



Invested in America

U.S. CAPITAL MARKETS DECK

SIFMA RESEARCH

SEPTEMBER 2017

Introduction

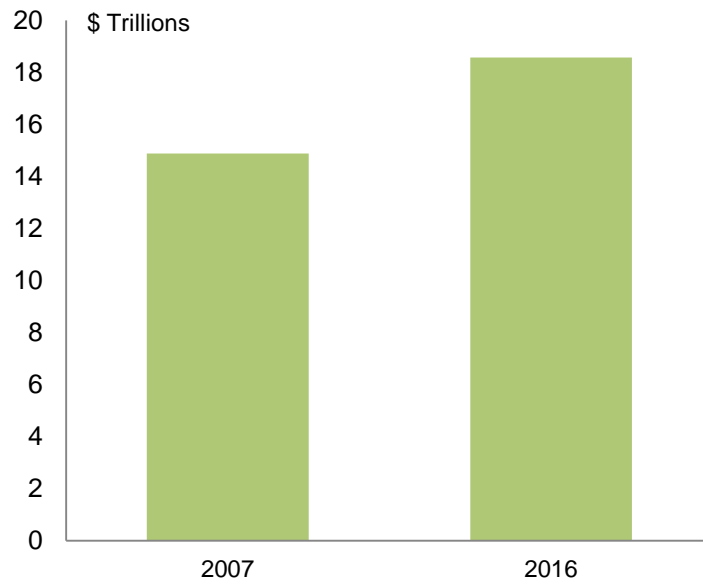
The United States has the largest and deepest capital markets in the world – according to the Federal Reserve, capital markets provide almost 80% of debt financing for businesses in the U.S. The securities industry facilitates access to those markets, creating investor opportunity, capital formation, job creation and economic growth.

- U.S. stock market market capitalization – the total value of publicly traded domestic companies – was \$27.4 trillion as of end-2016.
- Over 100 companies conducted initial public offerings in the U.S. in 2016 raising over \$17.8 billion in new capital – creating new value for the companies, their employees and their investors.
- The \$8.5 trillion corporate bond market is the largest in the world: almost 1,400 companies issued \$1.5 trillion in corporate bonds to fund their operations and growth in 2016.
- U.S. municipal issuers raised \$445.8 billion in 2016 to finance important community infrastructure projects including schools, airports, roads and bridges.

U.S. Economy – GDP

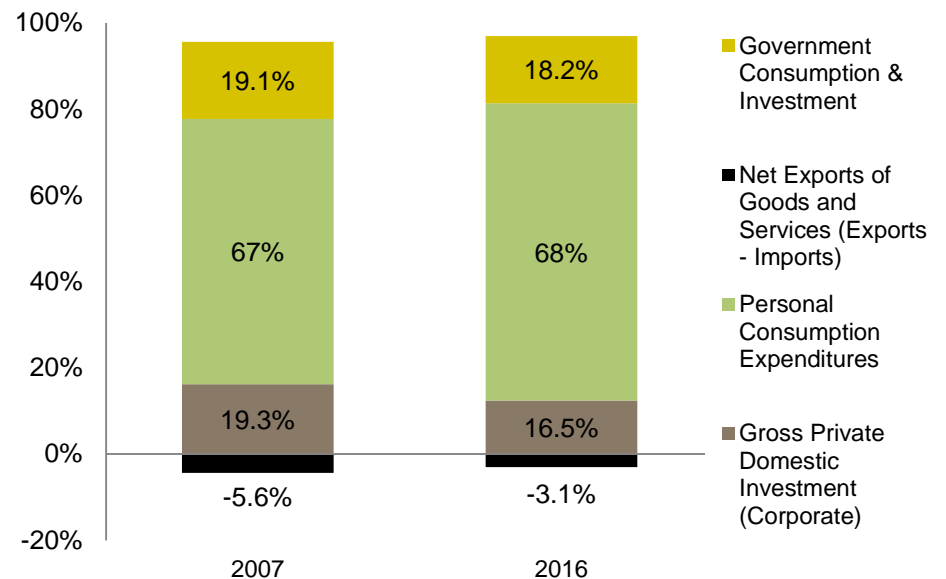
- U.S. gross domestic production was \$18.6 trillion in 2016, up 28.3% from \$14.9 trillion in 2007.

GDP (Real)
2007 and 2016



Source: Bureau of Economic Analysis

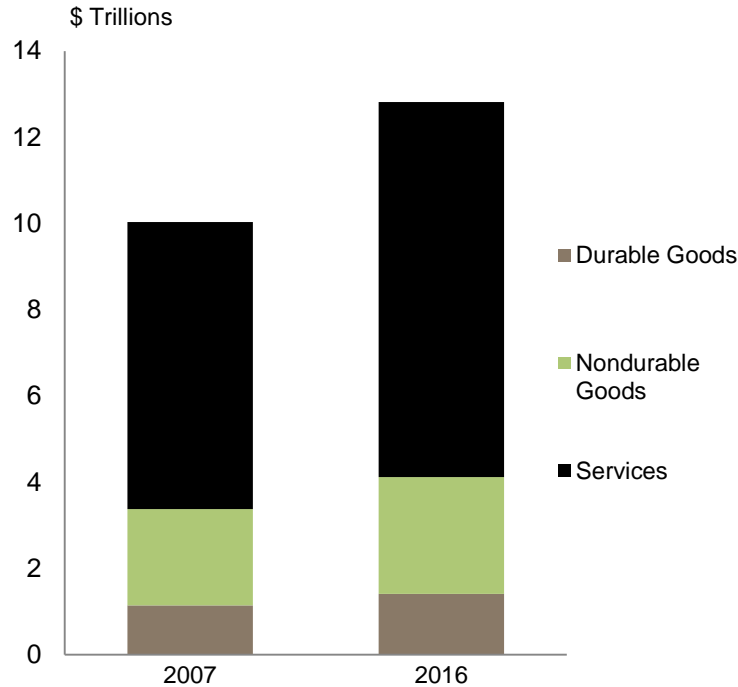
GDP By Category (Real)
2007 and 2016



Source: Bureau of Economic Analysis

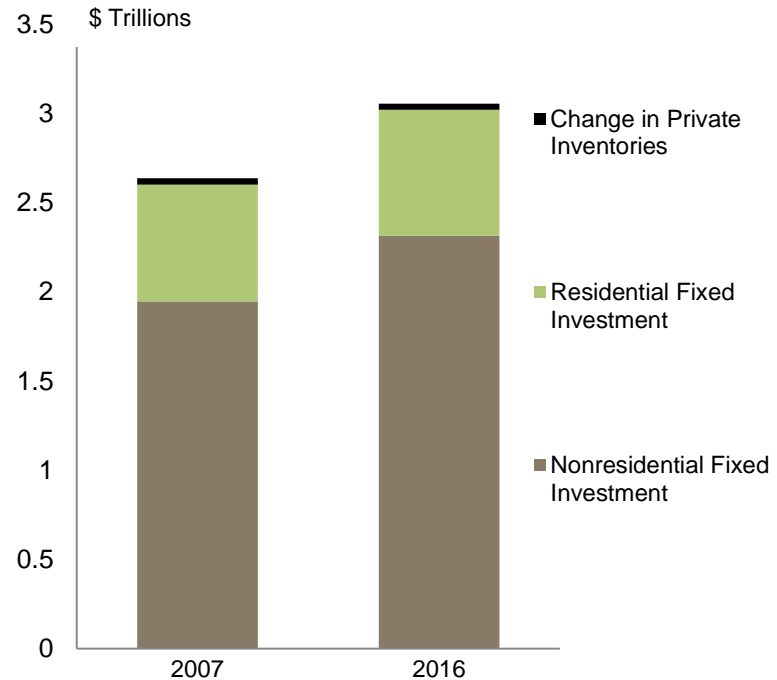
U.S. Economy – GDP Detail

GDP By Category - Personal Consumption
2007 and 2016



Source: Bureau of Economic Analysis

GDP By Category - Private Domestic Investment (Corporate)

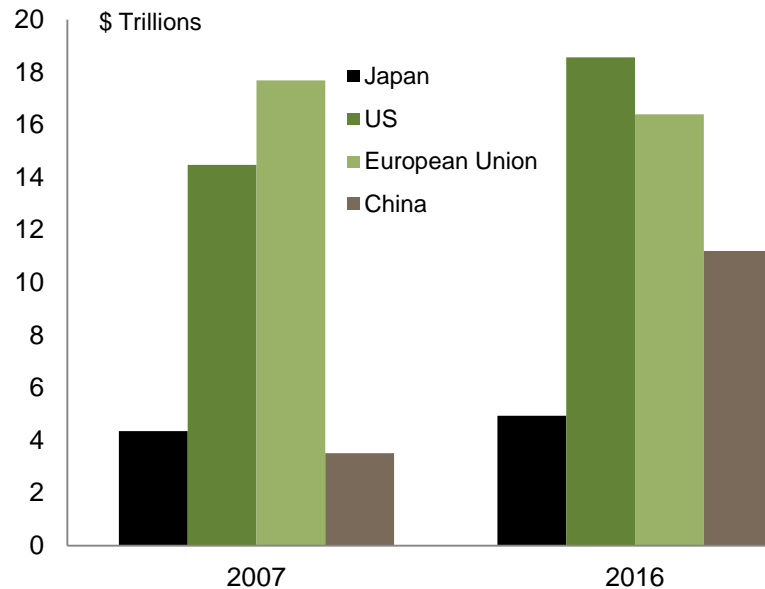


Source: Bureau of Economic Analysis

U.S. Economy – GDP in Perspective

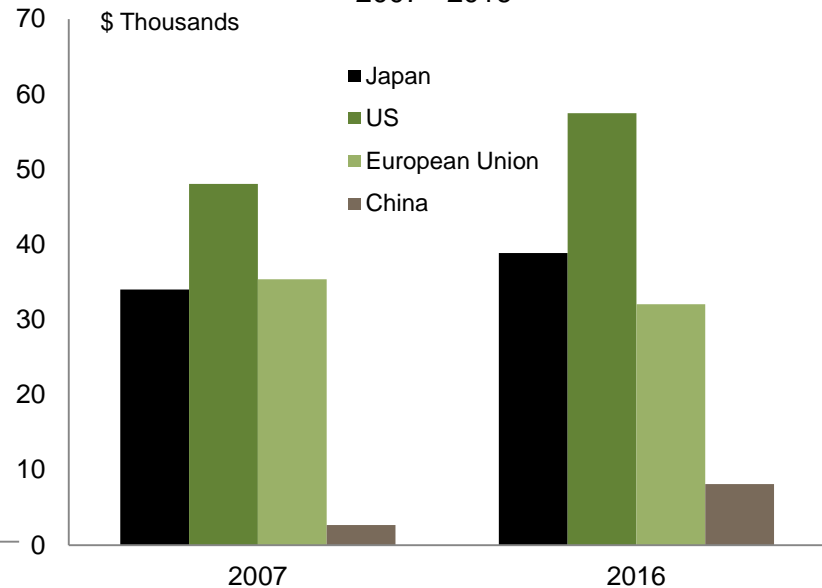
- In 2007, U.S. GDP was more than three times as large as Japan's GDP, more than four times as large as China's GDP, and 19.1% smaller than the EU28 GDP.
- In 2016, U.S. GDP was more than four times that of Japan, 1.5 times large as China's GDP and 13.2% greater than EU28 GDP.

Gross Domestic Product of Selected Regions
2007 - 2016



Sources: World Bank

Gross Domestic Product Per Capita of Selected Regions
2007 - 2016



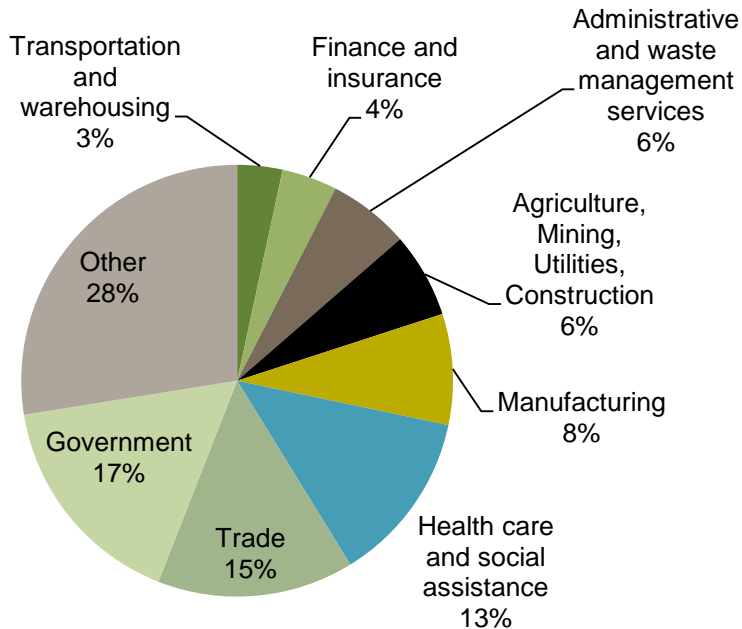
Sources: World Bank

Note: European Union includes the 28 EU-member states; China excludes Hong Kong

U.S. Economy - Employment

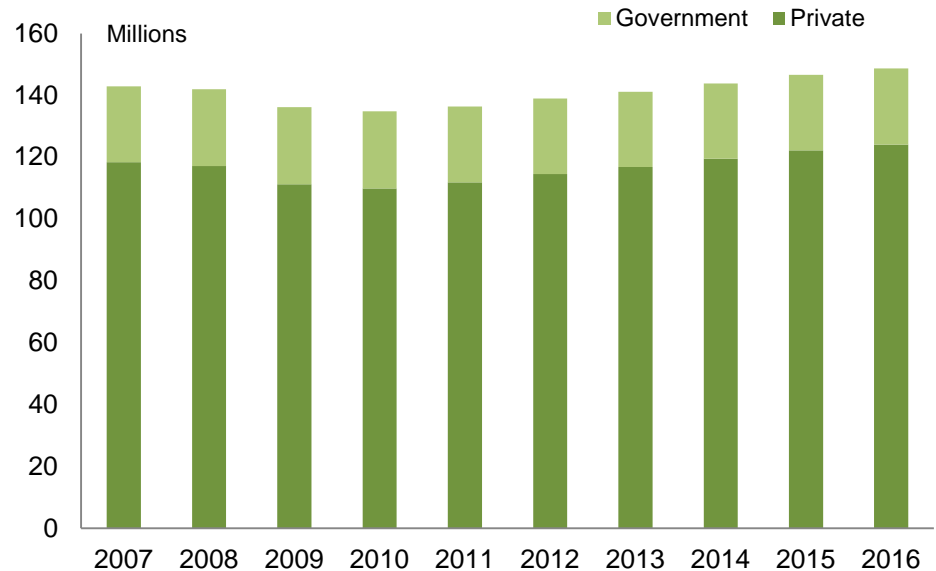
- U.S. employment stood at 149 million as of end-2016, up 4.0% from 143 million in 2007.

U.S. Employment, 2016
Total: 148.7 million



Source: Bureau of Economic Analysis

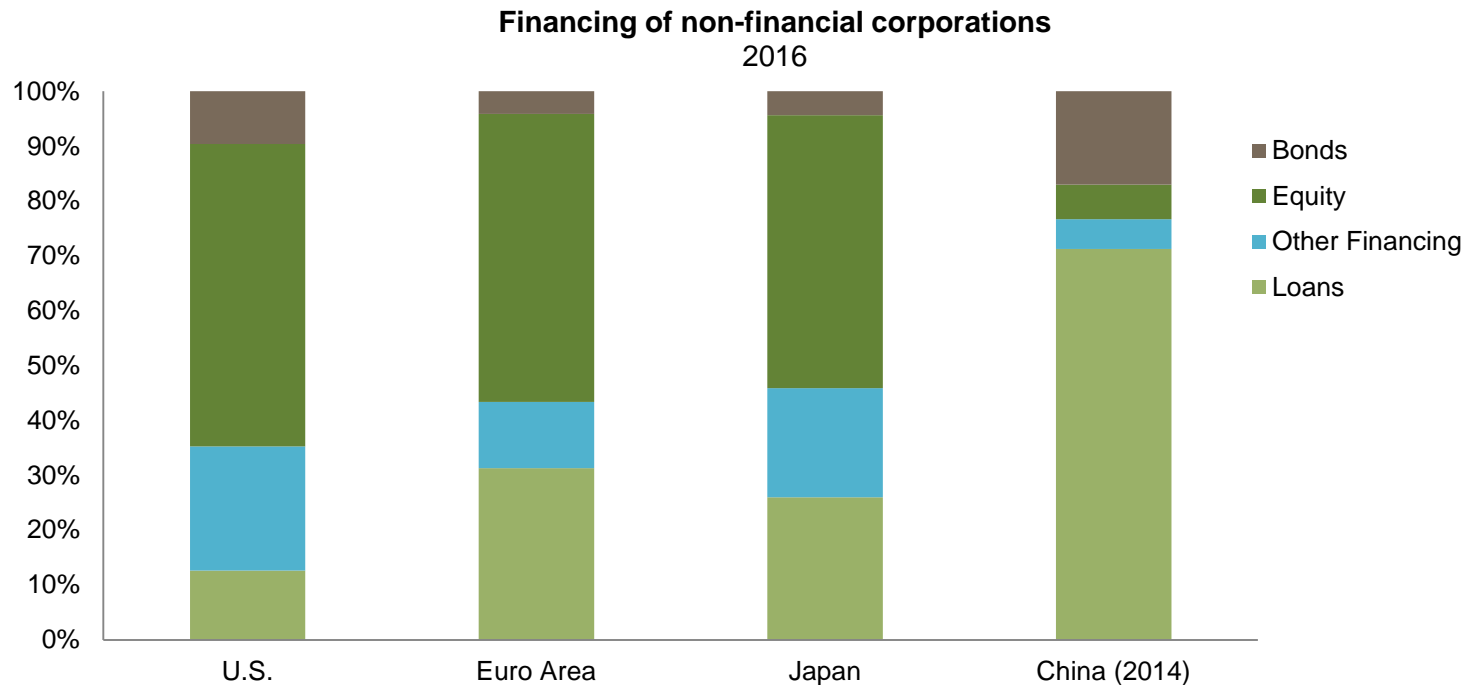
U.S. Employment
2007 - 2016



Source: Bureau of Economic Analysis

U.S. Corporate Financing in Perspective

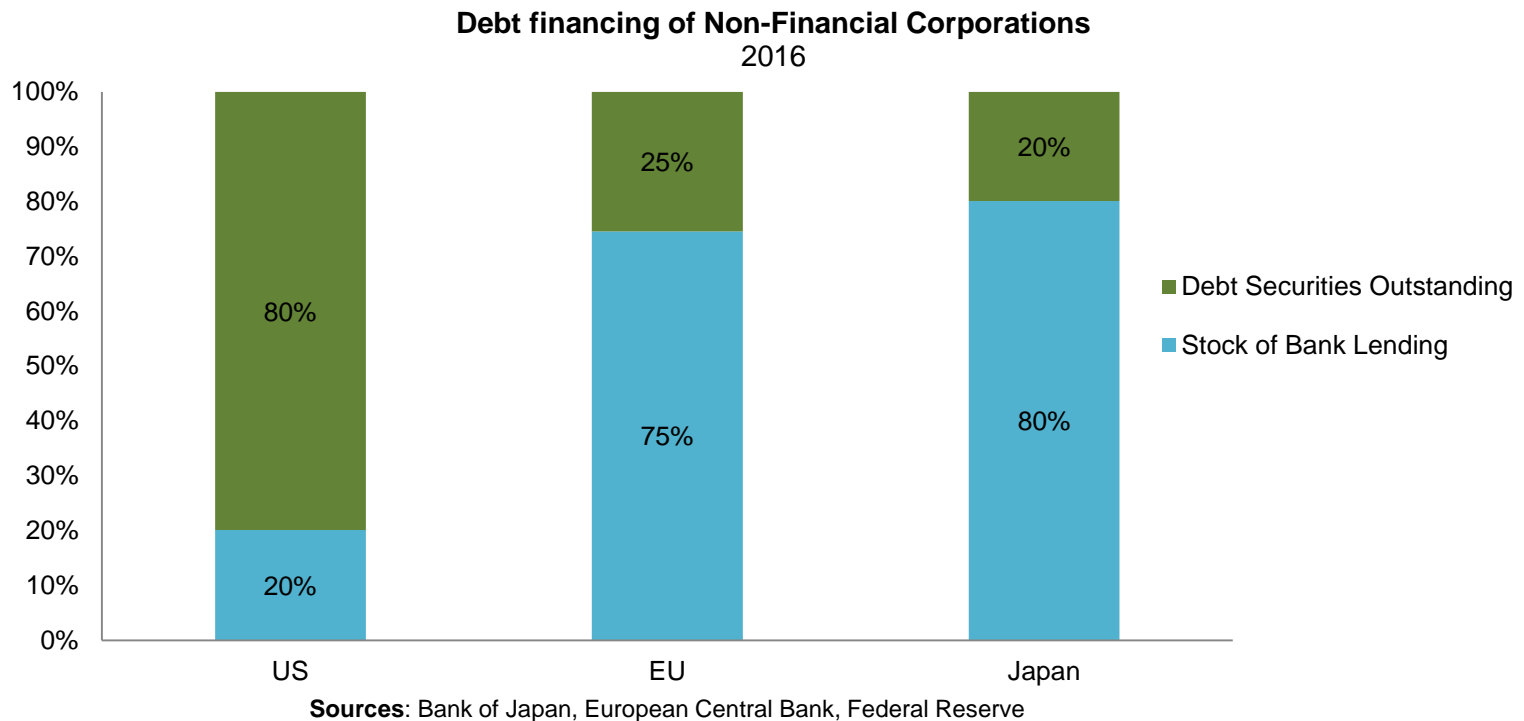
- U.S. companies rely on the capital markets for a greater portion of total funding than do companies in the Euro Area, Japan or China, which rely more on bank funding.



Sources: Organization for Economic Co-operation and Development (OECD), European Central Bank (ECB), Bank of Japan, National Bureau of Statistics of China

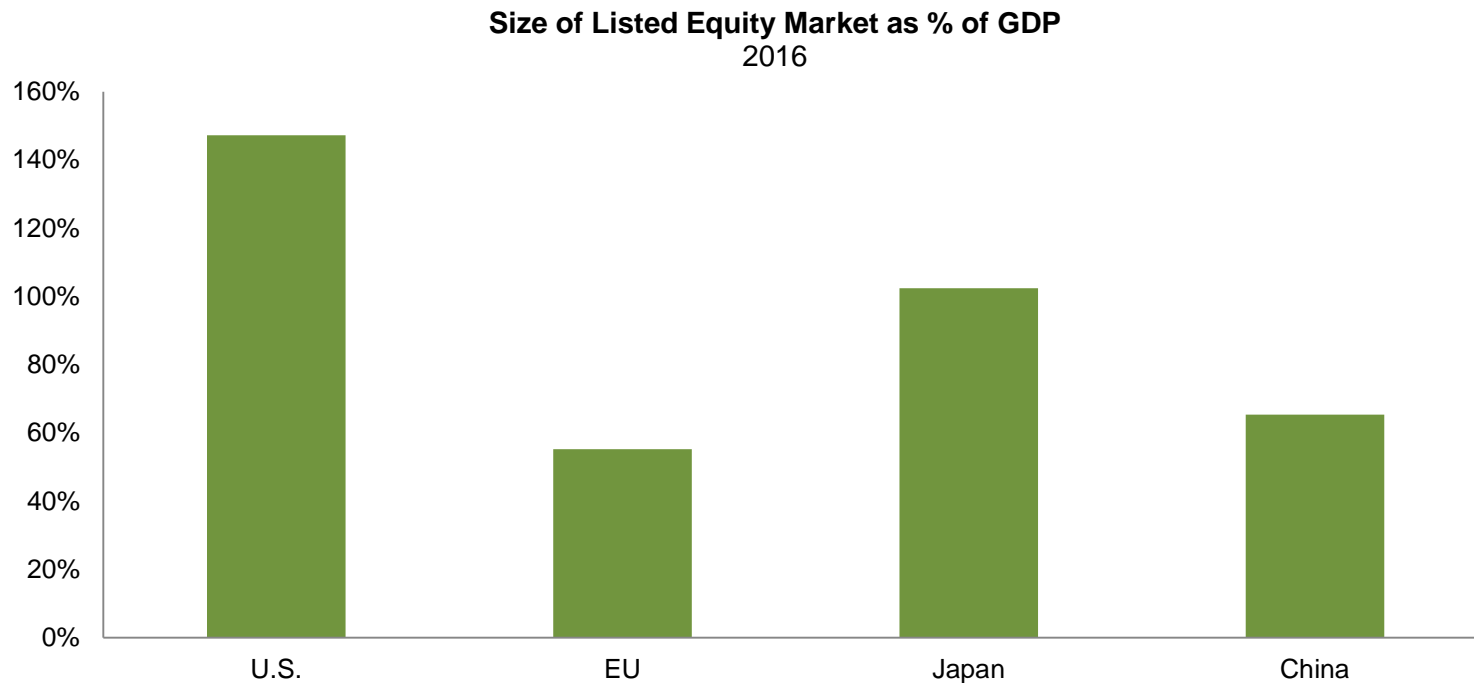
U.S. Corporate Debt Financing in Perspective

- U.S. companies rely more on the debt capital markets for credit financing than do those in the European Union or Japan, which rely more on bank loans for funding.



Equity Markets as % of GDP

- The U.S. has a larger equity market relative to the size of GDP (147%), followed by Japan (102%), China (65%) and the European Union (55%).

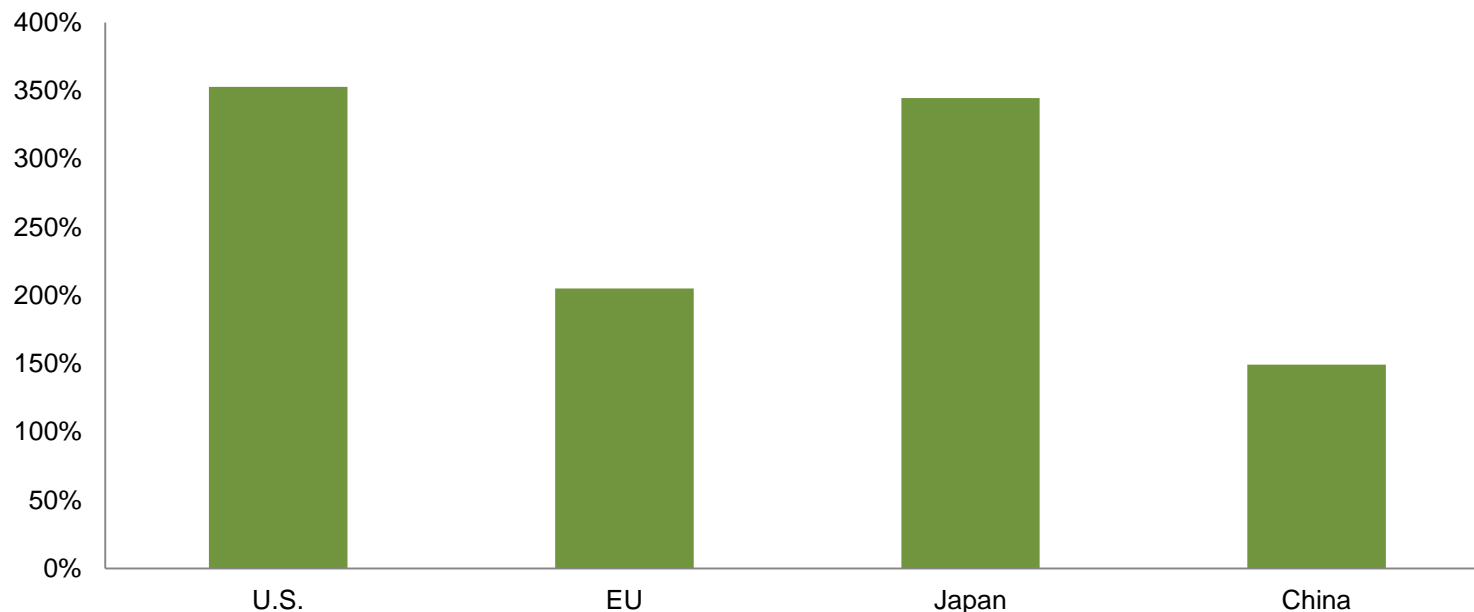


Sources: OECD, Bank of Japan, ECB, World Bank, World Federation of Exchanges

Bond & Equity Markets as % of GDP

- The U.S. has the largest bond and equity market relative to the size of GDP (353%), followed by Japan (345%), the European Union (205%) and China (149%).

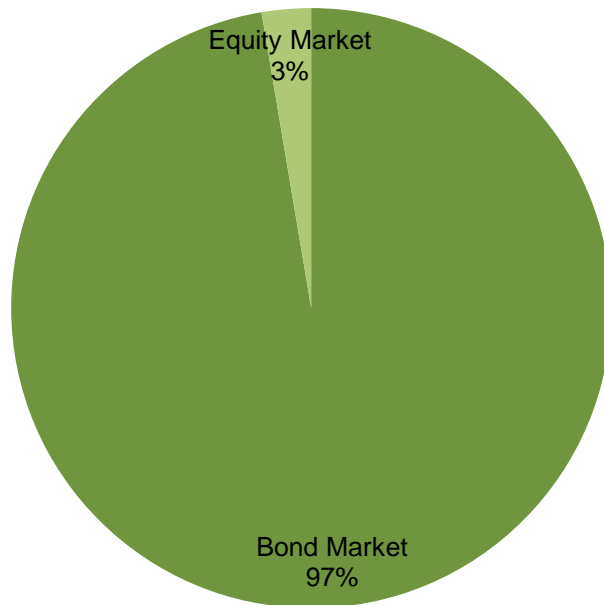
Size of Listed Bond & Equity Market as % of GDP
2016



Sources: BIS, World Bank, World Federation of Exchanges

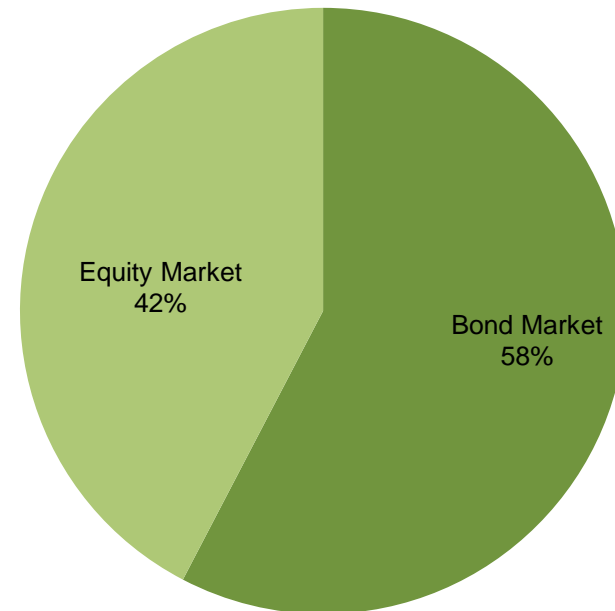
U.S. Capital Markets

U.S. Capital Markets Issuance - Equity vs Bonds, 2007
Total: \$7.5 trillion



Source: Bloomberg, Dealogic, Thomson Reuters, US Agencies, US Treasury, SIFMA

U.S. Capital Markets Outstanding - Equity vs Bonds, 2016
Total: \$68.3 trillion



Source: NYSE, NASDAQ, Federal Reserve, Bloomberg, U.S. Agencies, U.S. Treasury, SIFMA



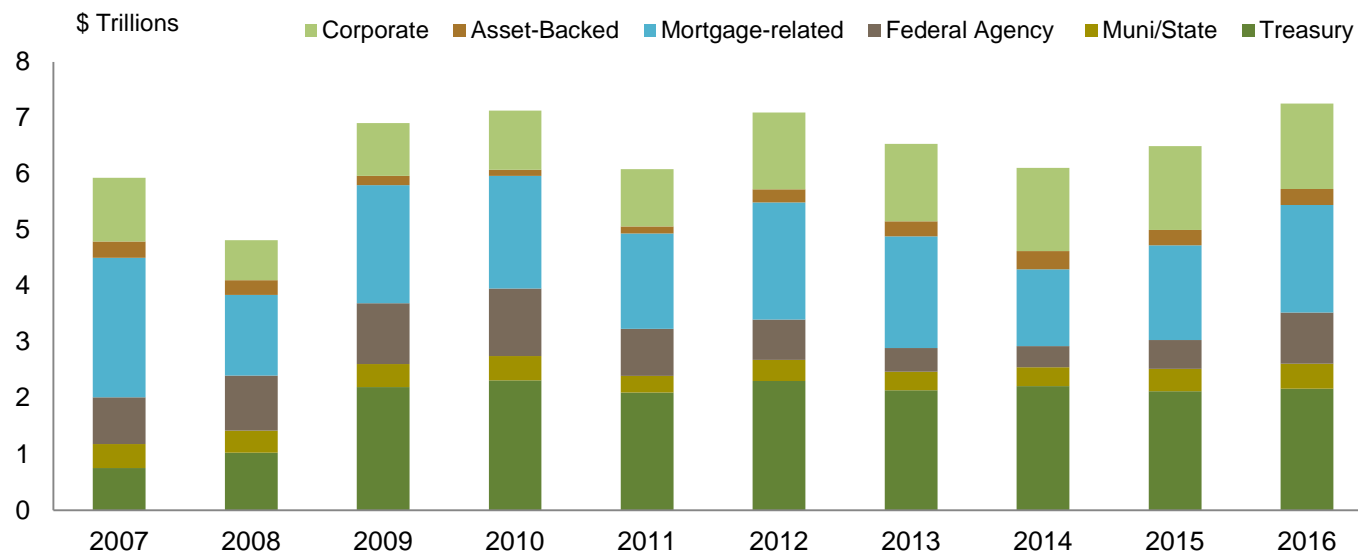
Note: Issuance includes long-term corporate, agency and non-agency MBS and CMOs, agency debentures, Treasury, and municipal securities, and primary and secondary equity issuance. Outstanding includes both short- and long-term debt securities and equity market capitalization.

U.S. Bond Markets: Issuance

Between 2007 and 2016:

- Treasury issuance increased to represent from 12.7% to 29.9% of total U.S. bond issuance
- Corporate issuance increased from 19.1% to 21.0%
- Mortgage-related issuance decreased from 42.0% to 26.4%

U.S Long-Term Bond Issuance
2007 - 2016

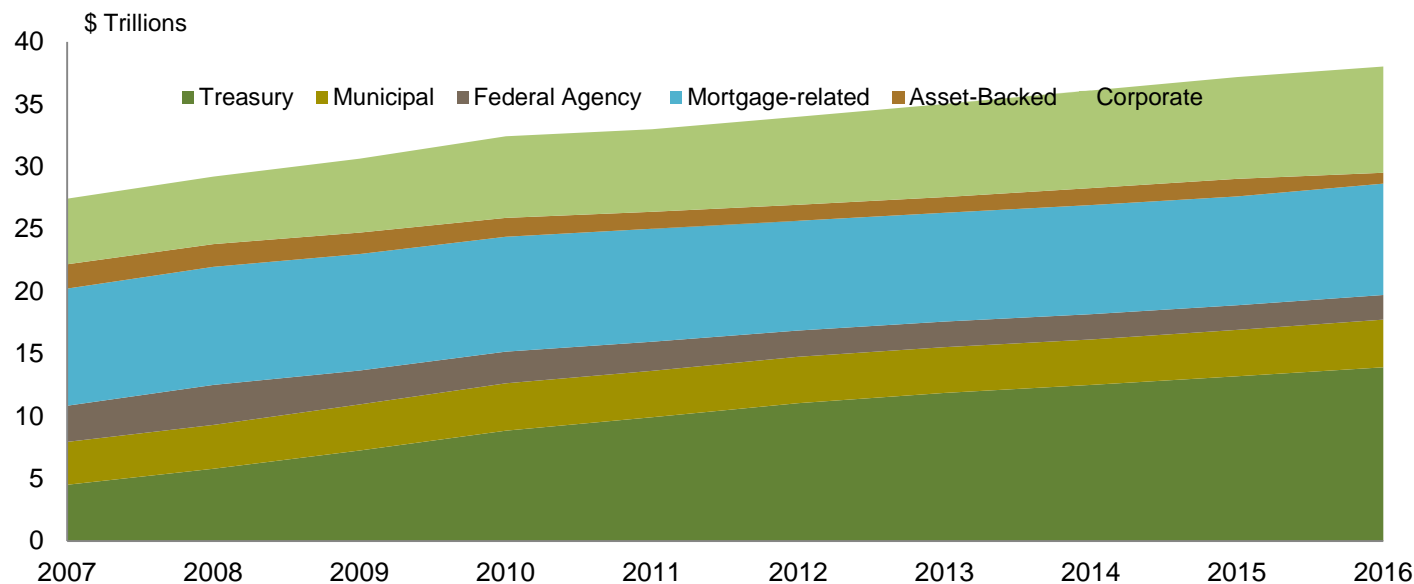


Source: Thomson Reuters, Bloomberg, Dealogic, US Treasury, US Agencies, SIFMA

U.S. Bond Markets: Outstanding

- The total value of outstanding bonds in the U.S. was \$39.4 trillion at the end of 2016, 52.6% larger than at end-2007.
- Municipals, corporates and Treasuries increased in dollar volume outstanding between 2007 and 2016, with Treasuries doubling, corporates growing 61.9% and municipals growing by 12.0% between 2007 and 2016.

U.S. Bond Market: Outstanding
2007 - 2016



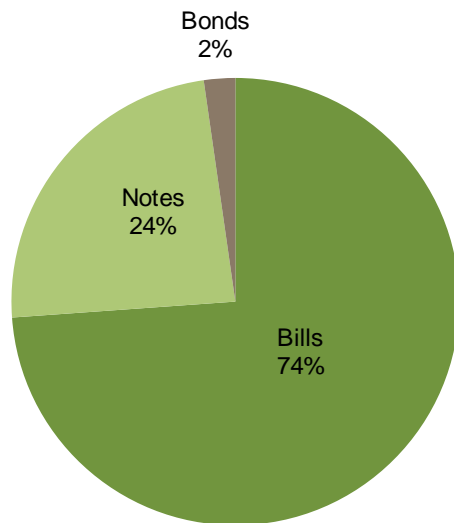
Source: Bloomberg, Thomson Reuters, US Treasury, US Agencies, Federal Reserve, SIFMA

Treasury Bond Markets: A Closer Look

- The U.S. Treasury issues different maturities of debt:
 - Short Term or Bills (up to one year) and
 - Long-Term or Notes (one year to 10 years) and Bonds (over 10 years).
- In 2016, the U.S. Treasury issued \$2.2 trillion in new long-term marketable securities, almost three times the \$752.2 billion issued in 2007.
- The U.S. Treasury marketable bond market outstanding was \$13.9 trillion as of end-2016, up over three-fold from \$4.5 trillion at end-2007.

U.S. Treasury Bond Issuance By Tenor, 2016

Total: \$8.3 trillion



Source: U.S. Treasury

U.S. Long-Term Treasury Bond Issuance

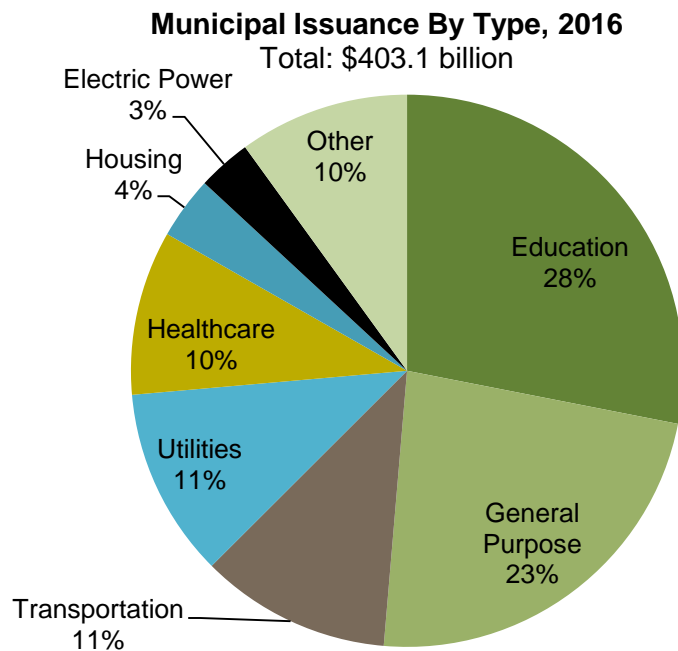
2007 - 2016



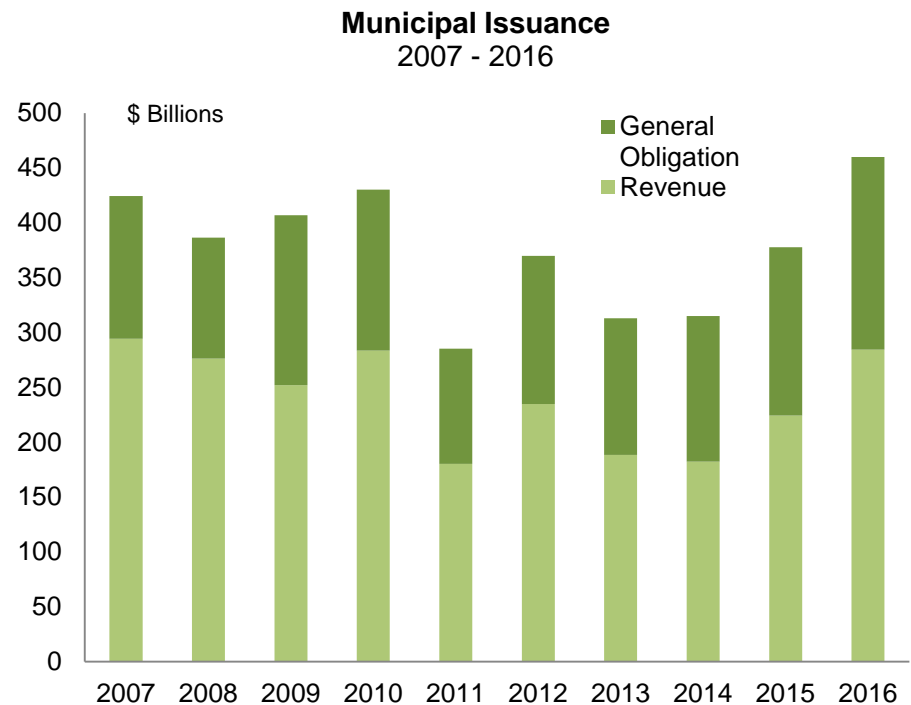
Source: U.S. Treasury

Municipal Bond Markets: A Closer Look

- Municipal bonds are issued by state and local governments, agencies and authorities. There are over 31,000 different municipal bond issuers with bonds outstanding.
- In 2016, \$445.8 billion in long-term municipal securities were issued, 3.9% above the \$429.2 billion in 2007.
- The municipal bond market outstanding was \$3.8 trillion as of end-2016, up 12.0% from end-2007.



Source: Thomson Reuters

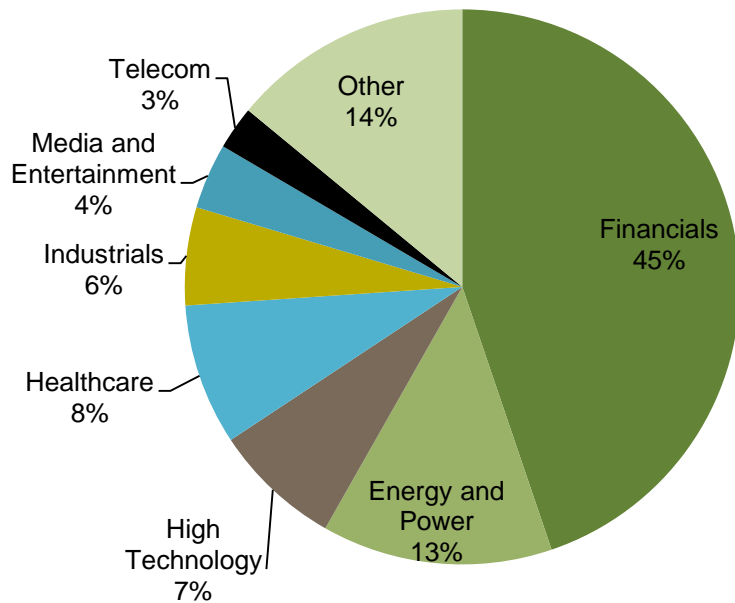


Source: Thomson Reuters

Corporate Bond Markets: A Closer Look

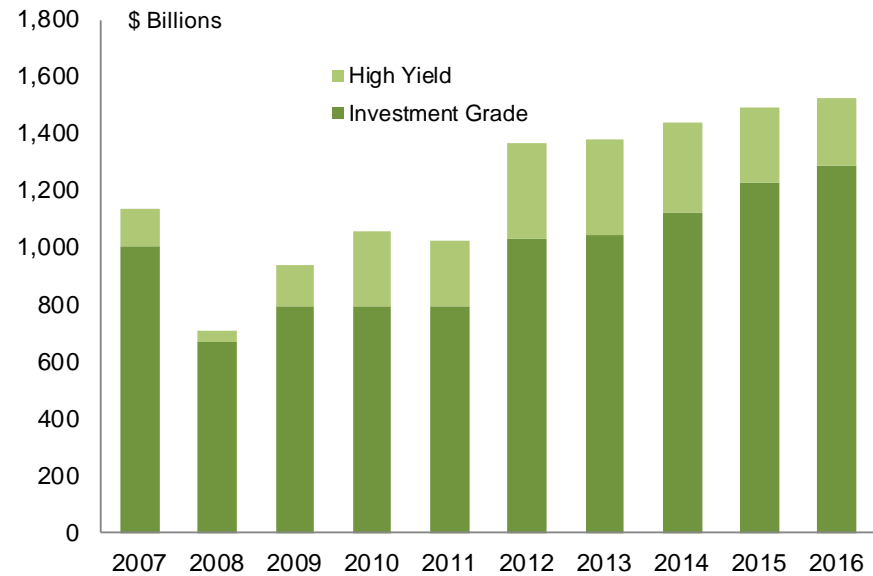
- Corporate bonds can be divided into investment grade (IG) and high yield (HY) based on their credit rating. IG bonds have ratings of BBB to AAA, while HY bonds have credit rating below BB. Bonds that have not been rated are also counted as HY.
- In 2016 \$1.5 trillion of corporate bonds were issued, up 34.1% from \$1.1 trillion in 2007.
- The size of the corporate bond market was \$8.5 trillion in 2016, up 61.9% from \$5.3 trillion in 2007.

Corporate Bond Market Issuance, 2016
Total: \$1.5 trillion



Source: Thomson Reuters

Corporate Bonds Issuance
2007 - 2016



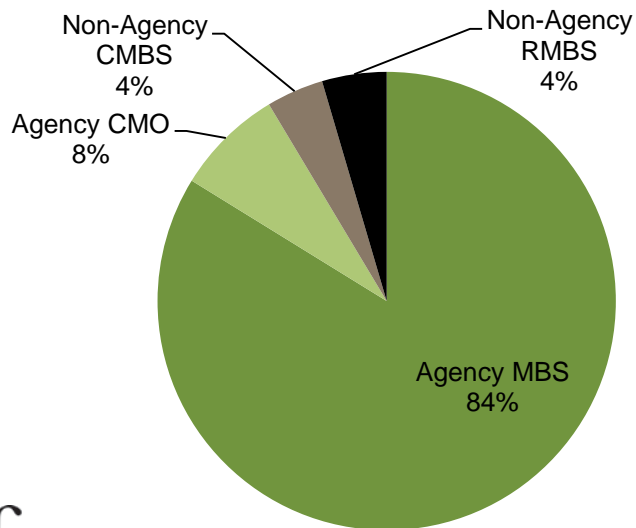
Source: Thomson Reuters

Mortgage-Related Markets: A Closer Look

- The mortgage-related securities market is comprised of:
 - Agency mortgage-backed securities (MBS) and collateralized mortgage obligations (CMOs)
 - Non-agency commercial residential mortgage-backed securities (CMBS) and residential mortgage-backed securities (RMBS).
- In 2016, mortgage-related securities issuance totaled \$1.9 trillion, 23.1% below the \$2.5 trillion in 2007.
- The mortgage-related market had \$8.9 trillion outstanding at end-2016, down 4.8% from \$9.4 trillion in 2007.

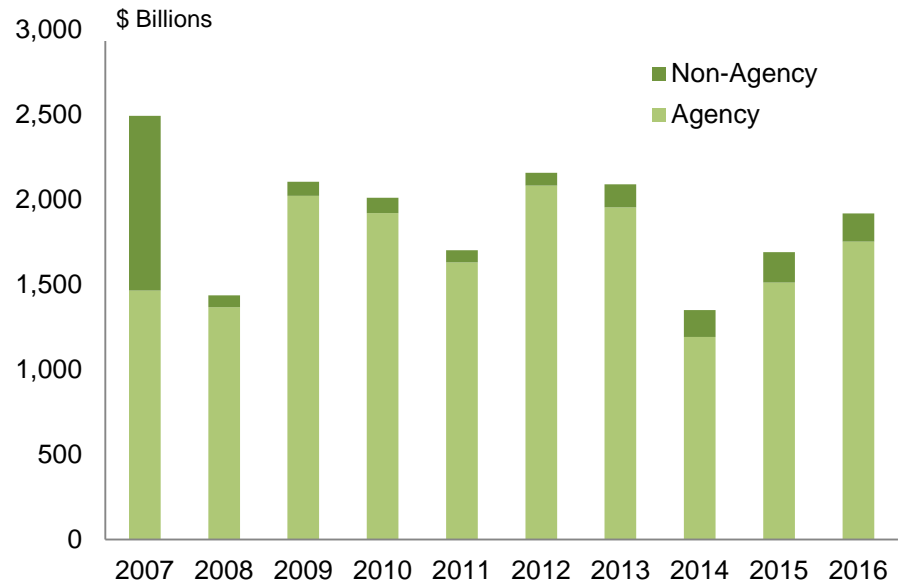
Mortgage-Related Issuance By Type, 2016

Total: \$1.9 trillion



Mortgage-Related Issuance

2007 - 2016

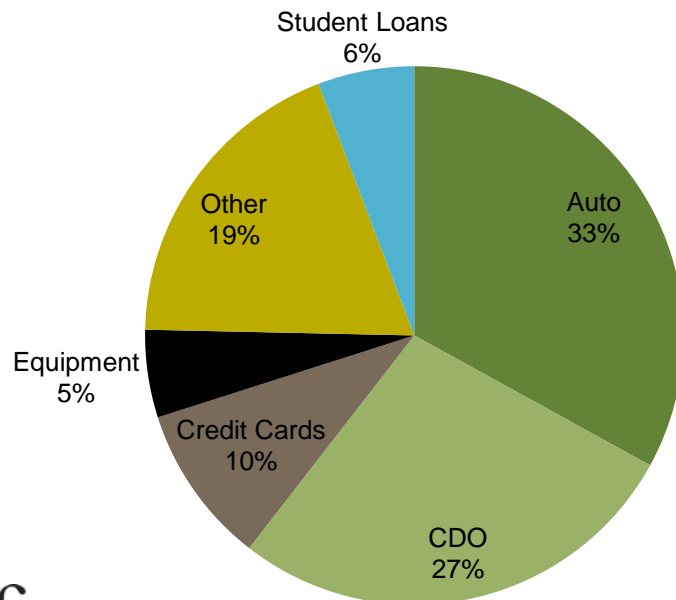


Source: Bloomberg, Thomson Reuters, Dealogic, Fannie Mae, Freddie Mac, Ginnie Mae, SIFMA

Asset-Backed Markets: A Closer Look

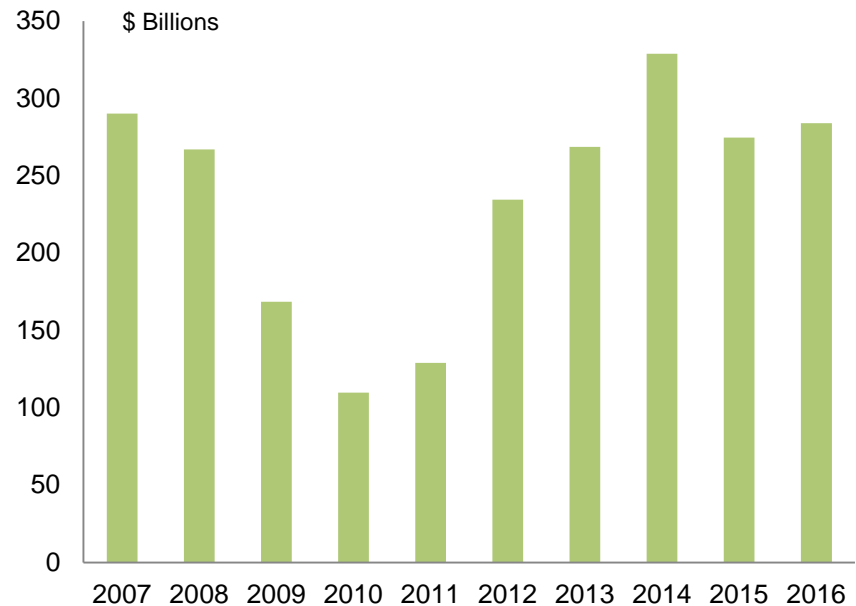
- Asset-backed securities are backed by cash flows of non-mortgage collateral such as auto loans, credit card balances or student loans.
- In 2016, \$283.9 billion of asset-backed securities were issued in 2016, down 2.1% from 2007.
- The asset-backed market had \$1.3 trillion outstanding as of the end-2016, down 31.7% from 2007.

Asset-Backed Issuance By Type, 2016
Total: \$283.9 billion



Source: Thomson Reuters

Asset-Backed Issuance
2007 - 2016



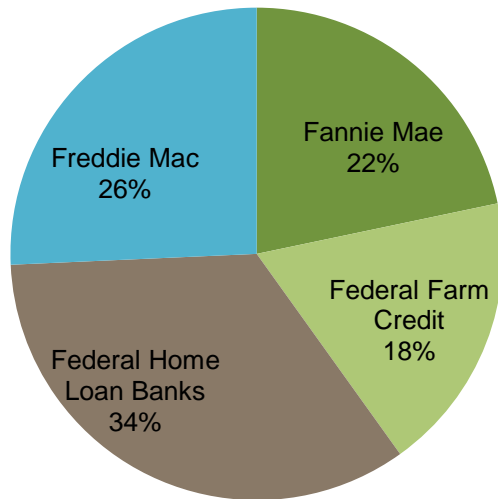
Source: Thomson Reuters

Agency Bond Markets: A Closer Look

- Agency bonds are debt securities issued by U.S. federal agencies or government-sponsored enterprises (GSEs). The largest three agency issuers are Federal Home Loan Mortgage Corporation (Freddie Mac), Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Banks (FHLBs).
- In 2016, \$915.5 billion in agency securities were issued, up 10.1% from the \$831.2 billion in 2007.
- The agency bond market had \$2.0 trillion outstanding at end-2016, down 32.2% from \$2.9 trillion in 2007.

Long-Term Agency Bond Issuance by Agency, 2016

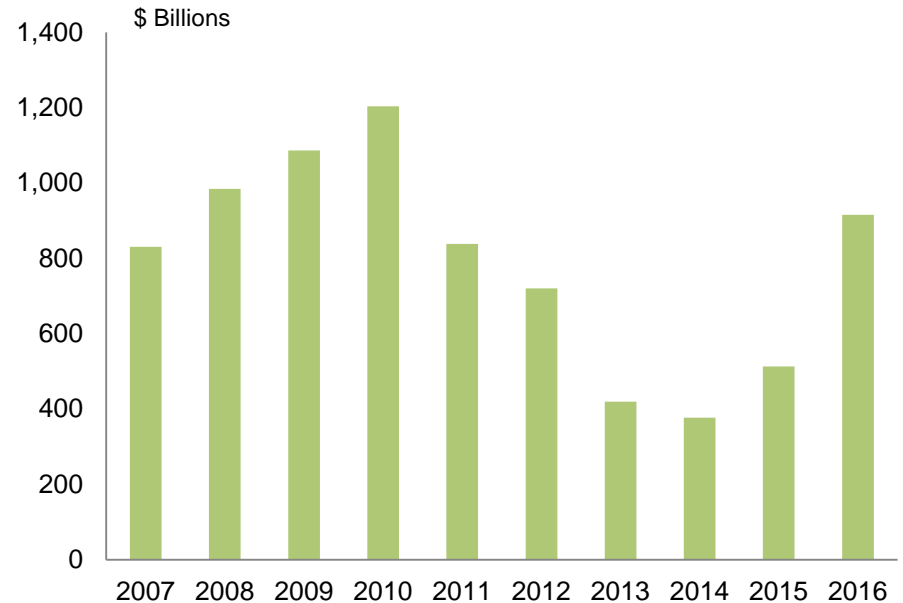
Total: \$915.5 billion



Source: Thomson Reuters

Long-Term Agency Bond Issuance

2007 - 2016

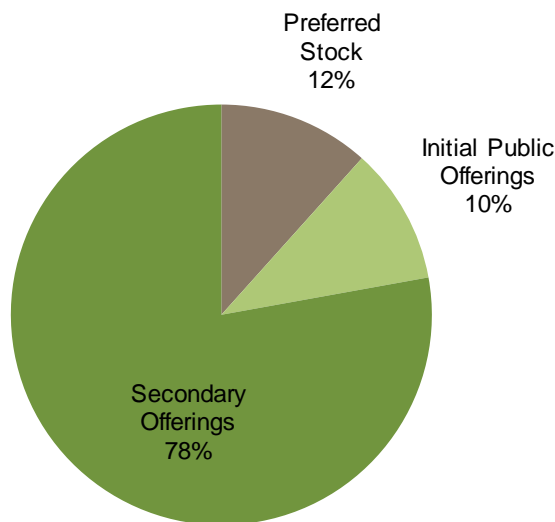


Source: Thomson Reuters

Equity Markets: A Closer Look

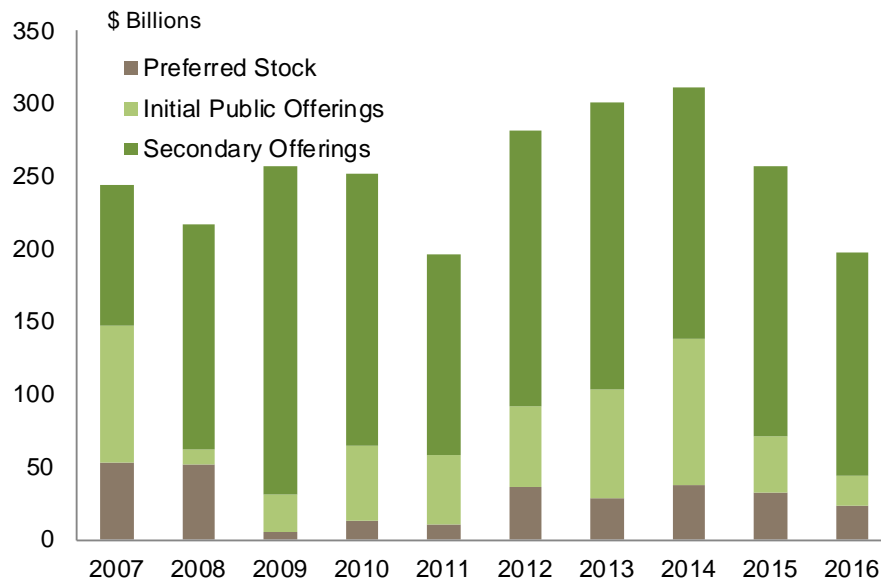
- Most of the equity issued in the U.S. is in the form of common stock, which represents ownership in a corporation, with the balance issued in preferred stock, which combines features of debt and equity. Common shares can be divided further into Initial Public Offerings (IPOs) - the first sale of stock to the public and secondary offerings – every subsequent stock issuance.
- In 2016, stock offerings raised \$197.6 billion, down 19.1% from \$244.3 billion in 2007.
- As of end-2016, U.S. equity market capitalization stood at \$27.4 trillion, 37.3% higher than in 2007.

U.S. Equity Market Issuance, 2016
Total: \$197.6 billion



Source: Thomson Reuters

U.S. Equity Market Issuance
2007 - 2016

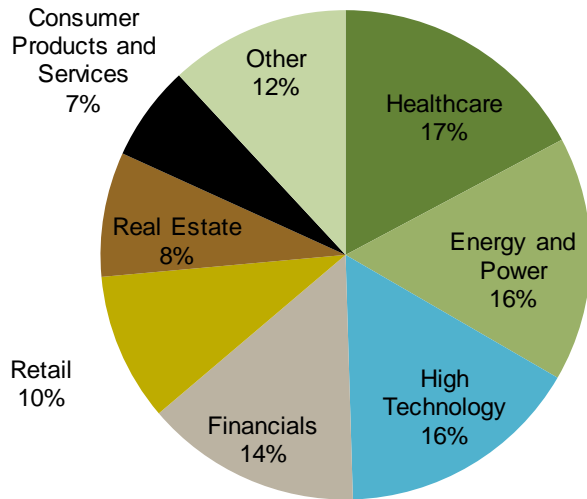


Source: Thomson Reuters

Equity Markets: A Closer Look at IPOs

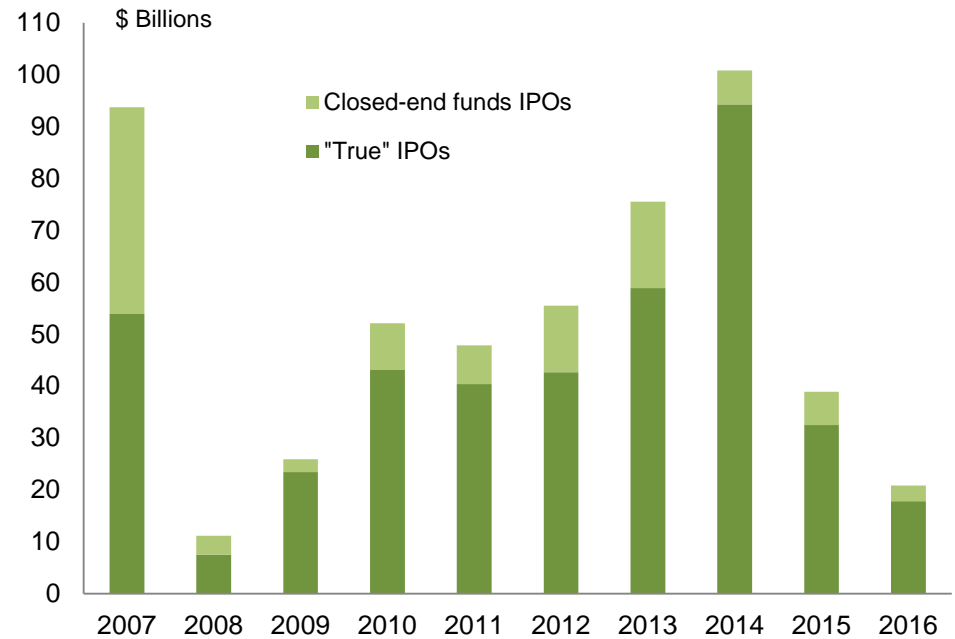
- IPOs can be divided into “true” IPOs which are offered by companies going public and IPOs offered by closed-end mutual funds.
- In 2016, \$17.8 billion was raised in “true” IPOs, down 67.0% from \$53.9 billion in 2007 and \$3.0 billion in closed-end IPOs, 92.5% down from \$39.8 billion in 2007.

“True” IPO Issuance, 2016
Total: \$17.8 billion



Source: Thomson Reuters

IPO Issuance
2007 - 2016



Source: Thomson Reuters