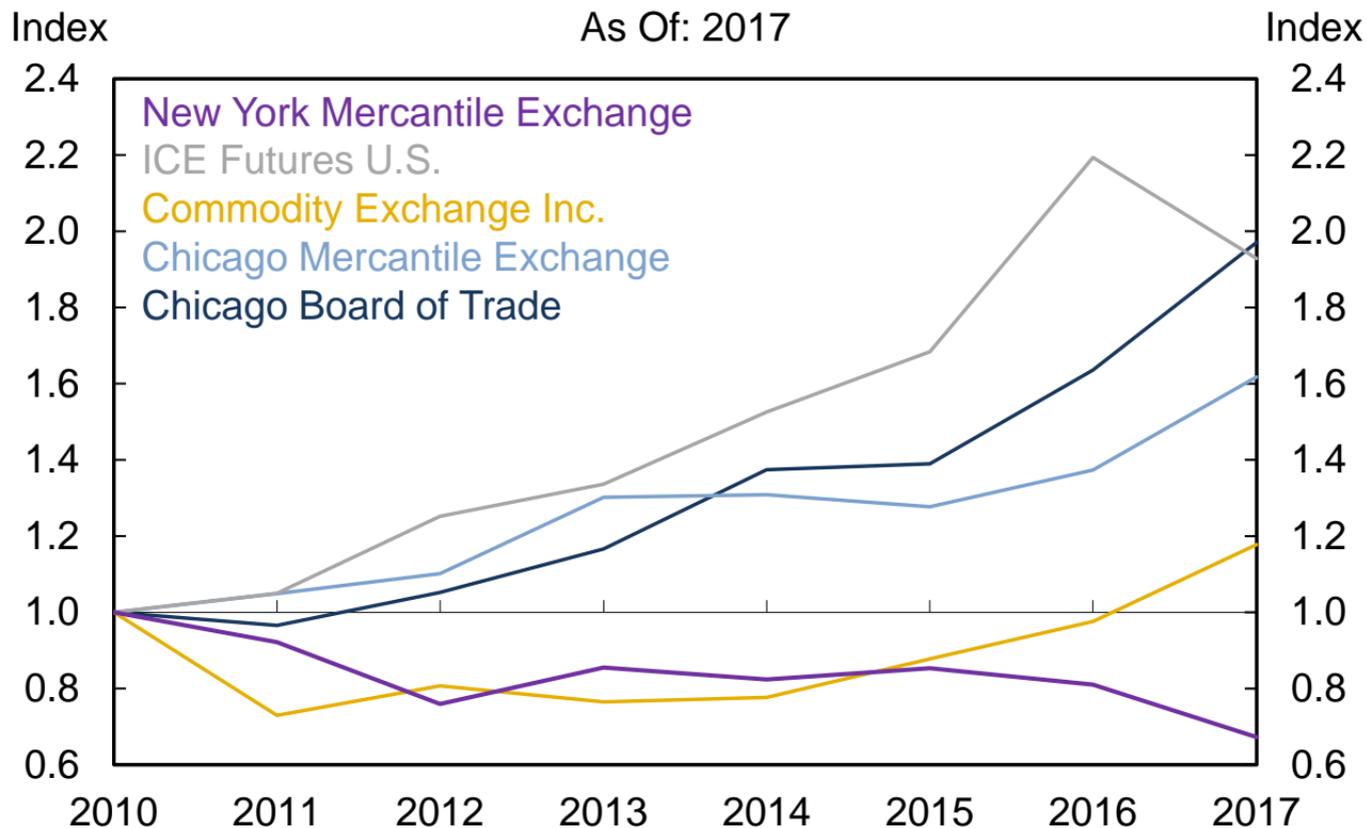


4.10.3 Normalized Futures Exchange Volume



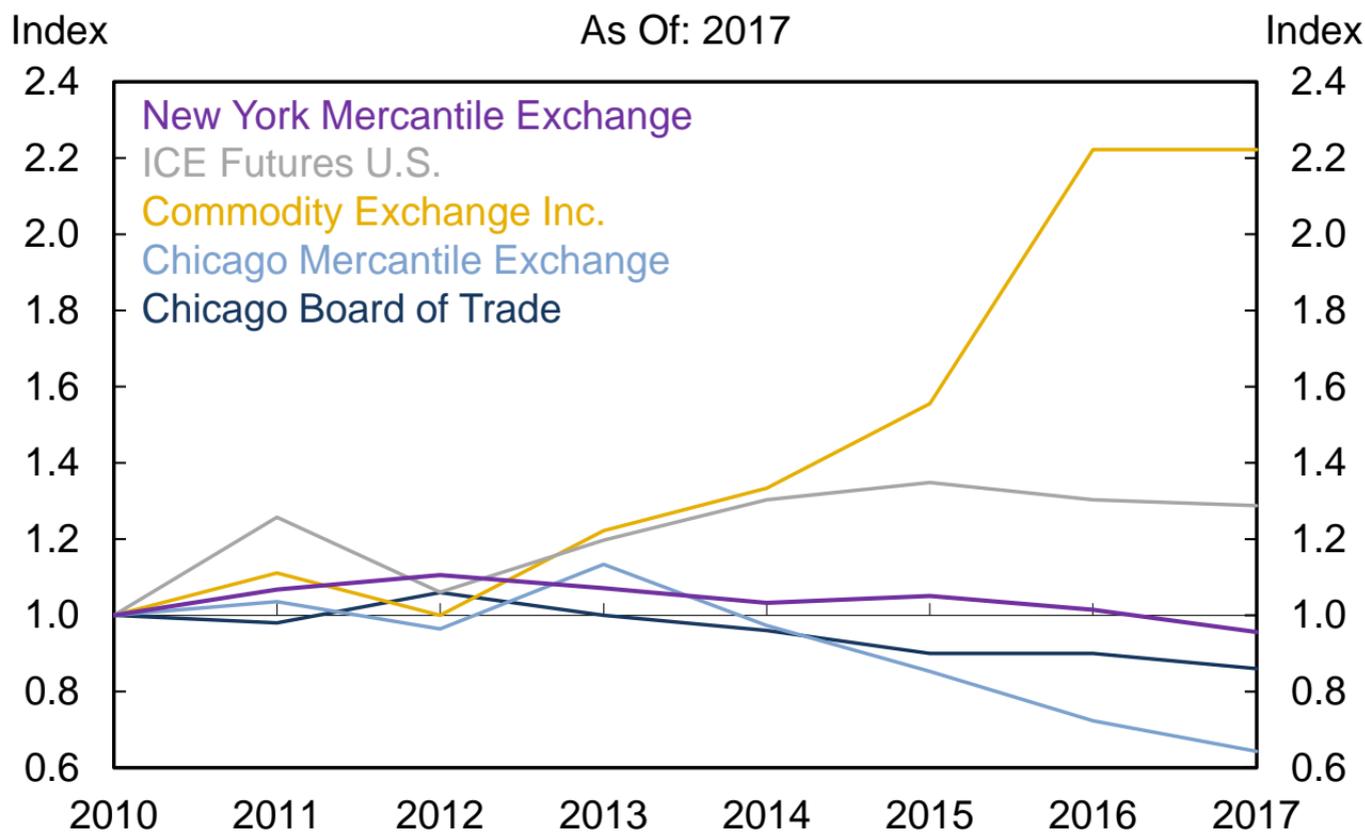
Source: CFTC

4.10.4 Normalized Futures Exchange Open Interest



Source: CFTC

4.10.5 Normalized Futures Exchange Number of Products



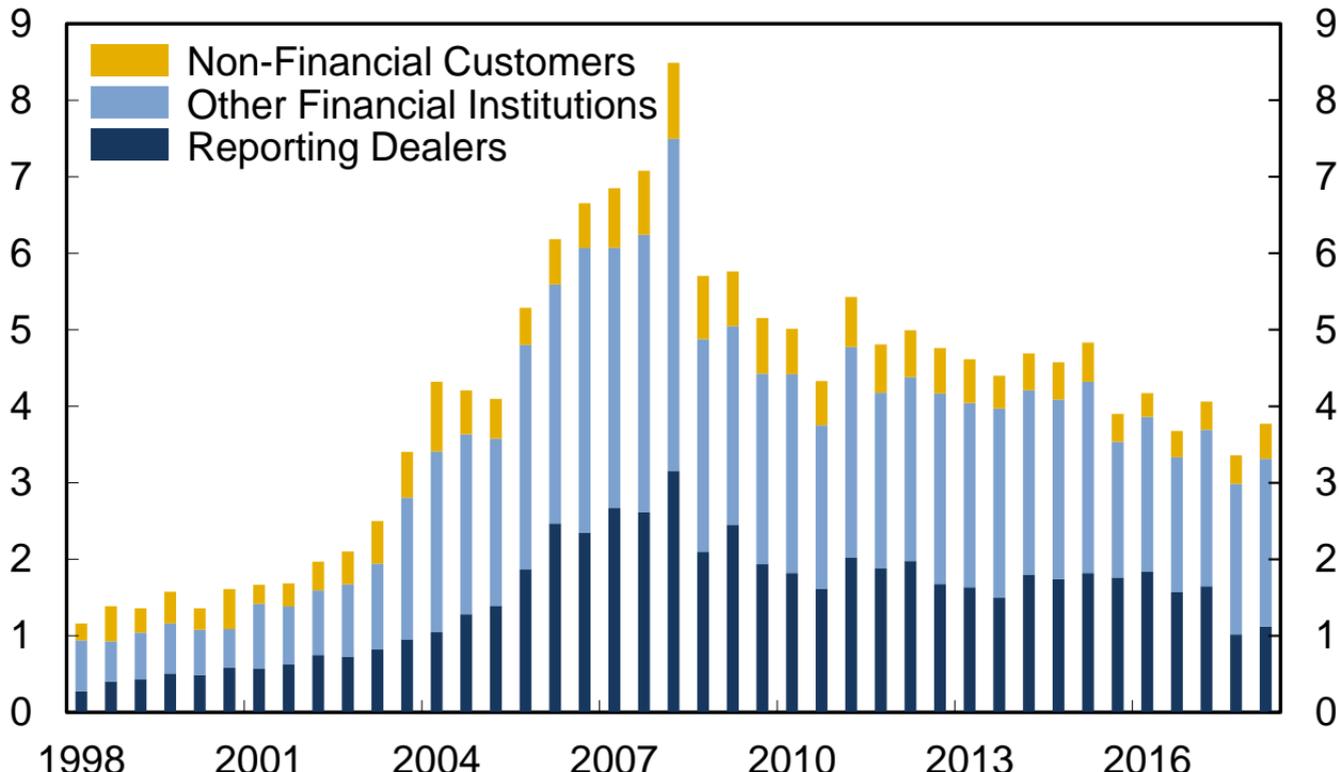
Source: CFTC

4.10.6 OTC Equity Options: Global Notional Outstanding

Trillions of US\$

As Of: 2018 Q2

Trillions of US\$



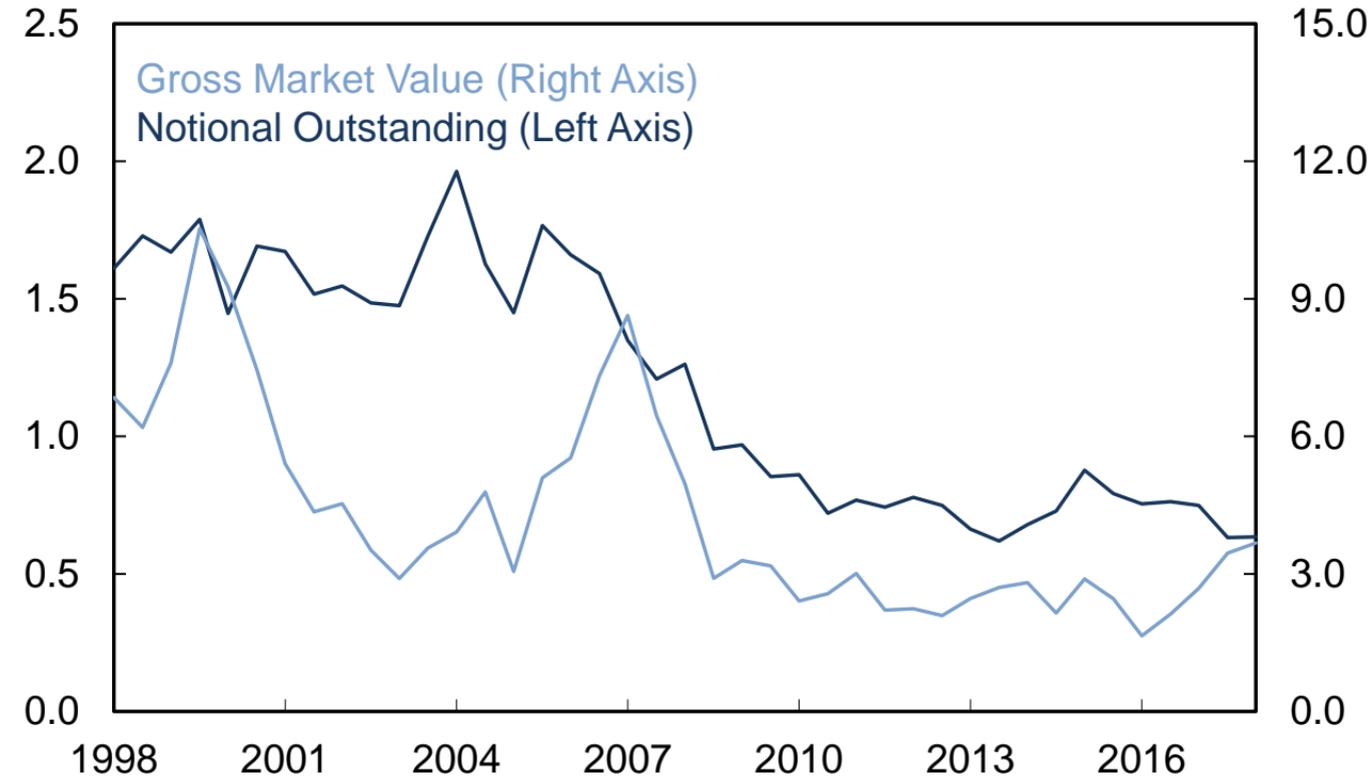
Source: BIS, Haver Analytics

4.10.7 OTC Equity Option Share of All OTC Derivatives

Percent

As Of: 2018 Q2

Percent



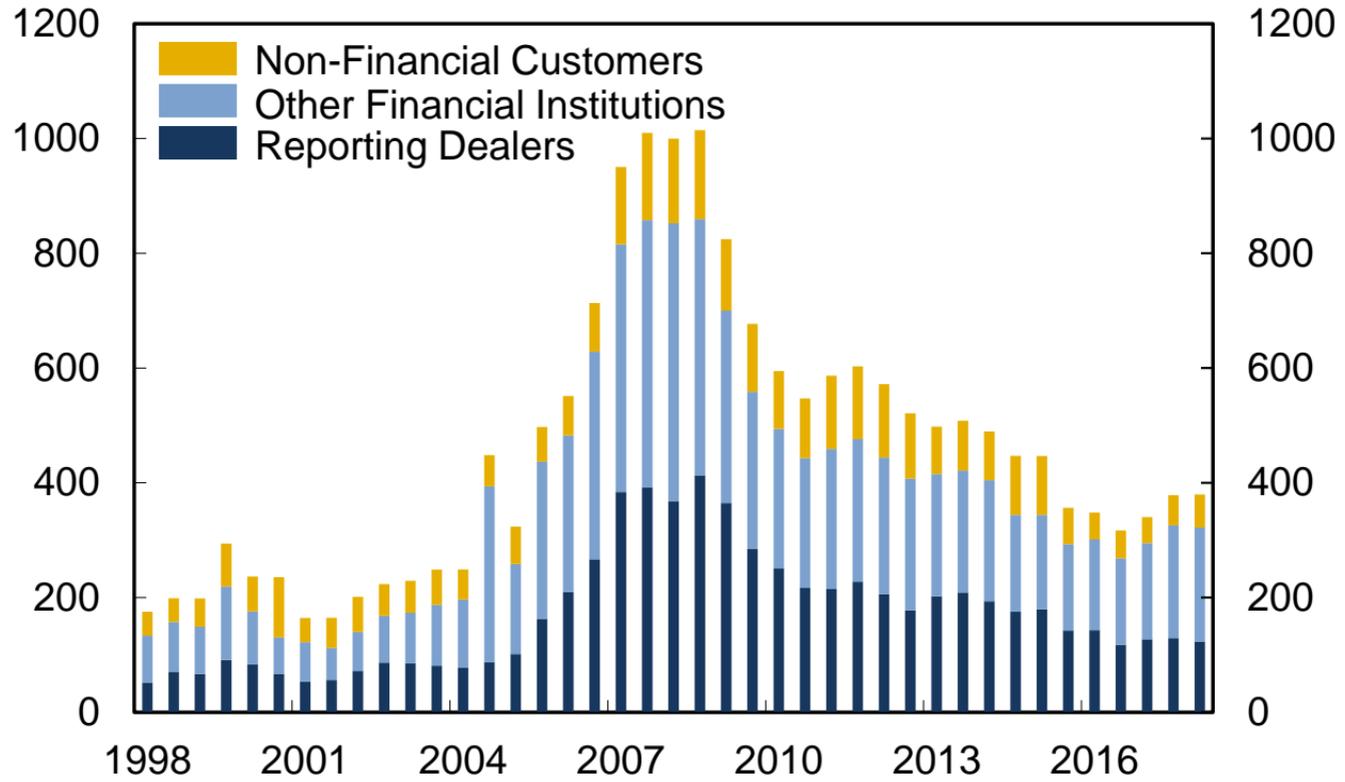
Source: BIS, Haver Analytics

4.10.8 OTC Equity Options: Global Market Value

Billions of US\$

As Of: 2018 Q2

Billions of US\$



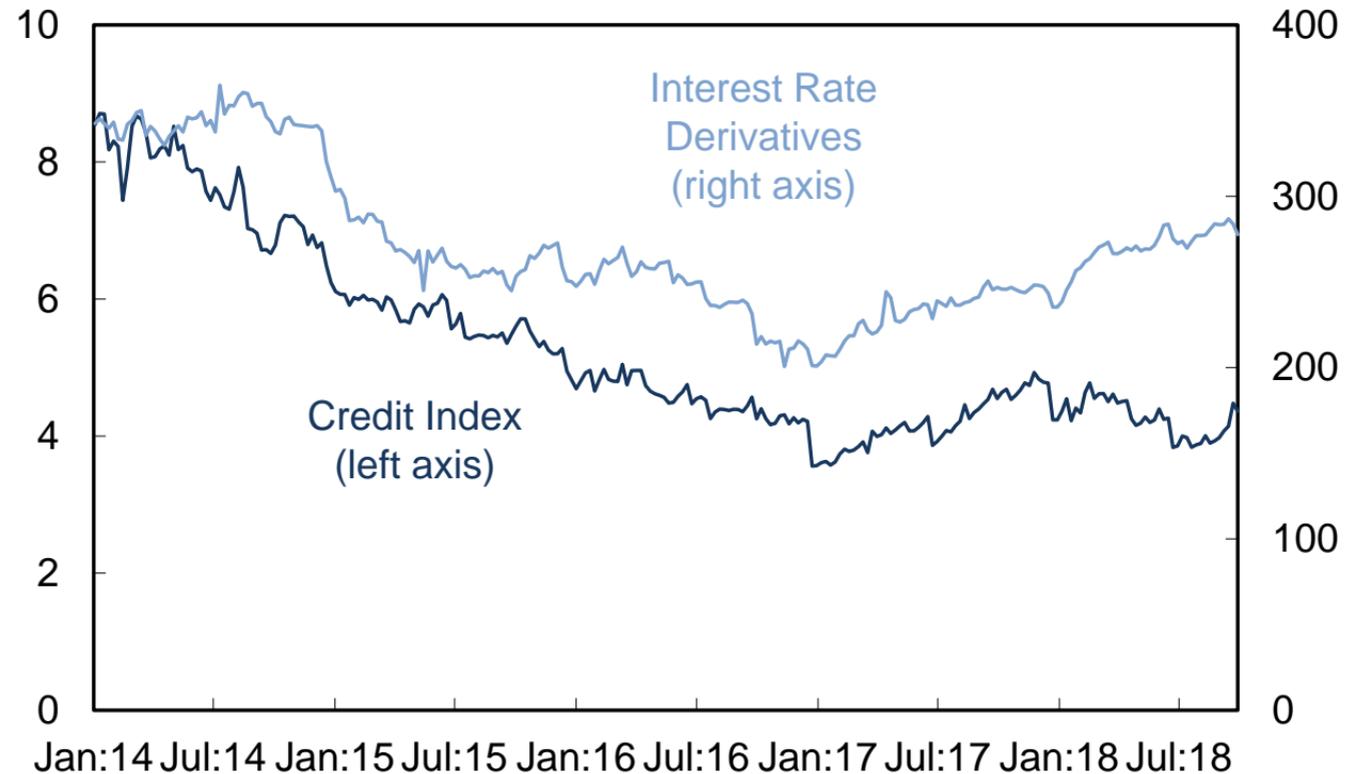
Source: BIS, Haver Analytics

4.10.9 Derivatives Notional Amount Outstanding

Trillions of US\$

As Of: 28-Sep-2018

Trillions of US\$



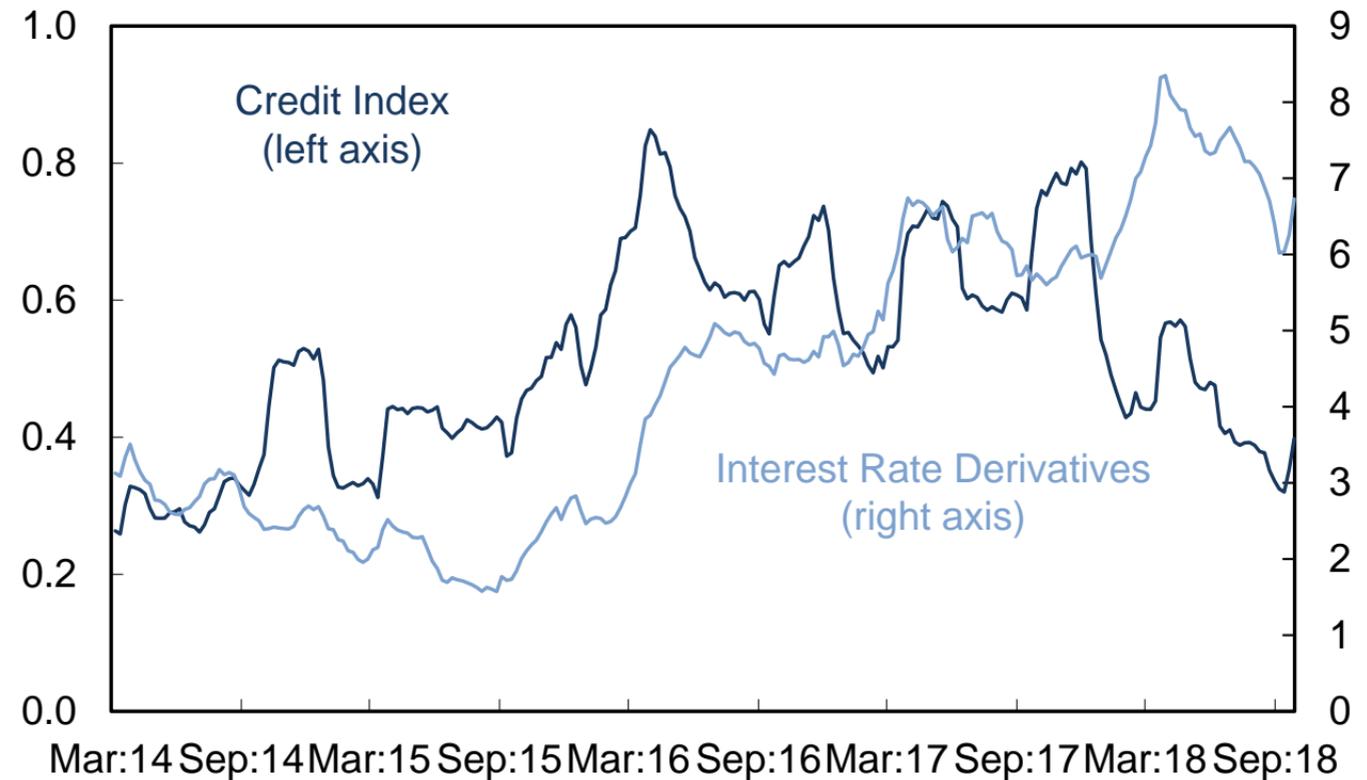
Source: CFTC

4.10.10 Derivatives Notional Volume

Trillions of US\$

As Of: 28-Sep-2018

Trillions of US\$



Source: CFTC

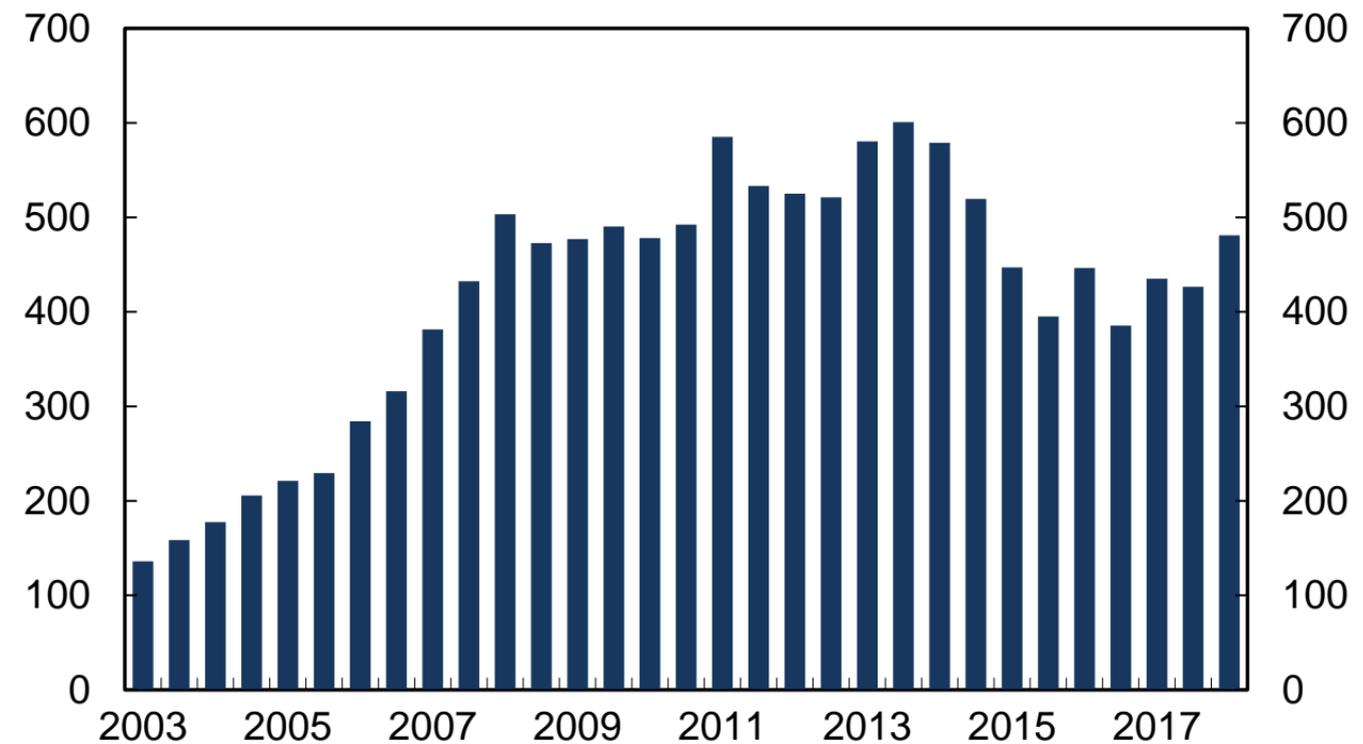
Note: 12-week moving averages.

4.10.11 Interest Rate Derivatives: Global Notional Outstanding

Trillions of US\$

As Of: 2018 Q2

Trillions of US\$



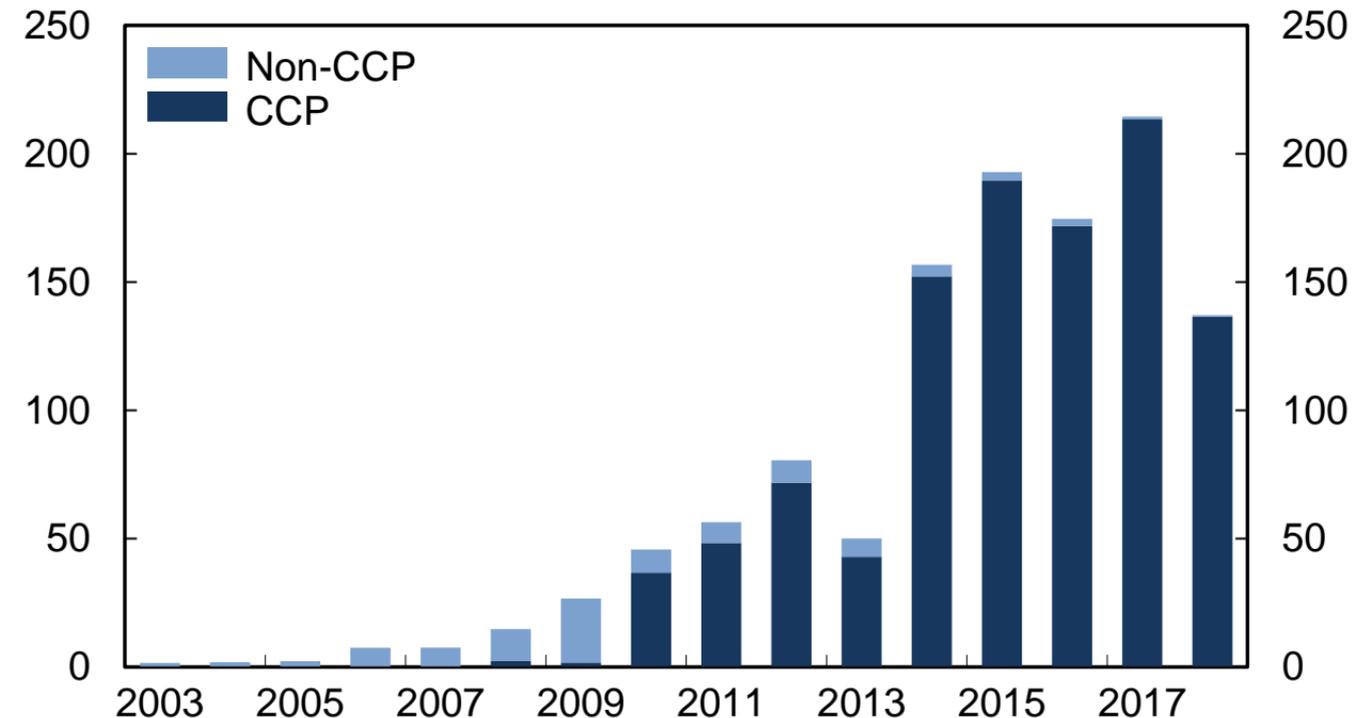
Source: BIS, Haver Analytics

4.10.12 Interest Rate Derivative Compression Volume

Trillions of US\$

As Of: Jun-2018

Trillions of US\$



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.

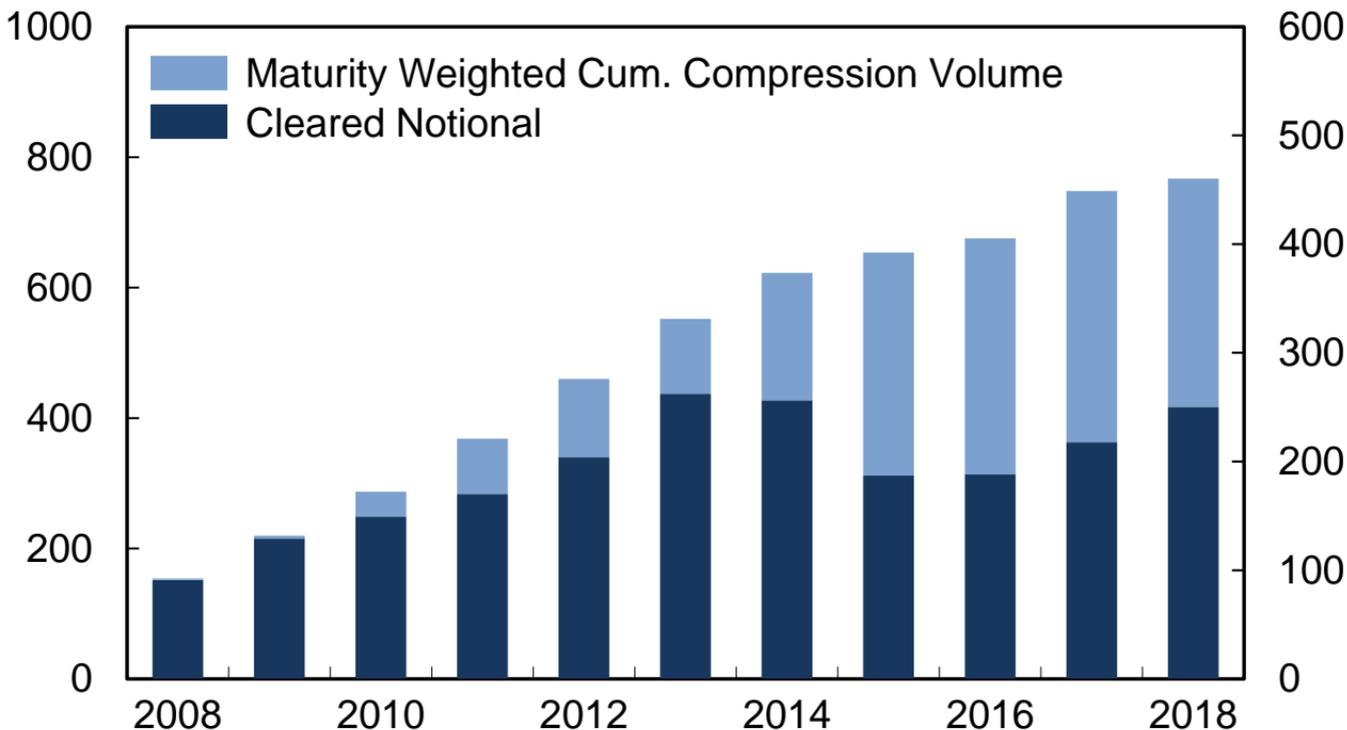
Source: TriOptima

4.10.13 Global Cleared OTC Interest Rate Derivatives

Trillions of US\$

As Of: Jun-2018

Trillions of US\$



Source: ClarusFT CCPView,
TriOptima, LCH.SwapClear

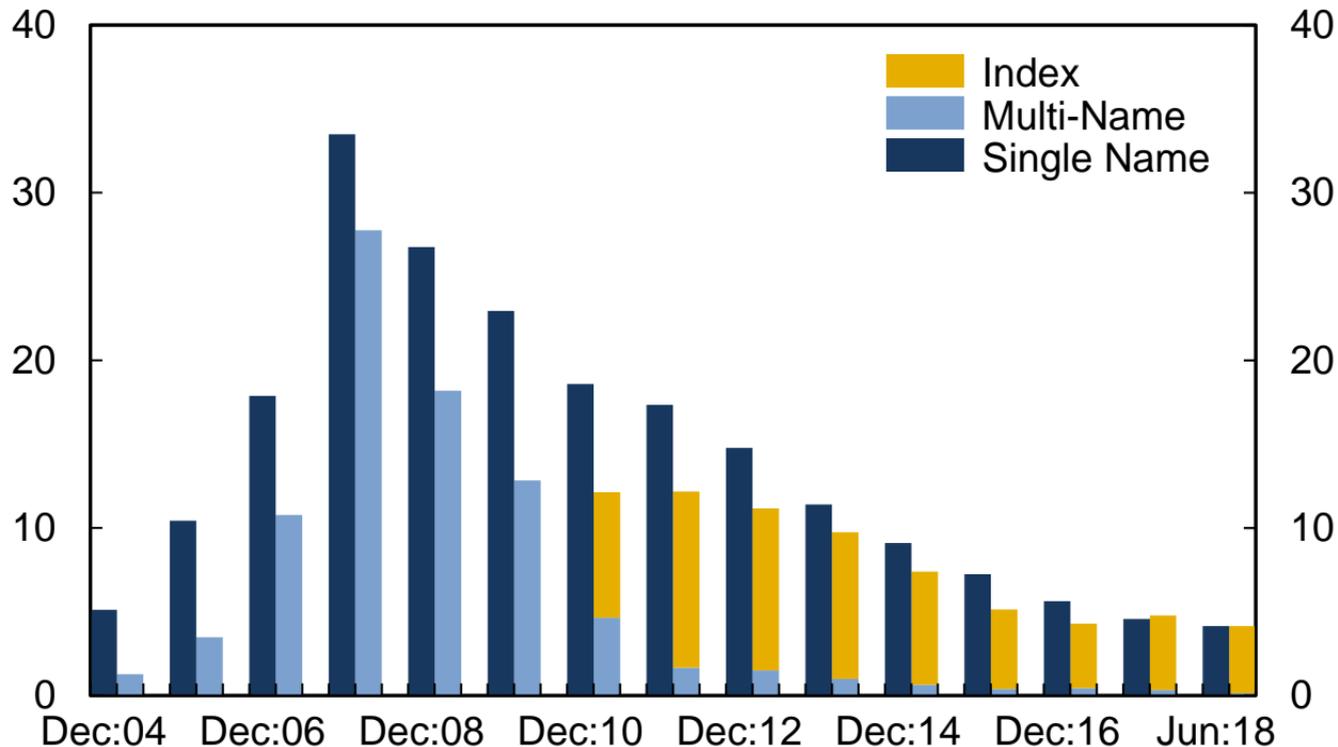
Note: Maturity weighted cumulative compression volume is calculated as the sum of the current and previous year's compression volume, estimating with two year average maturity for the compressed trades. 2018 data is year-to-date.

4.10.14 Global Credit Derivatives by Product

Trillions of US\$

As Of: 2018 Q2

Trillions of US\$



Source: BIS

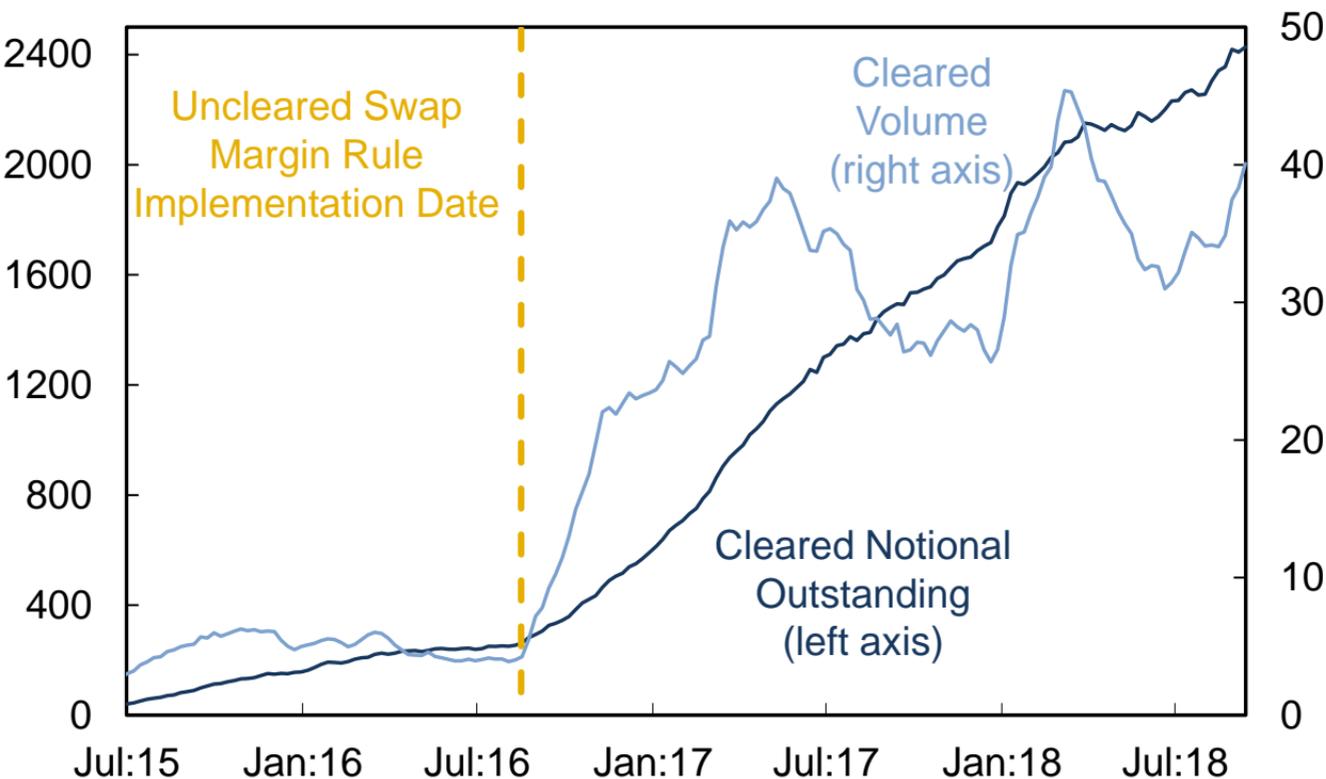
Note: Gross notional outstanding; prior to 2010, index CDS were reported as multi-name CDS.

4.10.15 Interest Rate Derivatives Inflation Swap Clearing

Billions of US\$

As Of: 28-Sep-2018

Billions of US\$



Source: ClarusFT CCPView

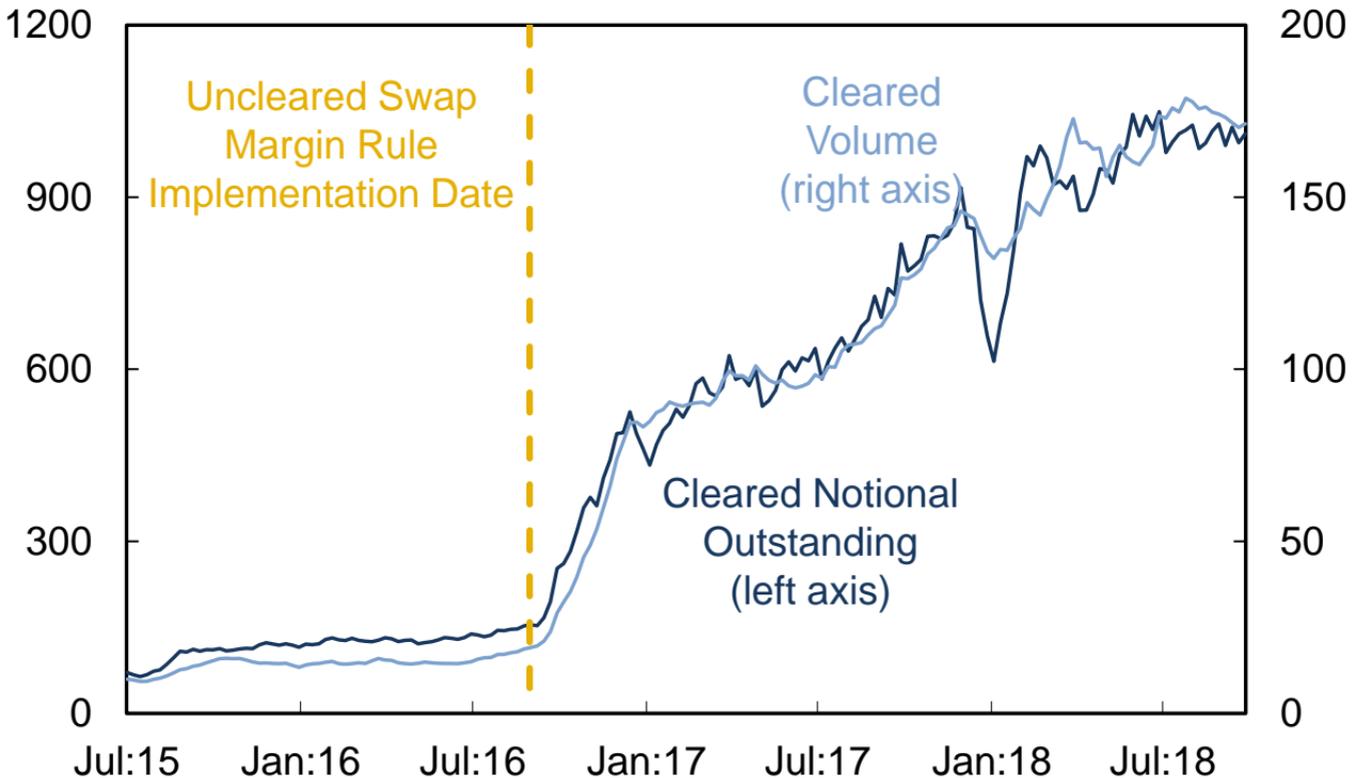
Note: 12-week moving averages for volume data.

4.10.16 FX Non-Deliverable-Forward Clearing

Billions of US\$

As Of: 28-Sep-2018

Billions of US\$

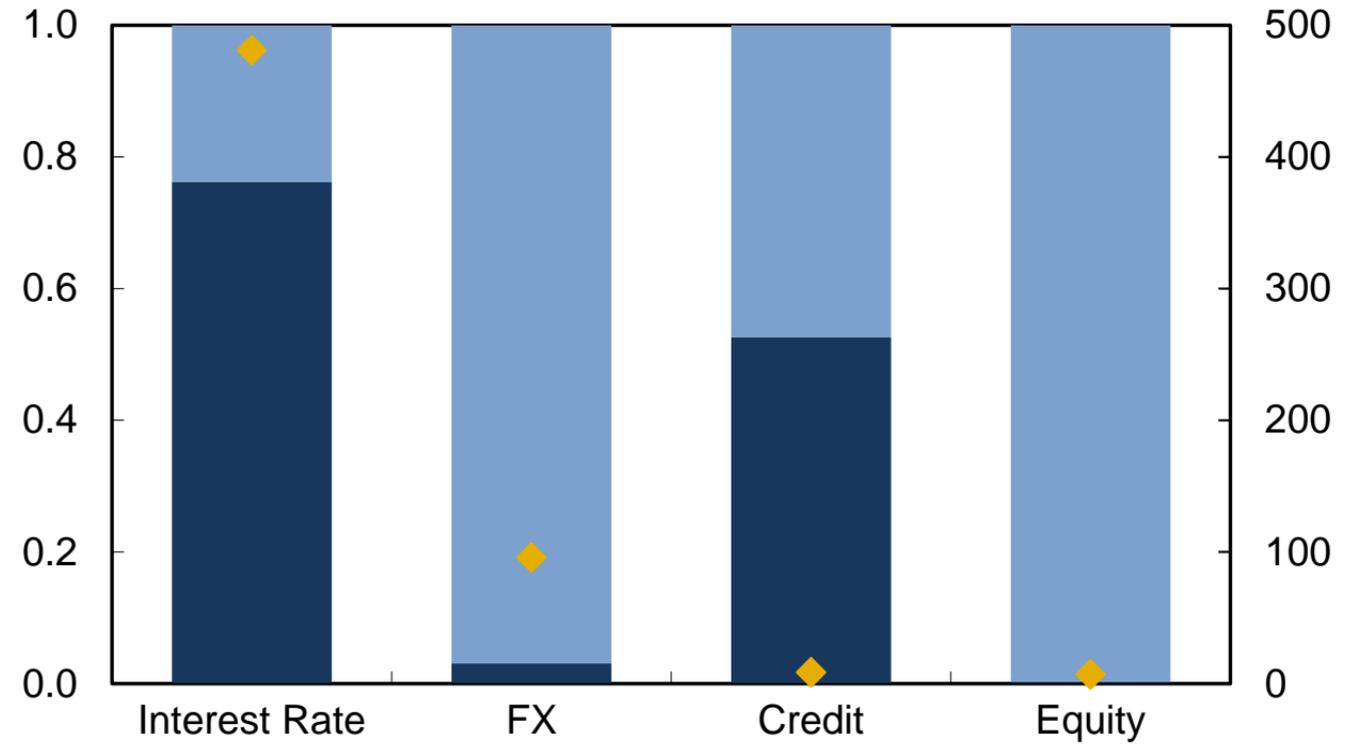


Source: ClarusFT CCPView

Note: 12-week moving averages for volume data.

4.10.17 Global OTC Central Clearing Market Share

Share As Of: 2018 Q2 Trillions of US\$



Source: BIS

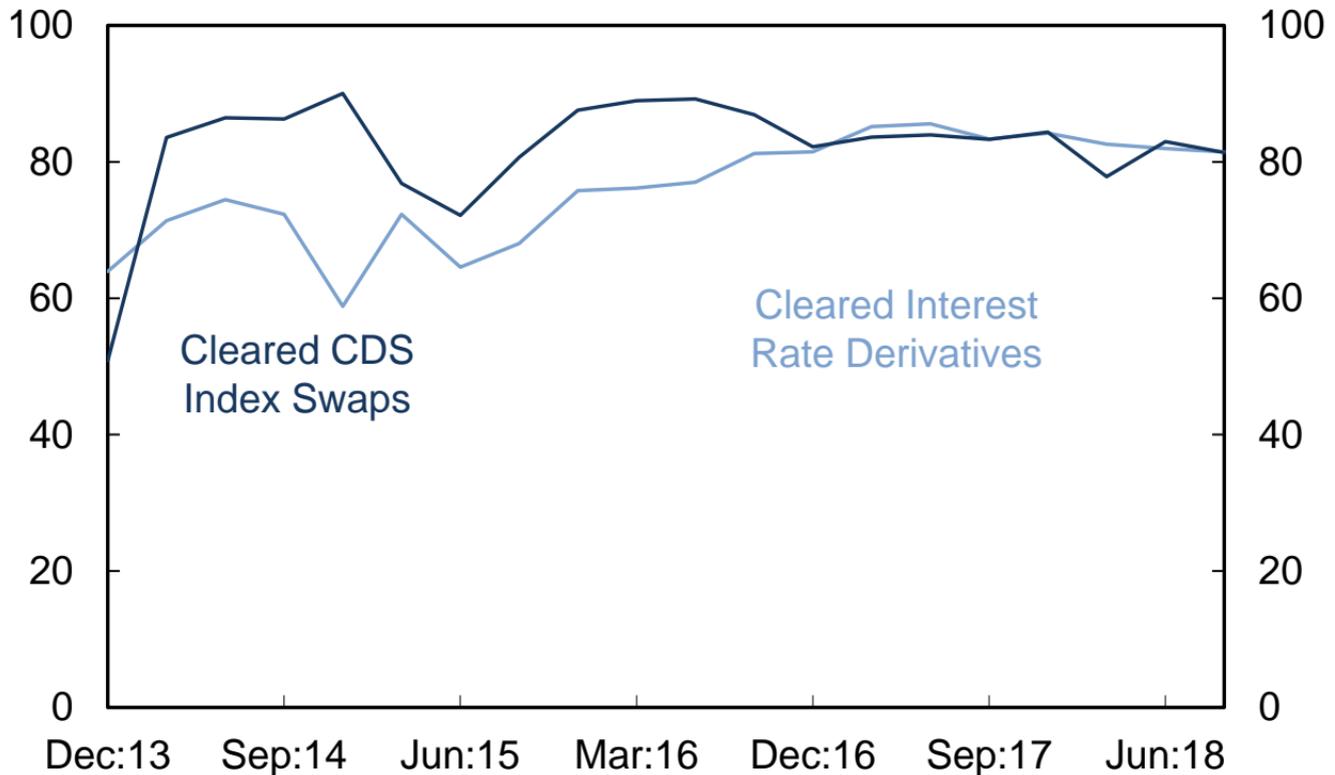
- Not Cleared (left axis)
- Cleared (left axis)
- Total Notional Outstanding (right axis)

4.10.18 U.S. Central Clearing Market Share

Percent

As Of: 2018 Q3

Percent



Source: CFTC

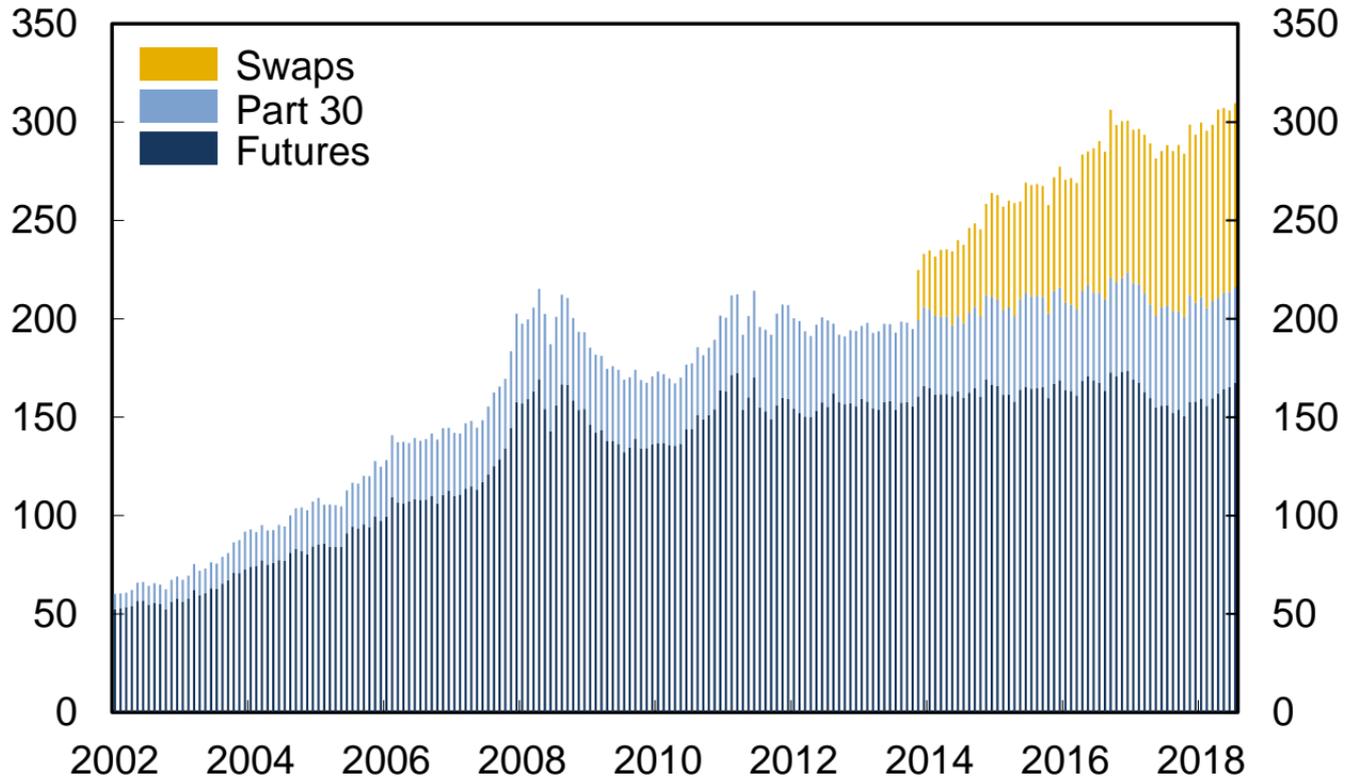
Note: Percentage of new transaction dollar volume.

4.10.19 Margin Funds Held at CFTC Registered FCMs

Billions of US\$

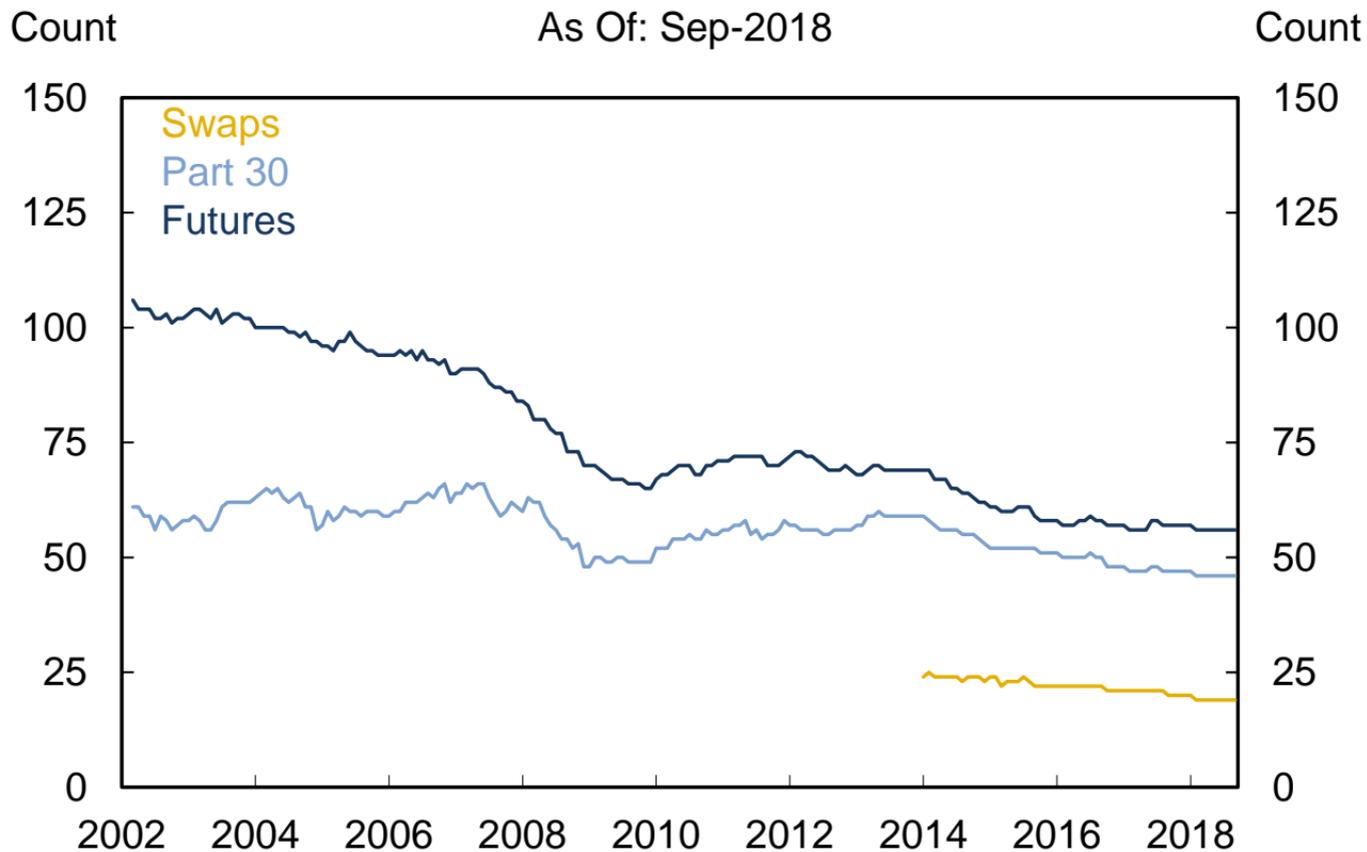
As Of: Sep-2018

Billions of US\$



Source: FIA

4.10.20 CFTC Registered FCMs Holding Client Funds

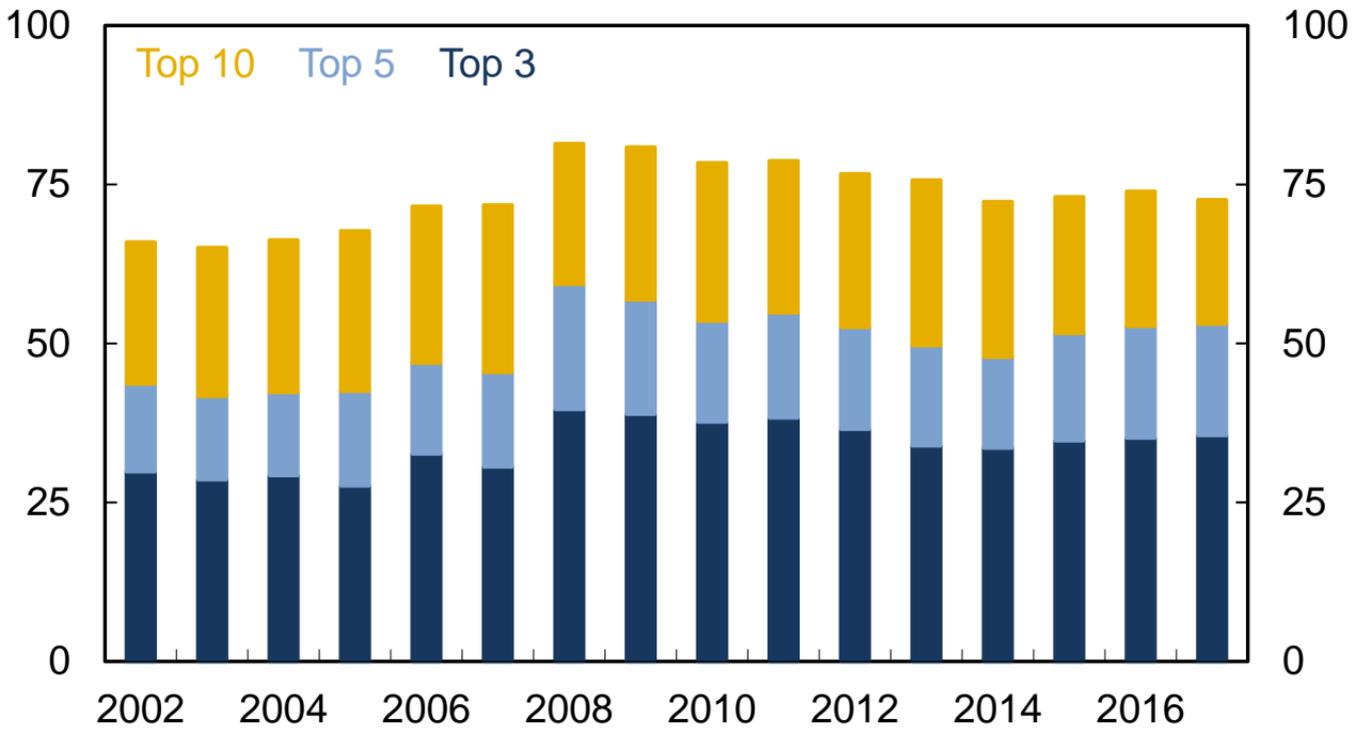


4.10.21 FCM Concentration: Customer 4d(a)(2) Balances

Percent

As Of: 2017

Percent



Source: CFTC
financial data for FCMs

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.

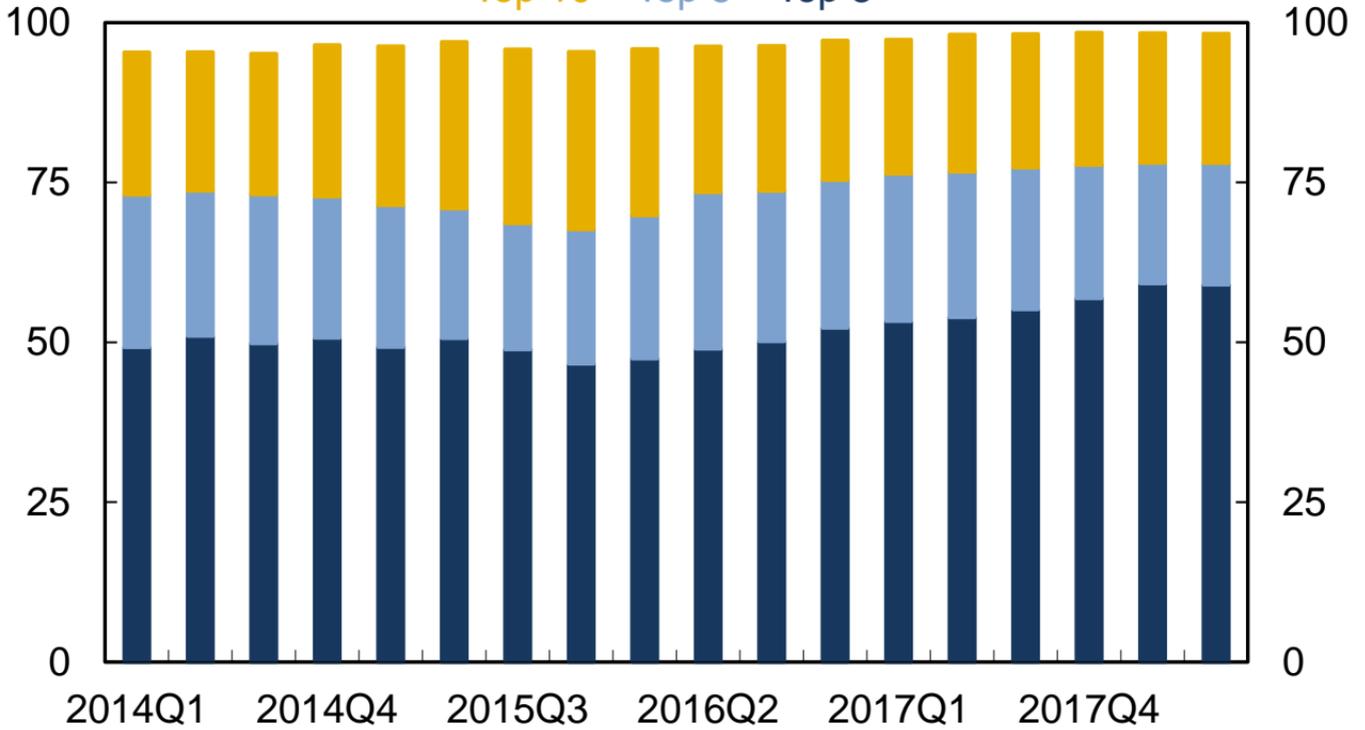
4.10.22 FCM Concentration: Customer Swap Balances

As Of: 2018 Q2

Percent

Top 10 Top 5 Top 3

Percent



Source: CFTC financial data for FCMs

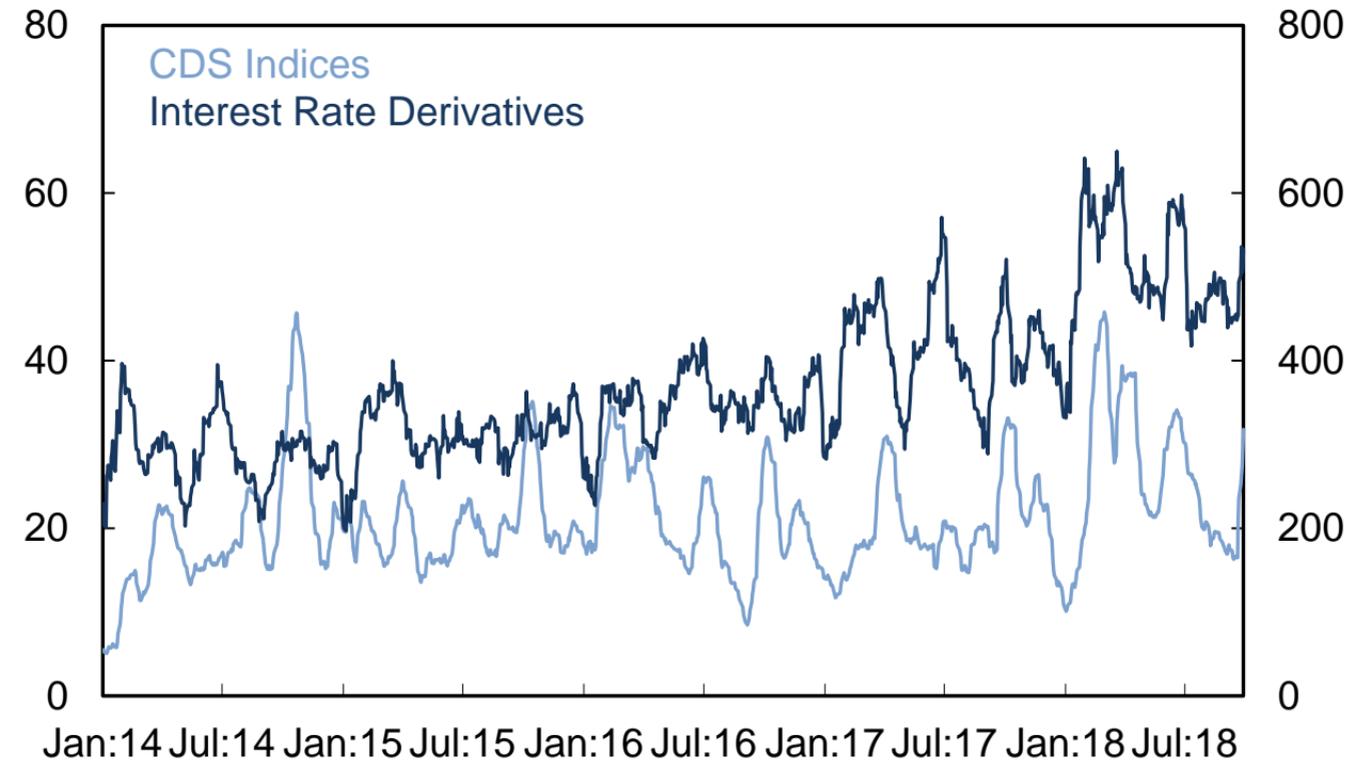
Note: Represents the amount of funds an FCM is required to segregate for customers who trade cleared swaps.

4.10.23 U.S. On-SEF Trading Volume

Billions of US\$

As Of: 28-Sep-2018

Billions of US\$



Source: CFTC

Note: Share of notional volume.
20-day moving averages.

4.10.24 U.S. On-SEF Trading Share

Percent

As Of: 28-Sep-2018

Percent

100

100

CDS Indices

Interest Rate Derivatives

80

80

60

60

40

40

20

20

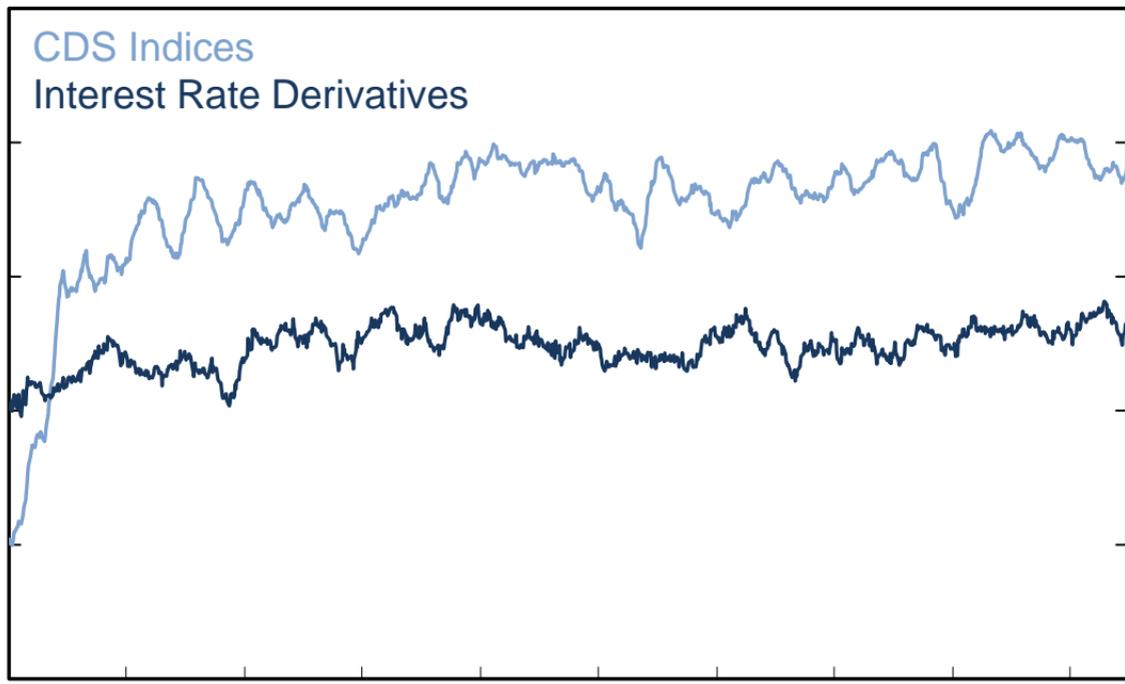
0

0

Jan:14 Jul:14 Jan:15 Jul:15 Jan:16 Jul:16 Jan:17 Jul:17 Jan:18 Jul:18

Source: CFTC

Note: Share of notional volume.
20-day moving averages.

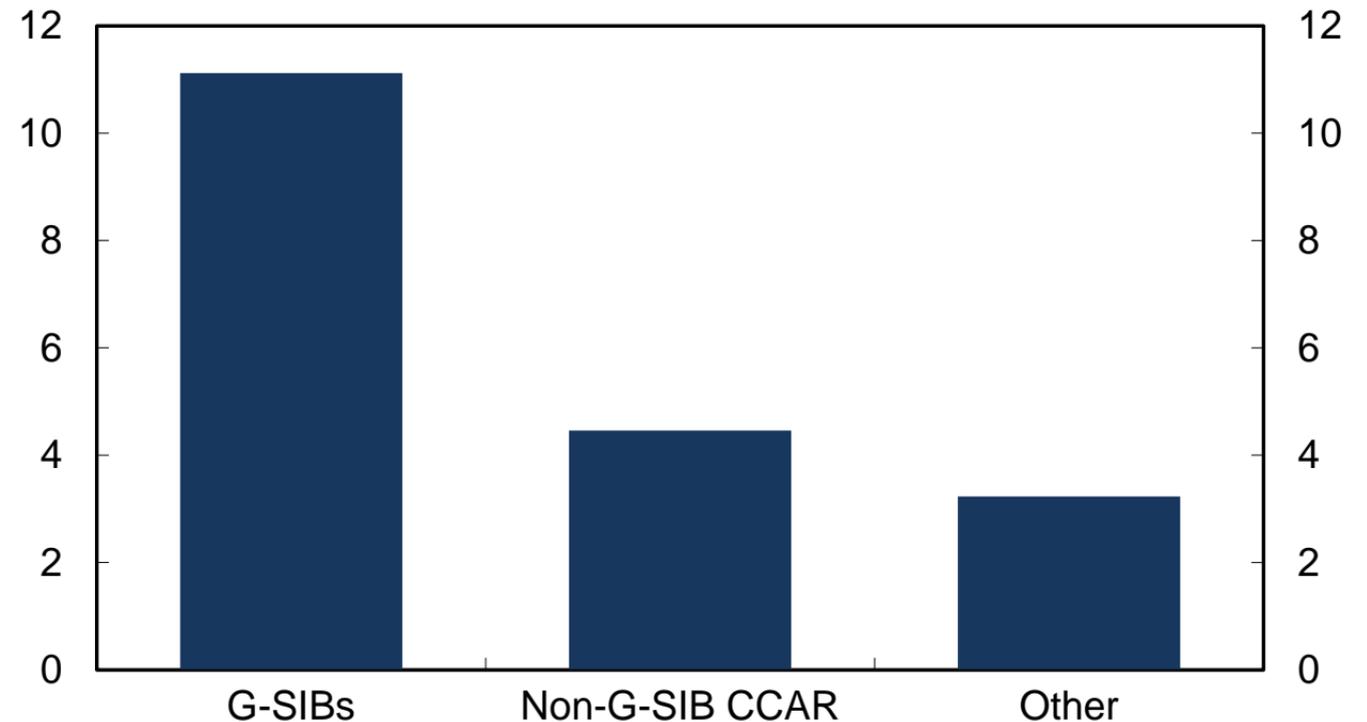


4.11.1 Total Assets by BHC Type

Trillions of US\$

As Of: 2018 Q2

Trillions of US\$



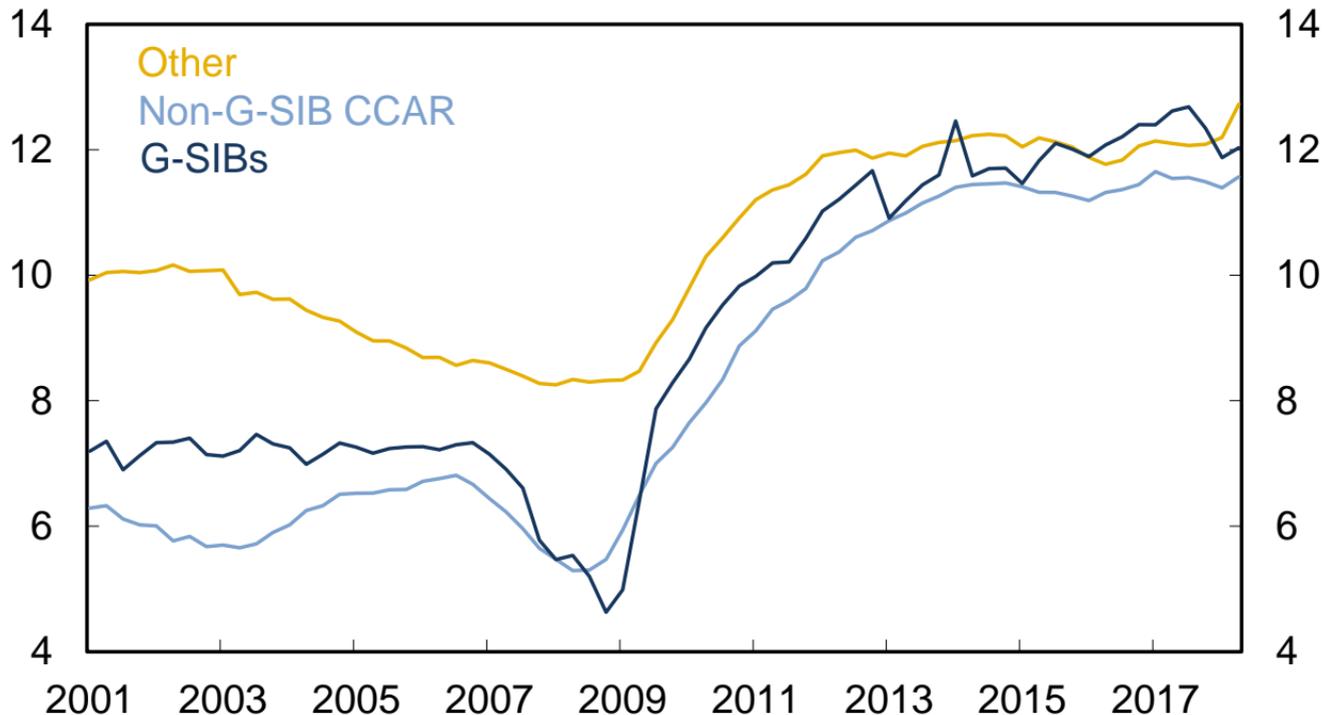
Source: FR Y-9C

4.11.2 Common Equity Tier 1 Ratios

Percent

As Of: 2018 Q2

Percent



Note: Prior to 2014:Q1, the numerator of the common equity tier 1 ratio is tier 1 common capital. Beginning in 2014:Q1 for advanced approaches BHCs and in 2015:Q1 for all other BHCs, the numerator is common equity tier 1 capital.

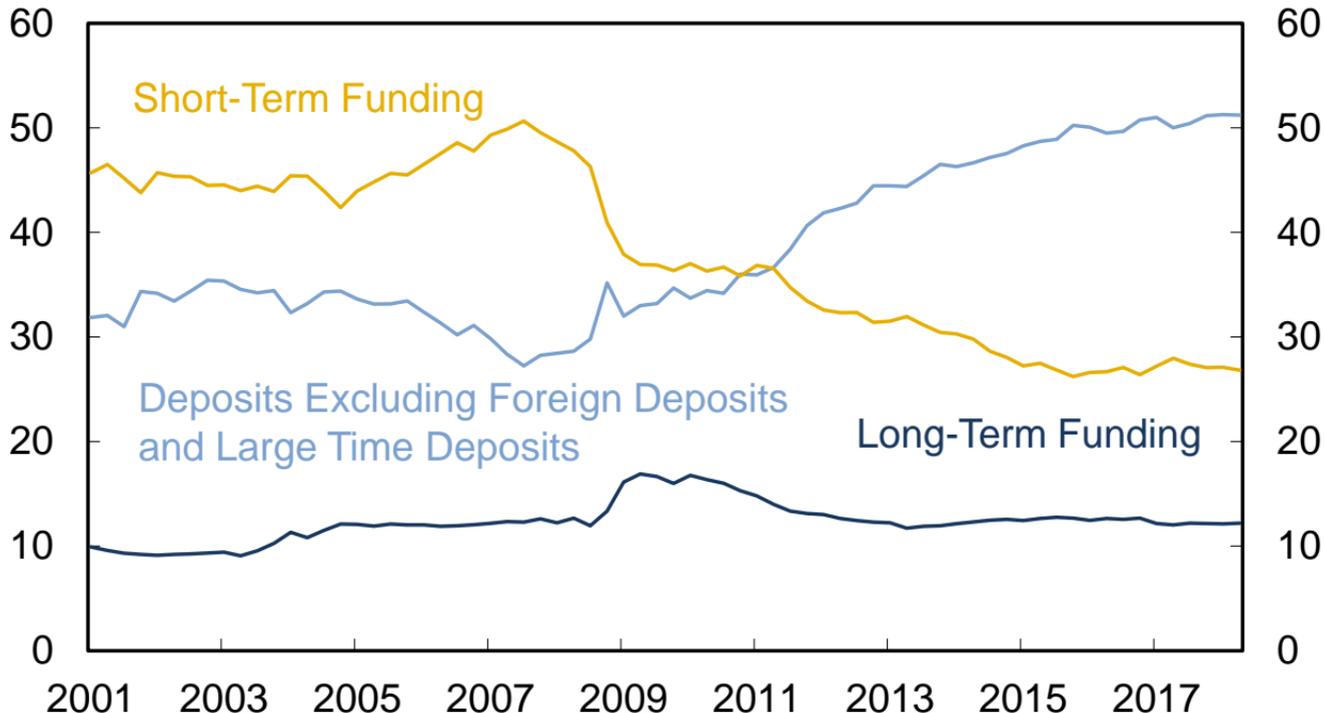
Source: FR Y-9C

4.11.3 Selected Sources of Funding at CCAR BHCs

Percent of Total Assets

As Of: 2018 Q2

Percent of Total Assets

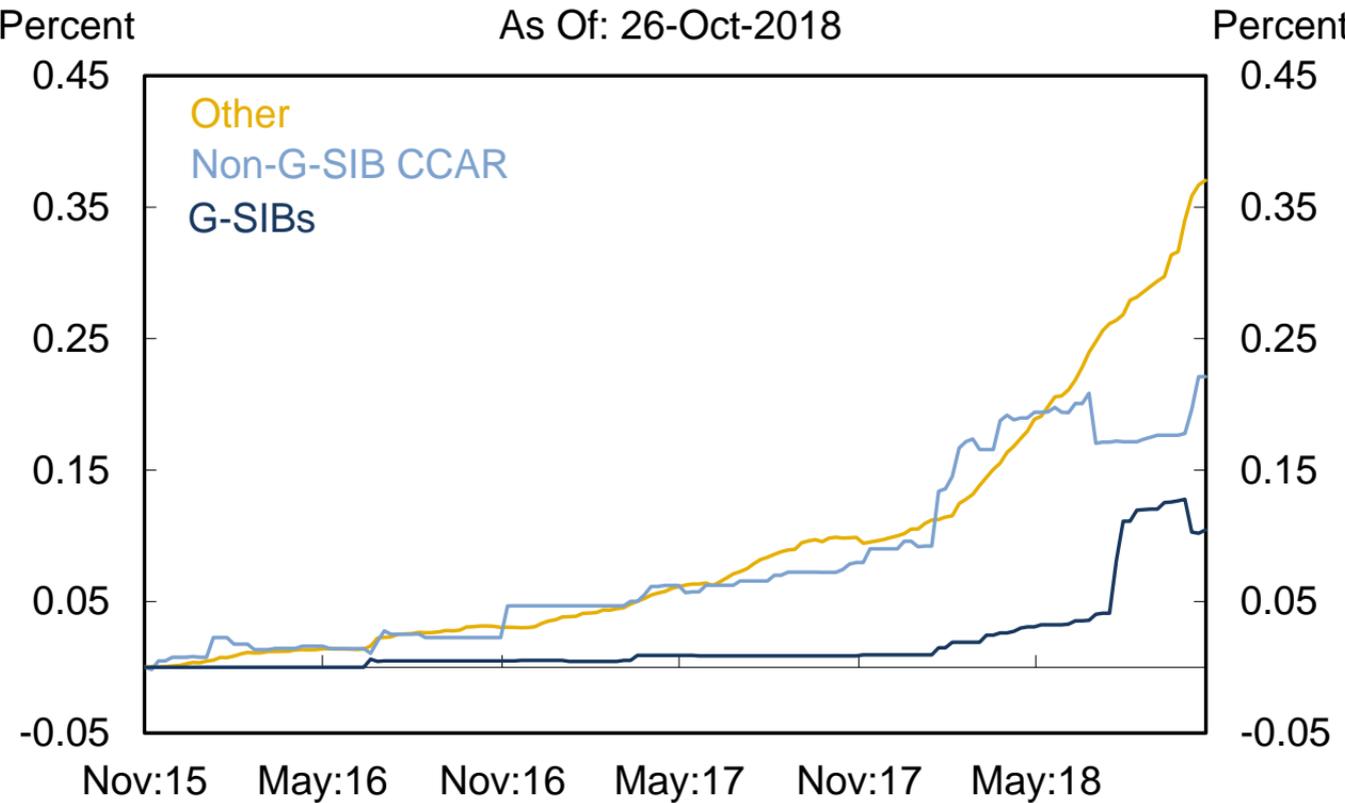


Note: Long-term funding includes other borrowed money, subordinated notes, and large time deposits with maturities >1 year. Short-term funding includes such liabilities with maturities <1 year plus trading liabilities, repos, CP, and foreign deposits.

Source: FR Y-9C

4.11.4 Cumulative Changes in Deposit Rates

As Of: 26-Oct-2018



Note: Based on average quoted rates for Jumbo CD - \$100K; up to 1 year maturity.

Source: SNL Financial

4.11.5 LIBOR-OIS Spread

Basis Points

As Of: 31-Oct-2018

Basis Points

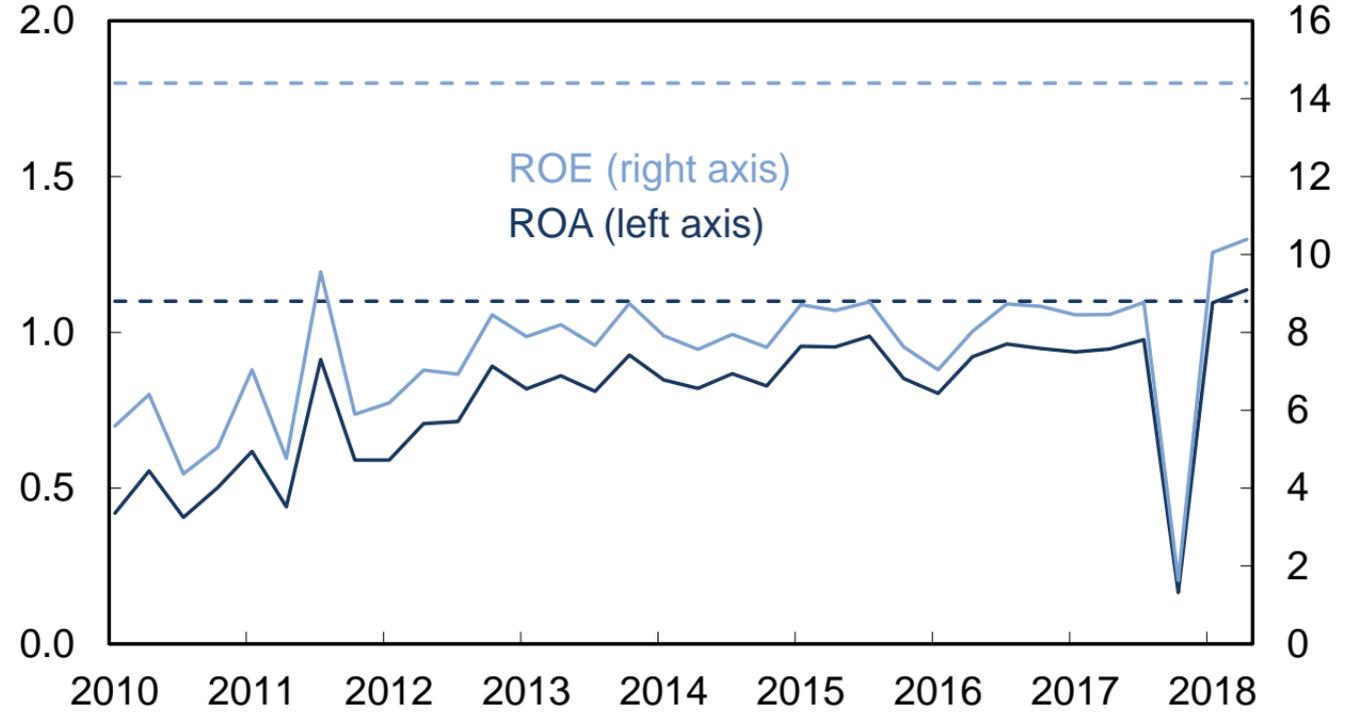


Source: Bloomberg, L.P.

Note: SEC money market fund reform came into effect on October 14, 2016

4.11.6 Return on Equity and Return on Assets

Percent As Of: 2018 Q2 Percent

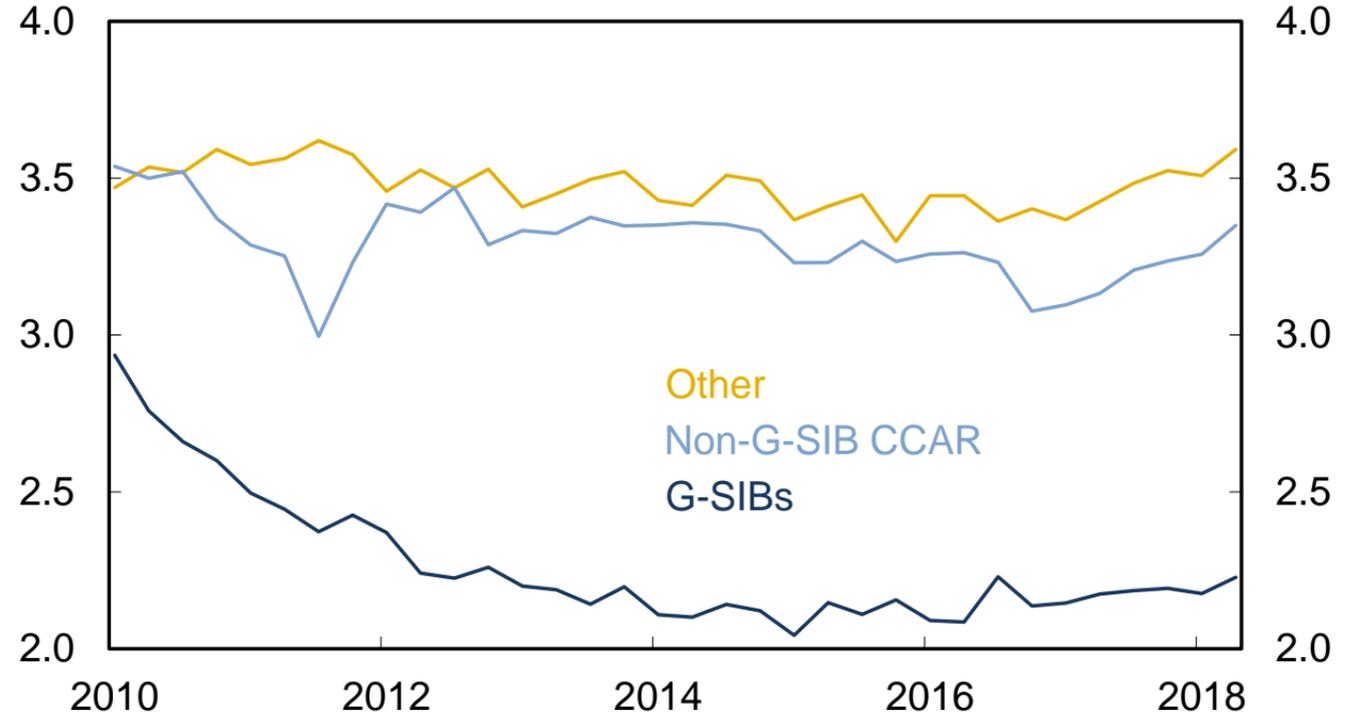


Note: Dashed lines represent 2003 – 2007 averages. Return on equity is equal to net income divided by average equity. Return on assets is equal to net income divided by average assets.

Source: FR Y-9C

4.11.7 Net Interest Margins

Percent As Of: 2018 Q2 Percent



Note: Net interest margin is equal to net interest income divided by the quarterly average of interest-earning assets.

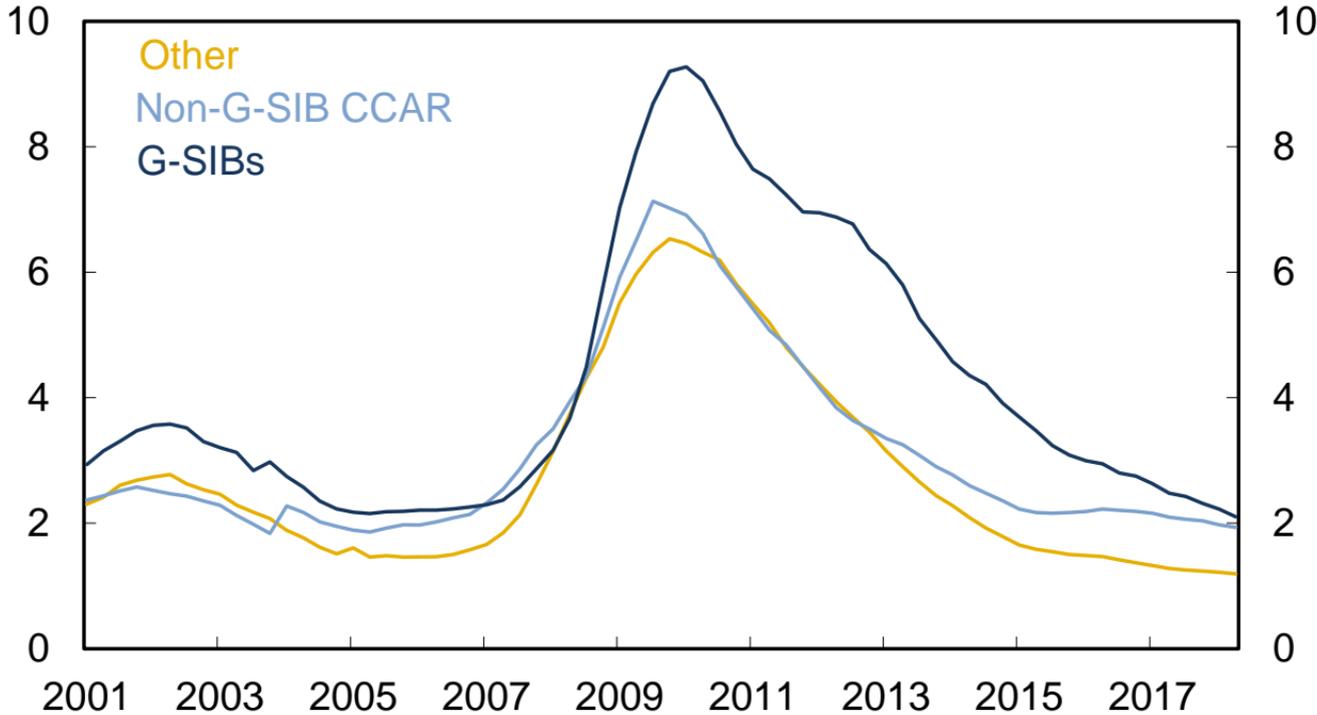
Source: FR Y-9C

4.11.8 Delinquency Rates

Percent

As Of: 2018 Q2

Percent



Note: Includes all loans in foreign and domestic offices. Delinquent loans are loans 30 days or more past due or in nonaccrual status.

Source: FR Y-9C

4.11.9 Loan-Loss Reserves

Percent

As Of: 2018 Q2

Percent

100

1,000

Reserves / Net Charge-Offs (right axis)

Reserves / Delinquent Loans (left axis)

80

800

60

600

40

400

20

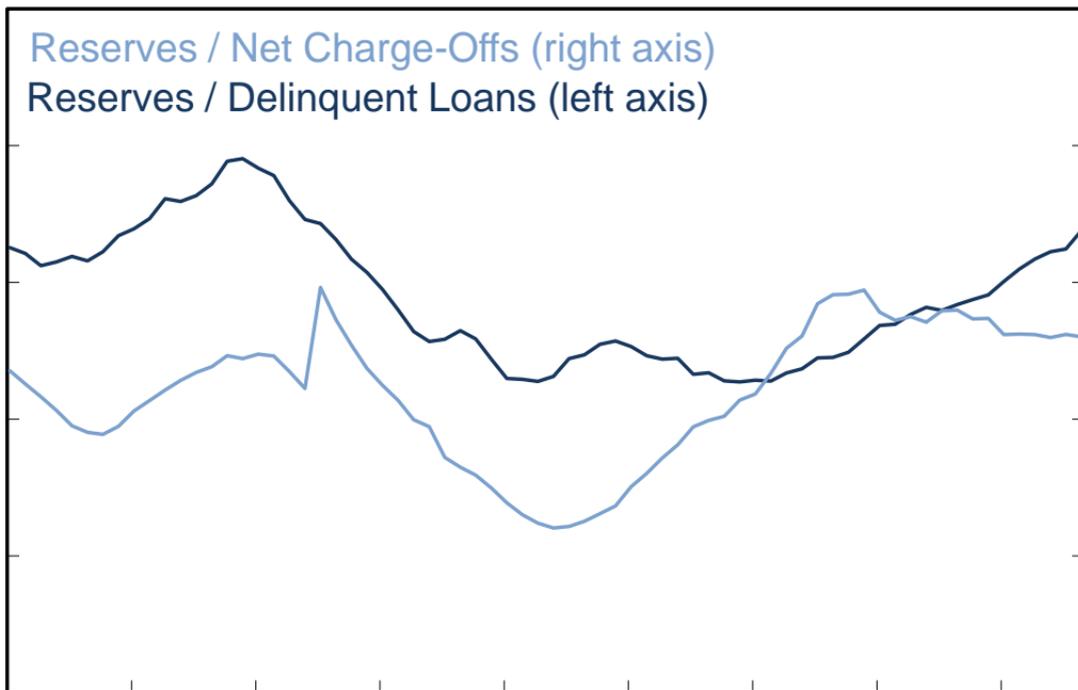
200

0

0

2001 2003 2005 2007 2009 2011 2013 2015 2017

Source: FR Y-9C

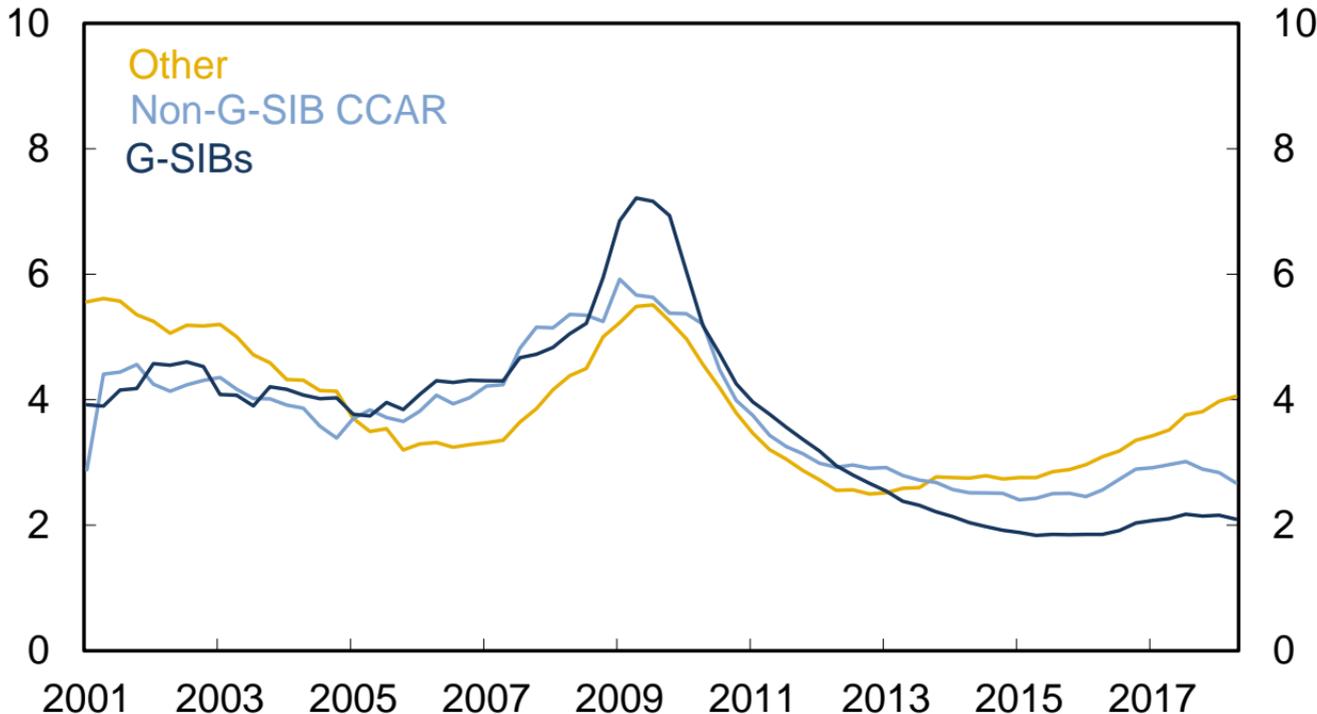


4.11.10 Credit Card Delinquency Rates

Percent

As Of: 2018 Q2

Percent



Note: Delinquencies are determined using nonaccrual loans and loans that are past due 30 days or more.

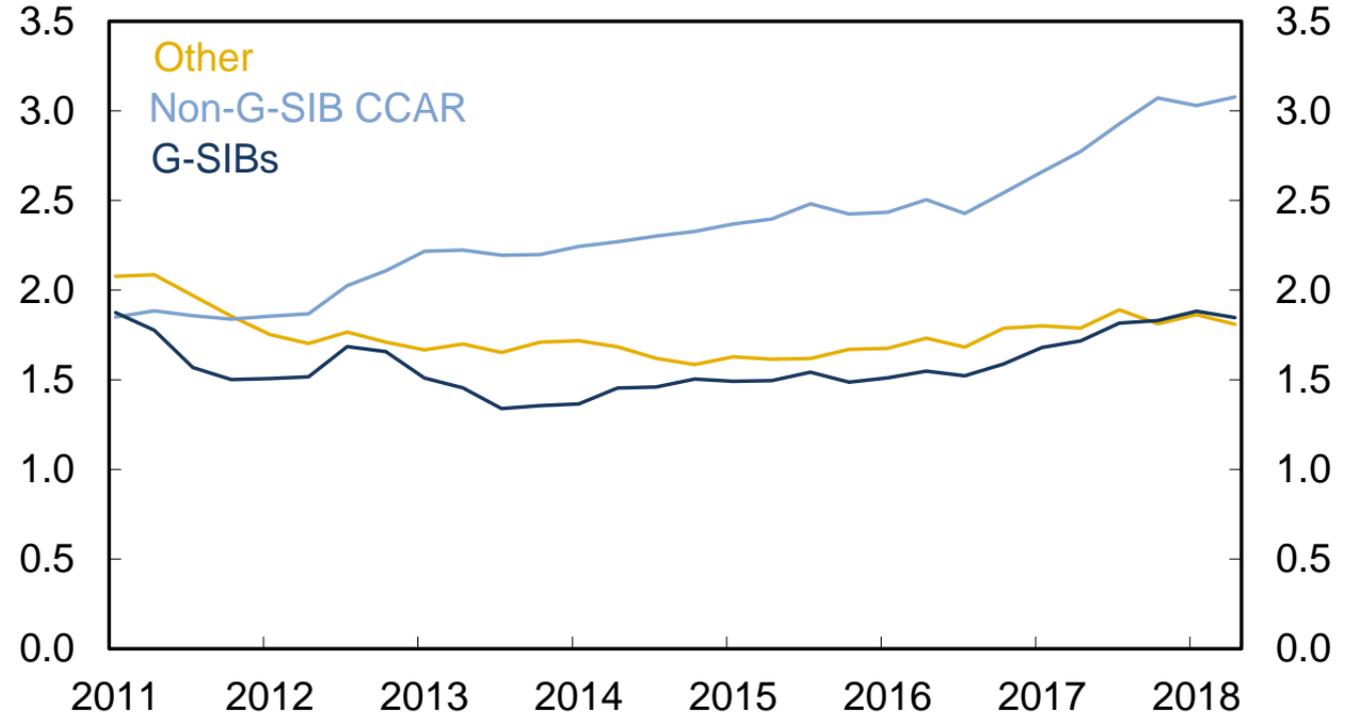
Source: Call Report

4.11.11 Auto Loan Delinquency Rates

Percent

As Of: 2018 Q2

Percent



Note: Delinquencies are determined using nonaccrual loans and loans that are past due 30 days or more.

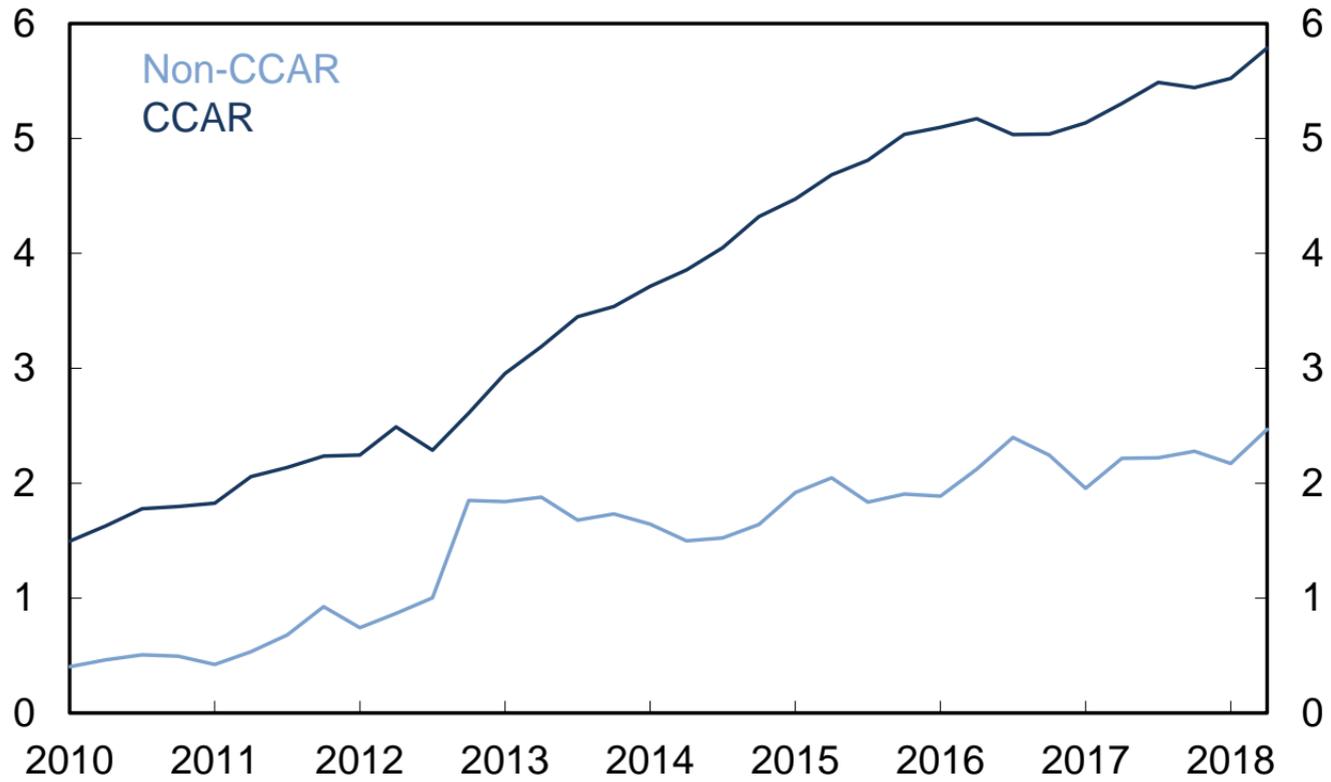
Source: Call Report

4.11.12 Loans to Nondepository Financial Institutions

Percent of Total Loans

As Of: 2018 Q2

Percent of Total Loans



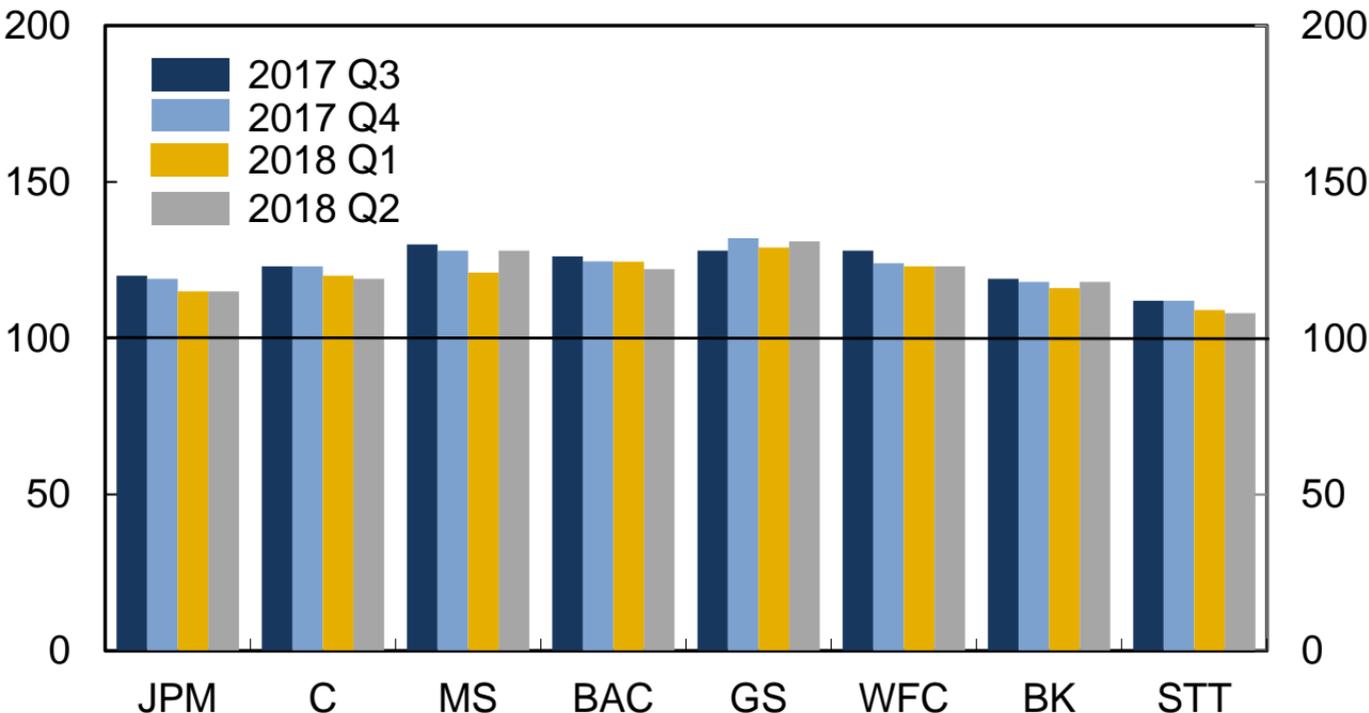
Source: FR Y-9C

4.11.13 Liquidity Coverage Ratio

Percent

As Of: 2018 Q2

Percent



Source: LCR Disclosures
from banks' websites

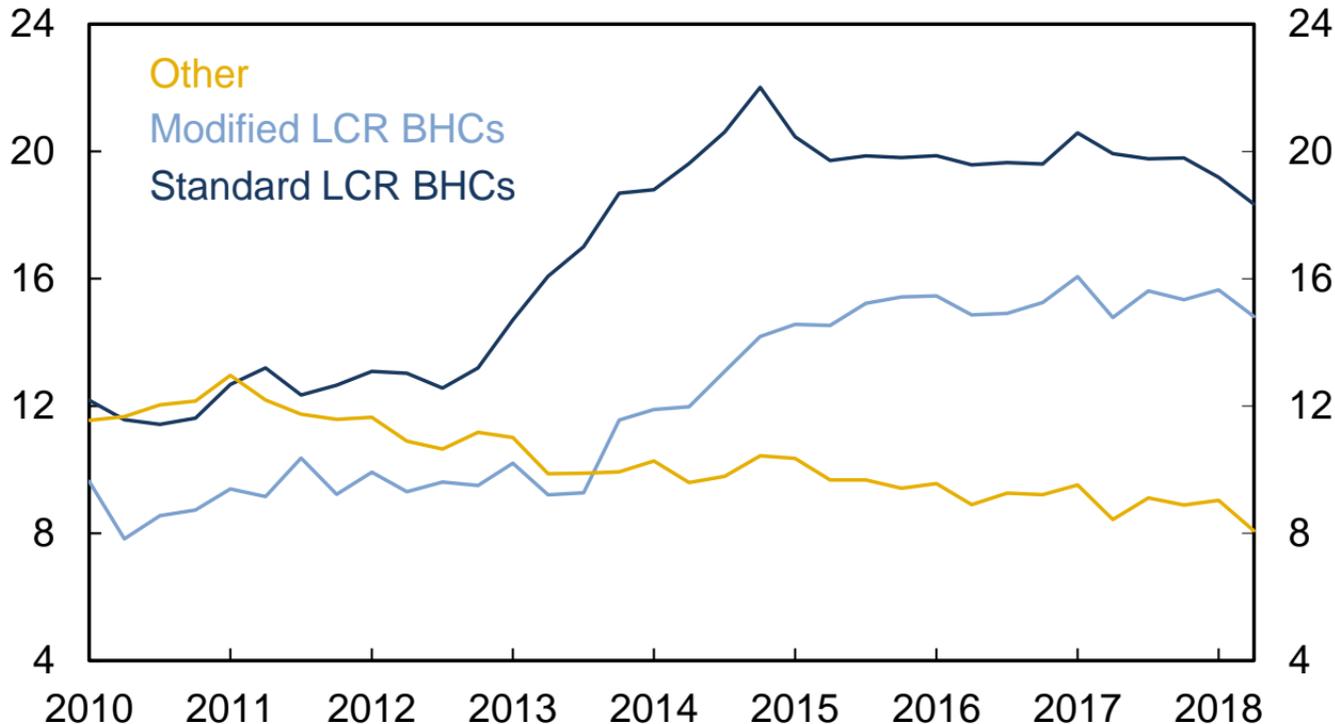
Note: The solid line represents
the regulatory minimum.

4.11.14 High-Quality Liquid Assets by BHC Type

Percent of Assets

As Of: 2018 Q2

Percent of Assets



Note: HQLA is estimated by adding excess reserves to an estimate of securities that qualify for HQLA. Securities are estimated from the FR Y-9C. Haircuts and level 2 asset limitations are incorporated into the estimate.

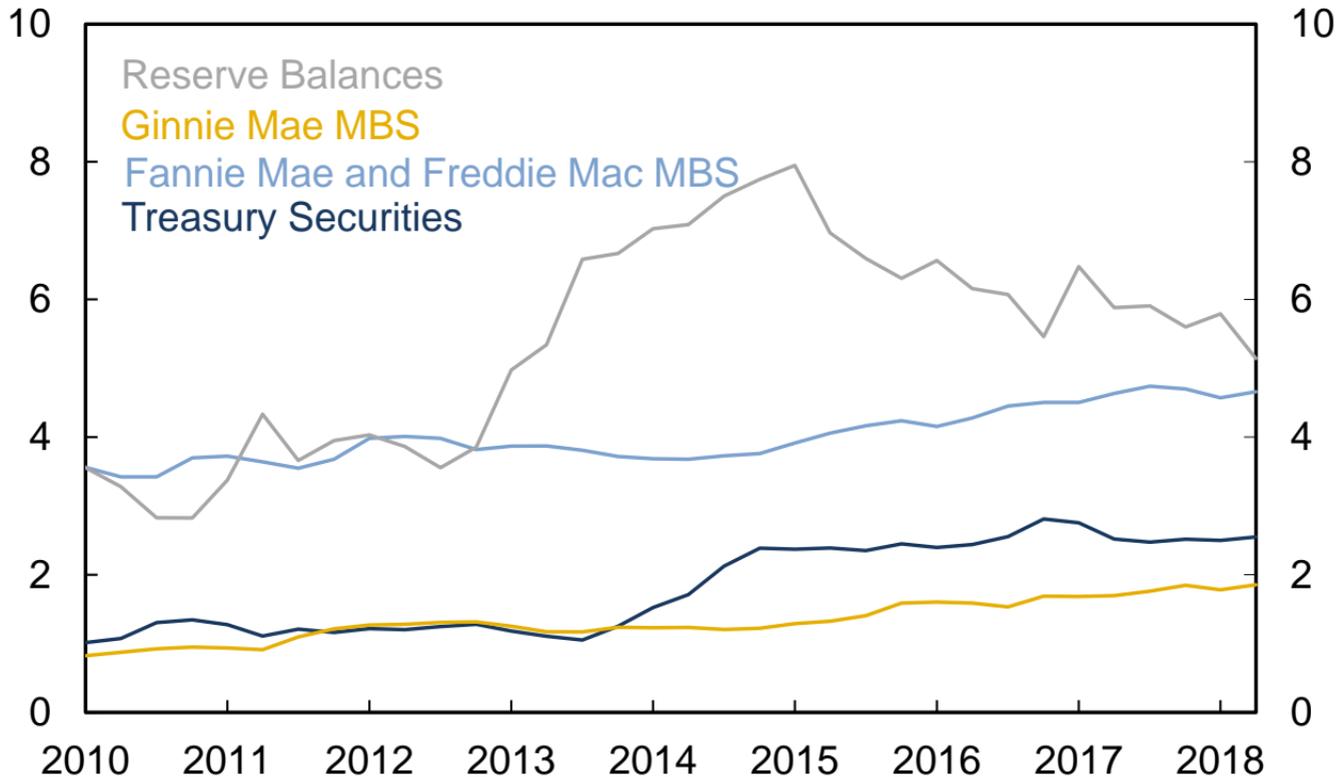
Source: FR Y-9C, FR 2900

4.11.15 Selected Liquid Assets at All BHCs

Percent of Assets

As Of: 2018 Q2

Percent of Assets



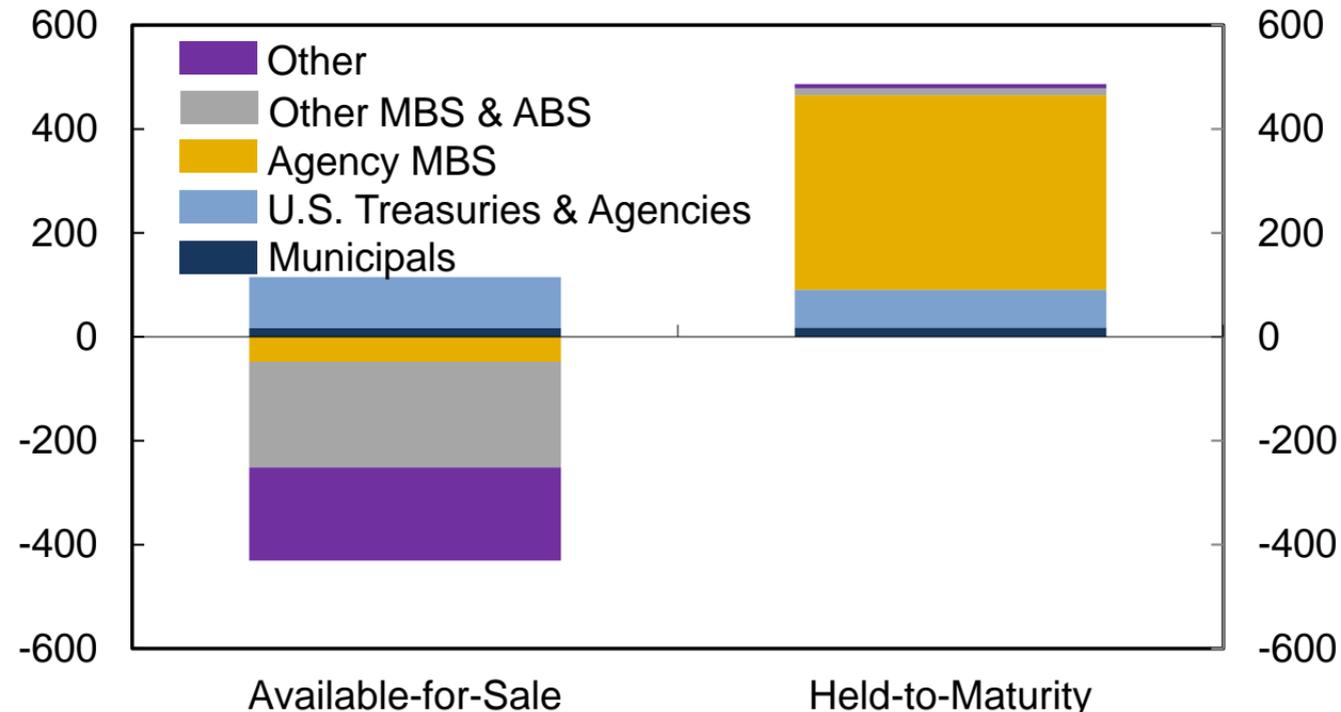
Source: FR Y-9C, FR 2900

4.11.16 Cumulative Change in Securities

Billions of US\$

As Of: 2018 Q2

Billions of US\$



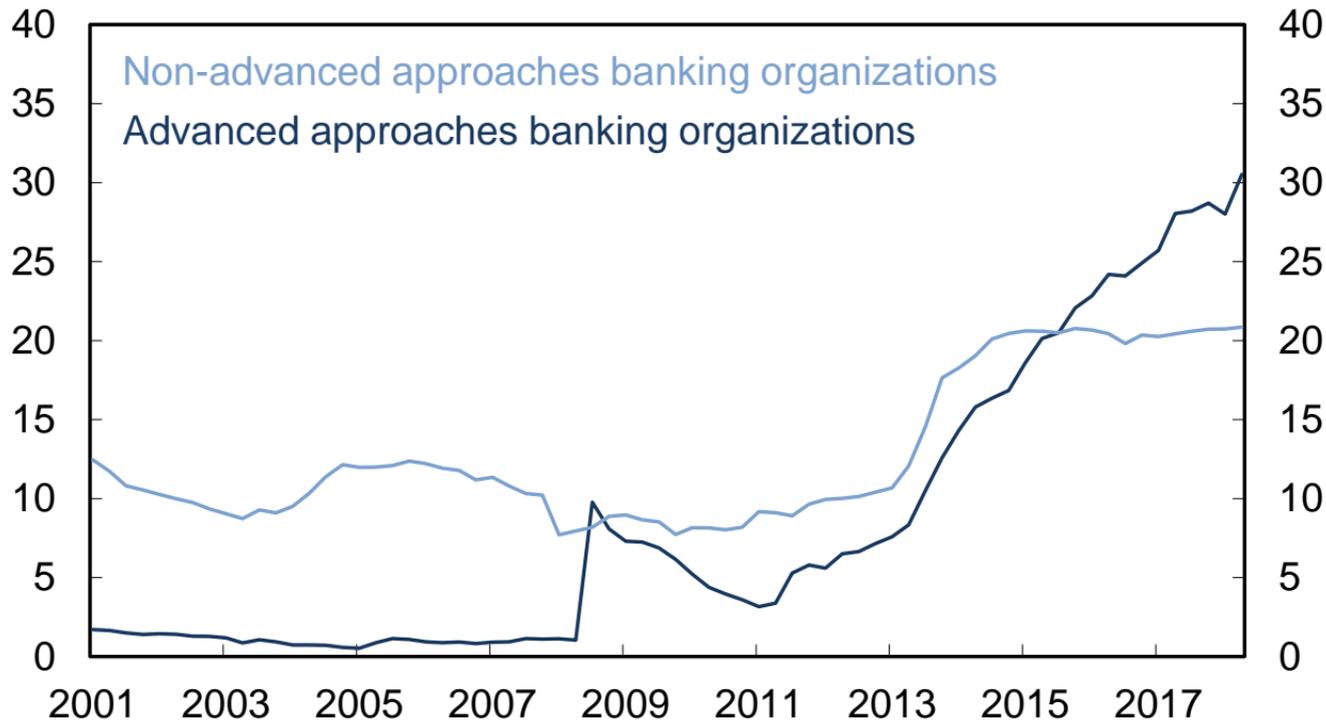
Note: At advanced approaches banking organizations.
Advanced approaches framework generally applies to banks with at least \$250 billion in total consolidated assets or at least \$10 billion in total on-balance sheet foreign exposure.
Cumulative change from 2012 Q4 – 2018 Q2.

4.11.17 Held-to-Maturity Securities

Percent of Investment
Securities

As Of: 2018 Q2

Percent of Investment
Securities



Source: FR Y-9C

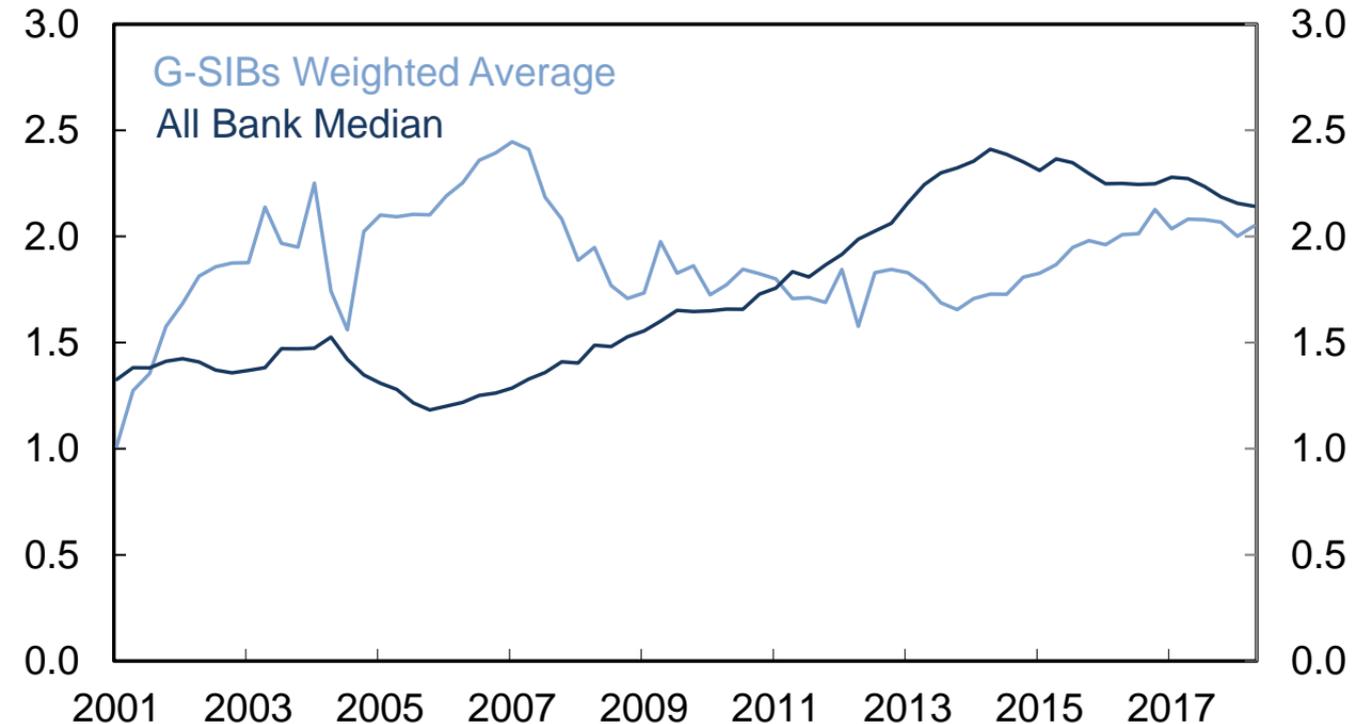
Note: Investment securities are held-to-maturity securities plus available-for-sale securities

4.11.18 Duration Gap

Years

As Of: 2018 Q2

Years

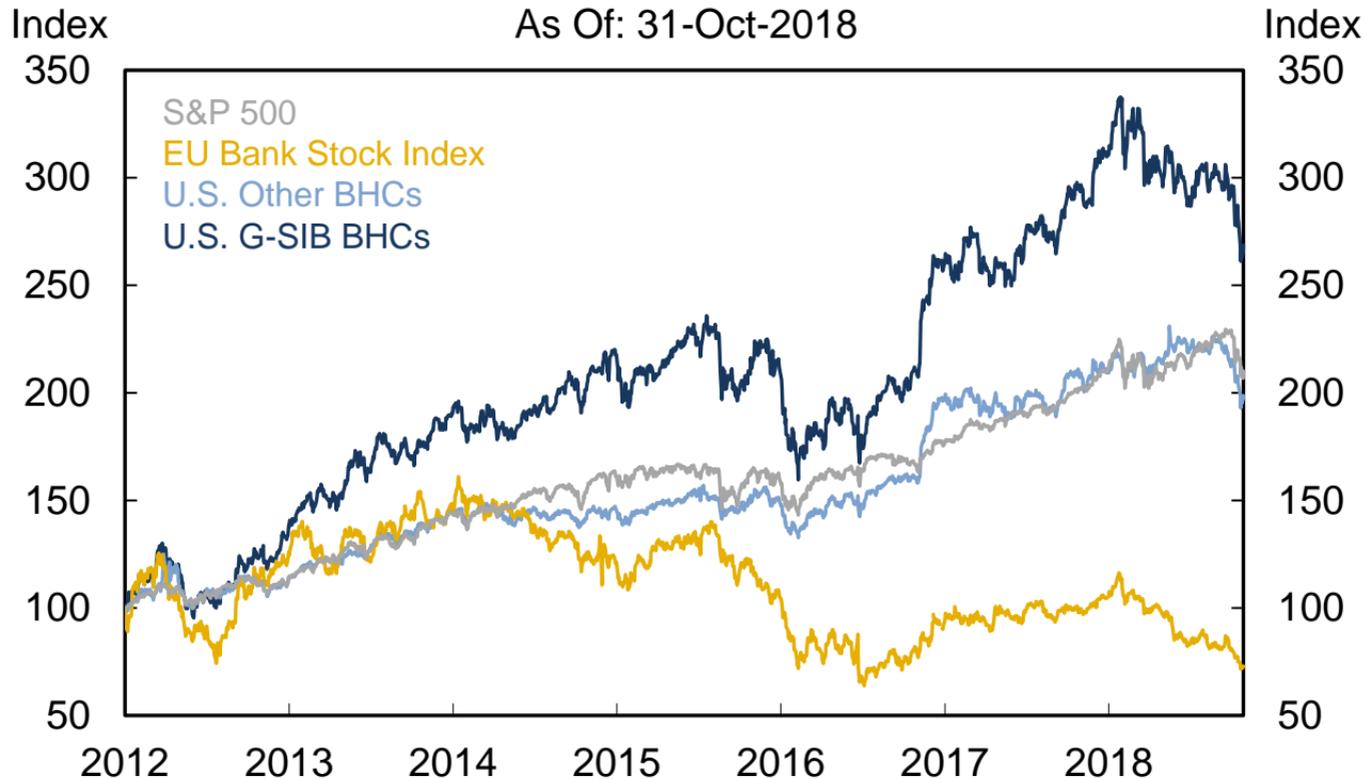


Note: Duration gap is the approximate weighted-average time of cash inflows less the approximate weighted-average time of cash outflows.

Source: Call Report

4.11.19 Stock Prices

As Of: 31-Oct-2018

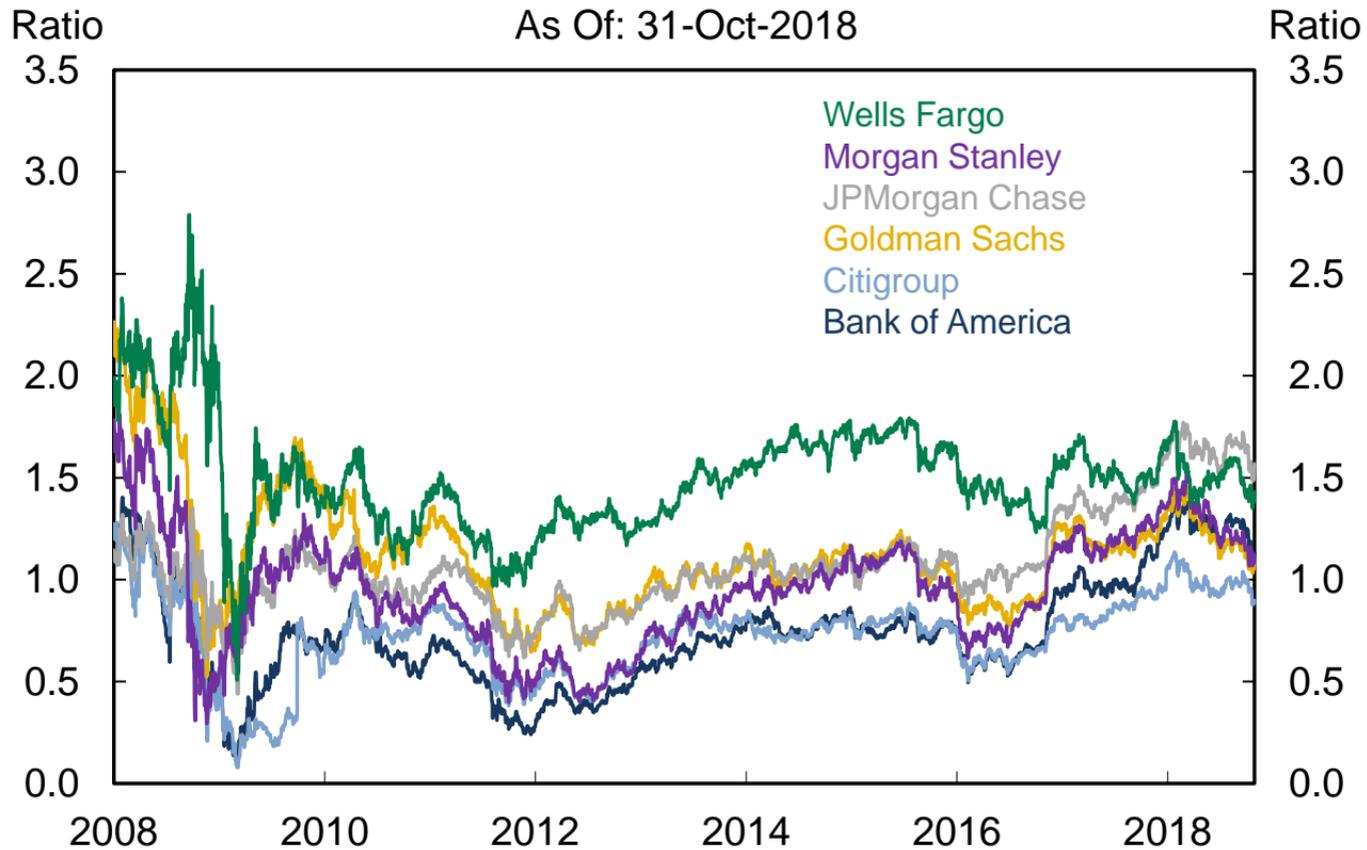


Note: January 3, 2012 = 100. EU Bank Stock Index created from stock price information for the following banks: BCS, BNP, CS, ACA, DB, SAN, UBS. All indexes are created by equally weighting banks.

Source: Bloomberg, L.P.

4.11.20 Price-to-Book

As Of: 31-Oct-2018



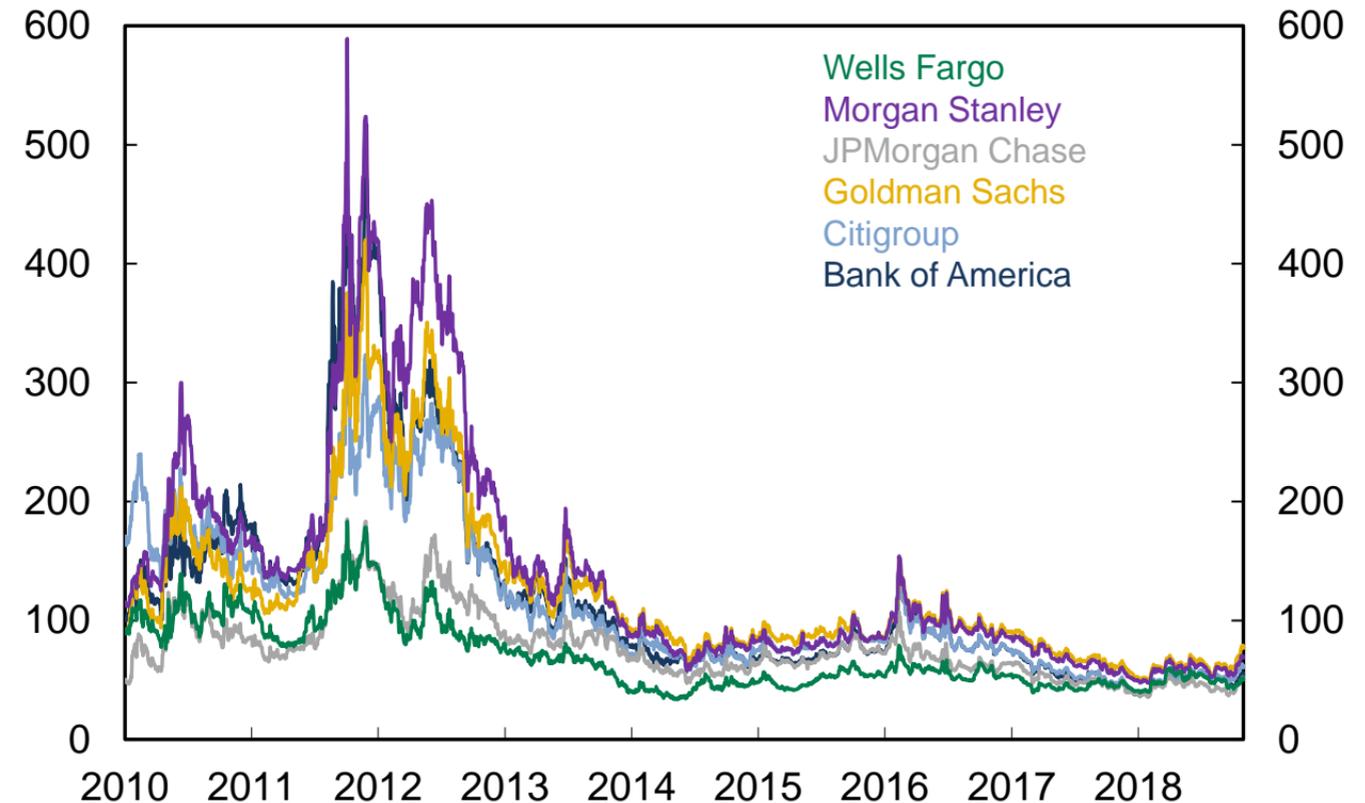
Source: Bloomberg, L.P.

4.11.21 U.S. Banks 5-Year CDS Spreads

Basis Points

As Of: 31-Oct-2018

Basis Points



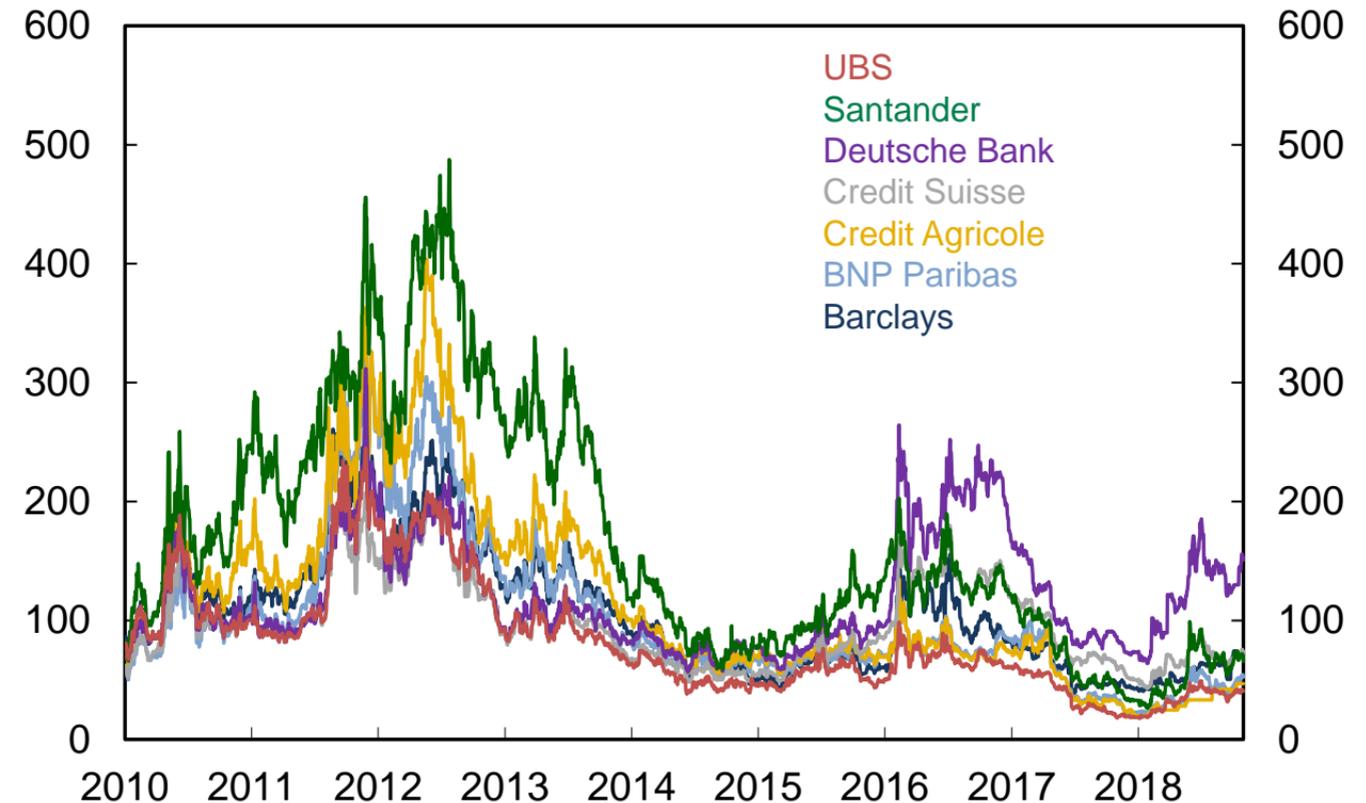
Source: Bloomberg, L.P.

4.11.22 Foreign Banks 5-Year CDS Spreads

Basis Points

As Of: 31-Oct-2018

Basis Points



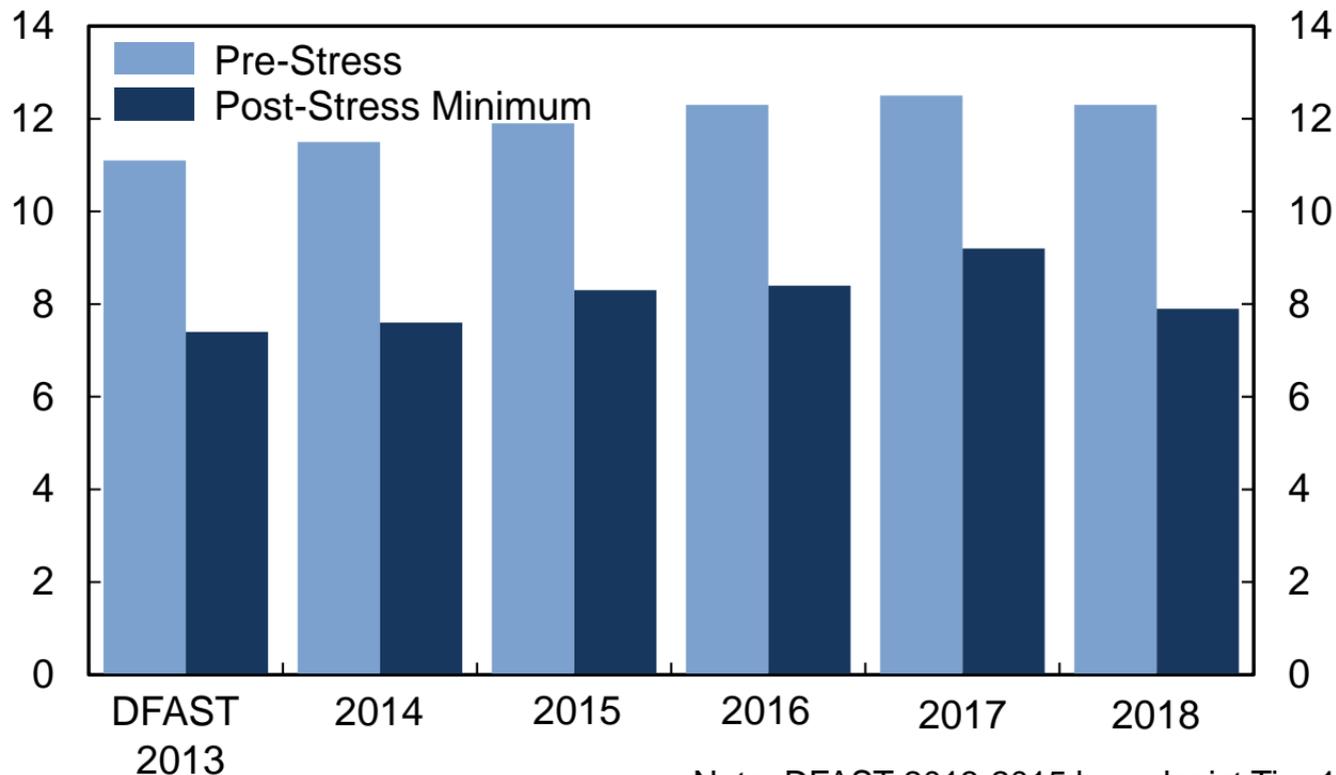
Source: Bloomberg, L.P.

4.11.23 Initial and Stressed Capital Ratios

Percent

As Of: Jun-2018

Percent



Note: DFAST 2013-2015 bars depict Tier 1 Common Capital Ratio. DFAST 2016-2018 bars depict Common Equity Tier 1 Ratio.

Source: Federal Reserve

4.11.24 Federal Reserve's Actions in CCAR 2017

Non-Objection to Capital Plan

Ally Financial	Comerica	MUFG Americas
American Express	Deutsche Bank	Northern Trust
BancWest	Discover Financial	PNC Financial
Bank of America	Fifth Third Bancorp	Regions Financial
Bank of New York Mellon	Goldman Sachs	Santander Holdings USA
BB&T	HSBC North America	State Street
BBVA Compass	Huntington Bancshares	SunTrust
BMO Financial	JPMorgan Chase	TD Group U.S.
CIT Group	KeyCorp	U.S. Bancorp
Citigroup	M&T Bank	Wells Fargo
Citizens Financial	Morgan Stanley	Zions

Conditional Non-Objection to Capital Plan

Capital One Financial

4.11.25 Federal Reserve's Actions in CCAR 2018

Non-Objection to Capital Plan

Ally Financial	Citizens Financial	Northern Trust
American Express	Credit Suisse Holdings (USA)	PNC
Bank of America	Discover Financial	Regions Financial
BB&T	Fifth Third	RBC USA
BBVA Compass	HSBC North America Holdings	Santander Holdings USA
BMO Financial	Huntington	SunTrust
Barclays USA	JPMorgan Chase	TD Group U.S.
BNP Paribas	Keycorp	UBS Americas
Bank of New York Mellon	M&T Bank	US Bancorp
Capital One Financial	MUFG Americas	Wells Fargo
Citigroup		

Conditional Non-Objection to Capital Plan

Goldman Sachs	Morgan Stanley	State Street
---------------	----------------	--------------

Objection to Capital Plan

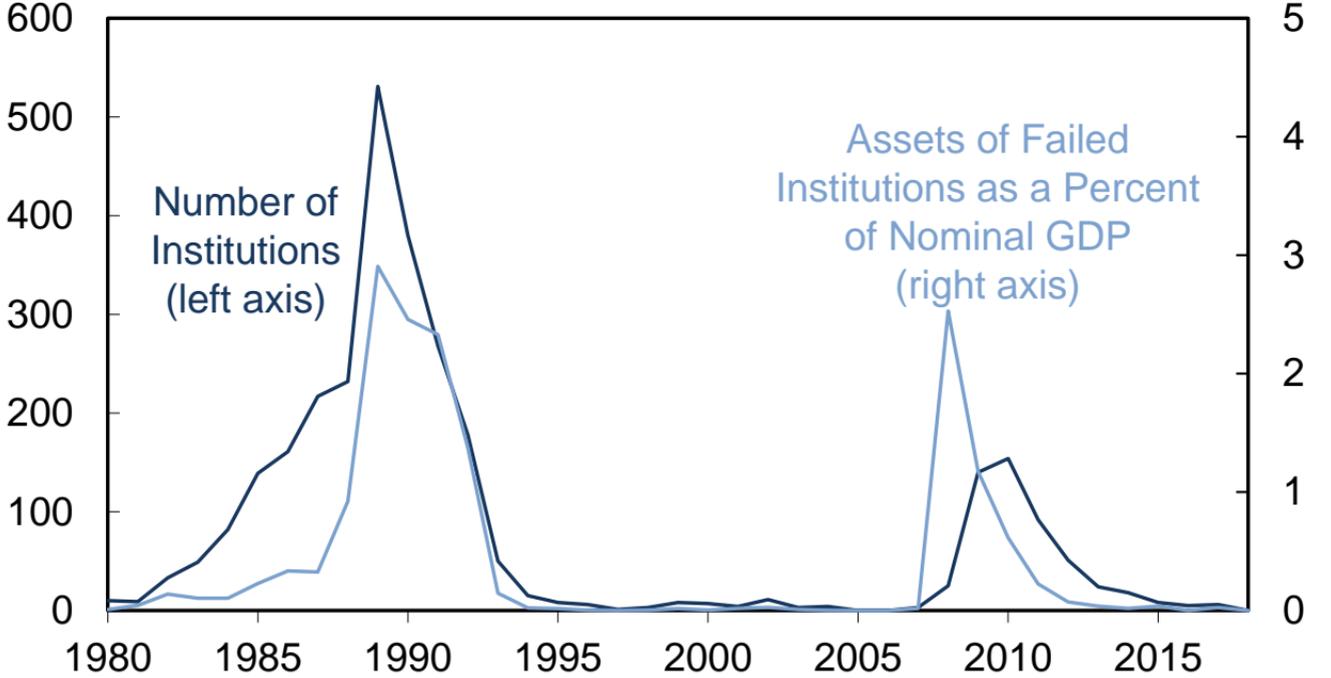
DB USA

4.11.26 FDIC-Insured Failed Institutions

Number of Institutions

As Of: 2018 Q2

Percent



Source: BEA, FDIC, Haver Analytics

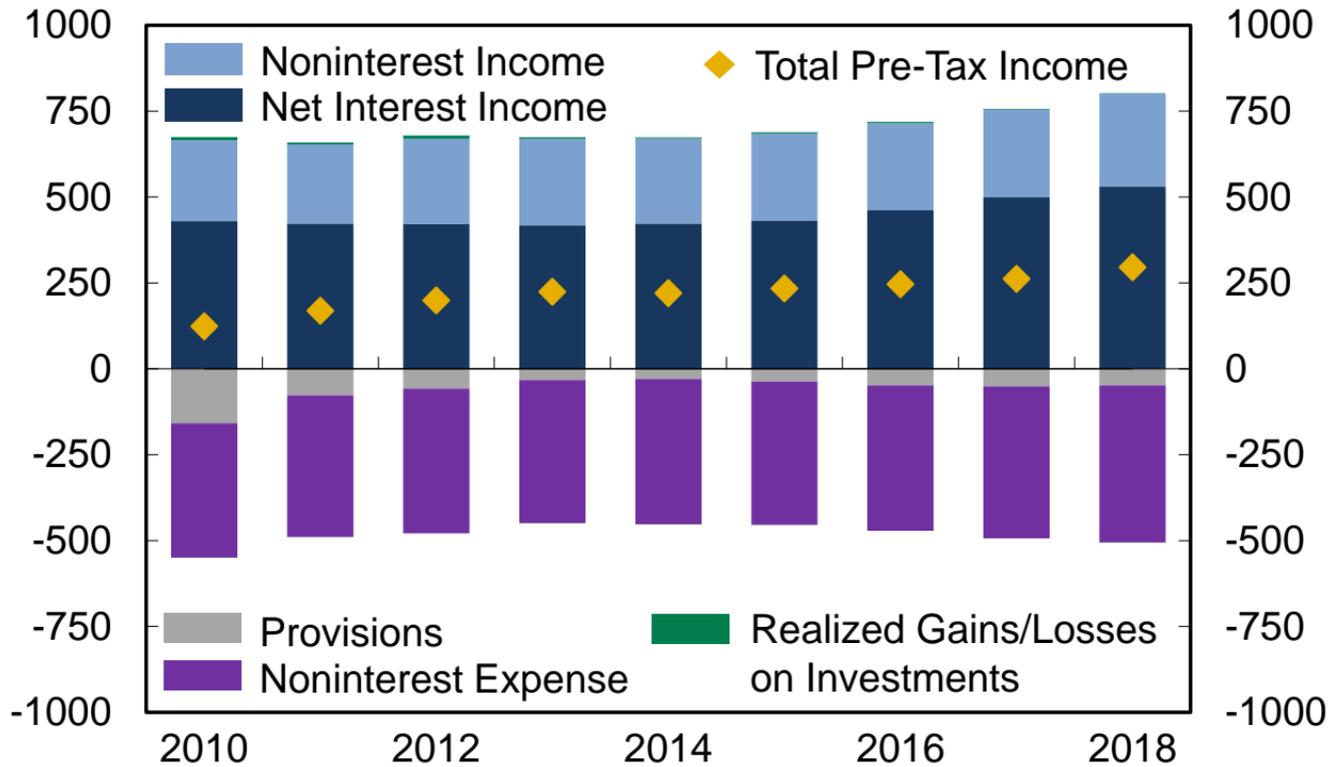
Note: No FDIC-insured institutions failed during 2005, 2006, and the first six months of 2018.

4.11.27 Commercial Bank and Thrift Pre-Tax Income

Billions of US\$

As Of: 2018 Q2

Billions of US\$



Note: Includes all FDIC-insured commercial banks and thrifts. Values are annualized.

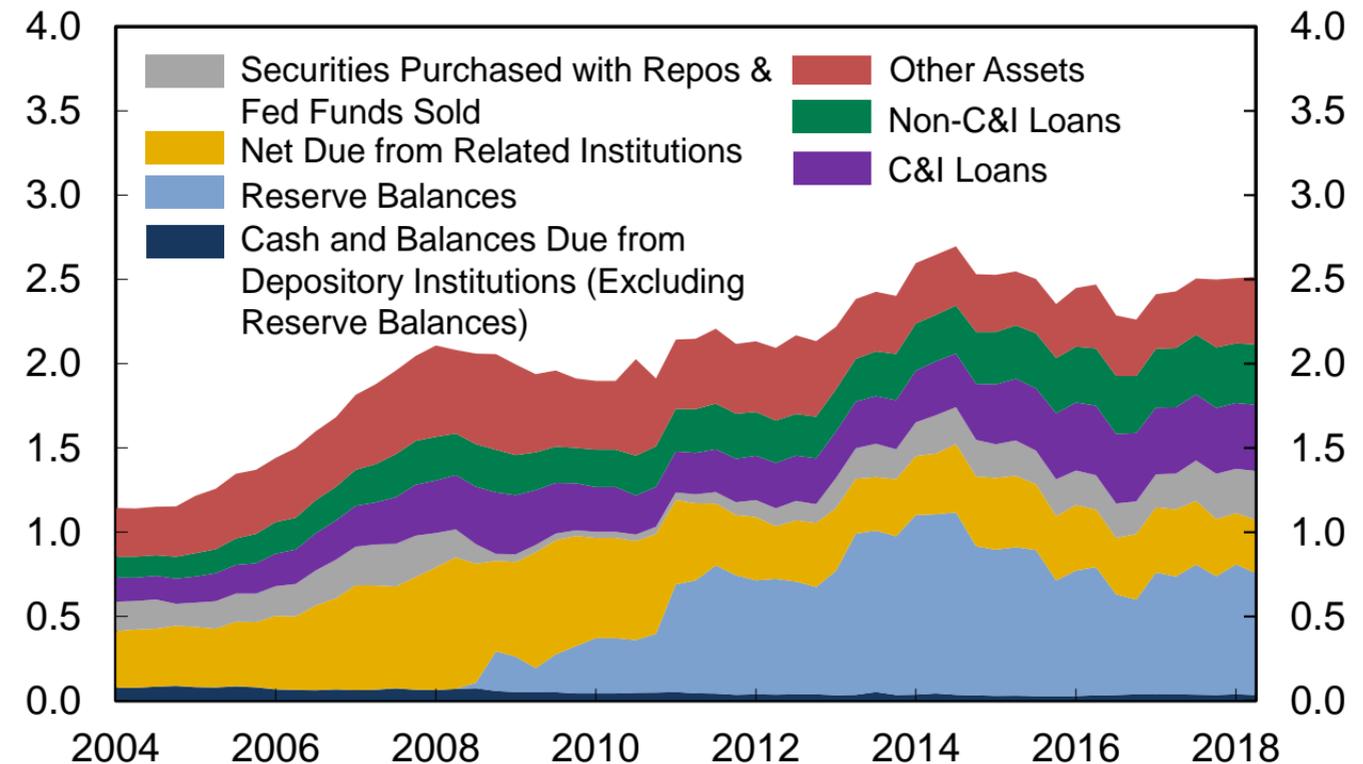
Source: FDIC

4.11.28 U.S. Branches and Agencies of Foreign Banks: Assets

Trillions of US\$

As Of: 2018 Q2

Trillions of US\$



Source: Federal Reserve, Haver Analytics

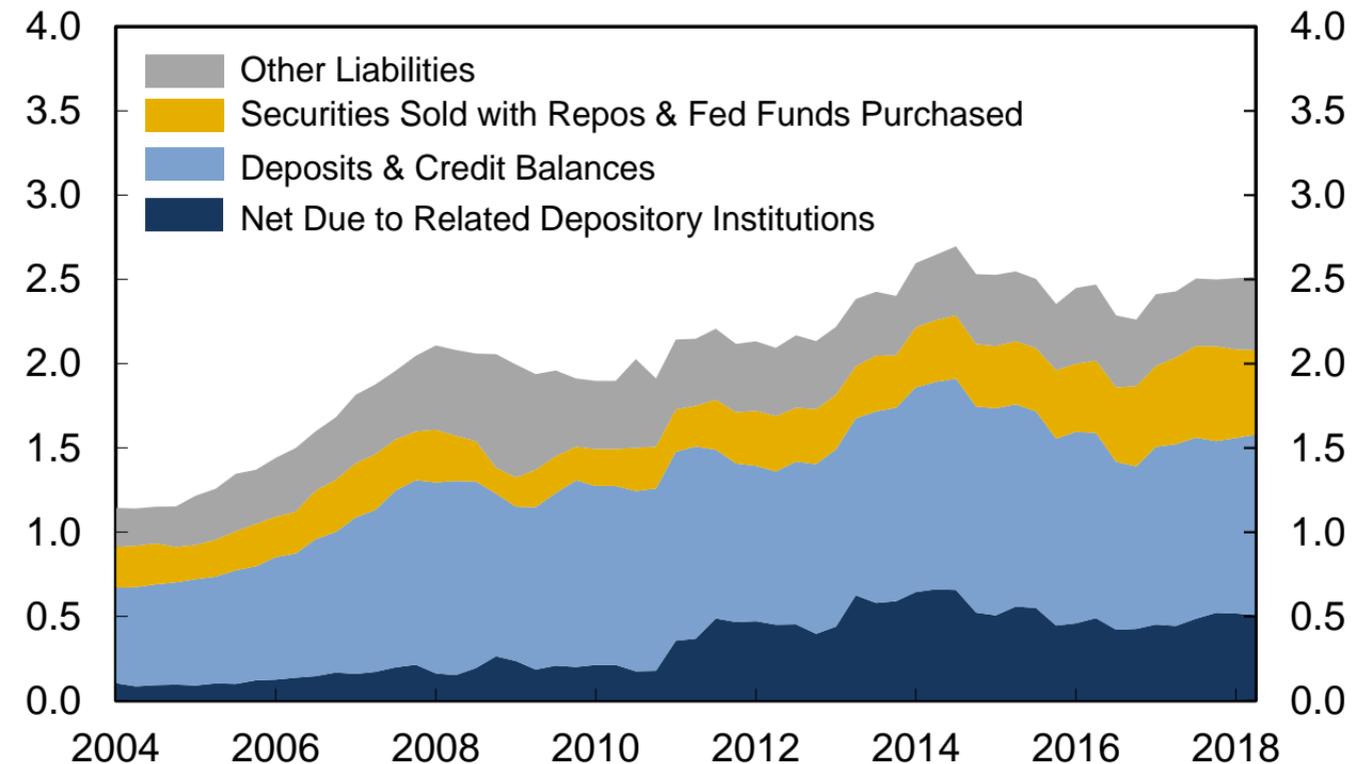
Note: Other assets includes government securities, asset-backed securities, and other trading assets.

4.11.29 U.S. Branches and Agencies of Foreign Banks: Liabilities

Trillions of US\$

As Of: 2018 Q2

Trillions of US\$



Source: Federal Reserve,
Haver Analytics

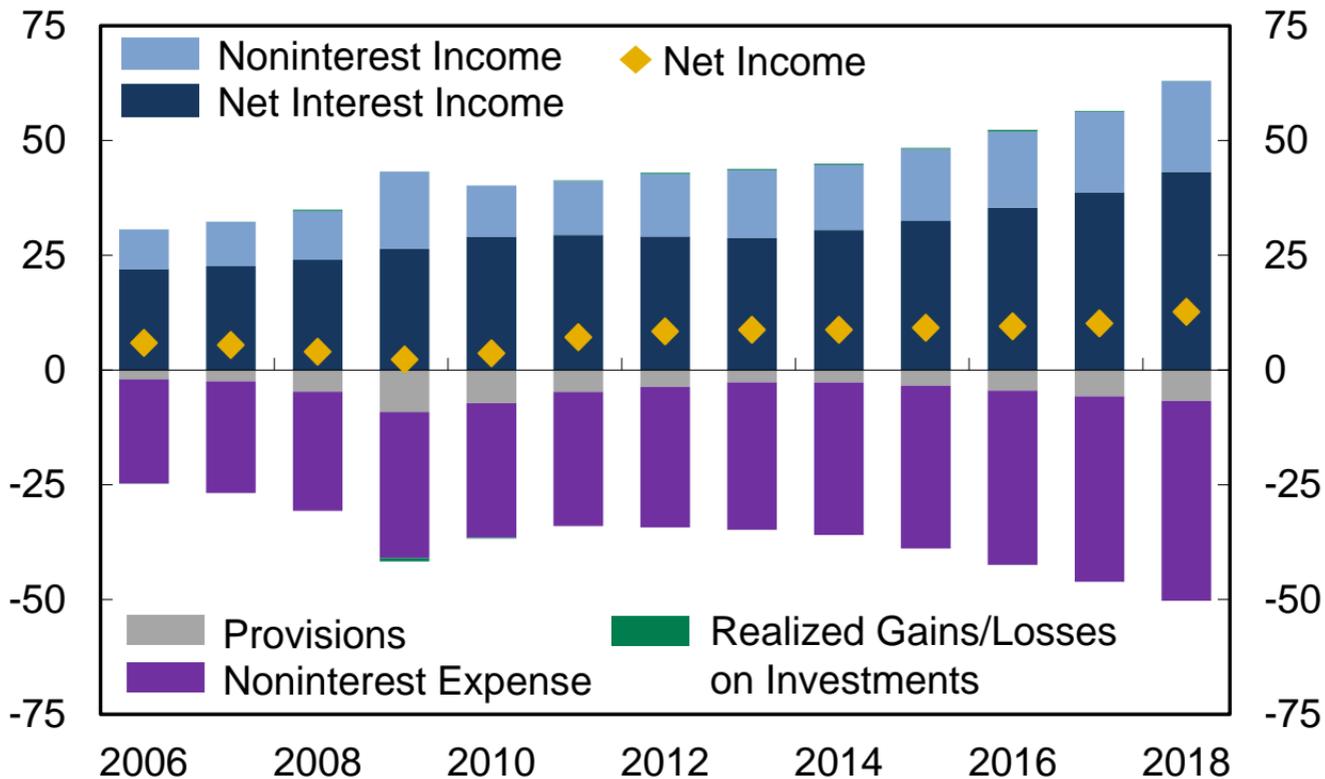
Note: Other liabilities includes transaction accounts,
non-transaction accounts, and other borrowed money.

4.11.30 Credit Union Income

Billions of US\$

As Of: 2018 Q2

Billions of US\$



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

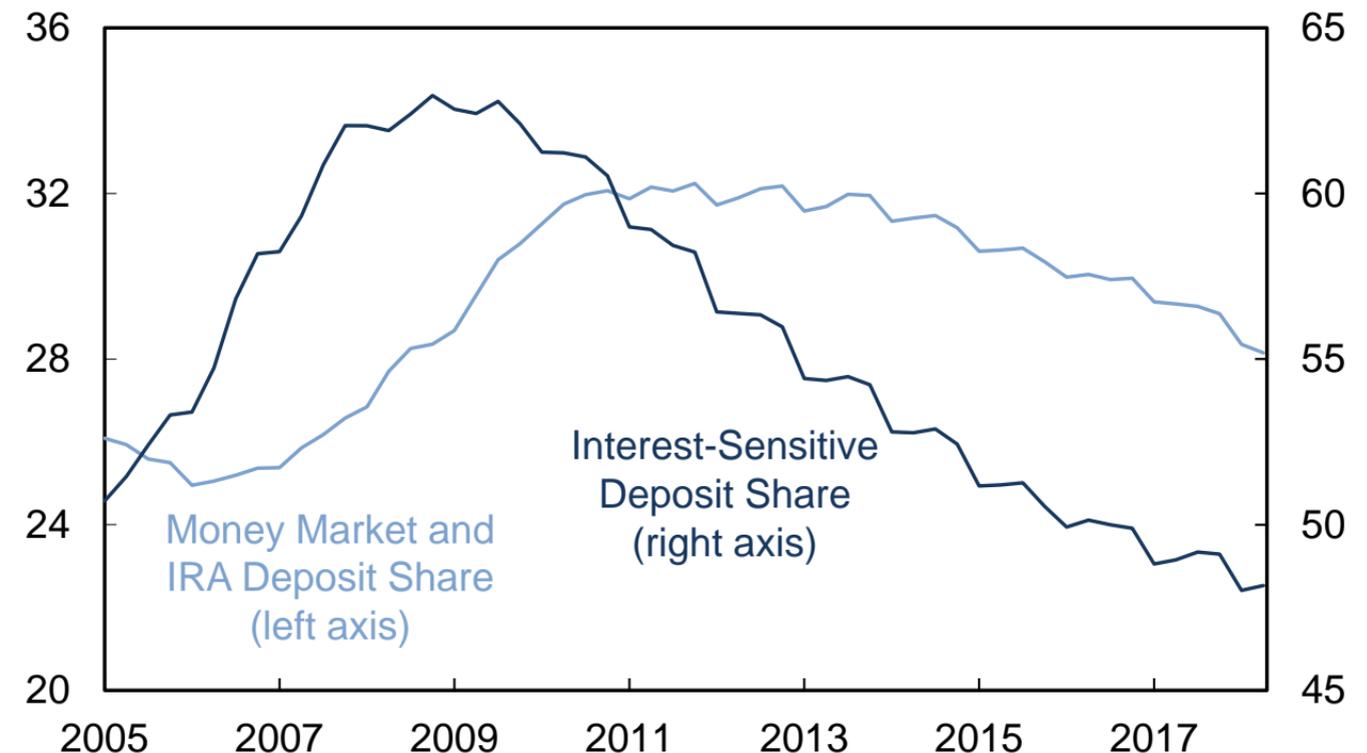
Source: NCUA

4.11.31 Credit Union Deposits

Percent

As Of: 2018 Q2

Percent



Source: NCUA

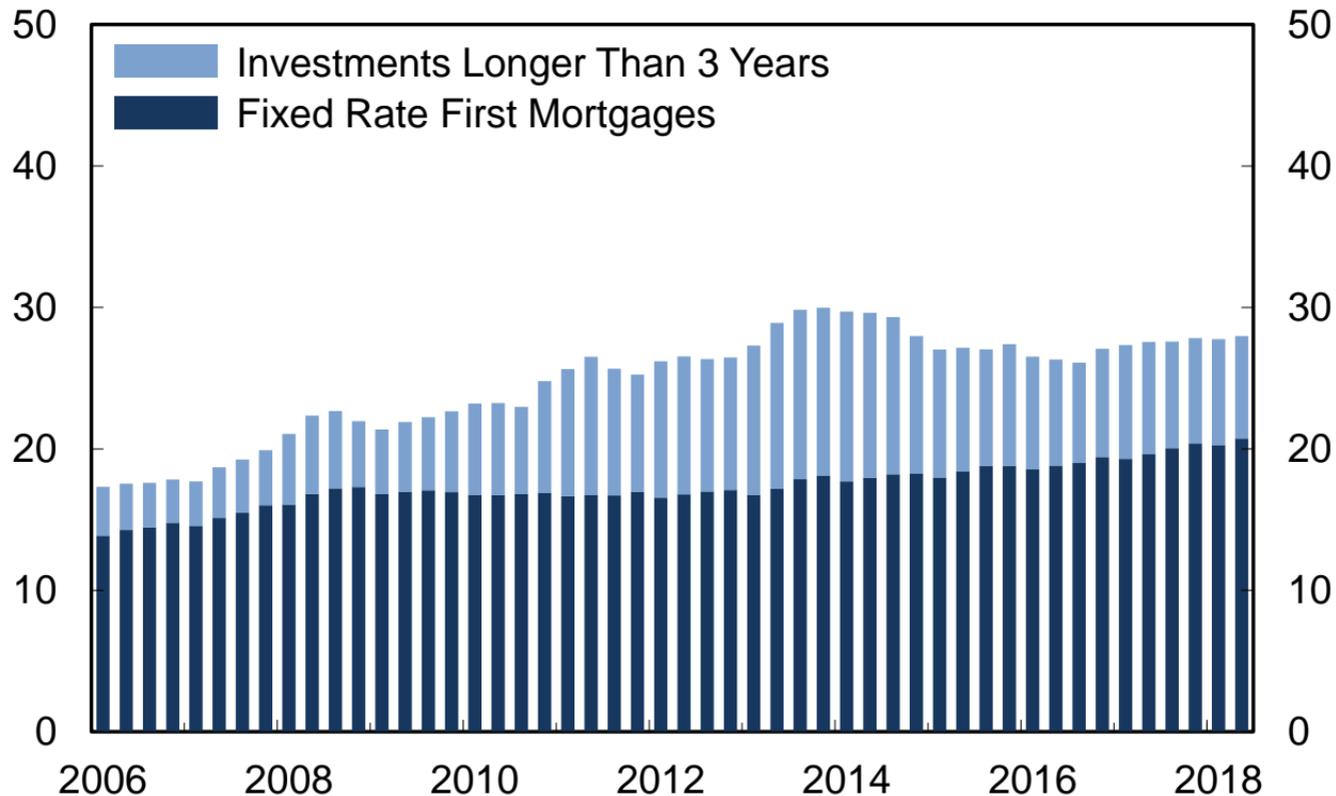
Note: Federally-insured credit unions. Interest-sensitive deposit share includes money market and IRA deposit share, share certificates, and certain other deposits.

4.11.32 Credit Union Net Long-Term Assets

Percent of Total Assets

As Of: 2018 Q2

Percent of Total Assets



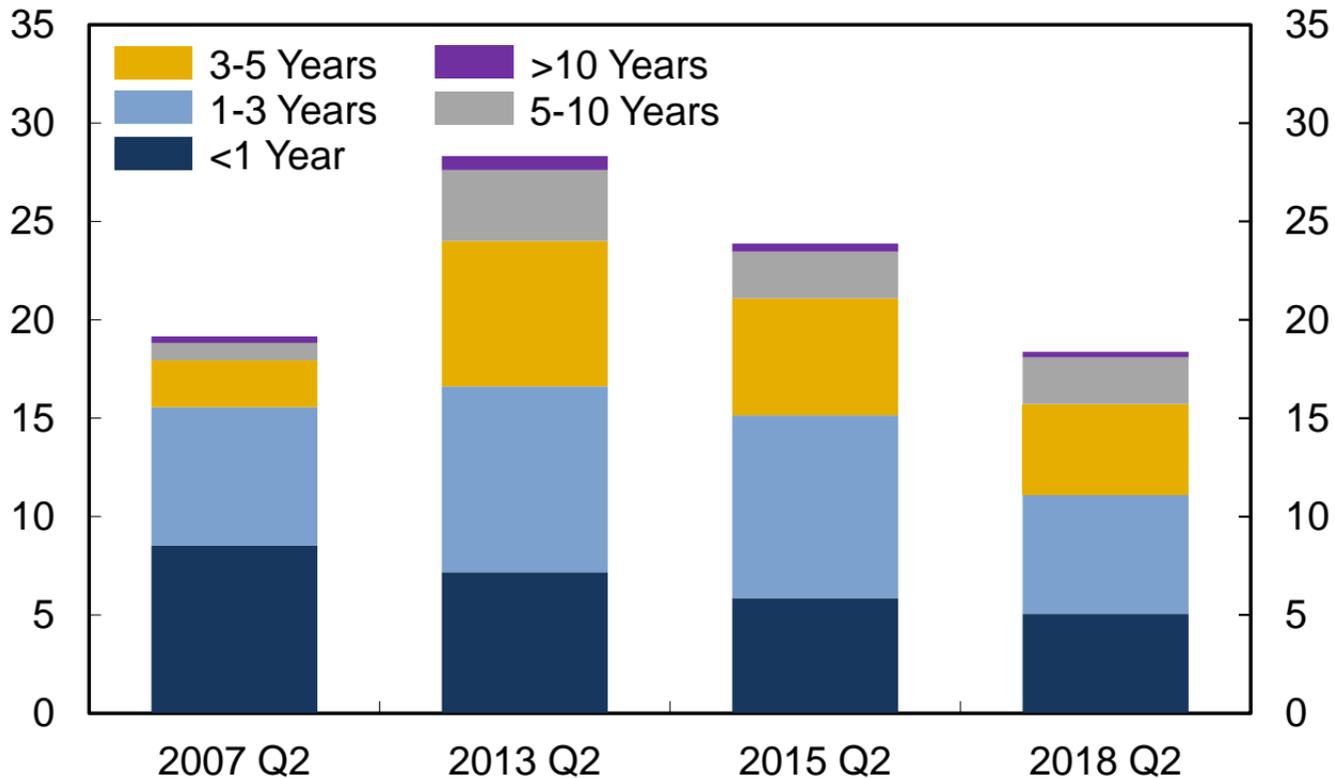
Source: NCUA

4.11.33 Credit Union Investments by Maturity

Percent of Total Assets

As Of: 2018 Q2

Percent of Total Assets



Note: Federally-insured credit unions. Investments <1 year exclude securities with maturities <3 months.

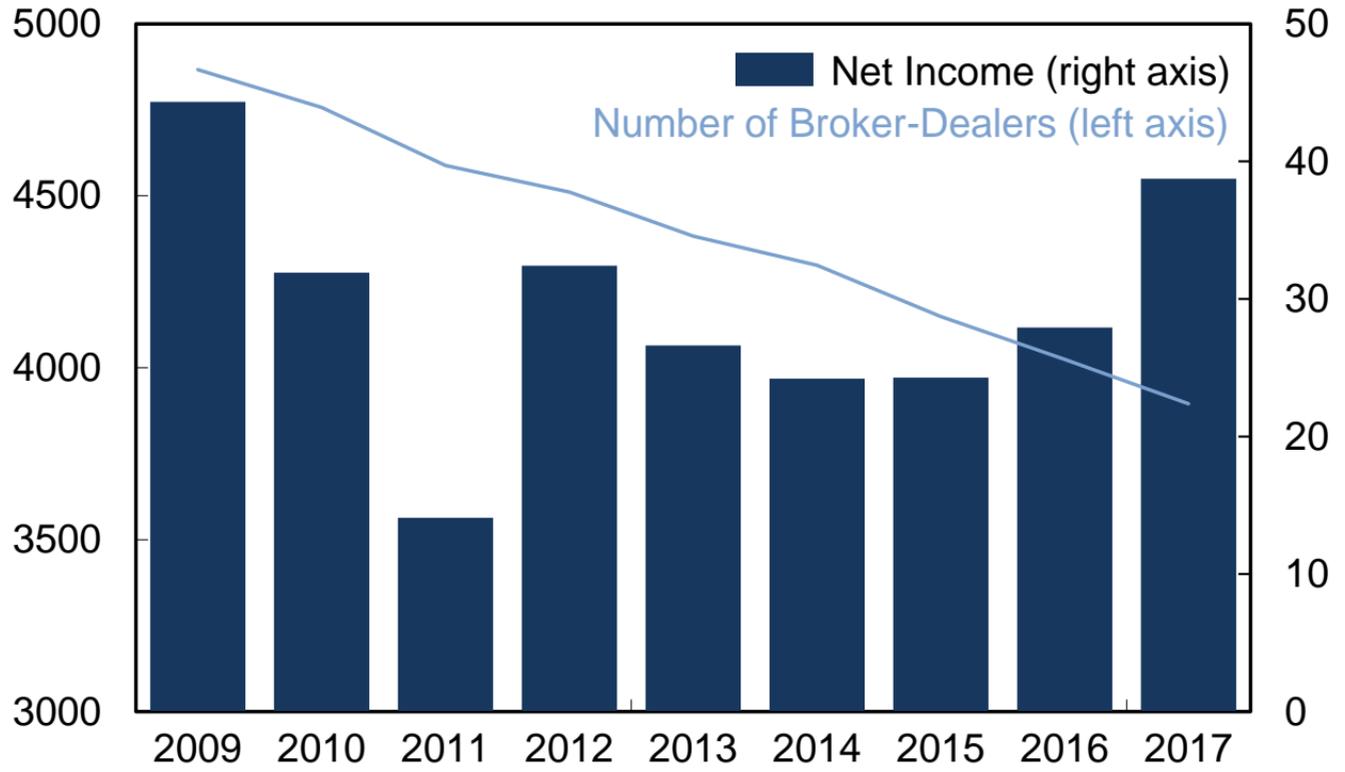
Source: NCUA

4.12.1 Number of Broker-Dealers and Industry Net Income

Number of Firms

As Of: 2017

Billions of US\$



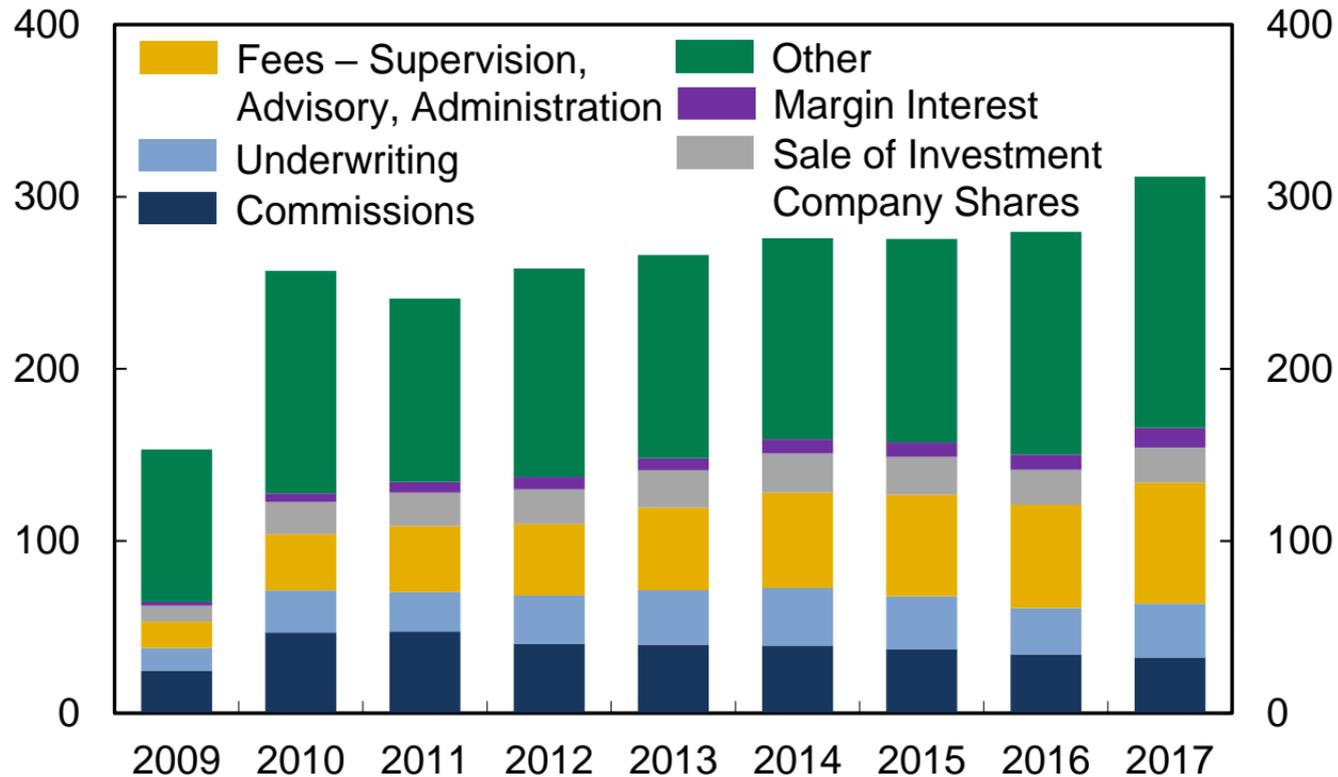
Source: FINRA

4.12.2 Broker-Dealer Revenues

Billions of US\$

As Of: 2017

Billions of US\$



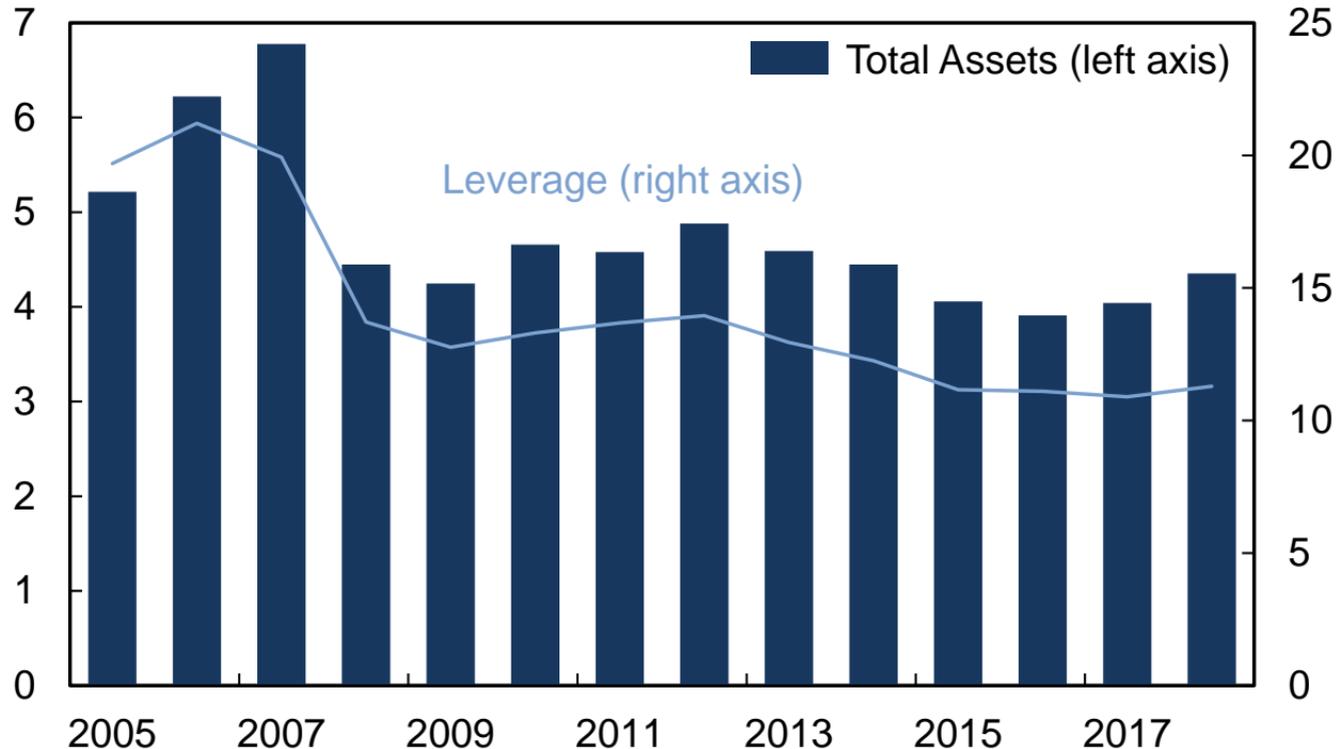
Source: FINRA

4.12.3 Broker-Dealer Assets and Leverage

Trillions of US\$

As Of: 2018 Q2

Ratio



Note: Leverage is the ratio of total assets to total ownership equity. 2018 data as of second quarter 2018.

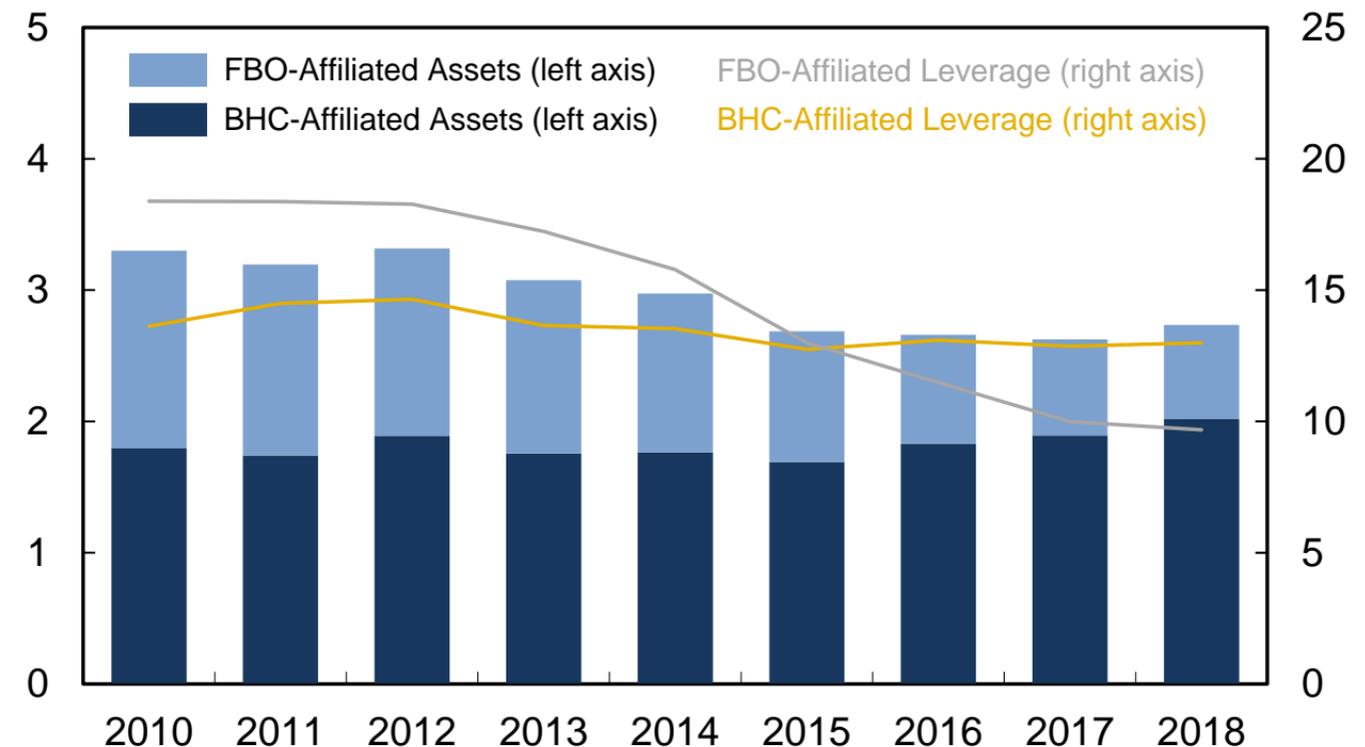
Source: FINRA

4.12.4 Large Broker-Dealer Assets and Leverage by Affiliation

Trillions of US\$

As Of: 2018 Q2

Ratio



Note: Data covers BHC- and FBO-affiliated broker-dealers that are among the 25 largest broker-dealers by assets as of second quarter 2018.

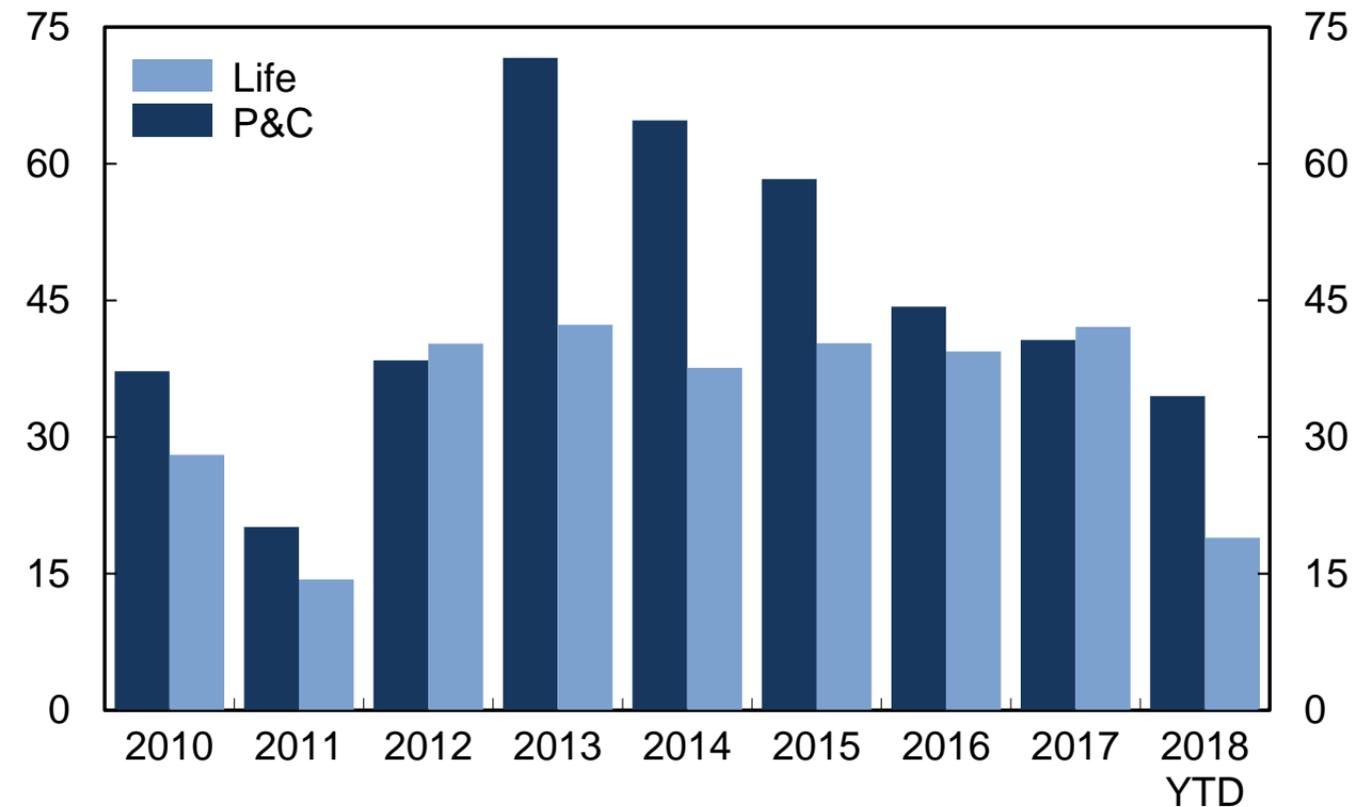
Source: FINRA

4.12.5 Insurance Industry Net Income

Billions of US\$

As Of: 2018 Q2

Billions of US\$



Source: SNL Financial

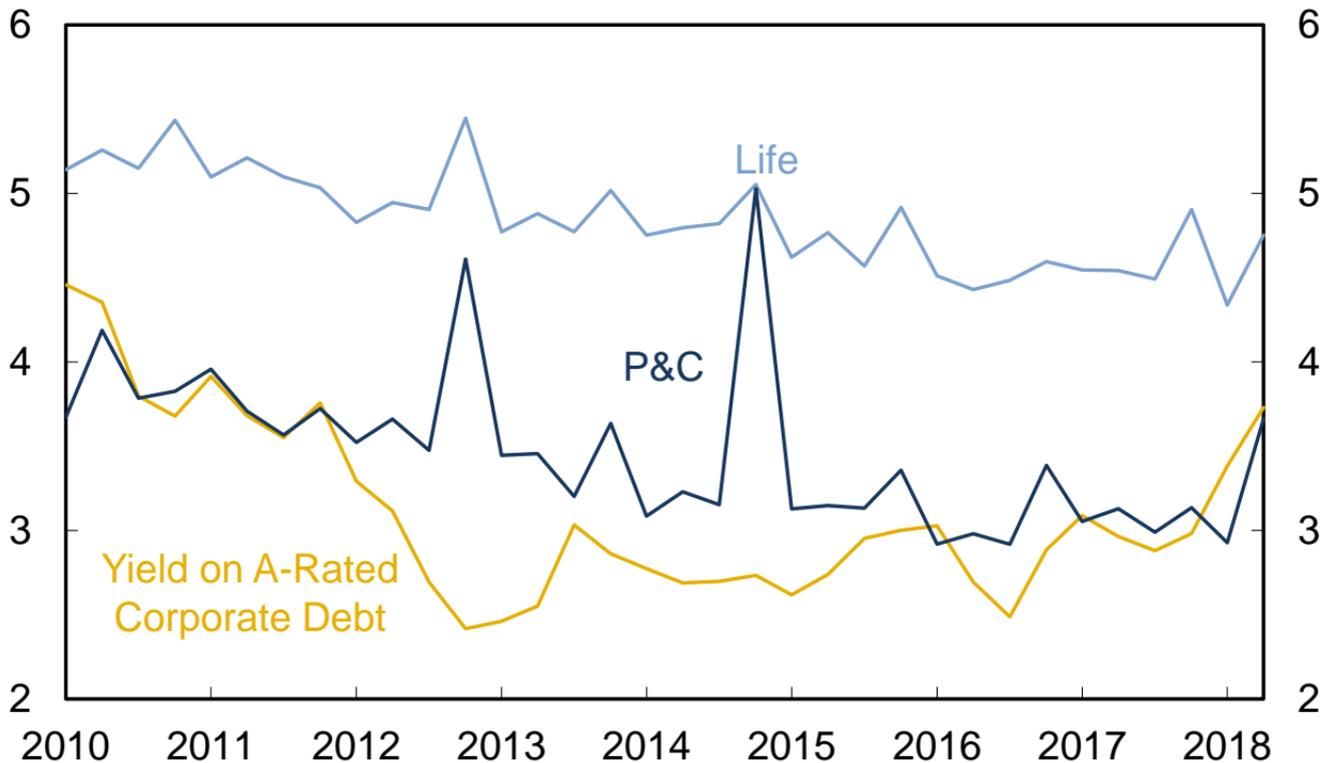
Note: Life includes accident and health.

4.12.6 Net Yield on Invested Assets

Percent

As Of: 2018 Q2

Percent



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

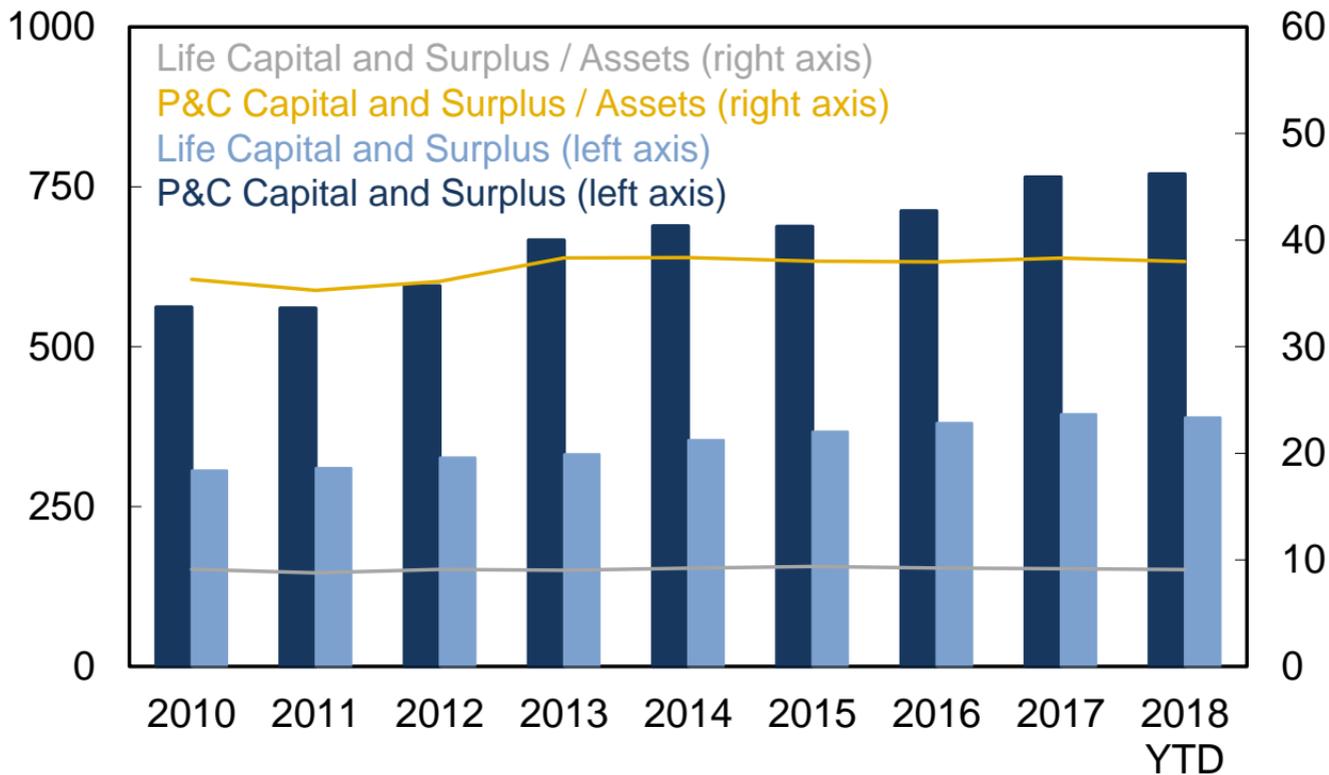
Note: Life includes accident and health.

4.12.7 Insurance Industry Capital and Surplus

Billions of US\$

As Of: 2018 Q2

Percent of Total Assets



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.

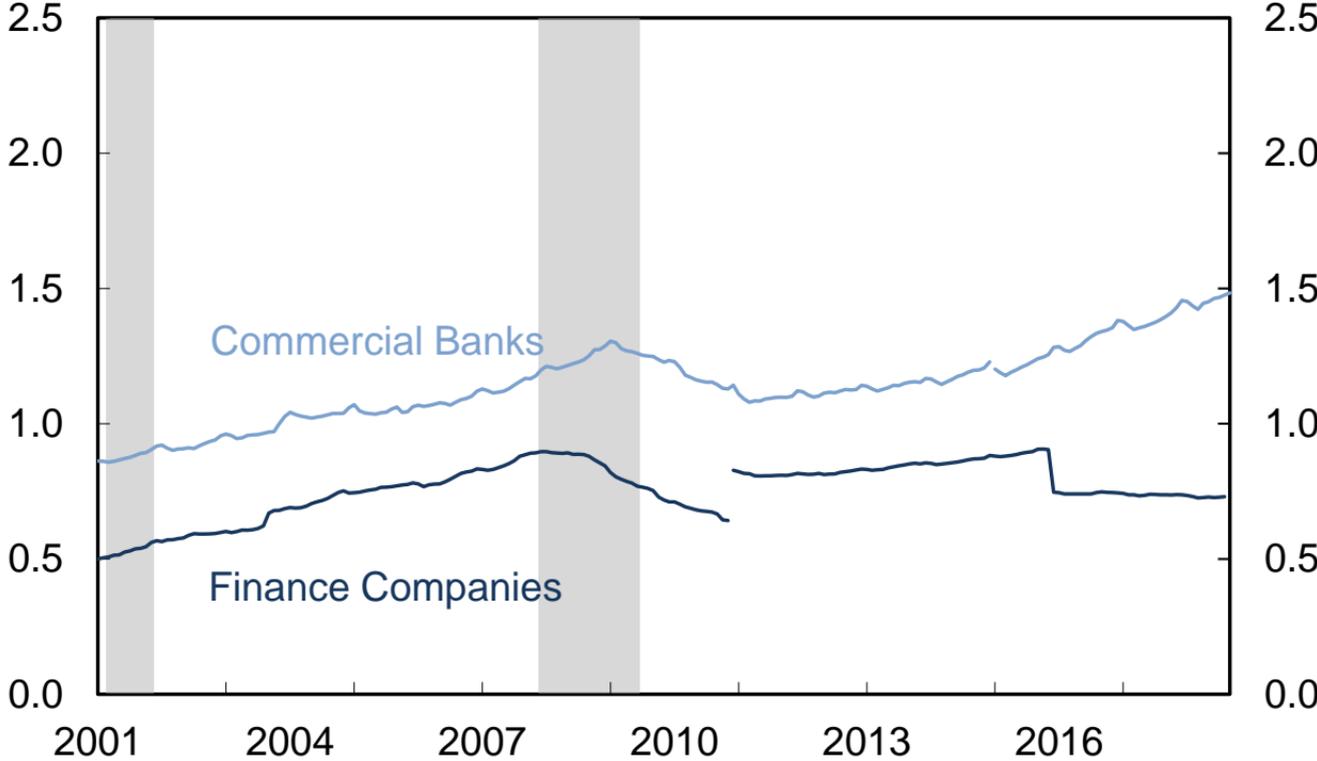
Source: SNL Financial

4.12.8 Consumer Loans and Leases Outstanding

Trillions of US\$

As Of: Sep-2018

Trillions of US\$



Source: Federal Reserve, Haver Analytics

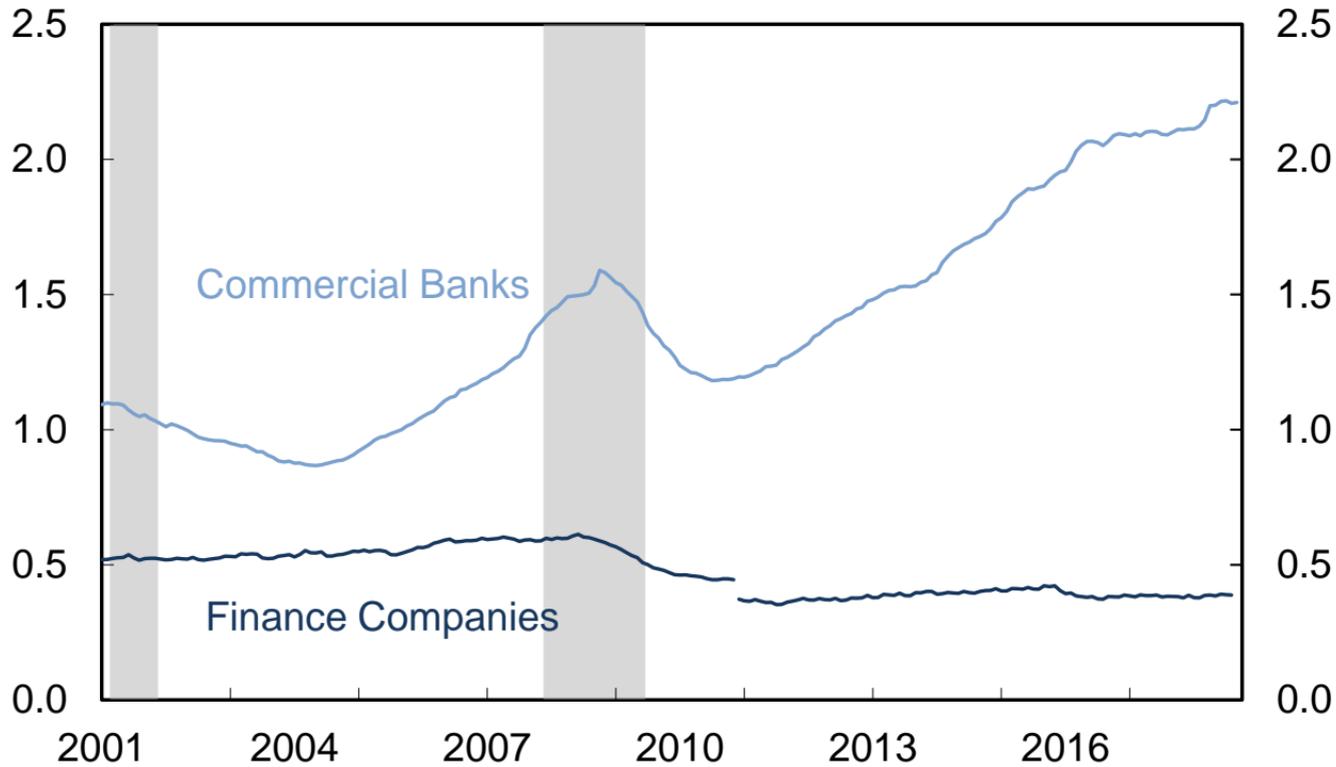
Note: Loans and leases owned and securitized. Series breaks in December 2010 and December 2014 due to change in data collection methodology. Gray bars signify NBER recessions.

4.12.9 Business Loans and Leases Outstanding

Trillions of US\$

As Of: Sep-2018

Trillions of US\$



Source: Federal Reserve,
Haver Analytics

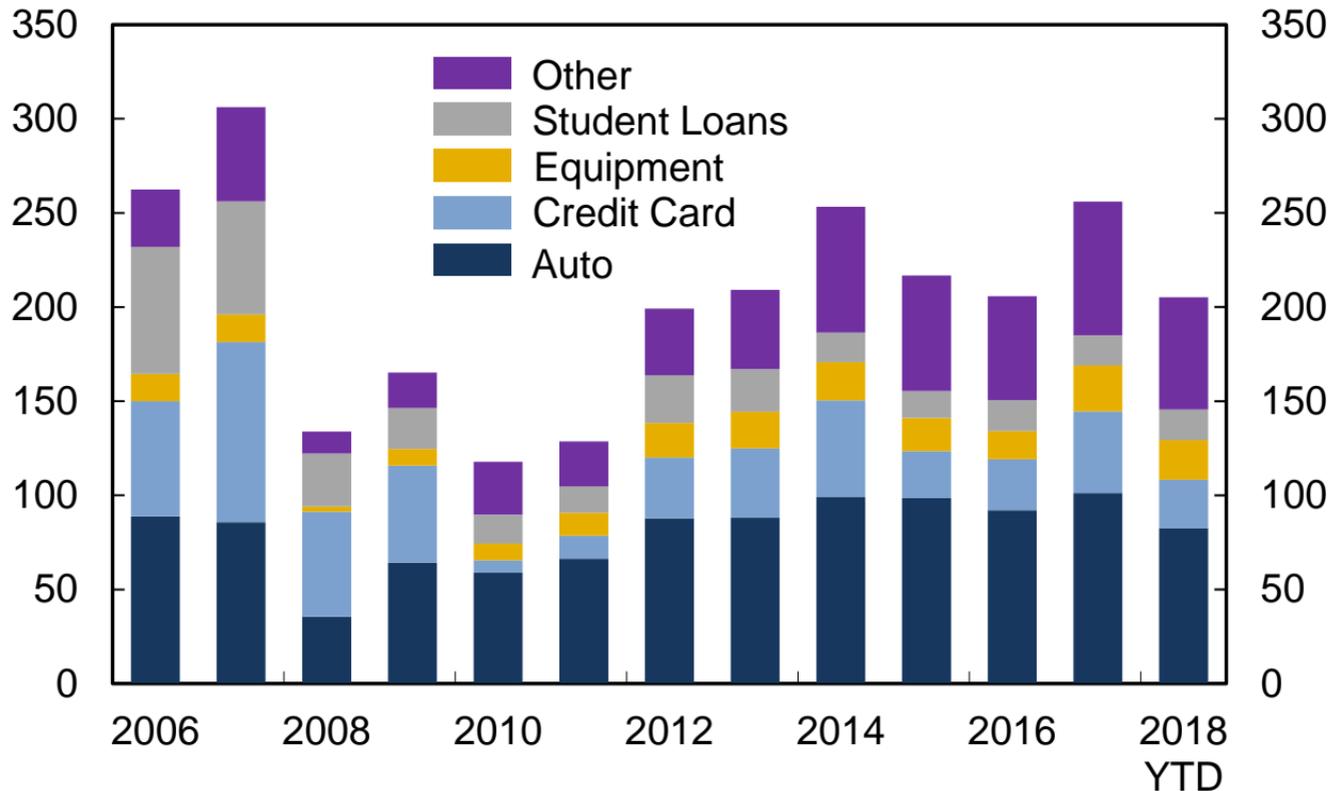
Note: Loans and leases owned and securitized. Series break in December 2010 due to change in data collection methodology. Gray bars signify NBER recessions.

4.12.10 ABS Issuance

Billions of US\$

As Of: Sep-2018

Billions of US\$



Source: Thomson Reuters, SIFMA

4.12.11 Select ABS Spreads

Basis Points

As Of: 27-Sep-2018

Basis Points

100

100

Subprime Auto Fixed BBB 3-Year

Prime Auto Fixed AAA 3-Year

Credit Card Fixed AAA 3-Year

80

80

60

60

40

40

20

20

2010

2011

2012

2013

2014

2015

2016

2017

2018

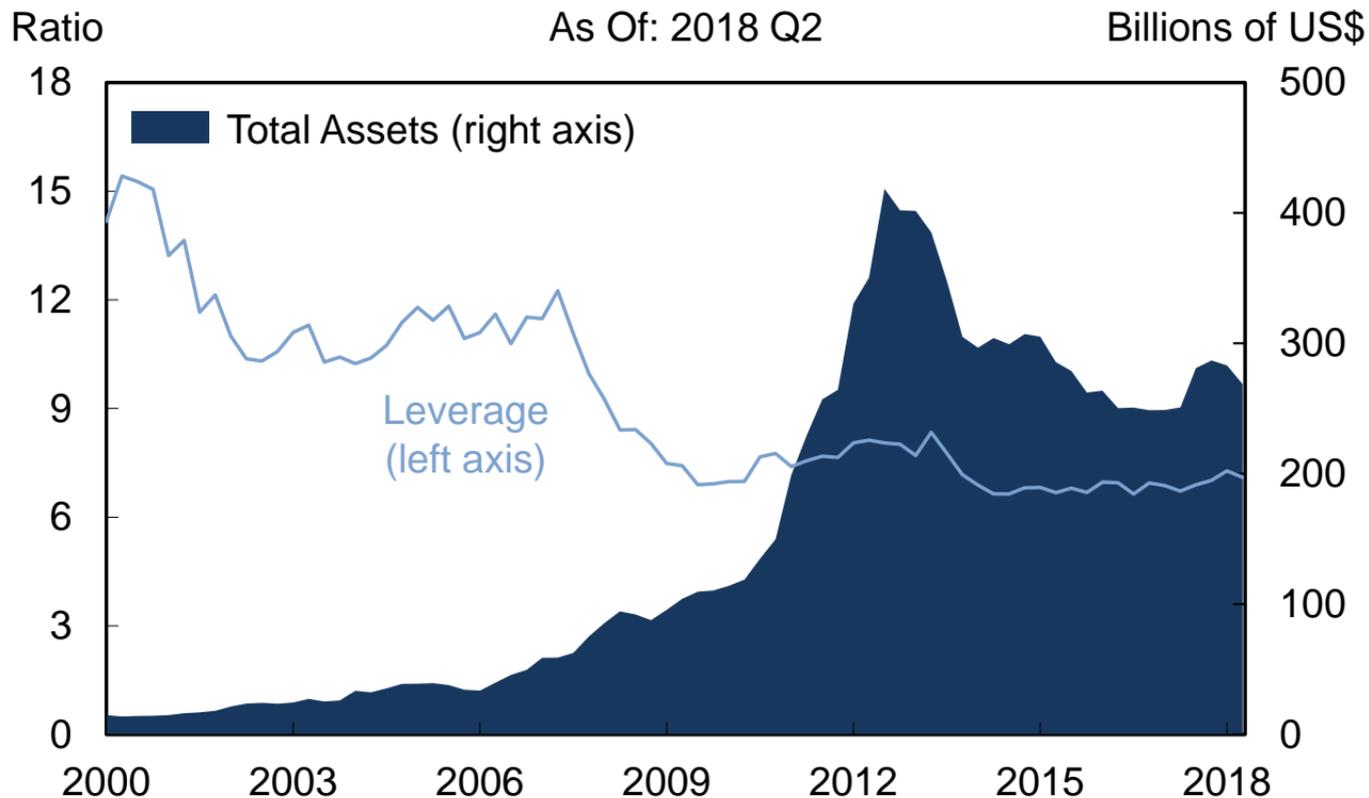
0

0

Source: J.P. Morgan

Note: Spreads to swaps.

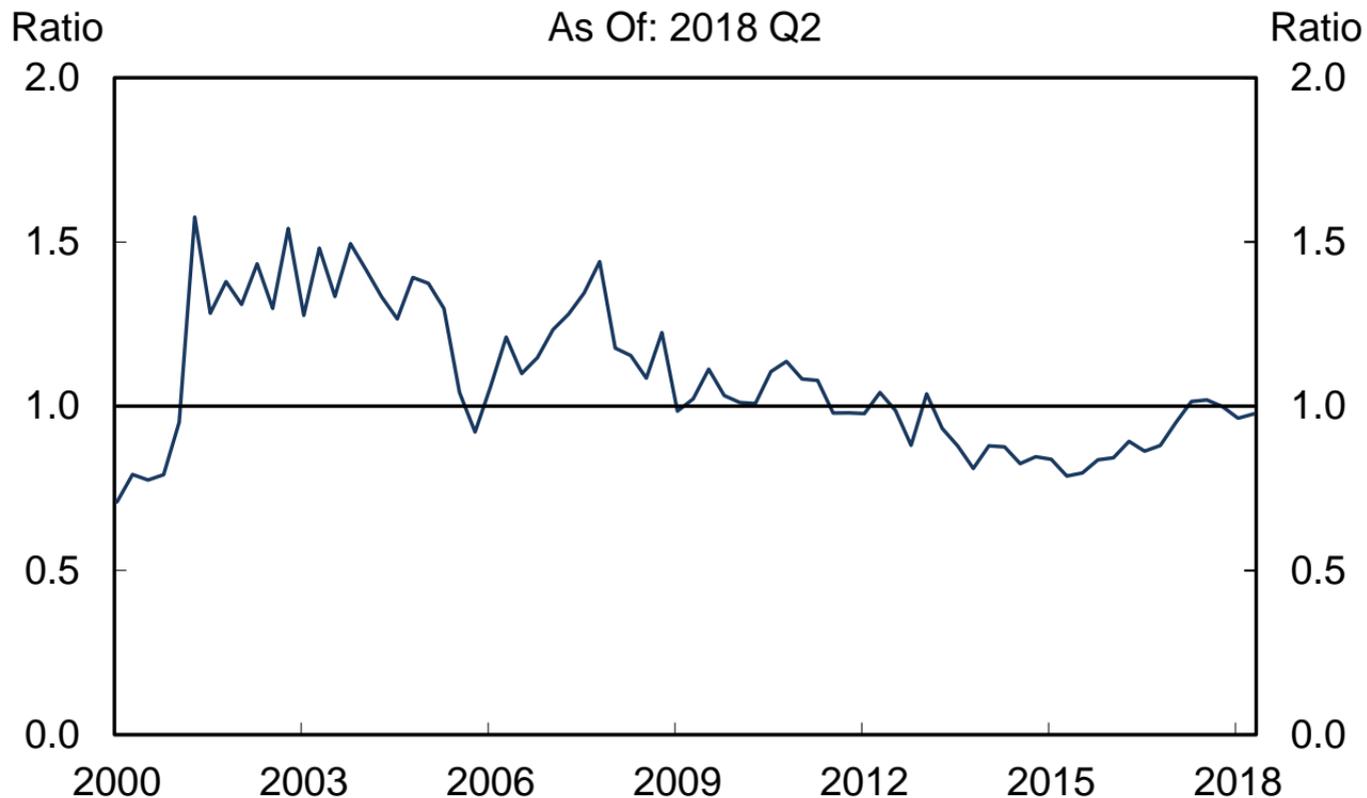
4.12.12 Agency REIT Assets and Leverage



Note: 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.

4.12.13 Agency REIT Price-to-Book Ratio



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

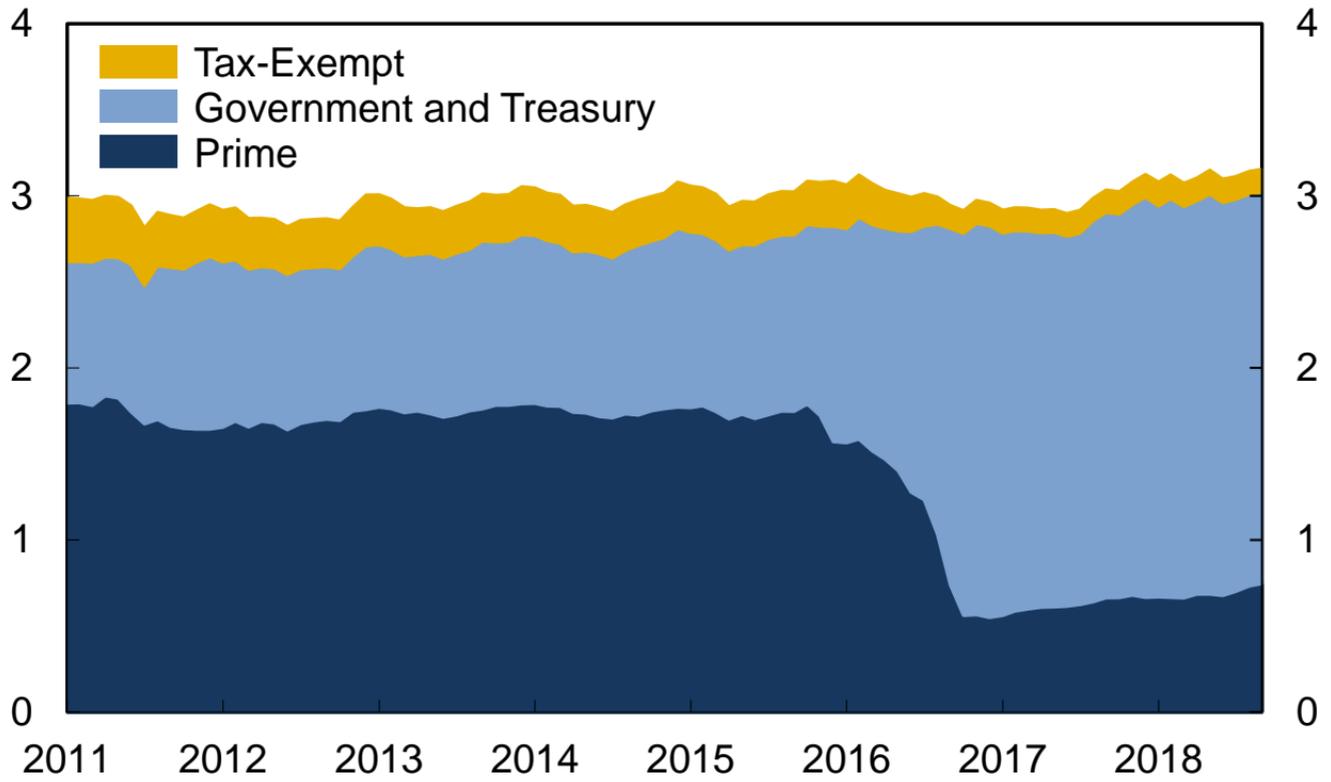
Source: Bloomberg, L.P.

4.13.1 MMF Assets by Fund Type

Trillions of US\$

As Of: Oct-2018

Trillions of US\$



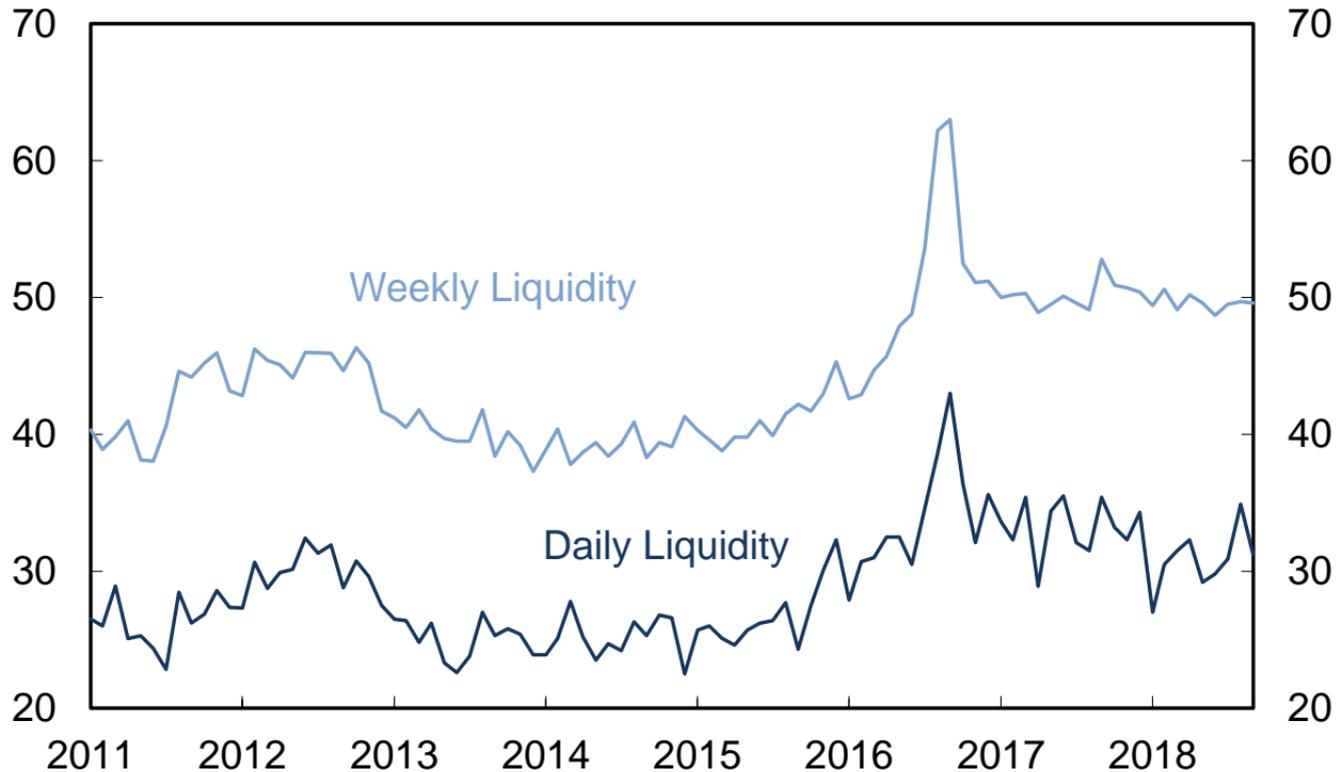
Source: SEC

4.13.2 Liquid Asset Shares of Prime MMFs

Percent of Total Assets

As Of: Oct-2018

Percent of Total Assets



Source: SEC

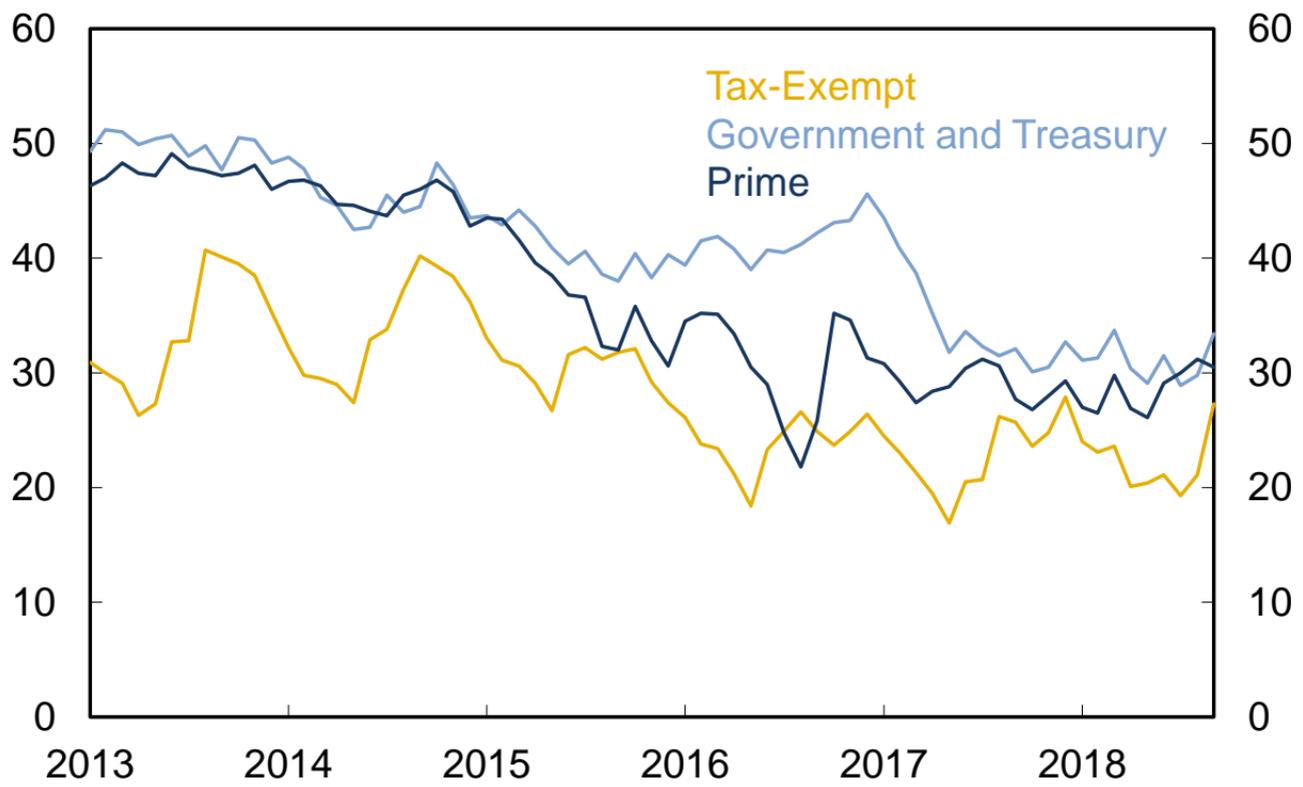
Note: Weighted by fund size.

4.13.3 Weighted Average Maturity by Fund Type

Basis Points

As Of: Oct-2018

Basis Points



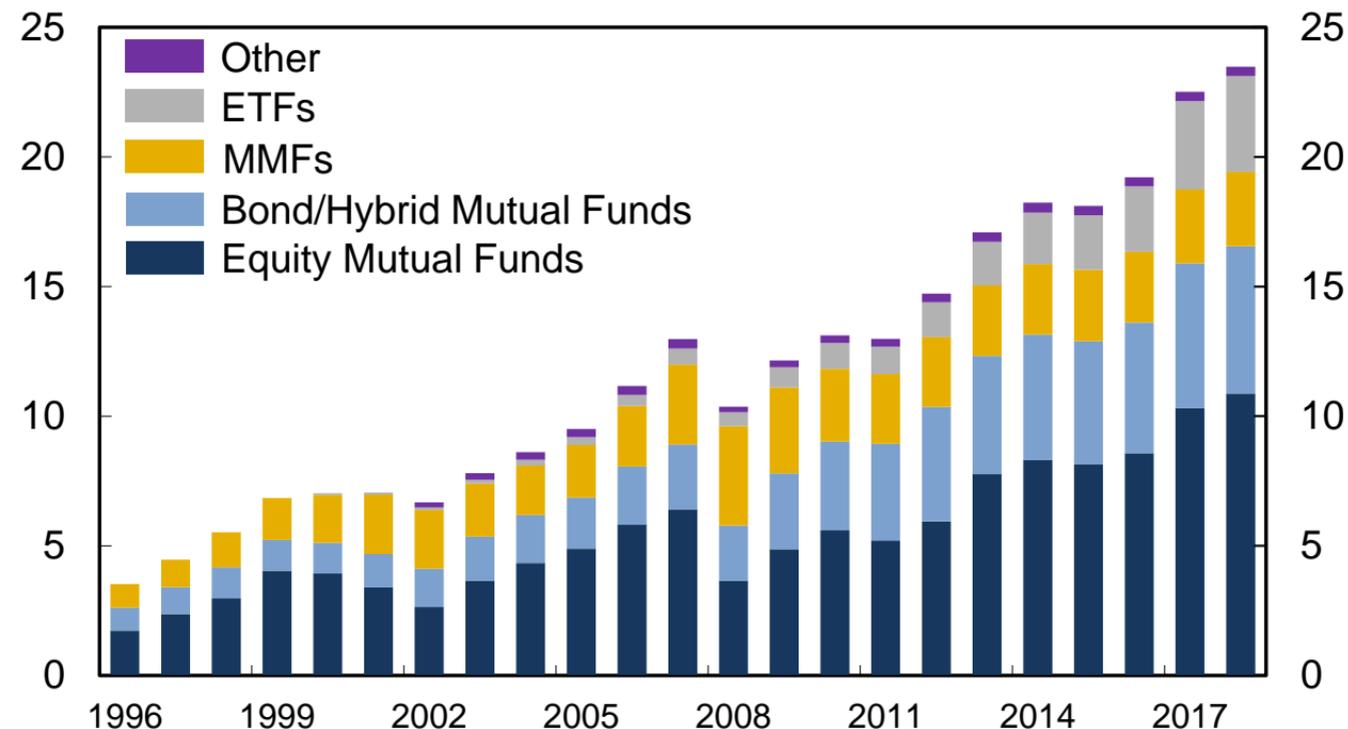
Source: SEC

4.13.4 Net Assets of the Investment Company Industry

Trillions of US\$

As Of: 2018 Q3

Trillions of US\$



Note: Other is composed of unit investment trusts and closed-end funds. 2018 YTD figures include 2017 UIT data, which is reported annually.

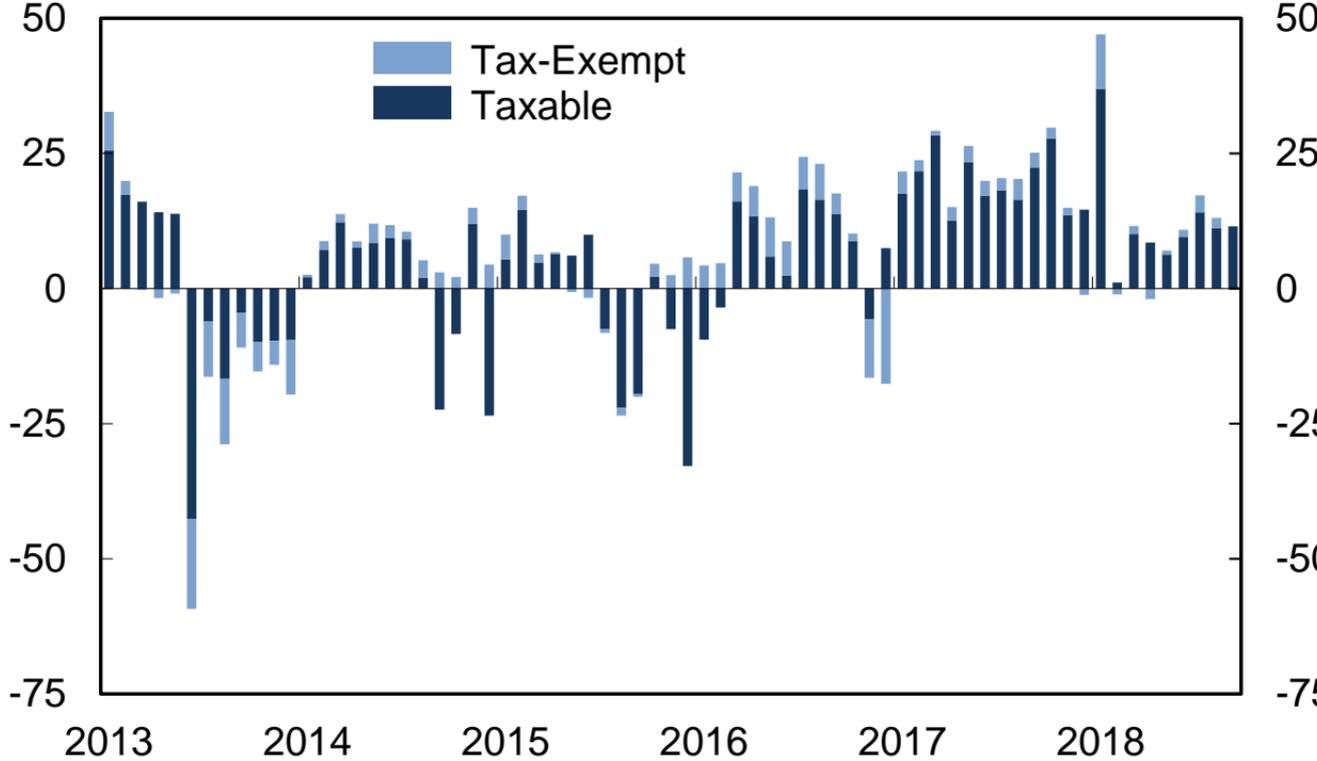
Source: ICI, Haver Analytics

4.13.5 Monthly Bond Mutual Fund Flows

Billions of US\$

As Of: Sep-2018

Billions of US\$



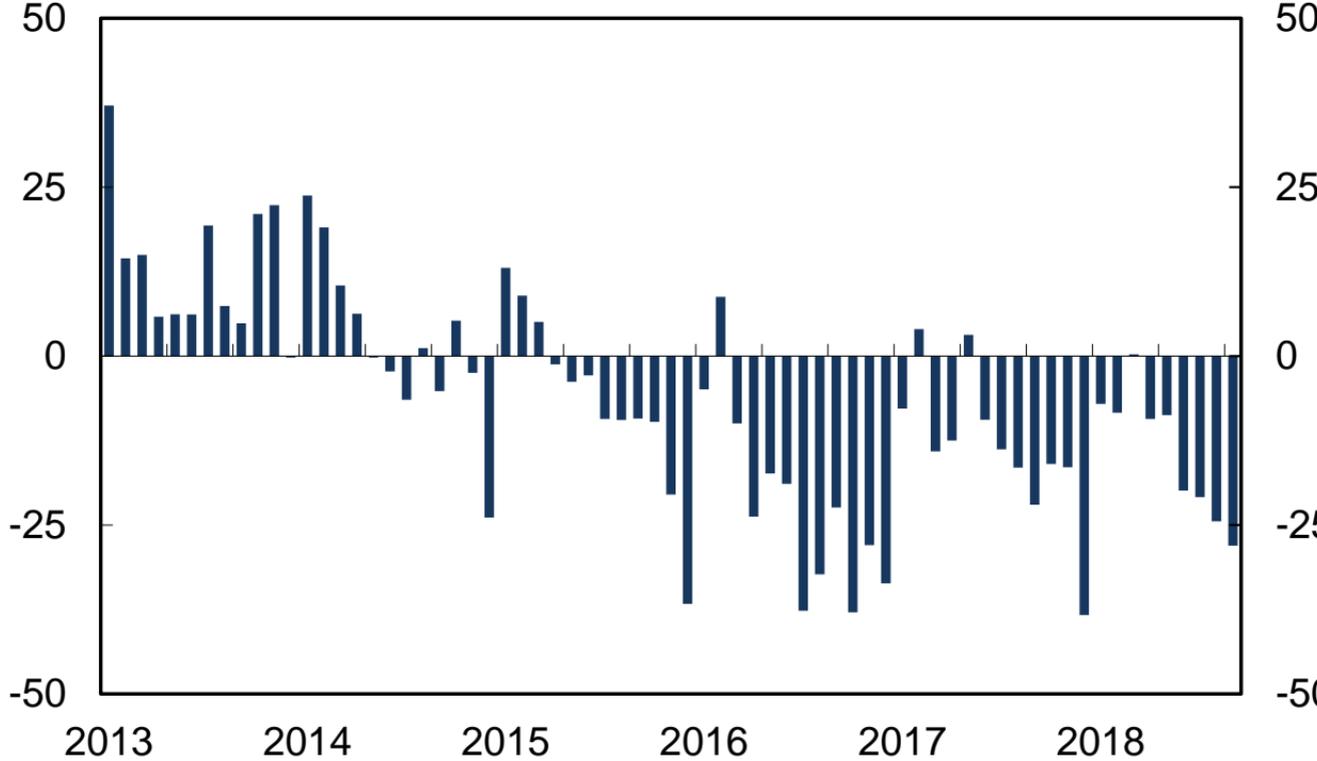
Source: ICI, Haver Analytics

4.13.6 Monthly Equity Mutual Fund Flows

Billions of US\$

As Of: Sep-2018

Billions of US\$



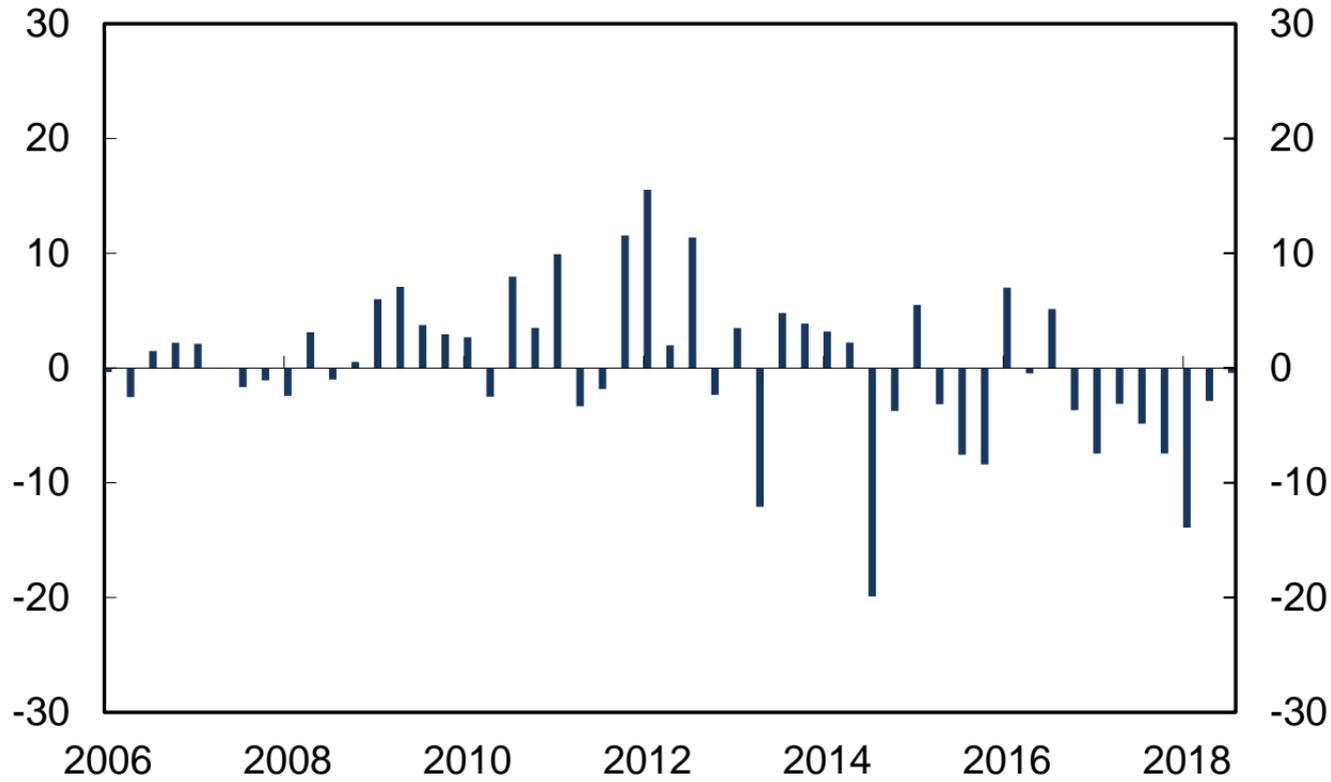
Source: ICI, Haver Analytics

4.13.7 High-Yield Mutual Funds: Quarterly Flows

Billions of US\$

As Of: 2018 Q3

Billions of US\$



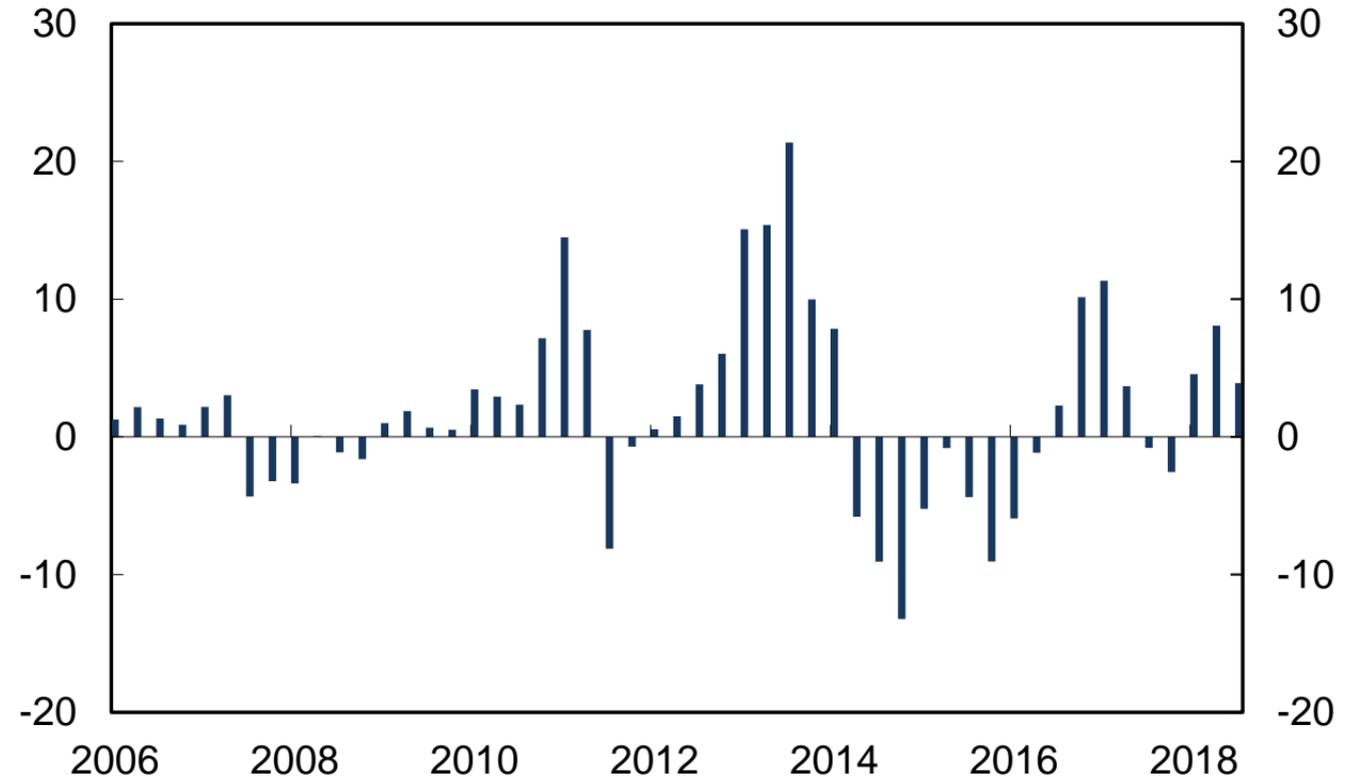
Source: Morningstar, Inc.

4.13.8 Bank Loan Mutual Funds: Quarterly Flows

Billions of US\$

As Of: 2018 Q3

Billions of US\$



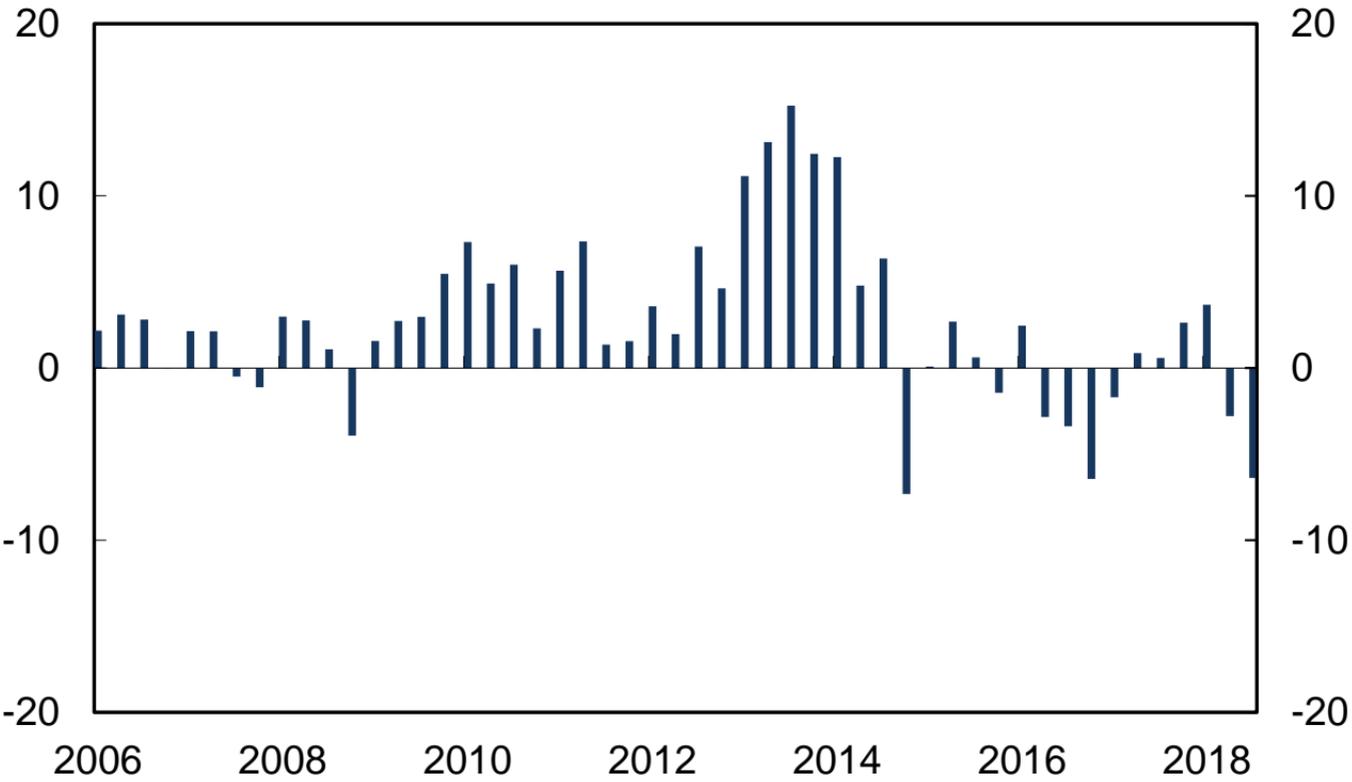
Source: Morningstar, Inc.

4.13.9 Alternative Mutual Funds: Quarterly Flows

Billions of US\$

As Of: 2018 Q3

Billions of US\$



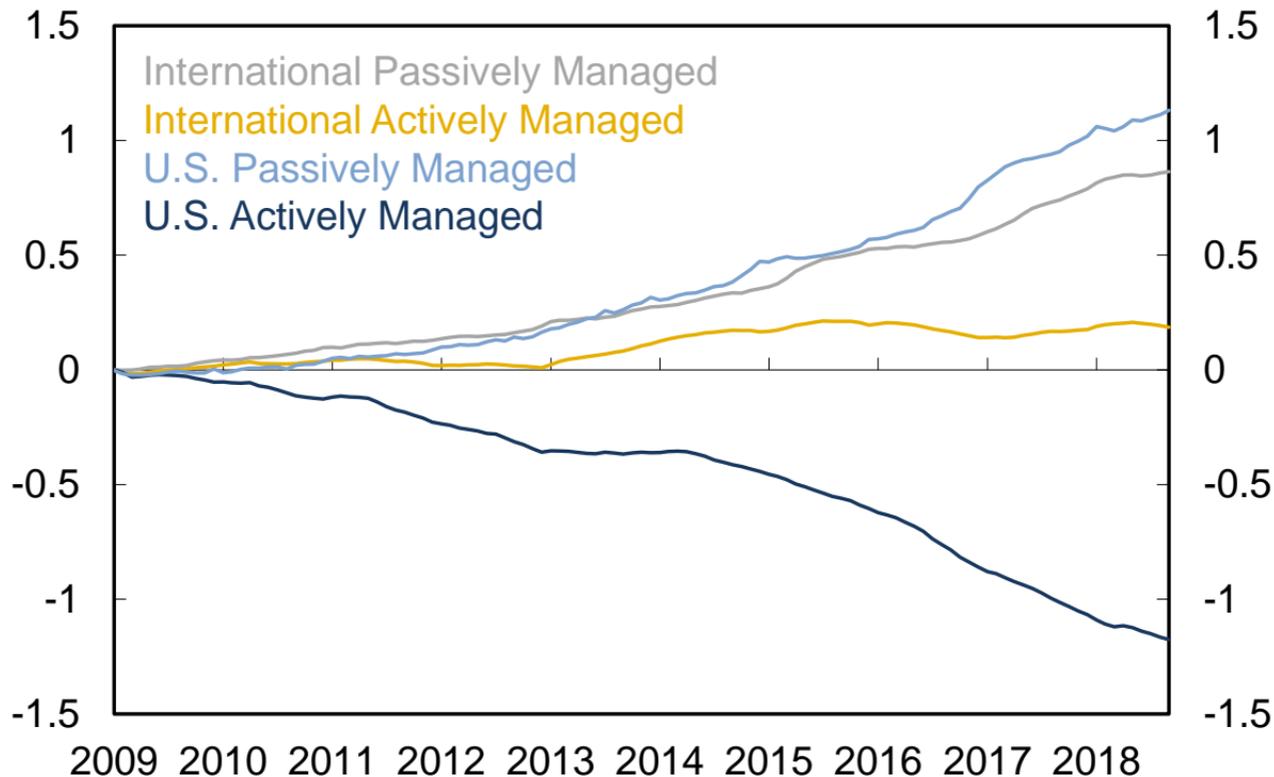
Source: Morningstar, Inc.

4.13.10 Cumulative Equity Fund Flows

Trillions of US\$

As Of: Sep-2018

Trillions of US\$



Source: Morningstar, Inc.

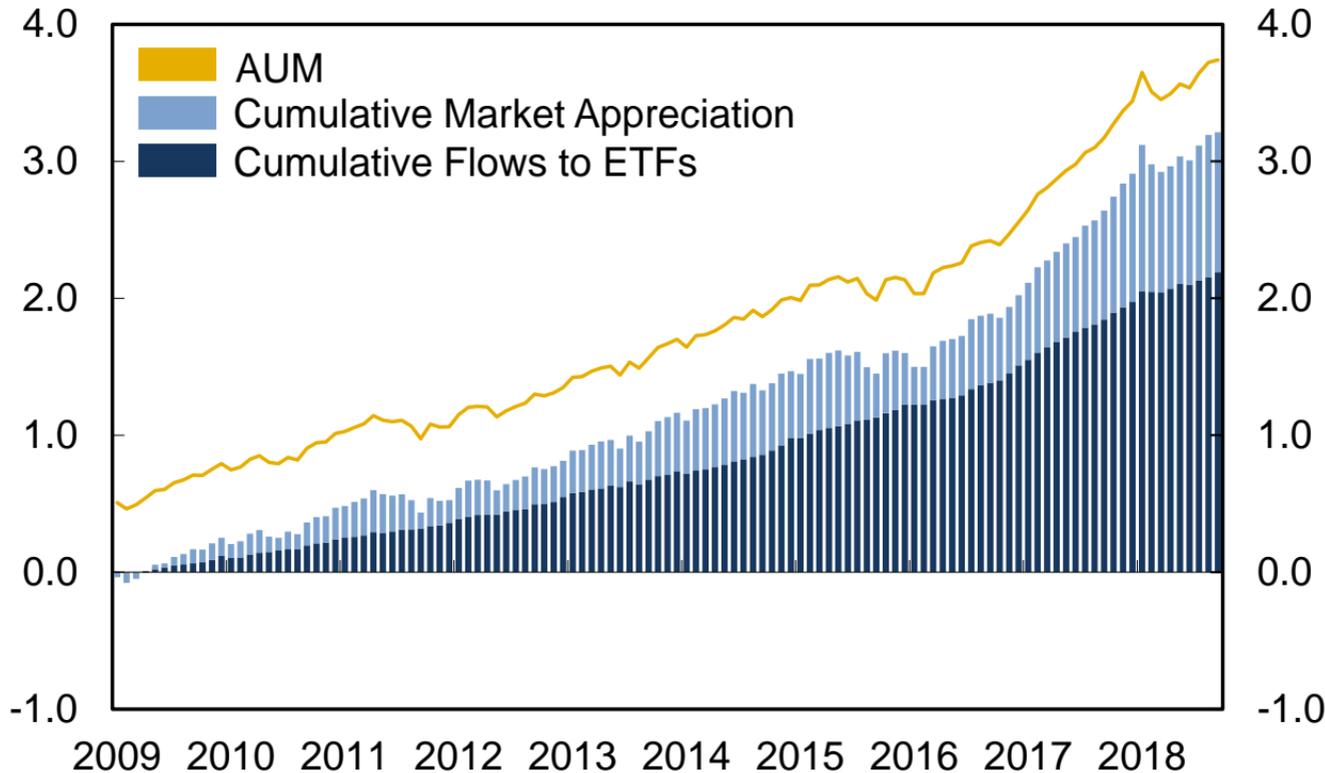
Note: Includes ETFs and mutual funds.

4.13.11 U.S.-Listed ETP AUM

Trillions of US\$

As Of: Sep-2018

Trillions of US\$



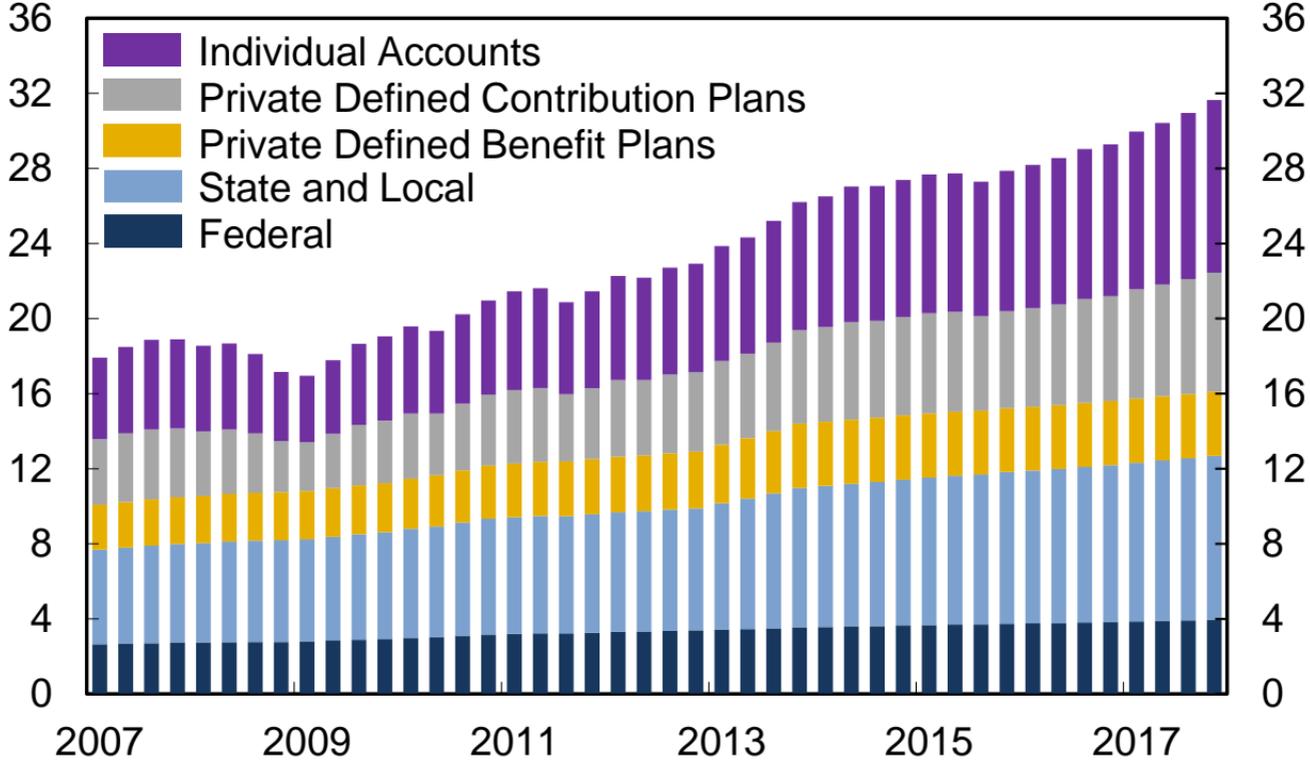
Source: Morningstar, Inc.

4.13.12 Retirement Fund Assets by Plan Type

Trillions of US\$

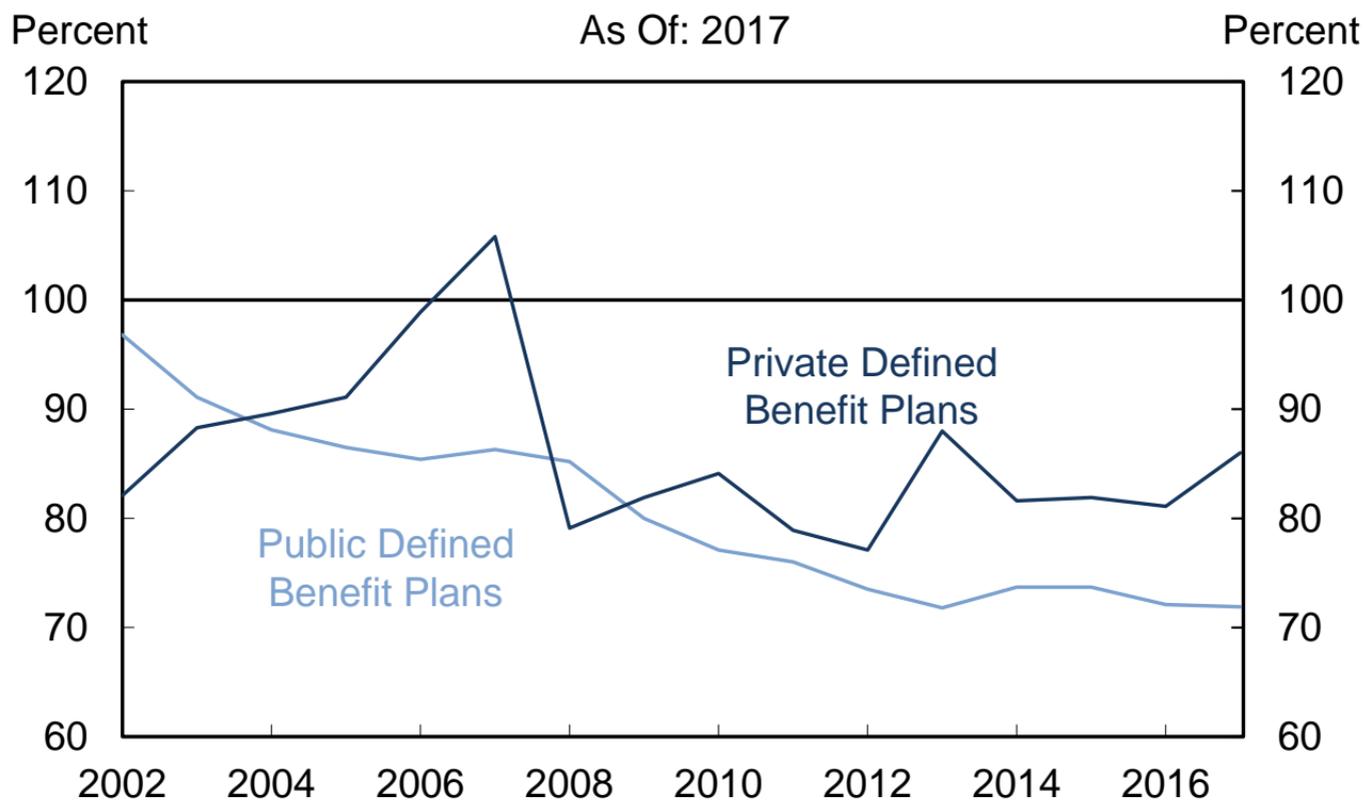
As Of: 2018 Q1

Trillions of US\$



Source: Federal Reserve, Haver Analytics

4.13.13 Public and Private Pension Funding Levels



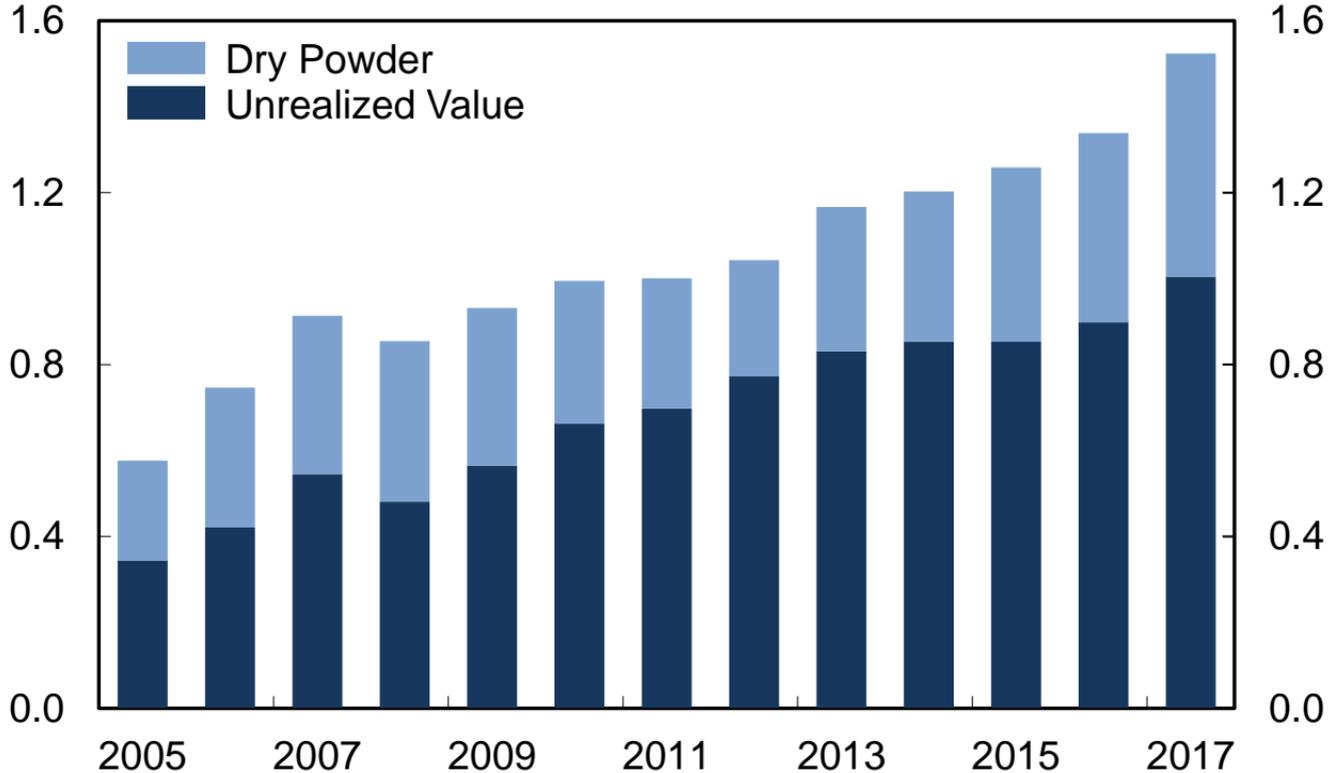
Source: NASRA Public Fund Survey, Milliman
2018 Corporate Pension Funding Study

4.13.14 North American Private Equity AUM

Trillions of US\$

As Of: 2017

Trillions of US\$



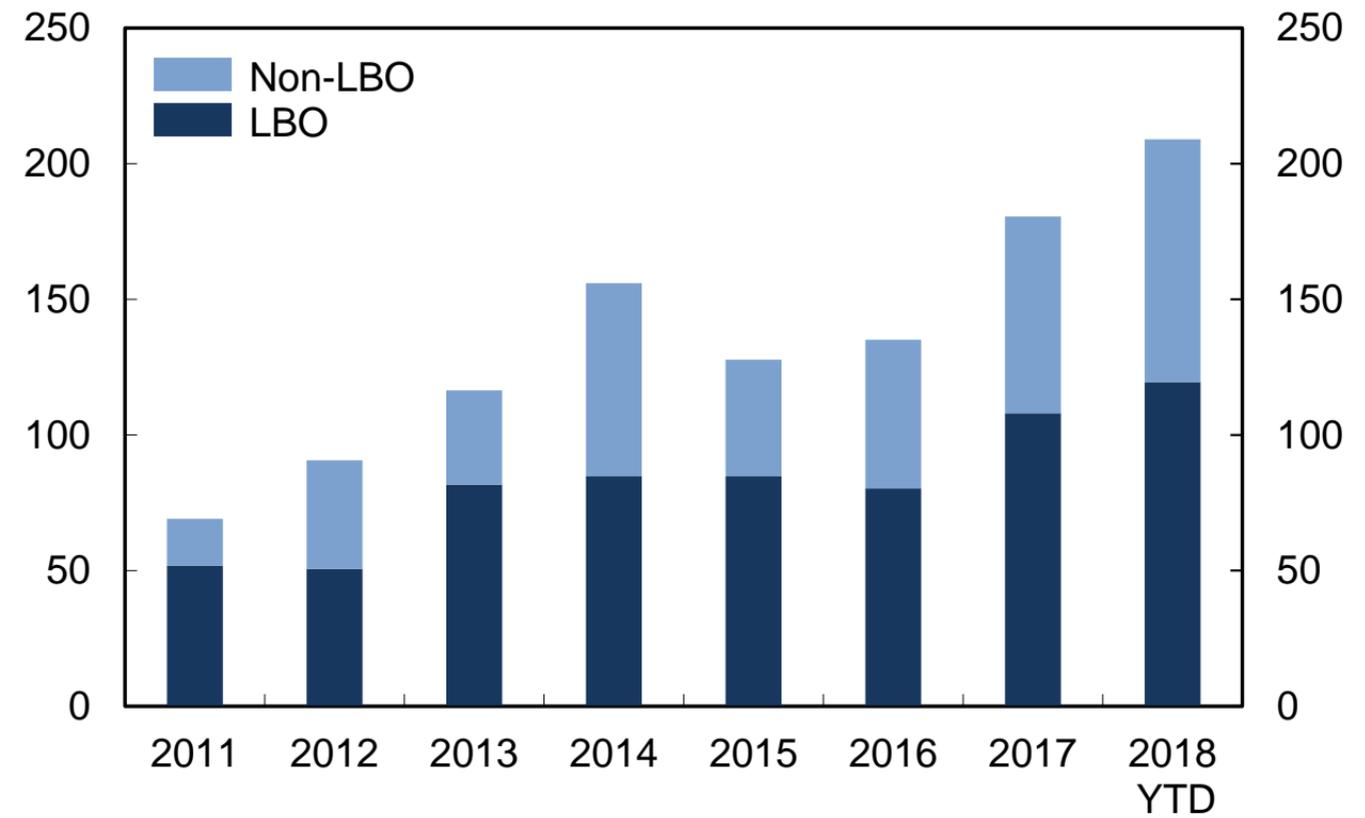
Source: Preqin

4.13.15 M&A Loan Volume for Private Equity-Backed Issuers

Billions of US\$

As Of: 31-Oct-2018

Billions of US\$



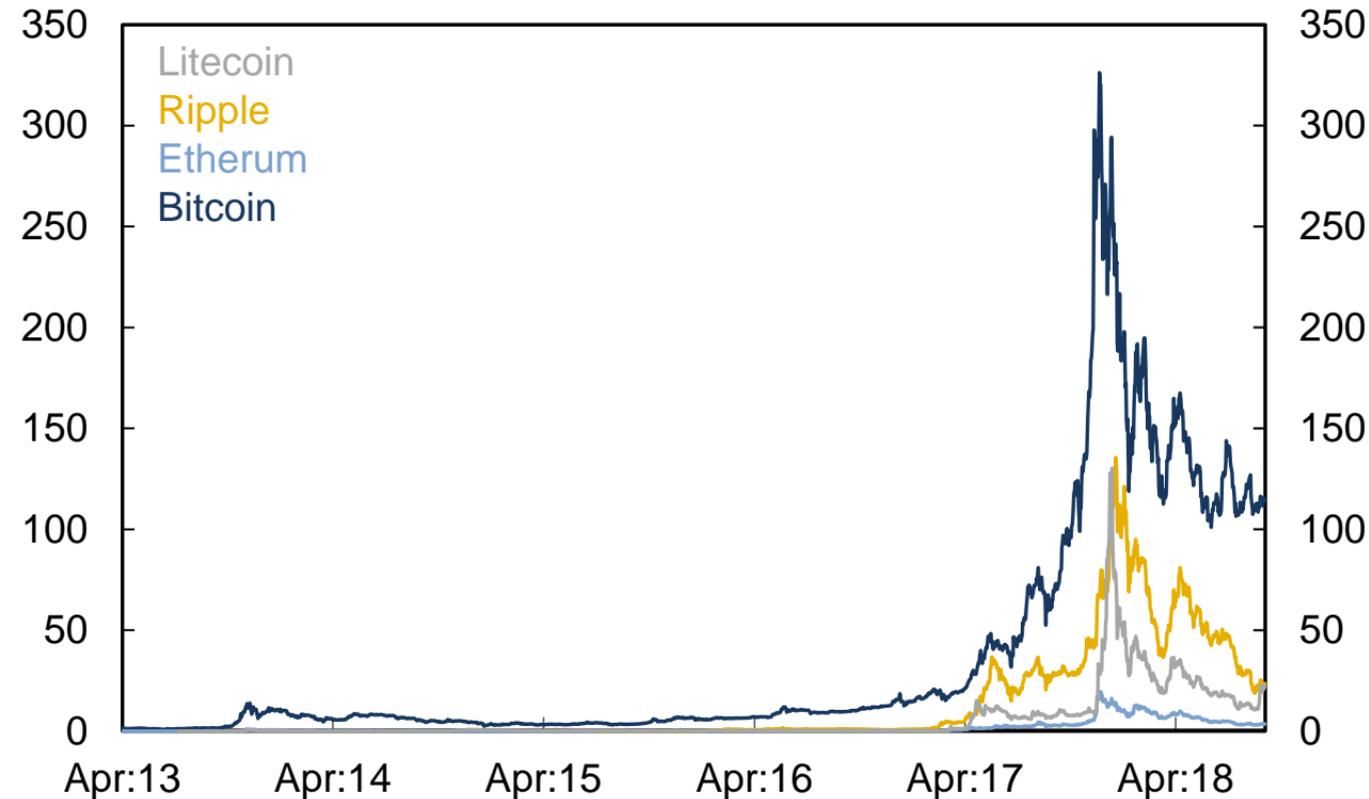
Source: S&P LCD

4.14.1 Market Capitalization of Blockchain-Based Digital Assets

Billion of US\$

As Of: 30-Sep-2018

Billions of US\$



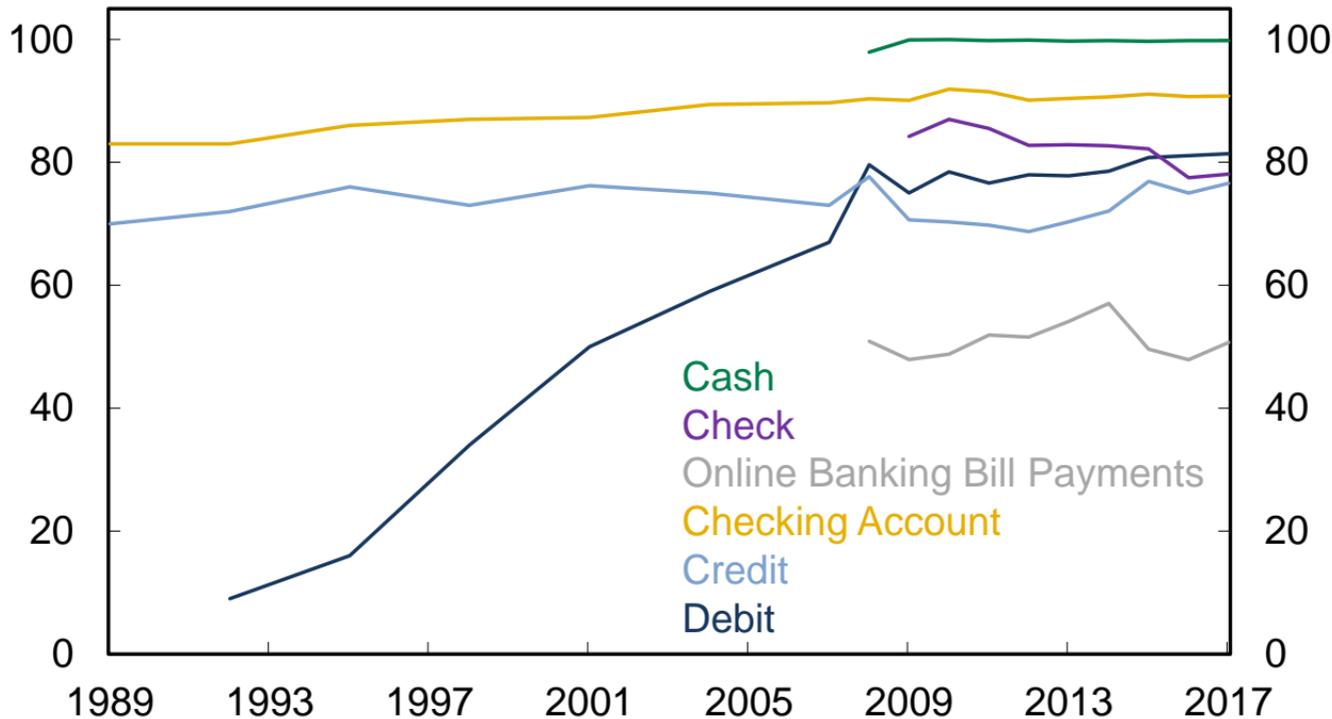
Source: Coinmarketcap.com; OFR

4.14.2 U.S. Consumer Adoption of Payment Instruments

Percent of Consumers

As Of: 2017

Percent of Consumers



Source: Federal Reserve
Bank of Boston

Note: Survey of Consumer Finances data from 1989 to 2007. Survey of Consumer Payment Choice data from 2008 to 2017.

D.1 VIX and S&P 500 Indices

Points As Of: 31-Oct-2018 Points



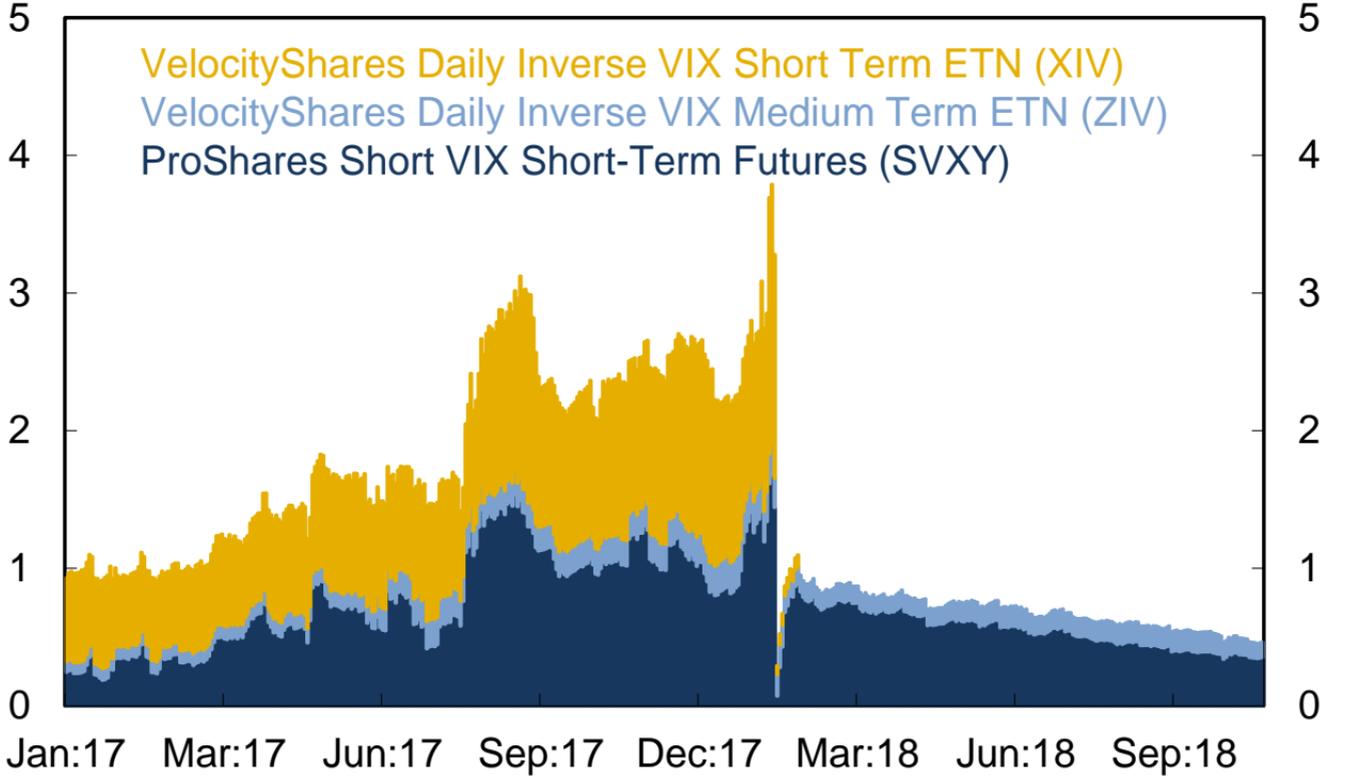
Source: Bloomberg, L.P.

D.2 Total Assets of Inverse VIX ETPs

Billions US\$

As Of: 31-Oct-2018

Billions US\$



Source: Bloomberg, L.P.