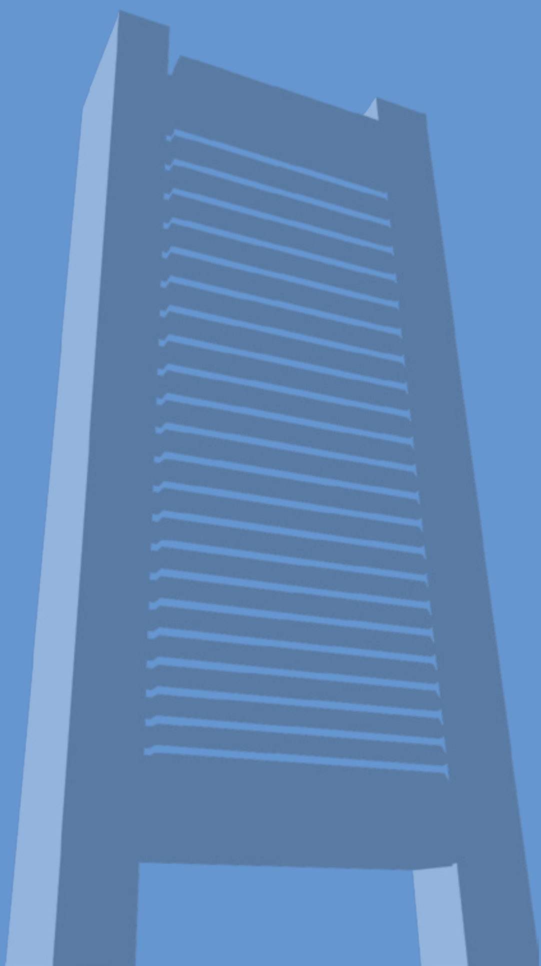
FEDERAL RESERVE
BANK OF BOSTON™

EMBARGOED UNTIL TUESDAY, JUNE 20, 2017 AT 8:15 A.M. U.S. EASTERN TIME AND 2:15 P.M. IN AMSTERDAM, THE NETHERLANDS; OR UPON DELIVERY

Financial Stability in a Low Interest Rate Environment



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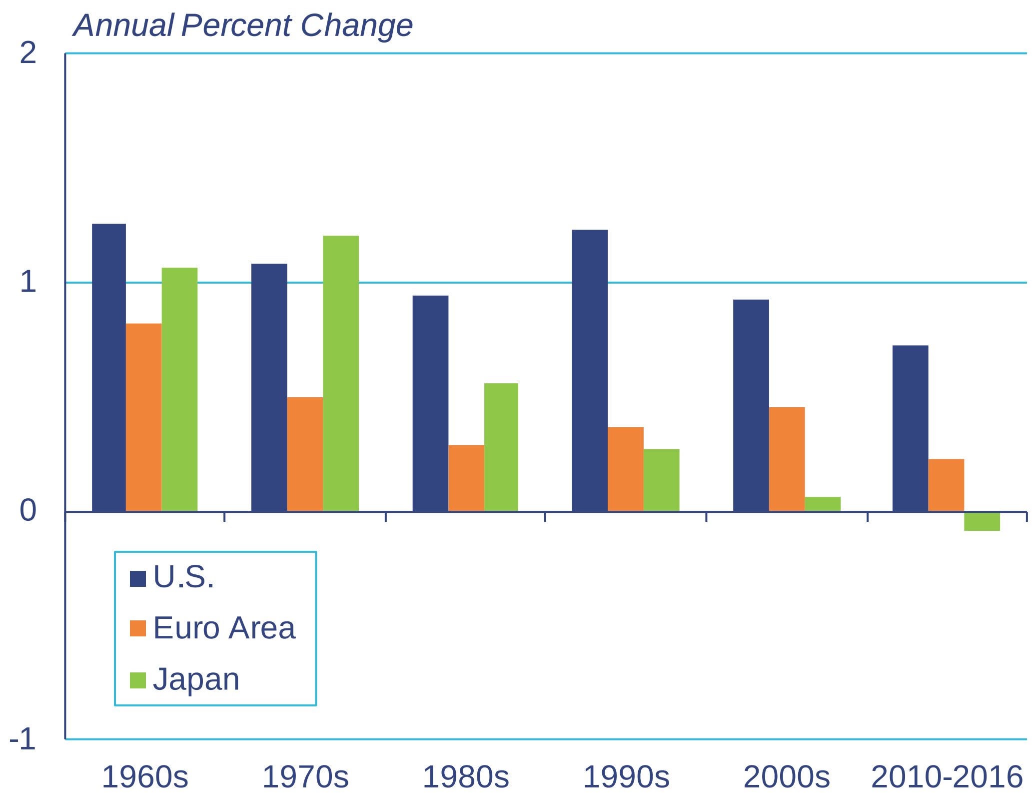
De Nederlandsche Bank & Sveriges Riksbank Macroprudential Conference Series
Amsterdam, The Netherlands

bostonfed.org

A Cyclical or Secular Problem?

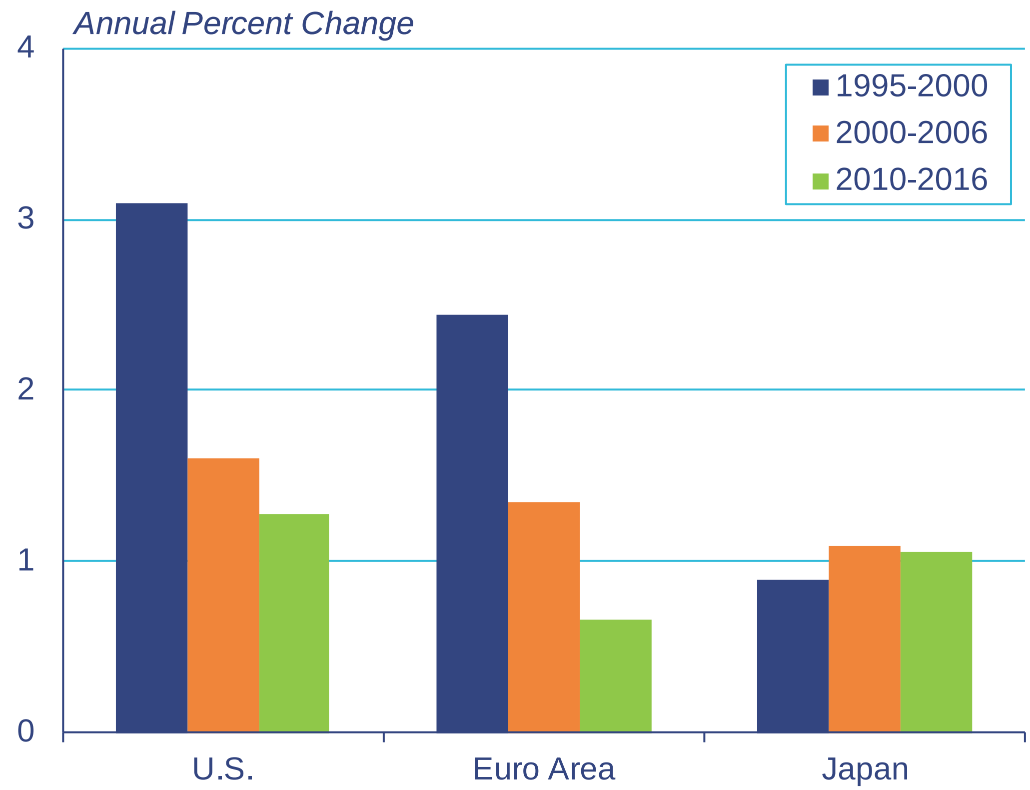
- The severity of the last downturn is an important reason for the very low interest rates in Europe and the U.S.
- However, there are significant reasons to believe that the low interest rate environment is a secular problem as well
  - Population trends are declining in most developed countries
  - Productivity growth has been declining
  - Inflation targets are low
- Estimates of the equilibrium real interest rate have declined significantly

Figure 1: Population Growth



Source: Bureau of the Census, Eurostat, Japan's Ministry of Internal Affairs and Communications, Haver Analytics

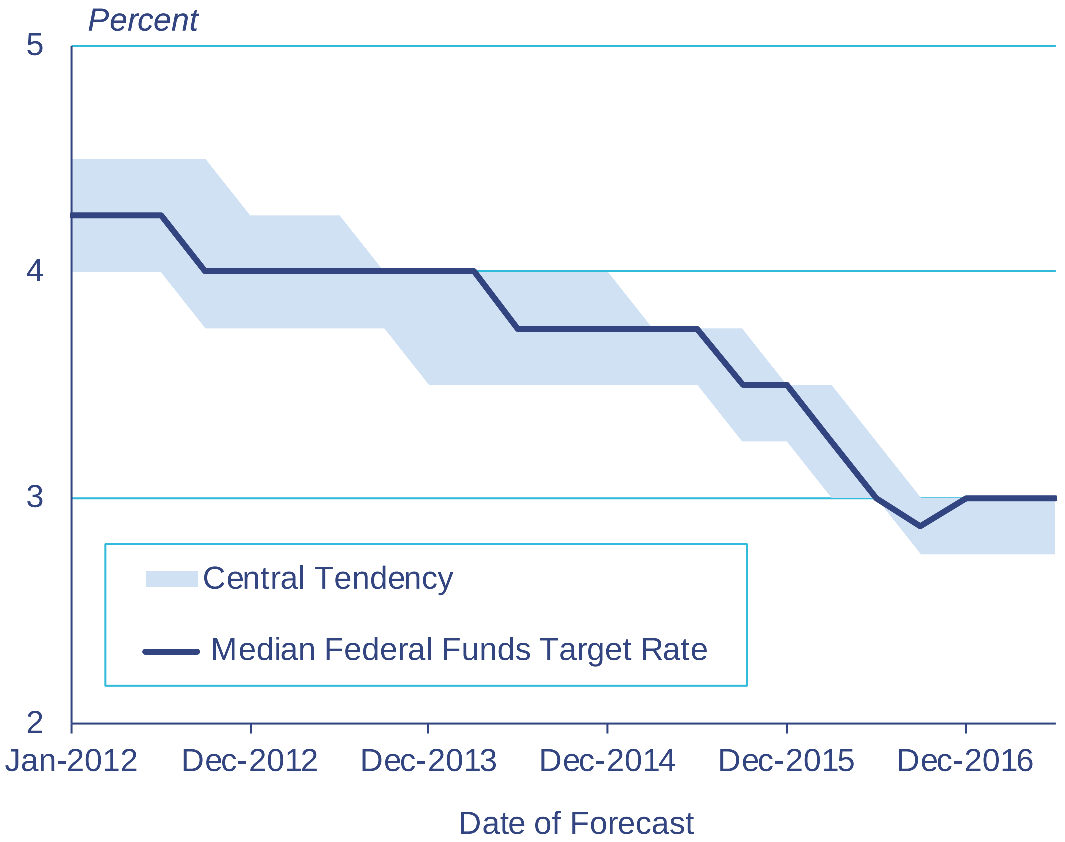
Figure 2: Growth in Real GDP Per Capita



Source: Bureau of Economic Analysis, Statistical Office of European Communities, Cabinet Office of Japan, Haver Analytics

Figure 3: Forecasts for the Longer-Run Federal Funds Rate from the Summary of Economic Projections

January 2012 - June 2017



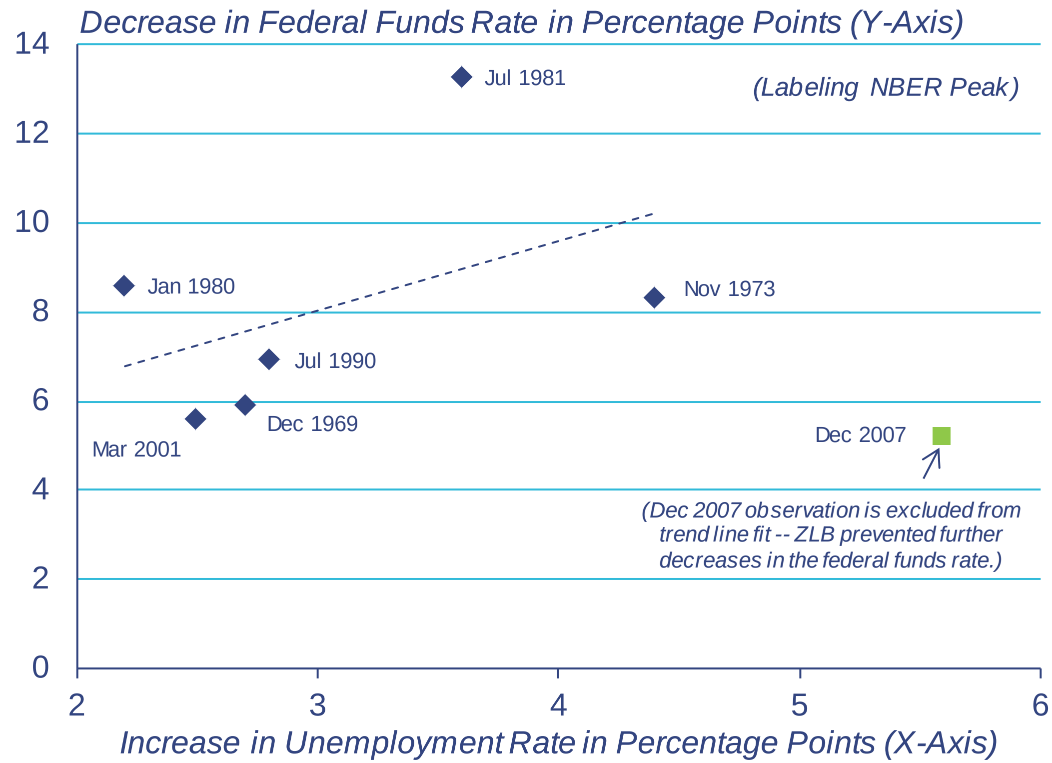
Note: The central tendency excludes the three highest and three lowest observations.

Source: FOMC, Summary of Economic Projections (SEP)

Low Interest Rates Do Pose Financial Stability Issues

- Monetary policy is less capable of offsetting negative shocks when rates are already low
  - Likely to experience very low interest rates in future recessions
  - Likely implies the need for less traditional monetary policy tools in future recessions
- Yield curve will be sensitive to policy actions – including policy choices when removing accommodation
- Reach-for-yield behavior can make financial intermediaries and the economy more risky

Figure 4: Changes in the Federal Funds Effective Rate and the Unemployment Rate

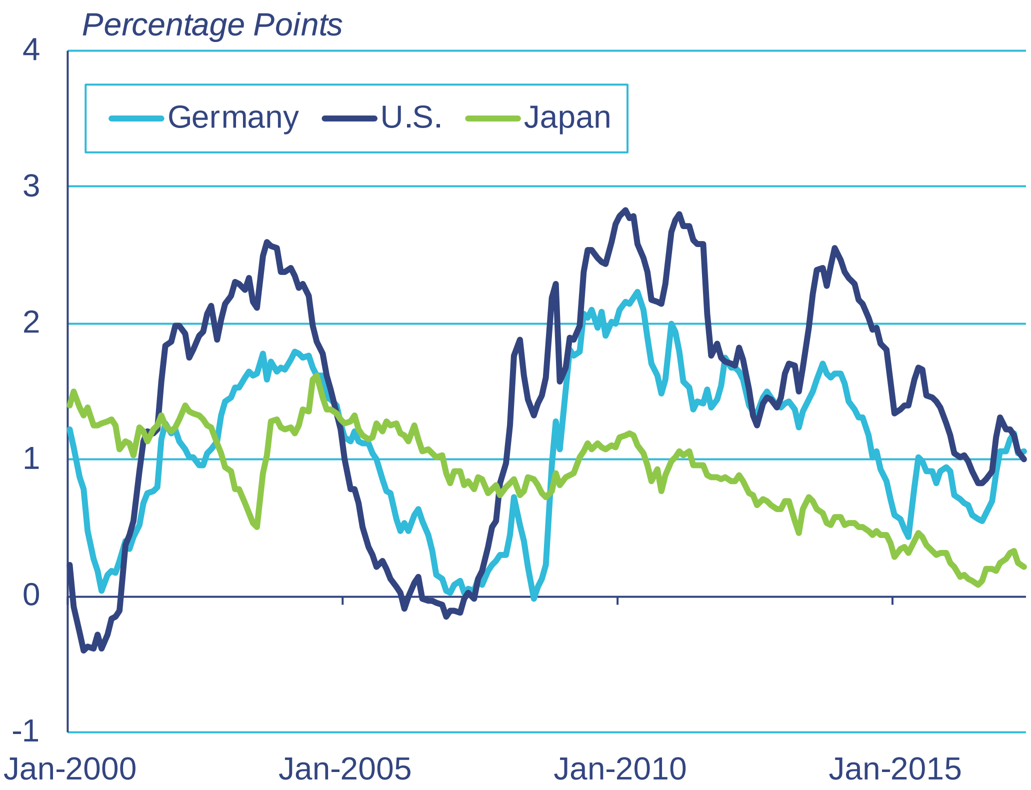


Note: The changes are measured between the peaks and troughs of the individual series. NBER business cycle peak dates are used only to identify the particular business cycle. The decrease in the federal funds rate is measured by the change from the peak federal funds rate to the trough federal funds rate. The increase in the unemployment rate is measured by the change from the trough unemployment rate to the peak unemployment rate.

Source: Federal Reserve Board, BLS, NBER, Haver Analytics

Figure 5: Spread: Ten-Year Government Bond Yield Minus Two-Year Government Bond Yield

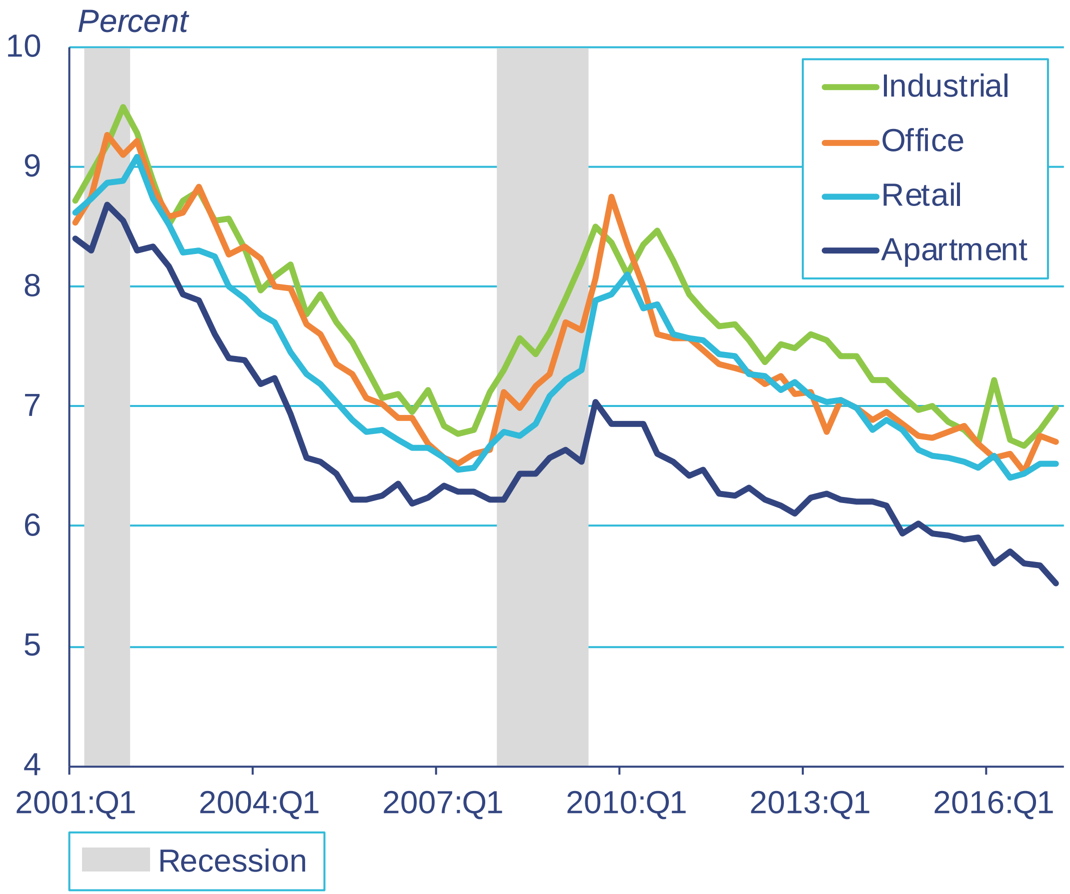
January 2000 - May 2017



Source: Bloomberg Finance L.P.

Figure 6: Capitalization Rates by Property Type

2001:Q1 - 2017:Q1

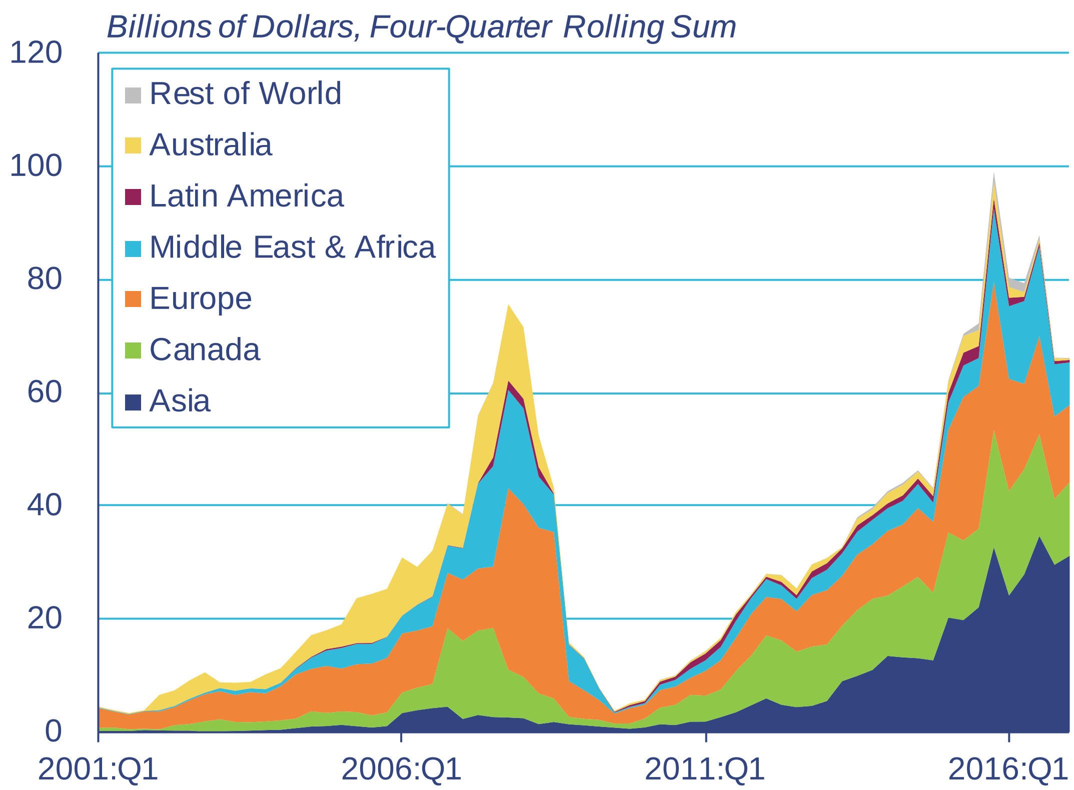


Note: The capitalization or "cap" rate is the ratio of net operating income produced by a property to the price paid, calculated at the time of a transaction. Based on properties of $2.5 million or more.

Source: Real Capital Analytics, NBER, Haver Analytics

Figure 7: Foreign Capital Invested in U.S. Commercial Real Estate

2001:Q1 - 2017:Q1



Note: Latin America is defined as any country in North or South America except Canada and the United States.

Source: Real Capital Analytics

Challenges for Intermediation – Using Insurance as an Example

- Insurance company products are often sensitive to a very low interest rate environment
  - Stable-value products are sensitive to future returns
  - Many annuities have floors well above current interest rates
  - Long-term care insurance profitability can be impacted by rates
- Intermediaries will need to alter products to reflect the possibility of a low rate environment
- However, less intermediation means households are subject more directly to risks

Concluding Observations

- Low interest rates do pose financial stability concerns
- My view: financial intermediaries will need to factor in the possibility of lower rates, particularly during economic downturns, and flatter yield curves
- I believe monetary policymakers must factor in financial stability concerns
  - They are important for exit strategies from very low rates
  - They have implications for monetary policy responsiveness to negative shocks
- Also: supervisory policies need to factor in this greater macroeconomic risk environment