



EMBARGOED UNTIL TUESDAY, MAY 9 AT 1:05 P.M.; OR UPON DELIVERY

Trends in Commercial Real Estate

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May 9, 2017

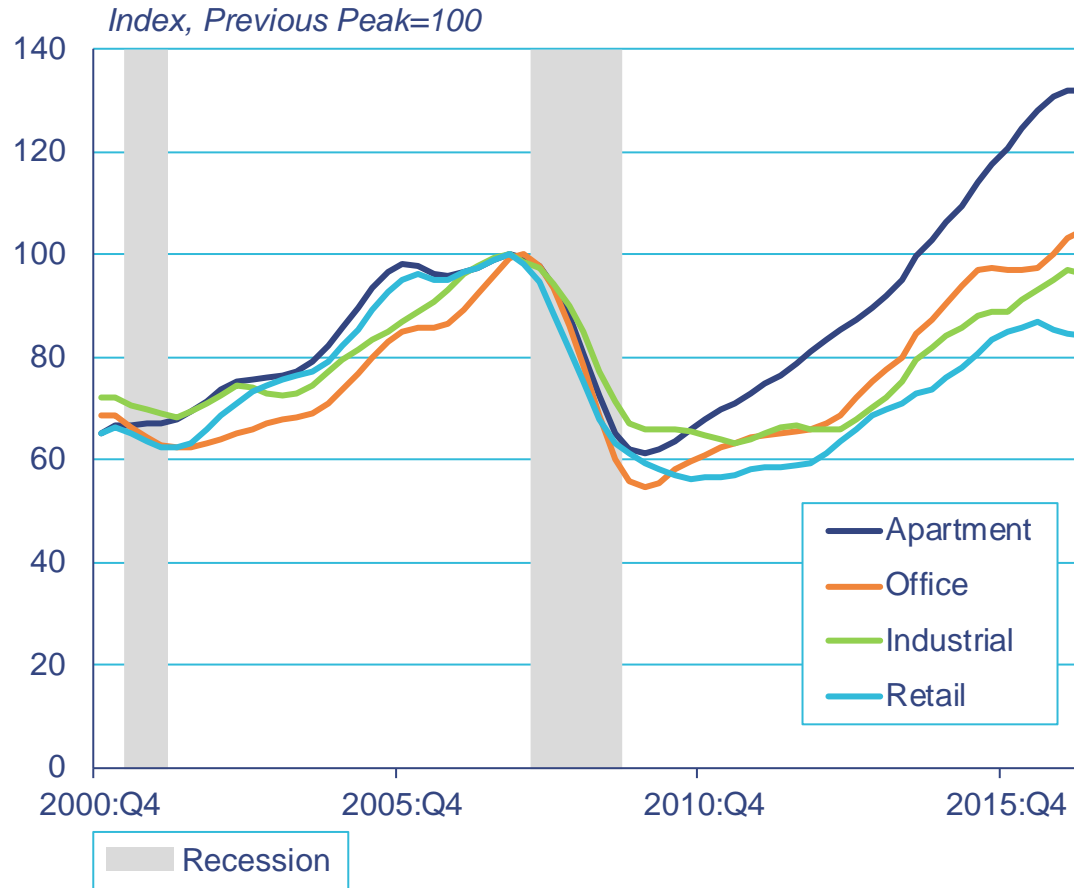
Risk Management for Commercial Real Estate Financial Markets Conference
New York University Stern School of Business
New York, New York

bostonfed.org



Figure 1: Real Commercial Property Price Indices by Property Type

2000:Q4 - 2017:Q1



Note: Indices are adjusted for inflation using the GDP deflator. Indices are repeat-sales based and include properties of \$2.5 million or more.

Source: Real Capital Analytics, BEA, NBER, Haver Analytics



Figure 2: Federal Funds Effective Rate
January 2000 - April 2017

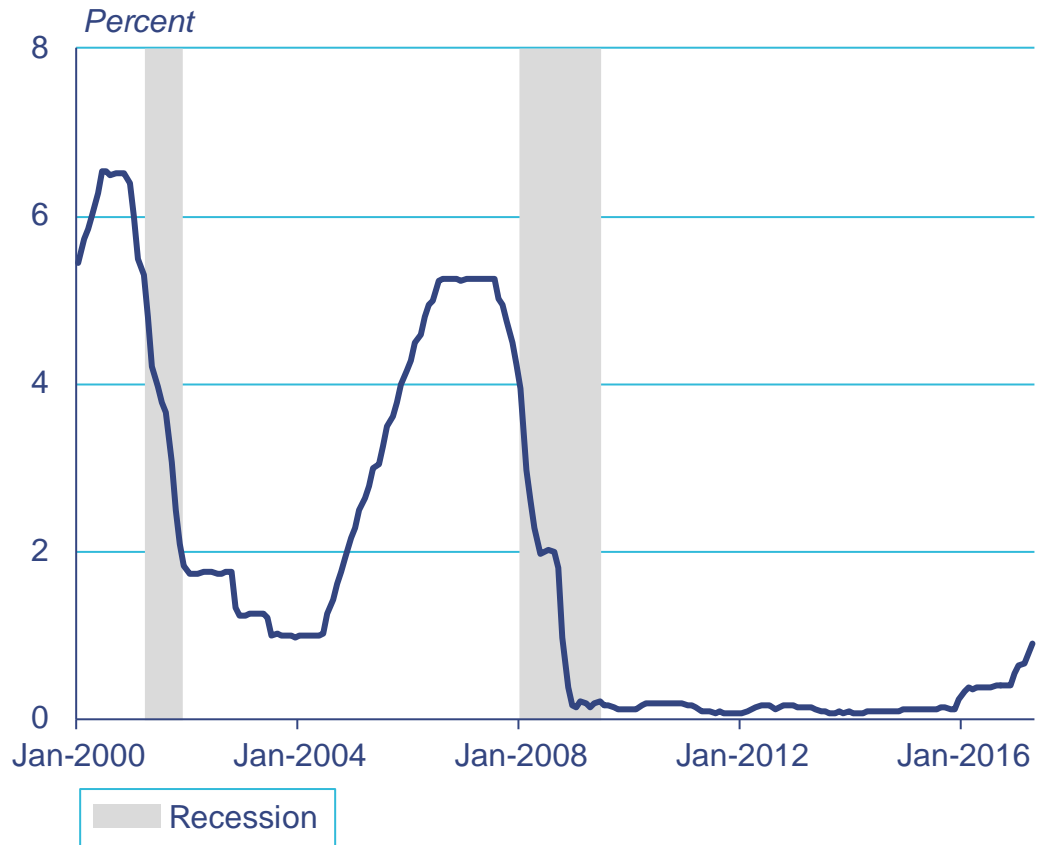




Figure 3: Federal Reserve System Assets
January 2000 - April 2017

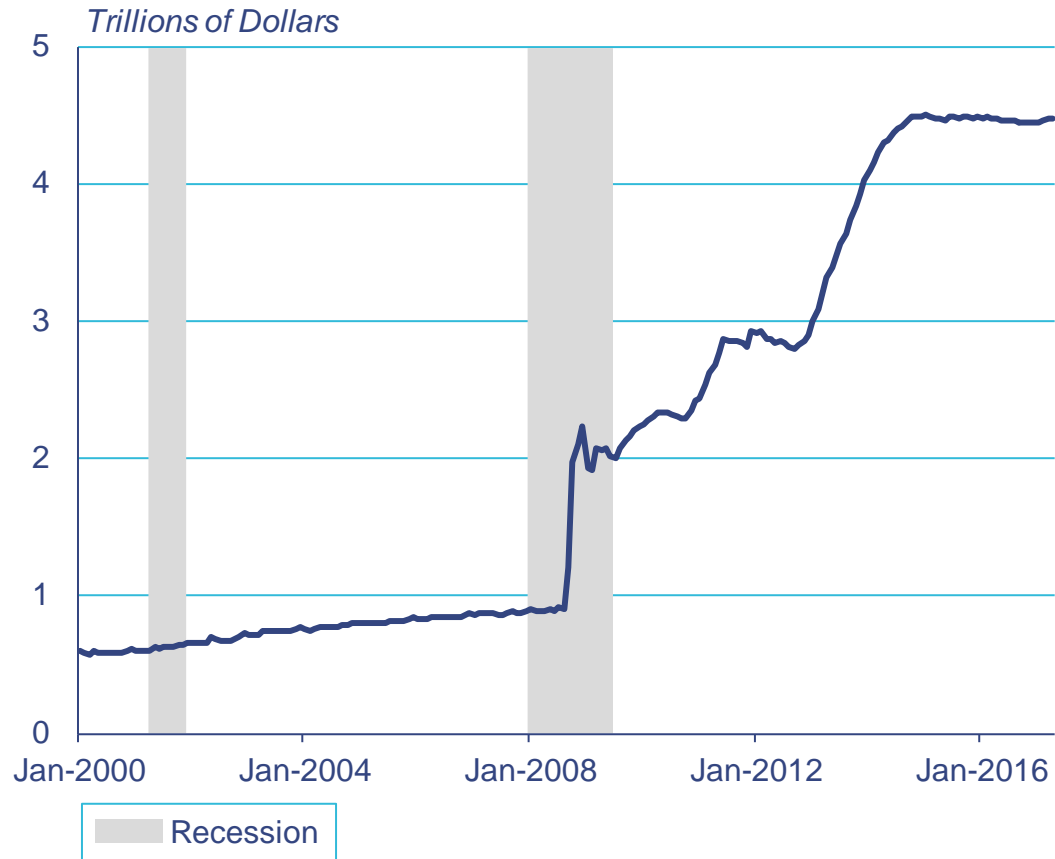
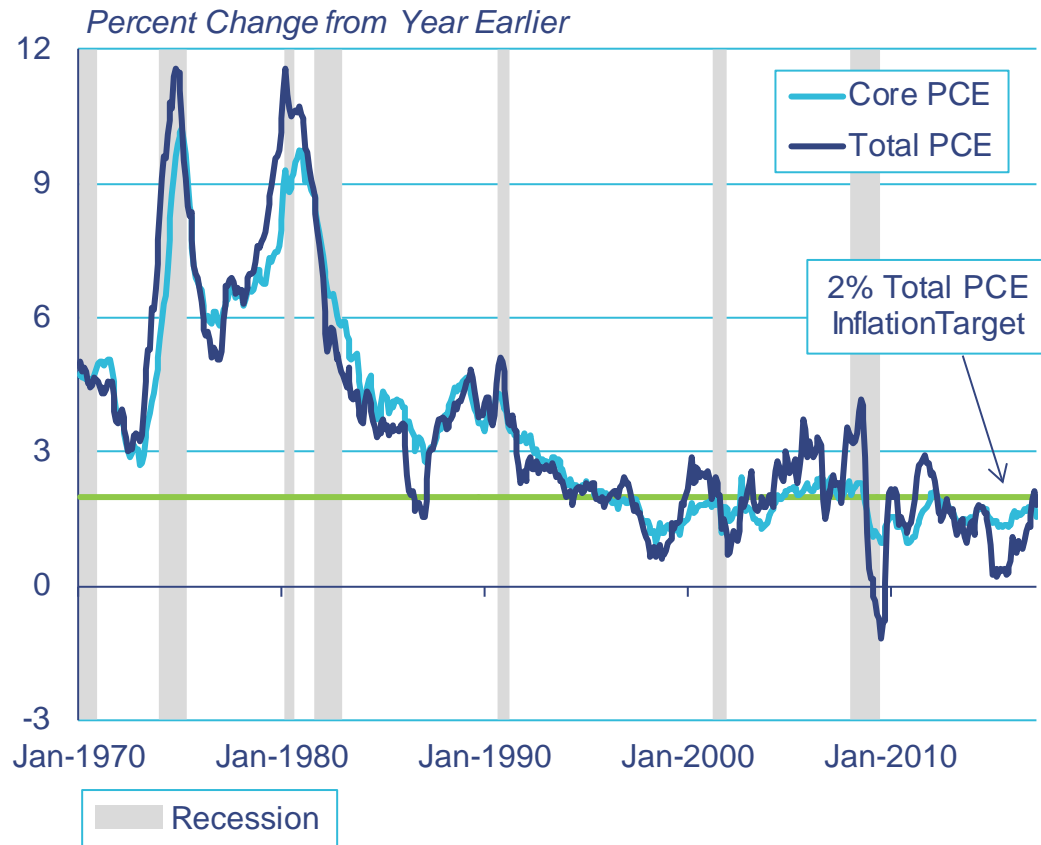


Figure 4: Inflation Rate: Change in Personal Consumption Expenditures (PCE) Price Indices
January 1970 - March 2017



Note: Core PCE excludes food and energy.

Source: BEA, NBER, Haver Analytics



Figure 5: Unemployment Rates in the United States and the Euro Area

January 2000 - April 2017



Note: The unemployment rates for the U.S. and Euro Area are defined somewhat differently. One difference is based on age; the U.S. civilian unemployment rate tallies the unemployed share of the labor force age 16 years and older, whereas the Euro Area harmonized unemployment rate calculates the unemployed share of the labor force age 15 to 74. For both definitions, unemployed persons must be actively seeking work. The April 2017 rate for the Euro Area is not yet available.

Source: BLS, Eurostat, Haver Analytics



Figure 6: Ten-Year Government Bond Yields January 2000 - April 2017

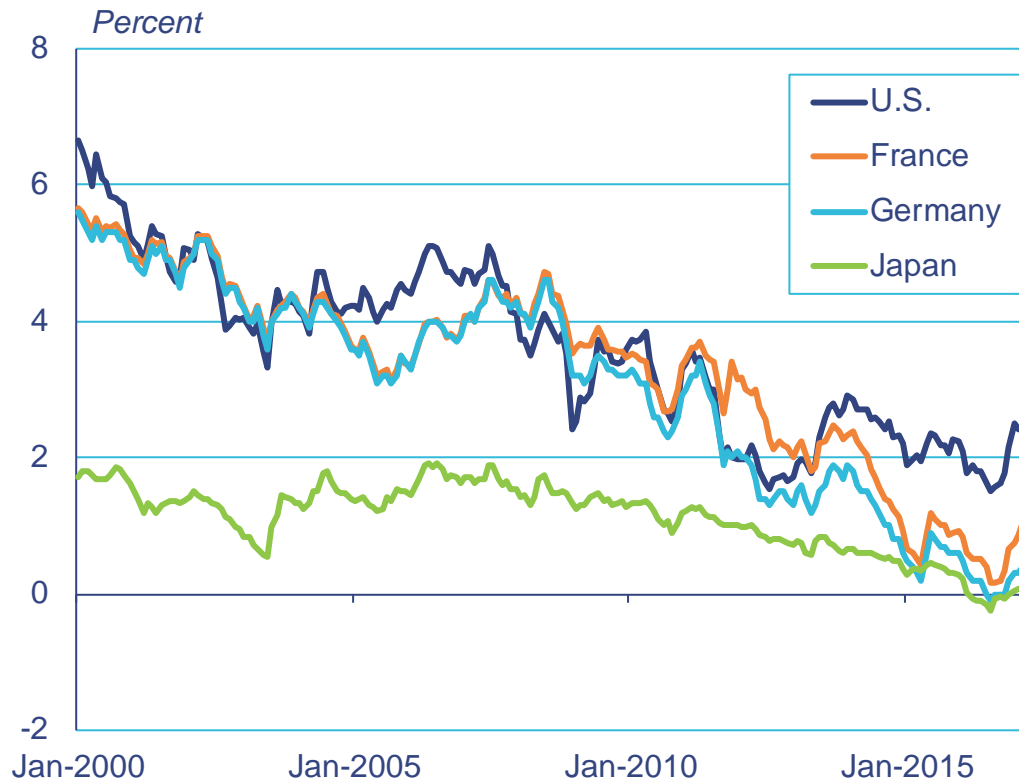




Figure 7: Demographic Trends 1960, 1980, 2000, and 2016

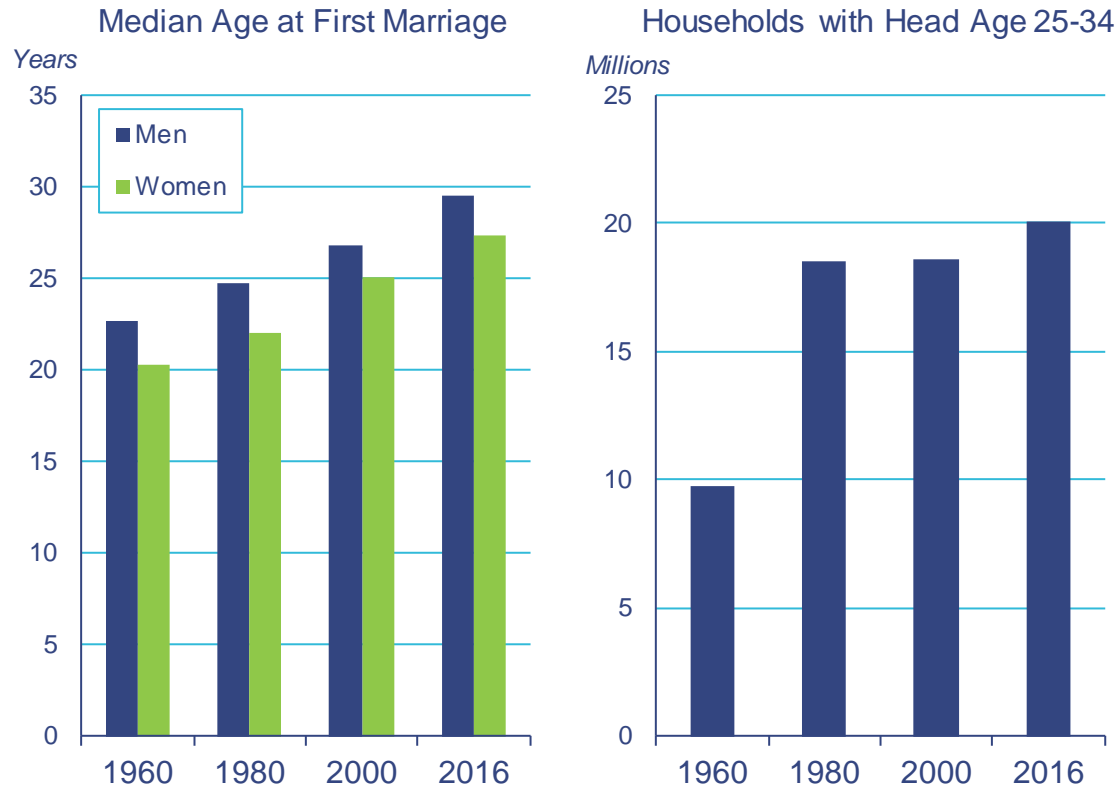




Figure 8: Multifamily Residential Mortgages by Holder

1980:Q1 - 2016:Q4

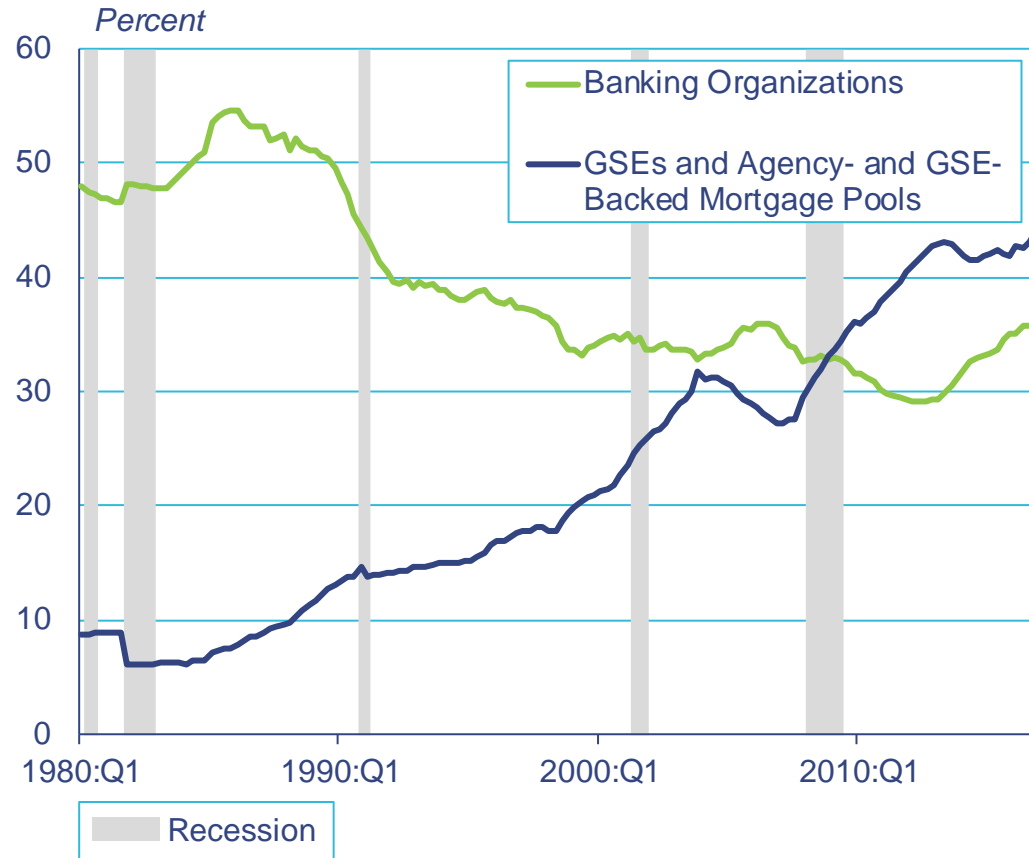




Figure 9: Share of GSE Income Derived from Multifamily Segment

2014 - 2016

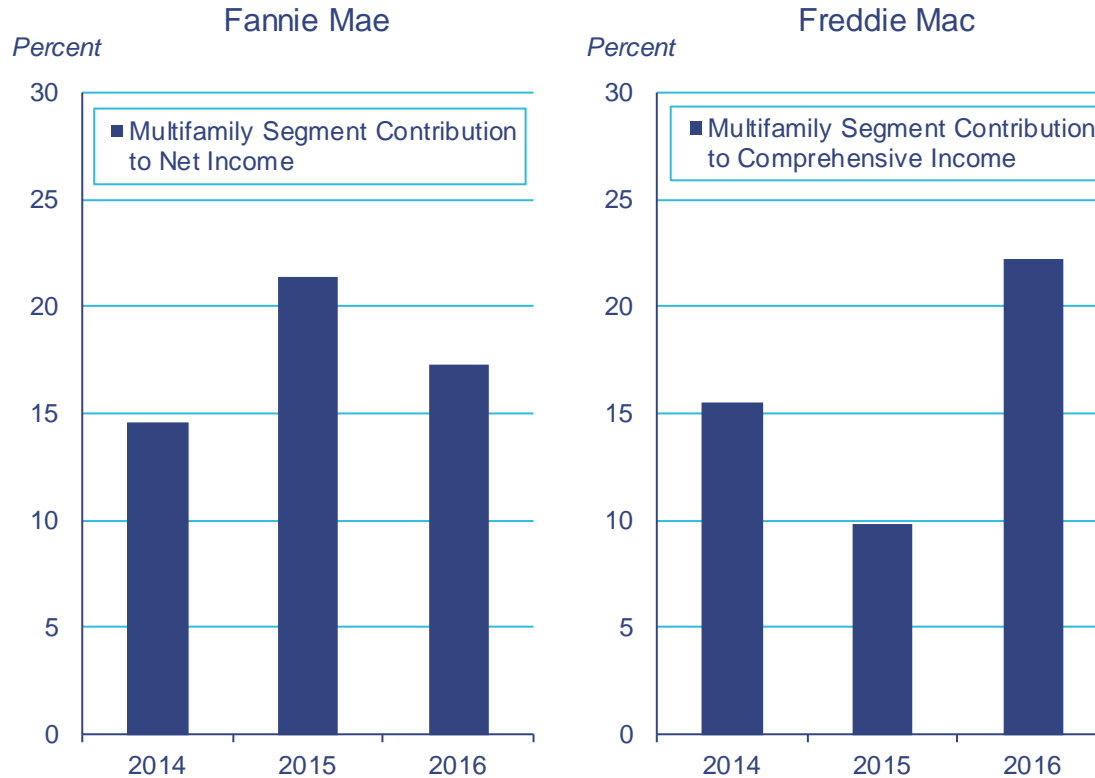




Figure 10: Commercial Real Estate Price Index in Severely Adverse Supervisory Scenario for Annual Stress Test

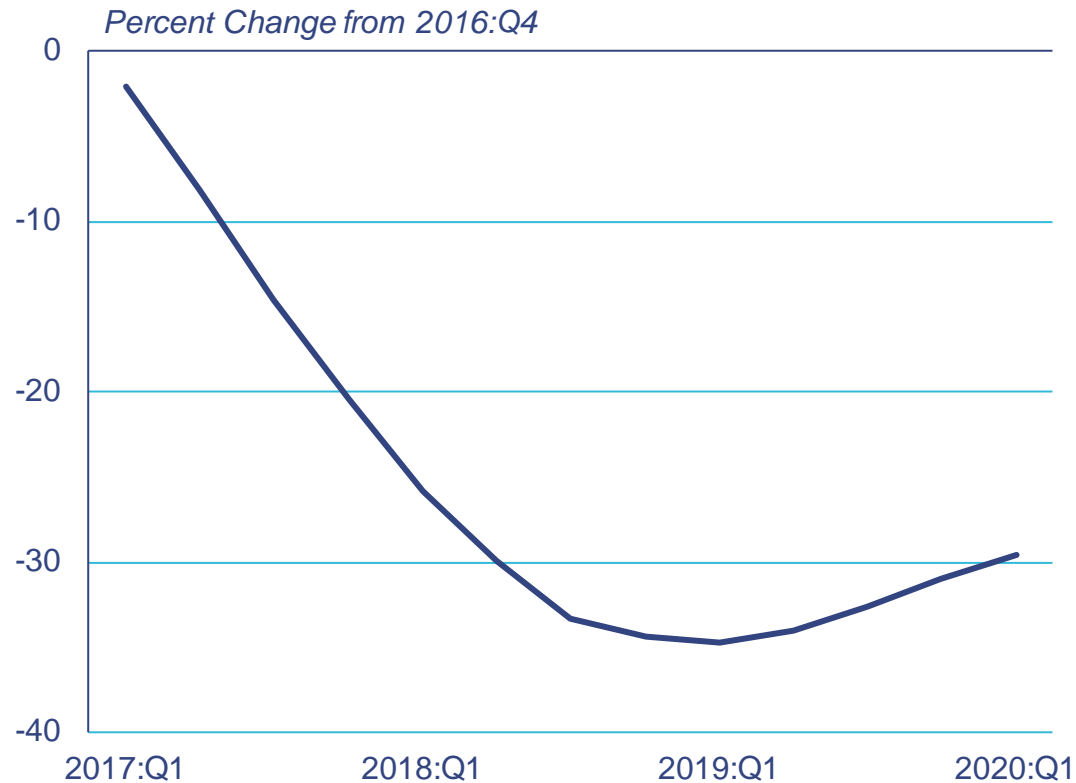
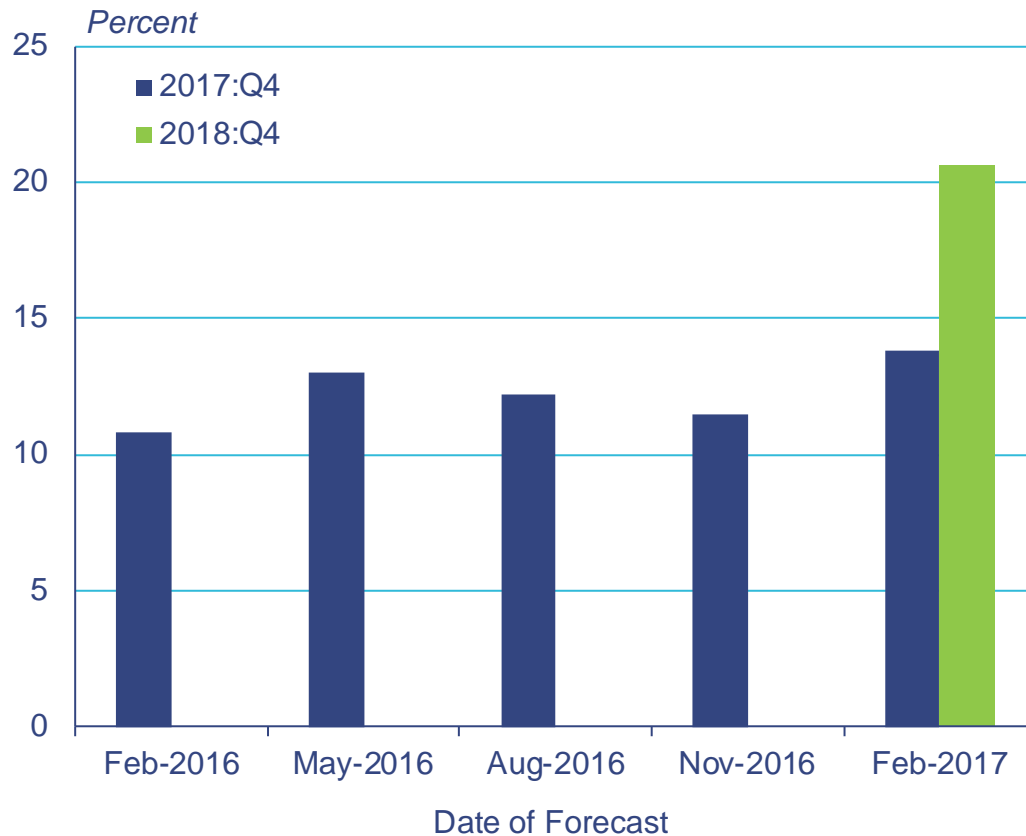


Figure 11: Survey of Professional Forecasters: Mean Probability of Core PCE Inflation Rate of 2.5% or More

2017:Q4 and 2018:Q4

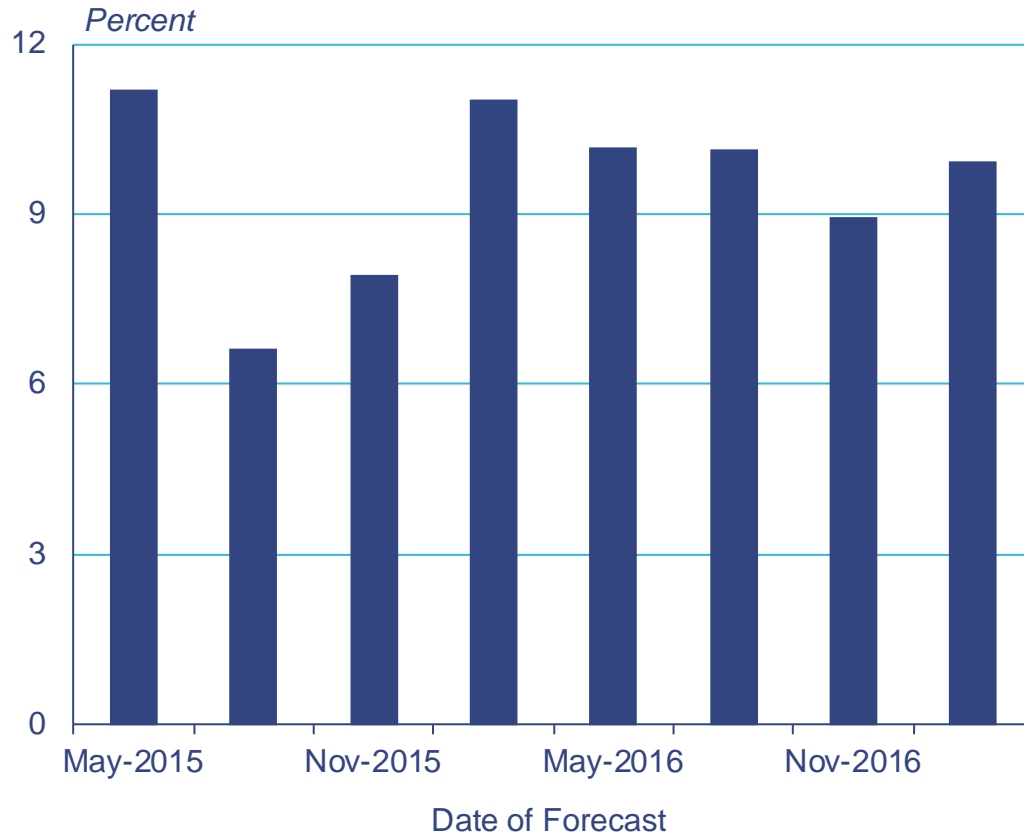


Note: Core PCE inflation rate as measured by the percent change from 2016:Q4 - 2017:Q4 and 2017:Q4 - 2018:Q4.

Source: Federal Reserve Bank of Philadelphia, Survey of Professional Forecasters; Haver Analytics



Figure 12: Survey of Professional Forecasters:
Mean Probability of Civilian Unemployment Rate
Less than 4% in 2018



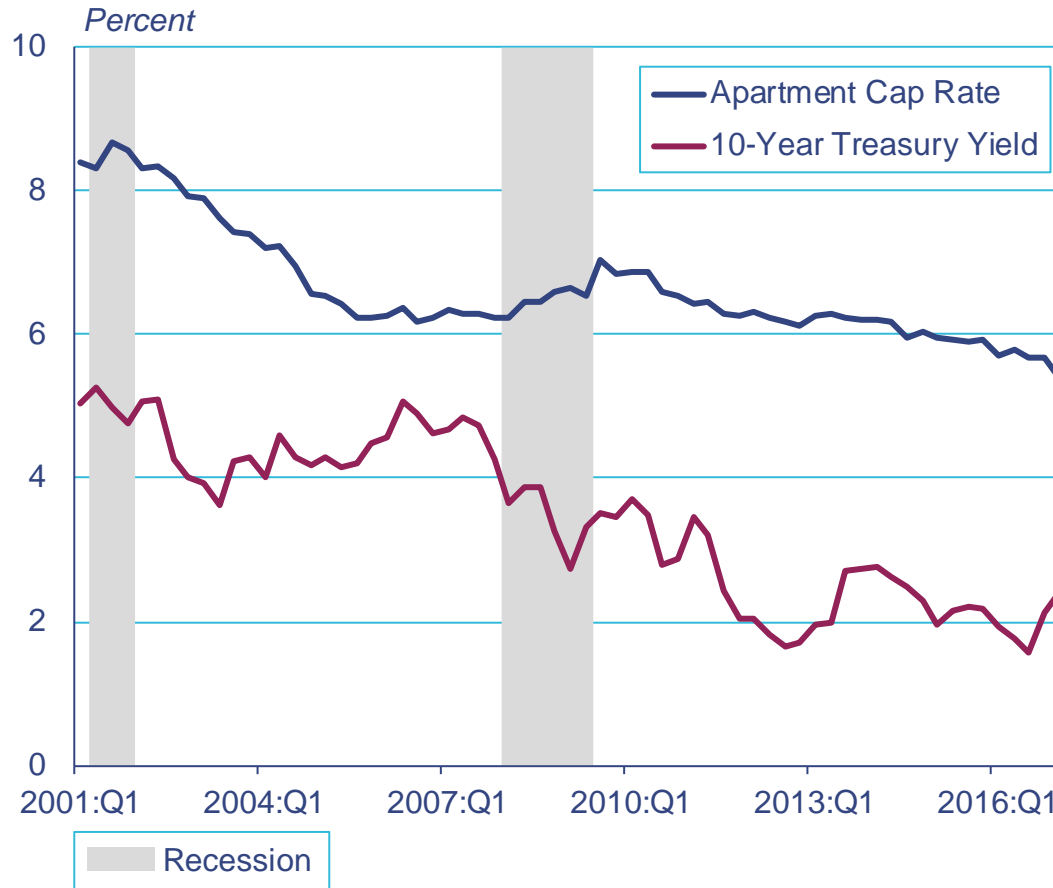
Note: Civilian unemployment rate is annual average.

Source: Federal Reserve Bank of Philadelphia, Survey of Professional Forecasters; Haver Analytics



Figure 13: Apartment Capitalization Rate and Ten-Year Treasury Yield

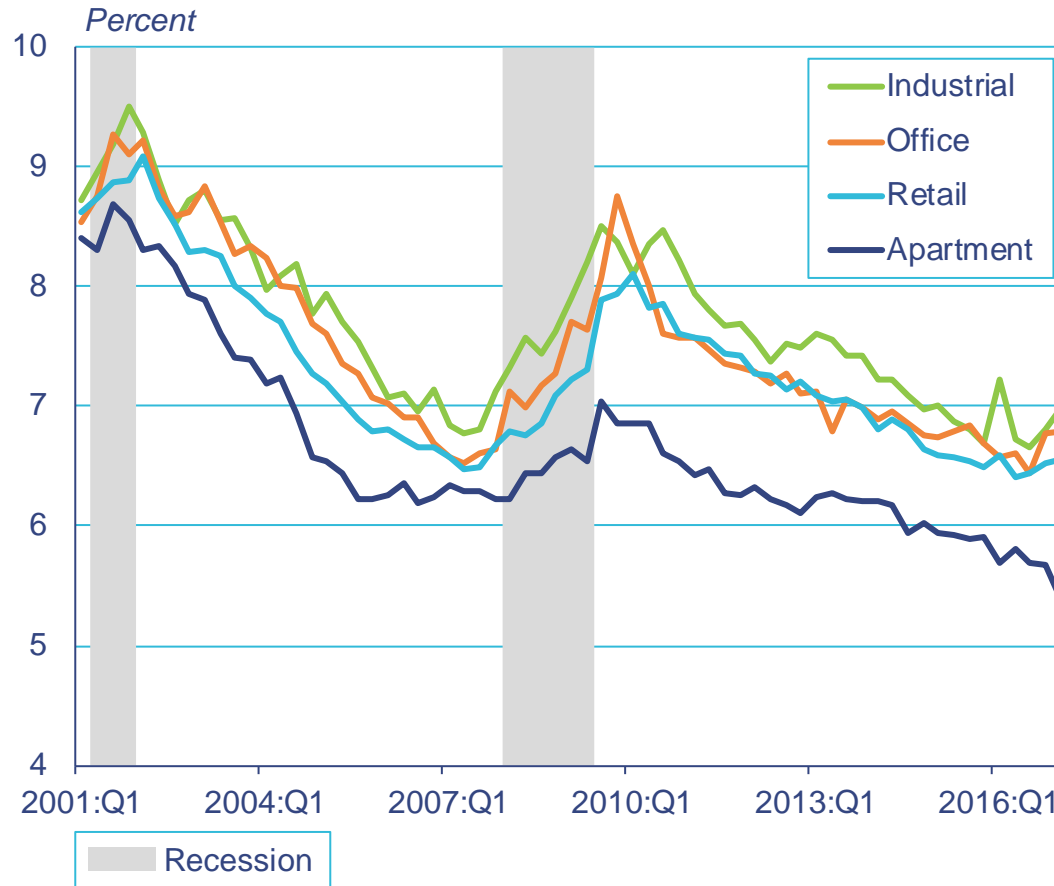
2001:Q1 - 2017:Q1



Note: The capitalization or “cap” rate is the ratio of net operating income produced by a property to the price paid for the property, calculated at the time of a transaction. Based on properties of \$2.5 million or more.

Source: Real Capital Analytics, Federal Reserve Board, NBER, Haver Analytics

Figure 14: Capitalization Rates by Property Type
2001:Q1 - 2017:Q1



Note: The capitalization or “cap” rate is the ratio of net operating income produced by a property to the price paid, calculated at the time of a transaction. Based on properties of \$2.5 million or more.

Source: Real Capital Analytics, NBER, Haver Analytics

Figure 15: Commercial Real Estate Loans by Holder
2016:Q4

| Outstanding as of December 31, 2016 | Commercial Real Estate Loans | | | | | | | | |
|--|------------------------------|-----------|------------------------------|-----------------------------------|-----------|------------------------------|-----------------|-----------|------------------------------|
| | Commercial Mortgages | | | Multifamily Residential Mortgages | | | Total | | |
| Holder | Billion Dollars | Share (%) | Change from Year Earlier (%) | Billion Dollars | Share (%) | Change from Year Earlier (%) | Billion Dollars | Share (%) | Change from Year Earlier (%) |
| Banking Institutions ¹ | 1,595.1 | 61 | 8.9 | 424.7 | 36 | 12.0 | 2,019.8 | 53 | 9.6 |
| Banks with over \$50 Billion in Assets ² | 587.0 | 22 | 5.7 | 180.8 | 15 | 8.9 | 767.8 | 20 | 6.4 |
| Banks with under \$50 Billion in Assets ² | 942.8 | 36 | 10.0 | 239.8 | 20 | 13.4 | 1,182.6 | 31 | 10.7 |
| Life Insurers and Other Long-Term Investors ³ | 390.8 | 15 | 6.7 | 69.6 | 6 | 6.4 | 460.4 | 12 | 6.6 |
| GSEs & Agency MBS/CMBS | 0.0 | 0 | 0.0 | 521.0 | 44 | 14.9 | 521.0 | 14 | 14.9 |
| Non-Agency MBS/CMBS ⁴ | 491.8 | 19 | -5.1 | 52.2 | 4 | -21.8 | 544.0 | 14 | -7.0 |
| Finance Companies | 23.6 | 1 | -17.2 | 1.2 | 0 | 0.2 | 24.9 | 1 | -16.4 |
| Nonfinancial (Other) ⁵ | 113.5 | 4 | 3.1 | 117.9 | 10 | 3.1 | 231.4 | 6 | 3.1 |
| Total | 2,614.8 | 100 | 5.1 | 1,186.7 | 100 | 9.8 | 3,801.5 | 100 | 6.5 |

¹Includes U.S.-chartered depository institutions, foreign banking offices in the U.S., banks in U.S.-affiliated areas and credit unions.

²Includes commercial and savings banks and thrifts. Author's estimates using call report data.

³Includes life and property-casualty insurance companies, private pension funds, and state and local government retirement funds.

⁴Includes REITS.

⁵Includes households, nonfinancial corporate and noncorporate businesses and federal and state and local governments.