



EMBARGOED UNTIL WEDNESDAY, AUGUST 31, 2016 AT 3:15 A.M. U.S. EASTERN TIME
AND 3:15 P.M. IN BEIJING, CHINA; OR UPON DELIVERY

Observations on Financial Stability Concerns for Monetary Policymakers

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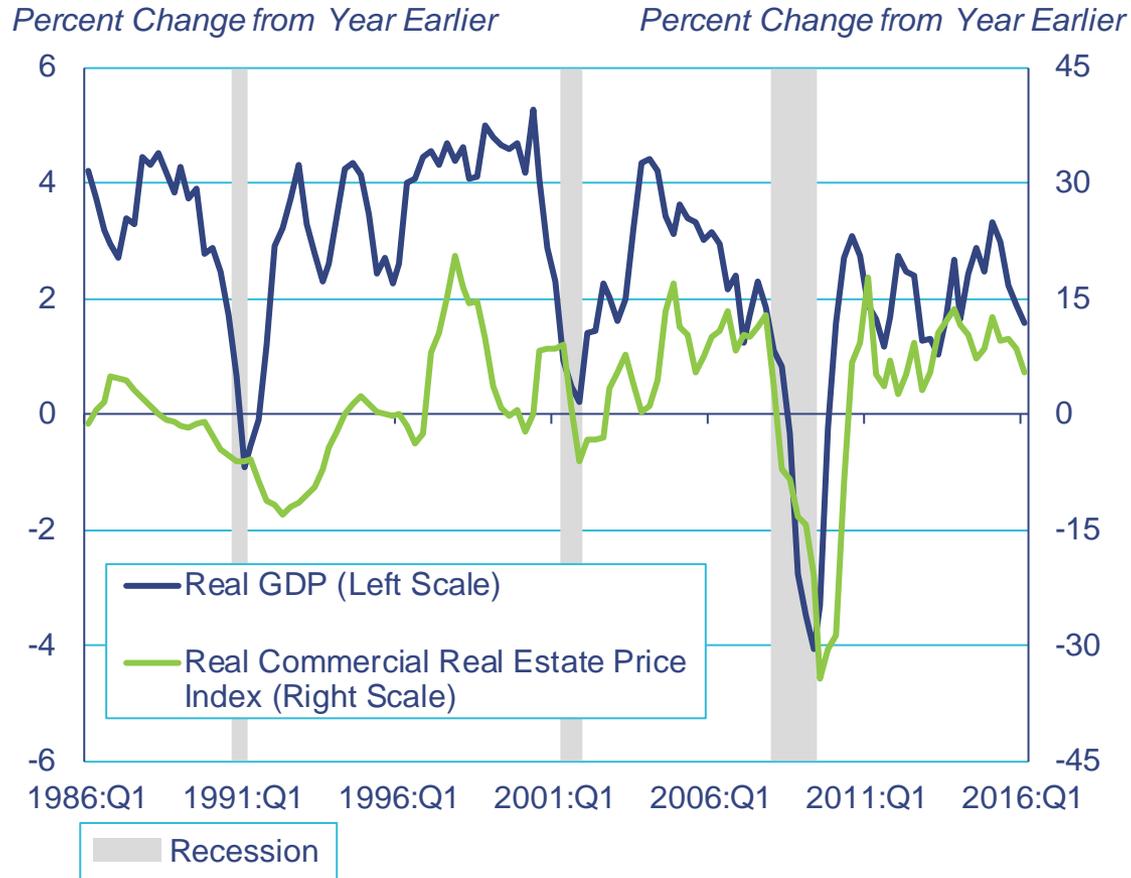
August 31, 2016

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Figure 1: Growth in Real GDP and Real Commercial Real Estate Prices in the United States 1986:Q1 - 2016:Q1



Note: The commercial real estate price index is adjusted for inflation using the GDP deflator.

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

Figure 2: U.S. Commercial Real Estate by Lender Type

2016:Q1

Outstanding as of March 31, 2016	Commercial Mortgages		Multifamily Residential Mortgages		Total	
	Billion Dollars	%	Billion Dollars	%	Billion Dollars	%
Banking Institutions ¹	1,494.0	59	388.6	35	1,882.7	52
Banks with over \$50 Billion in Assets ²	552.7		164.6		717.3	
Life Insurers and Other Long-Term Investors ³	369.7	15	66.4	6	436.1	12
GSEs & Agency CMBS	0.0	0	472.5	43	472.5	13
Non-Agency CMBS ⁴	498.1	20	61.2	6	559.3	15
Finance Companies	27.8	1	1.2	0	29.1	1
Nonfinancial (Other) ⁵	133.1	5	121.2	11	254.3	7
Total	2,522.8	100	1,111.1	100	3,633.9	100

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

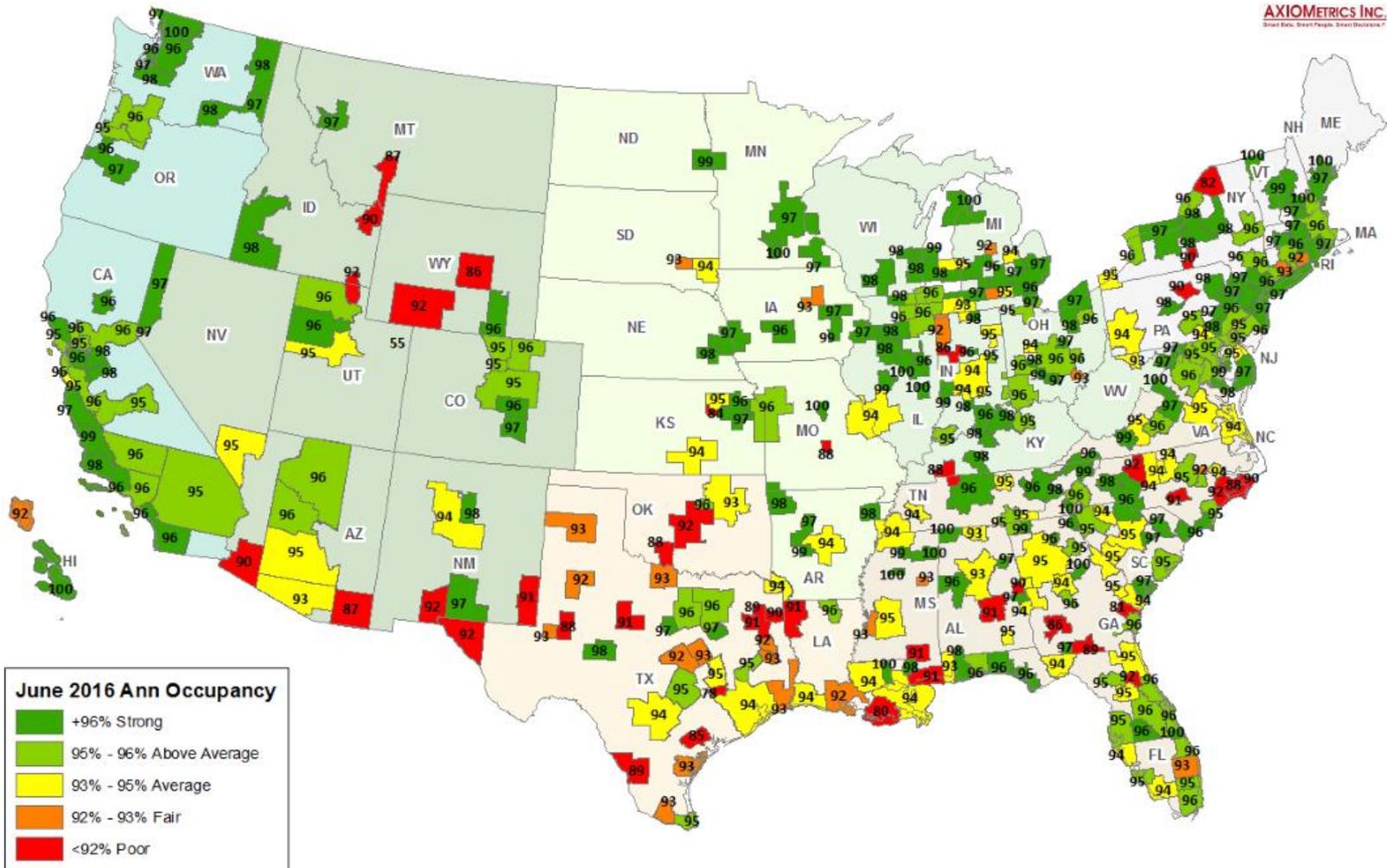
²Includes commercial and savings banks and thrifts with assets over \$50 billion. Author's estimates using call report data.

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

⁴Includes REITS.

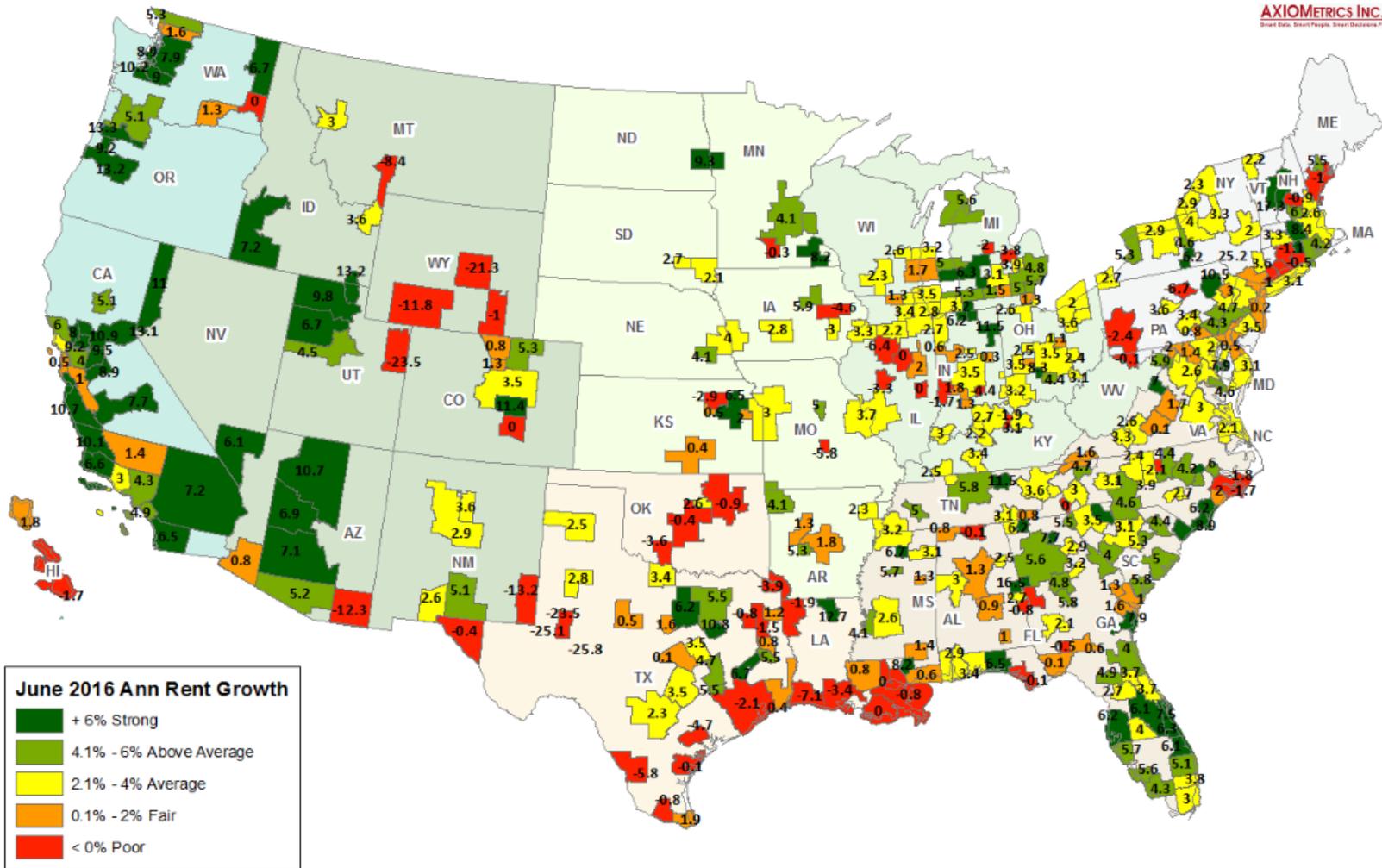
⁵Includes households, nonfinancial corporate and noncorporate businesses and federal and state and local governments.

Figure 3: National Annual Apartment Occupancy



Source: AXIOMETRICS/Risk Analysis Unit, FRB Atlanta

Figure 4: National Annual Effective Rent Growth for Apartments

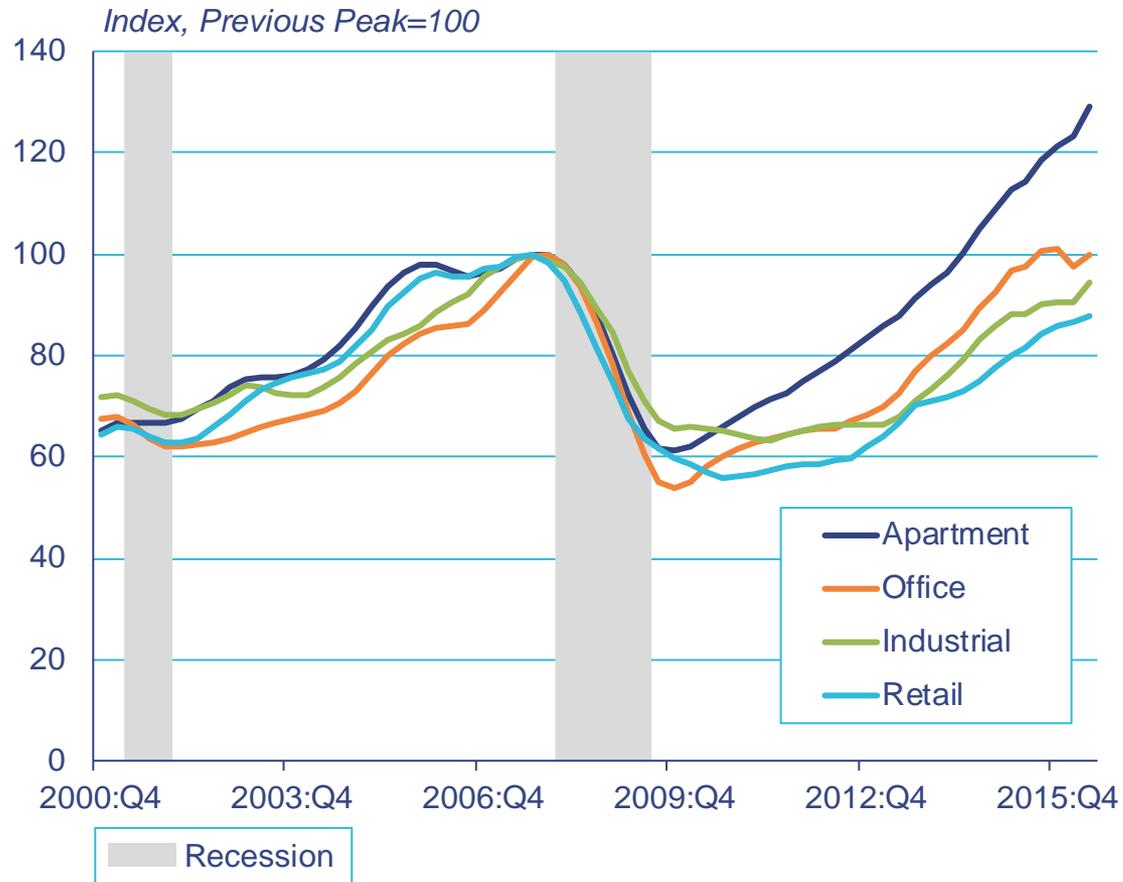


Source: AXIOMETRICS/Risk Analysis Unit, FRB Atlanta



Figure 5: U.S. Real Commercial Property Price Indices by Property Type

2000:Q4 - 2016:Q2



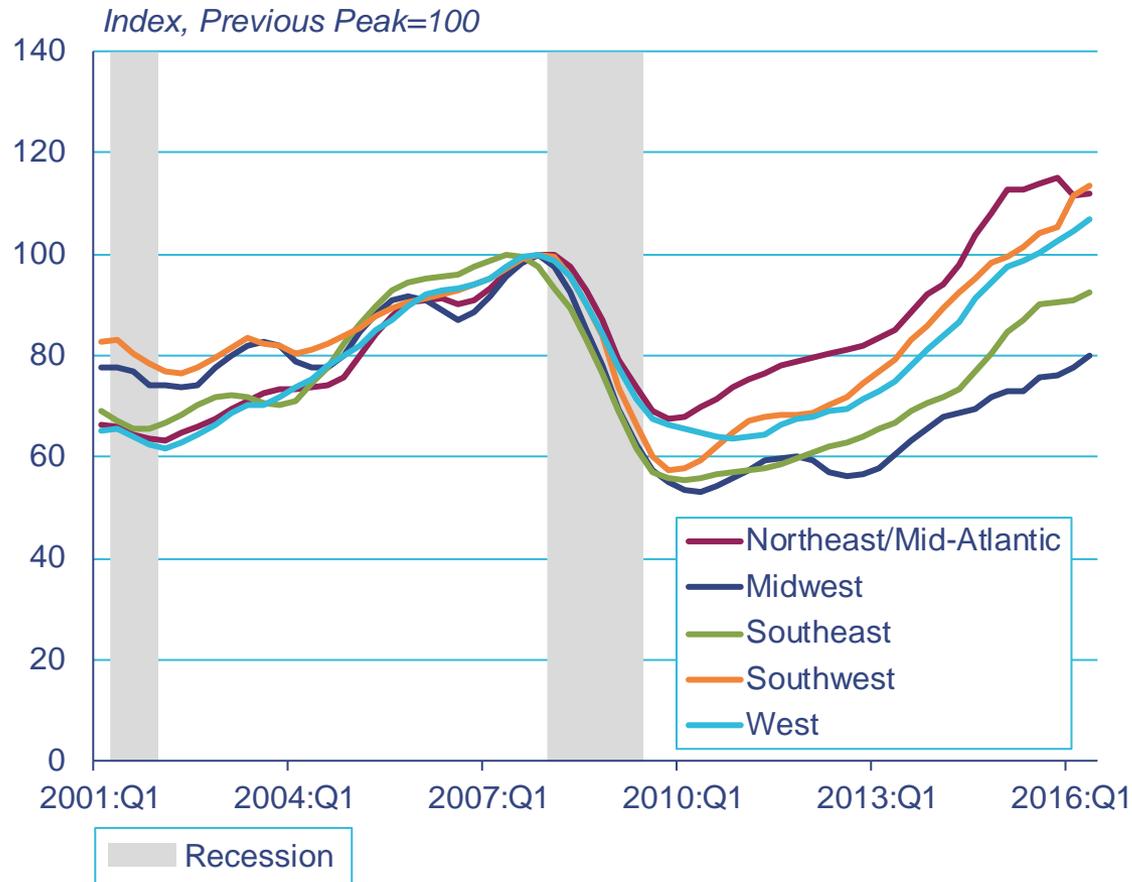
Note: Indices are adjusted for inflation using the GDP deflator. Indices are repeat-sales based.

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



Figure 6: U.S. Real Commercial Property Price Indices by Region

2001:Q1 - 2016:Q2

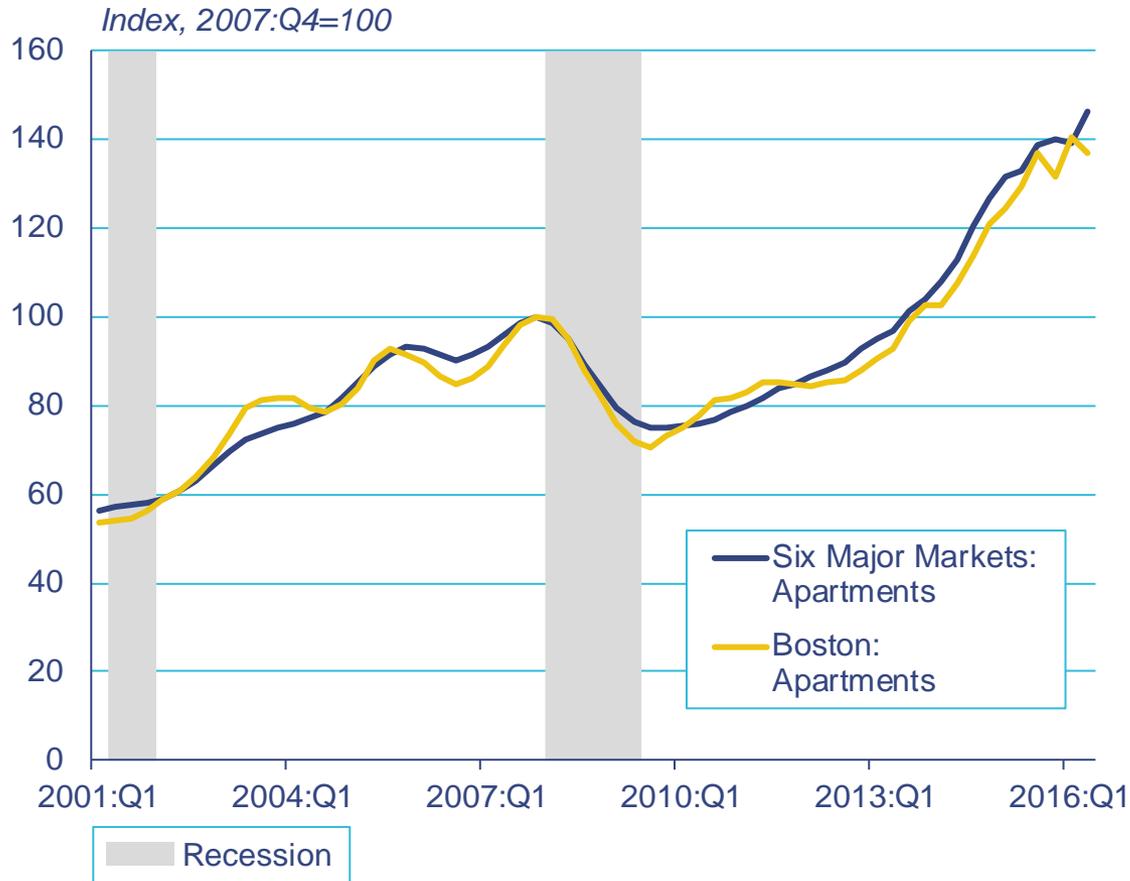


Note: Indices are adjusted for inflation using the GDP deflator. Indices are repeat-sales based.

Source: Real Capital Analytics, BEA, NBER, Risk Analysis Unit/Federal Reserve Bank of Atlanta

Figure 7: Apartments: Boston vs Six Major Markets Real Commercial Property Price Indices

2001:Q1 - 2016:Q2



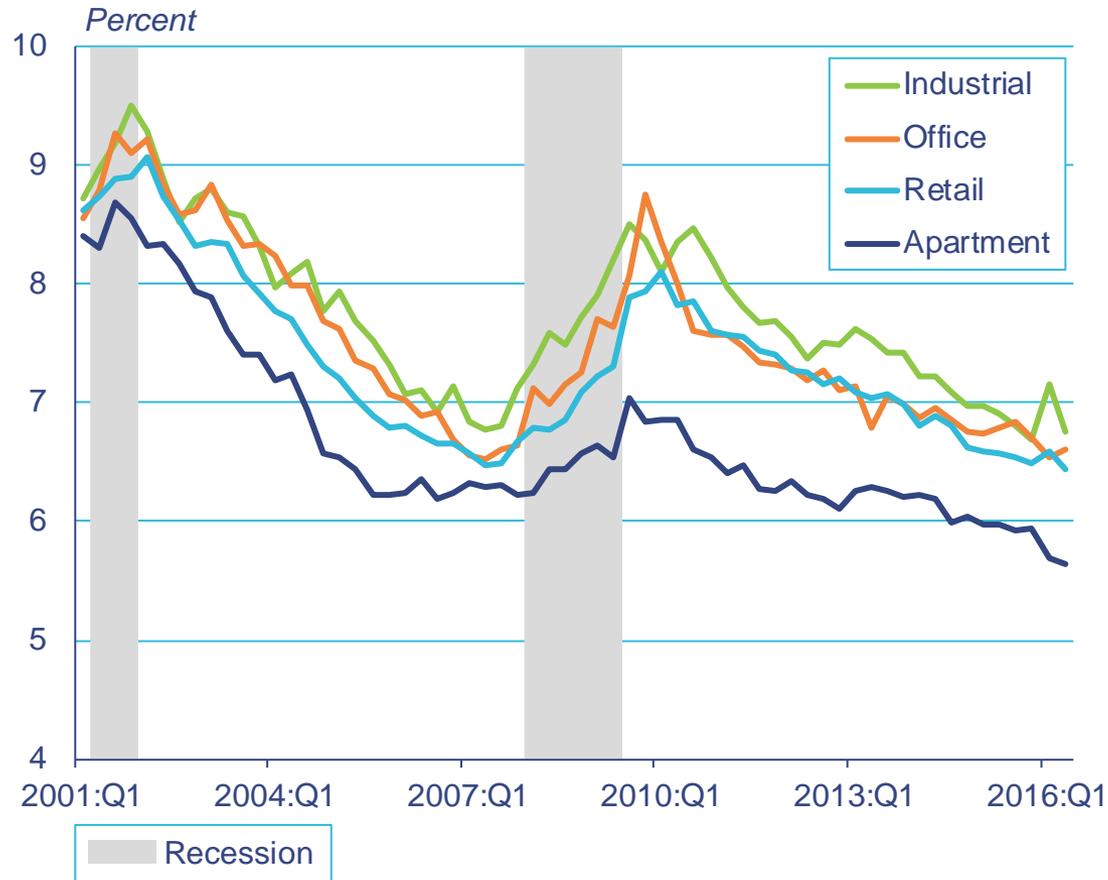
Note: Indices are adjusted for inflation using the GDP deflator. Indices are repeat-sales based. The six major markets are Boston, Chicago, DC Metro, LA Metro, NYC Metro and SF Metro.

Source: Real Capital Analytics, BEA, NBER, Risk Analysis Unit/Federal Reserve Bank of Atlanta



Figure 8: U.S. Capitalization Rates by Property Type

2001:Q1 - 2016:Q2

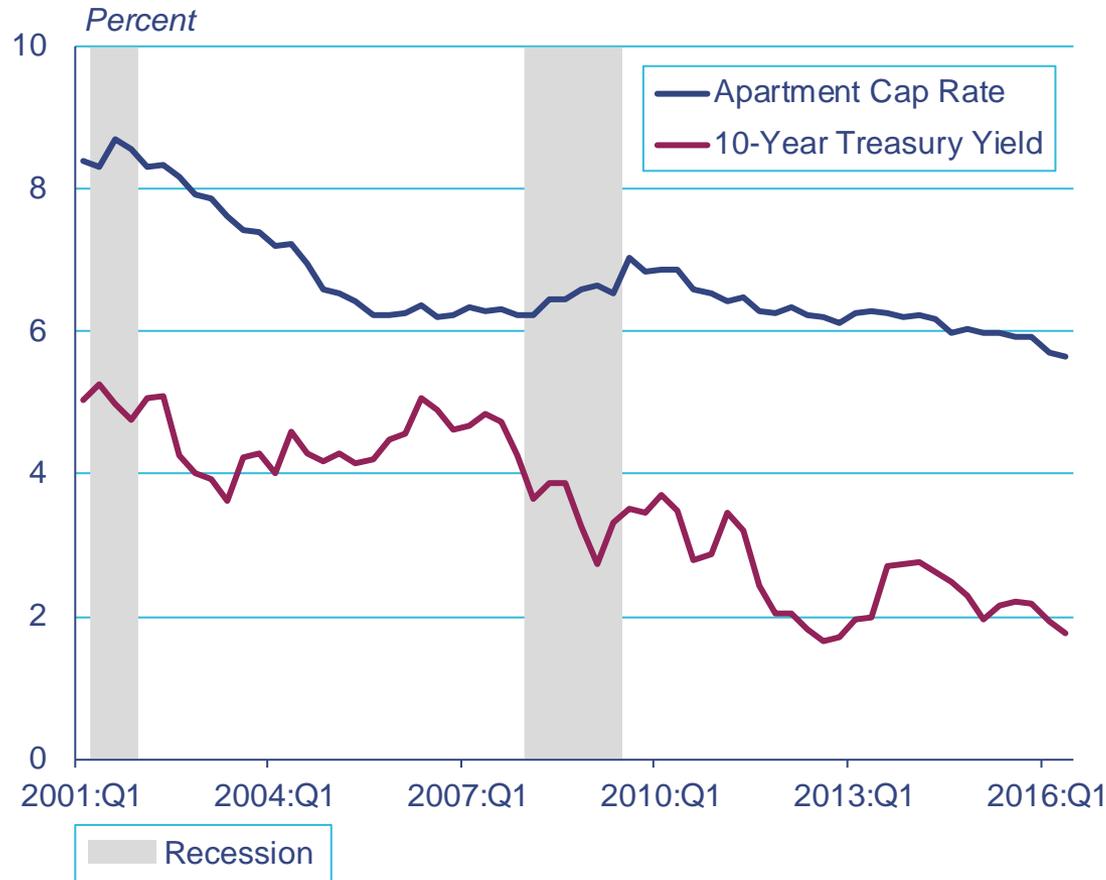


Note: The capitalization or “cap” rate is the ratio of net operating income produced by a property to the price paid, calculated at the time of a transaction. Thus, aggregate cap rate statistics only include cap rates from recent sales.

Source: Real Capital Analytics, NBER, Haver Analytics

Figure 9: U.S. Apartment Capitalization Rate and Ten-Year Treasury Yield

2001:Q1 - 2016:Q2

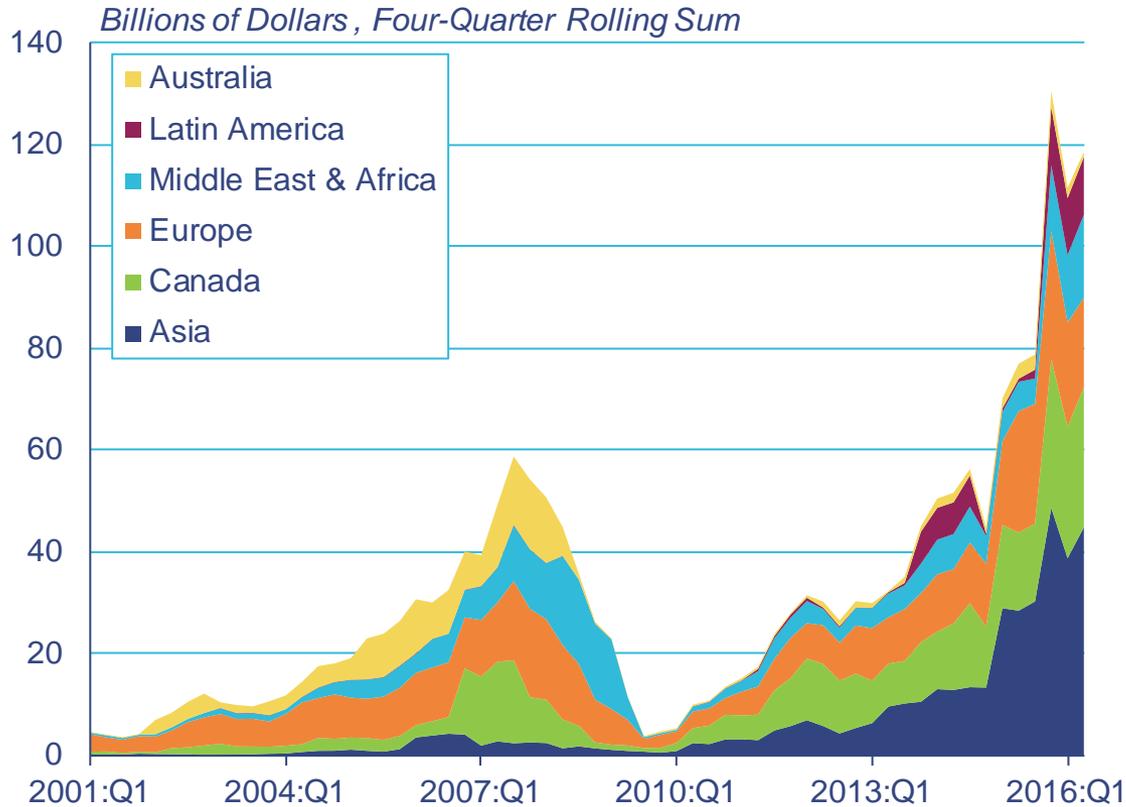


Note: The capitalization or “cap” rate is the ratio of net operating income produced by a property to the price paid, calculated at the time of a transaction. Thus, aggregate cap rate statistics only include cap rates from recent sales.

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

Figure 10: Foreign Capital Invested in U.S. Commercial Real Estate

2001:Q1 - 2016:Q2

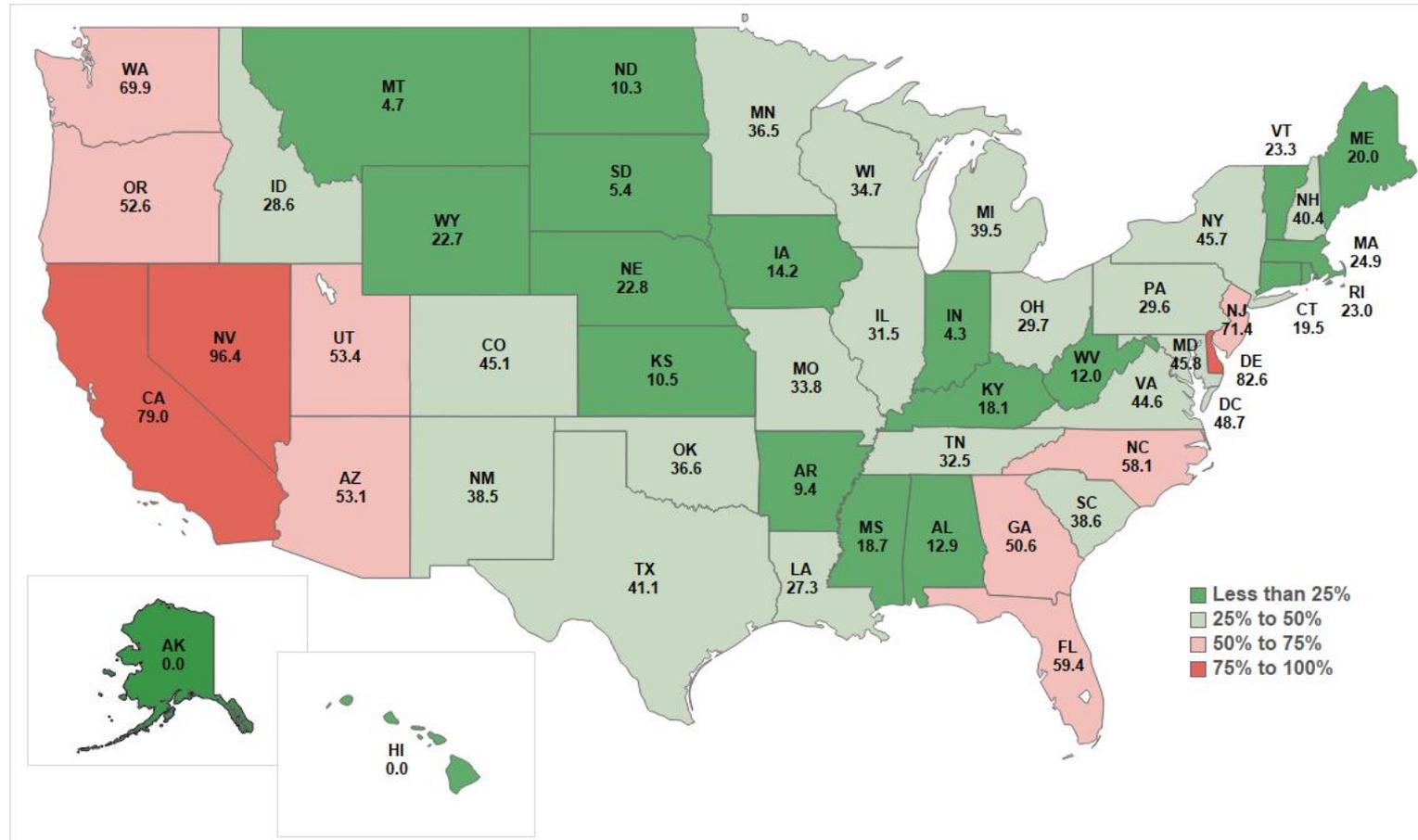


Note: Latin America is defined as any country in North or South America except Canada and the United States.

Source: Real Capital Analytics

Figure 11: Share of Commercial Real Estate in Banks with CRE Greater than or Equal to 350% of Risk-Based Capital by State for Banks with Assets Under \$1 Billion

2016:Q1



Note: Loans secured by owner-occupied nonfarm nonresidential properties are included in the definition of commercial real estate for this analysis.

Source: Quarterly Call Reports



Figure 12: U.S. Civilian Unemployment Rate and the Natural Rate of Long-Term Unemployment
1996:Q1 - 2016:Q2

