2013-2014 ANNUAL REAL ESTATE UPDATE

California Public Employees' Retirement System

November 2014

PCA
PENSION CONSULTING ALLIANCE

Agenda Items

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Section 1: Real Estate Update

PCA Real Estate

CalPERS' Board Consultant dedicated real estate team:

Christy Fields, Co-lead, Managing Director, PCA Board Member:
Ms. Fields rejoined PCA in 2007 as Managing Director of Real Estate Consulting Services. Ms. Fields has extensive experience in structuring and analyzing real estate transactions, developing investment strategy, analyzing manager fees and performance, evaluating manager reporting practices, and supervising and negotiating workouts.

David Glickman, Co-lead, Managing Director:
Mr. Glickman joined PCA in 2009. He has more than 40 years of global institutional investing experience, with an emphasis on commercial real estate debt and equity for pension and retirement system clients. In 1999 he founded Ambassador Capital Management, Inc., a registered investment advisor, specializing in publicly traded real estate–related securities.

Dillon Lorda, Principal:
Mr. Lorda joined PCA in 2008 and covers real assets. He has been working for CalPERS on behalf of PCA since the Global Financial Crisis. Mr. Lorda has been actively involved in real assets inclusive of real estate acquisitions, development, and consulting as well as agricultural commodities trading.

Real Estate Portfolio

CalPERS' *Real Estate Portfolio*:

- Portfolio metrics continue to move towards strategic targets:
  - New capital deployed through separate accounts
  - Better alignment and reduced investment-management fees
  - Focus on reducing risk associated with leverage

- Facing challenging market factors:
  - Tepid economic growth
  - Increased demand from large institutions and spread investors
  - Pricing of stabilized assets often below targeted long-term net return of 7% for real estate

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Real Estate Strategic Plan

The 2011 Strategic Plan addressed the embedded risks.

Staff and PCA collaborated to develop a five-year Strategic Plan consistent with the role of real estate in CalPERS' overall Asset Allocation Model:

- Reduce correlation to public and private equities
- Emphasize income (versus capital gains) for majority of return
- Produce stable, distributable cash yields

Strategic Plan remains relevant and prudent:

- Strong strategic portfolio performance
- Greater control of portfolio
- Consistent with CalPERS' Investment Beliefs

Market Dynamics

CalPERS faces a challenging and highly competitive investment market:

- Sovereign wealth funds, high net worth, and other large direct investors
- Persistent low interest rates fueling demand for income-producing assets
- Capital flows putting upward pressure on pricing
- Pockets of distress still exist but are less widespread

Returns generated over the last three years unlikely to be sustained:

- Absolute performance will likely slow over the medium term
- CalPERS' core properties should continue to perform well relative to the benchmark

Property Market Challenges

Many assets appear fully valued, nevertheless, by some relative measures (e.g., spread over treasuries), real estate is reasonably priced.

Core Market Dynamics (not unlike 2004):

- Stabilized assets in gateway cities appear to be fully priced
- Cap rates at historic lows
- Low economic growth
- Occupancy and rent growth recovery lag pricing

International Markets:

- Developed markets (e.g., Europe) opportunities not part of Strategic Plan
- Developing markets continue to have slowing growth outlooks and additional political uncertainty
- Legal issues
- Social and demographic changes
- Exchange rates

Implementation Challenges

Implementation challenges include:

- Maintaining focus and diligence on implementation of Strategic Plan
- Desire to put more capital to work
- Core separate account managers report that it is difficult to invest and generate returns in excess of hurdle rates
- Reinvestment risk
- Availability and allocation of human and other resources
- Assessing risk and investing in emerging markets without adequate resources

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Implementation Options

In light of the difficulties that have existed, and that continue to exist, for the System in reaching its target allocations, PCA has observed that Staff have been questioning whether real estate investment criteria should be relative or absolute. PCA believes that this matter warrants study within the context of the entire portfolio.

- Both approaches have merits and challenges

- Absolute return investment criteria (the current model)
  - Makes it harder to invest during certain points in the cycle and under certain market conditions, such as a low interest rate environment
  - May improve absolute performance of the real estate portfolio

- Relative return investment criteria
  - Provides more flexibility to invest during all points in the cycle, presuming that Staff determines stabilized real estate to be attractively priced relative to other asset class options
  - Might result in lower absolute returns within the real estate portfolio

Without broader portfolio analysis, PCA endorses the System staying with existing underwriting criteria.

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Continued Monitoring

Several areas merit diligent oversight:

- Portfolio management of emerging markets exposure
- Progress towards long-term strategic targets (i.e., Base versus Domestic Tactical; orderly disposition of Legacy portfolio assets)
- Staff's compensation program
- Reliance on outside resources; internalize whenever possible
- Resources to manage portfolio, particularly for resource-intensive programs including emerging markets, emerging managers, RCP and ESG initiatives.

Conclusion

- Continued progress on 2011 Strategic Plan objectives, portfolio management initiatives, and Real Estate Unit operational efficiency
- Portfolio generating positive performance, with significant market tailwinds and favorable leverage compared to the Benchmark
- Returns are unlikely to continue same pace over medium term
- Market conditions are challenging
- Pricing is acting as a governor on acquisition pacing
- Reaching target allocation should be a deliberate process

Section 2: Appendix

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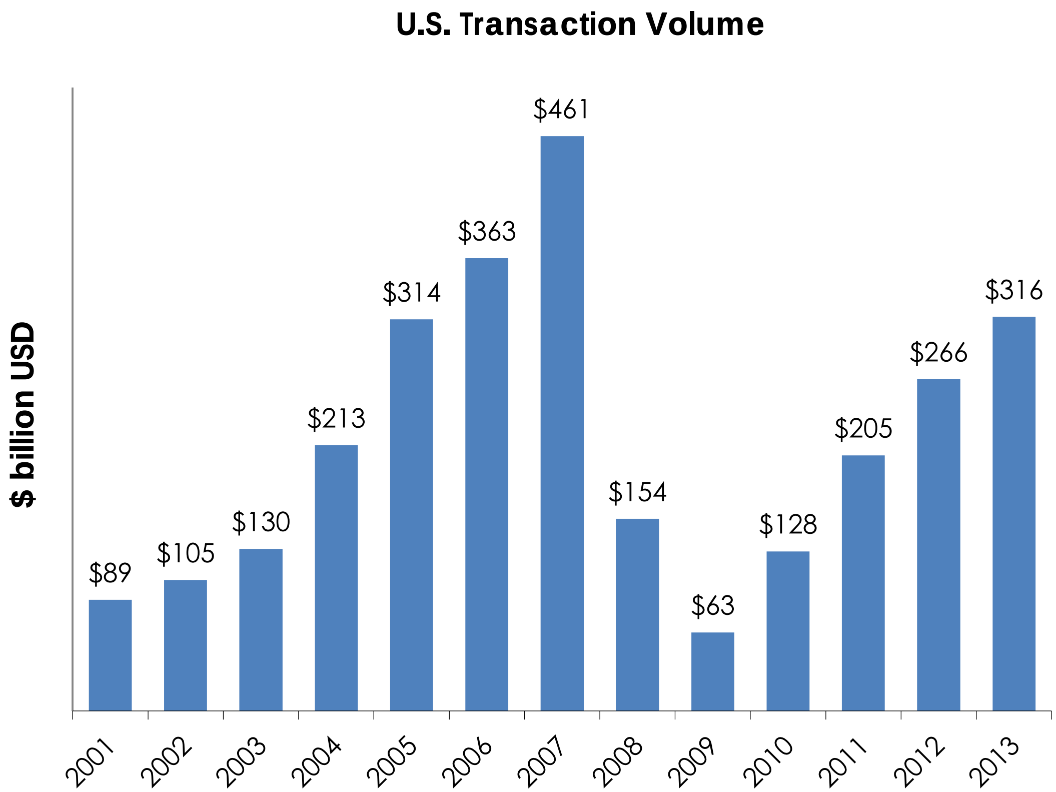
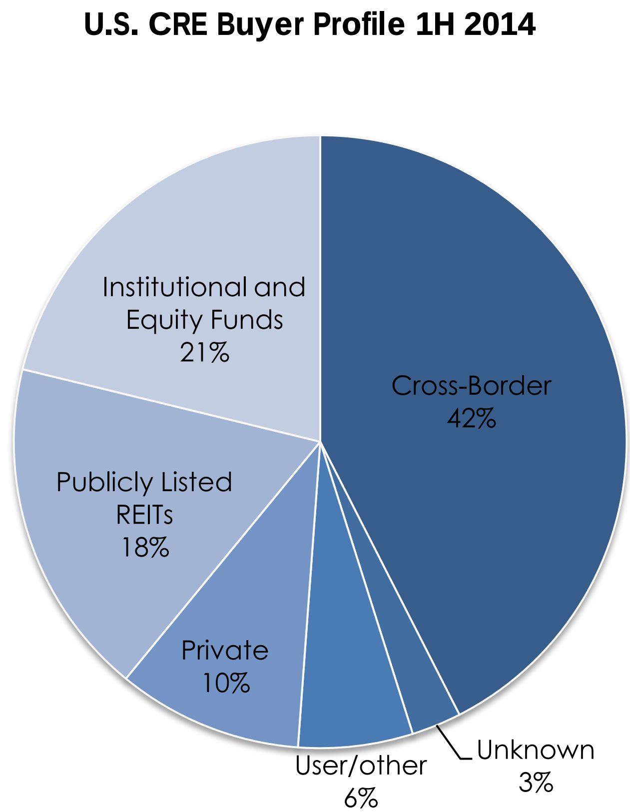
Capital Flows





U.S. commercial transaction volumes have picked up but are still below peak levels. The competition to CalPERS' investment managers includes diverse international investors who view U.S. commercial properties in gateway cities as relatively attractive safe havens.

Sources: Real Estate Capital Analytics, Deutsche Asset & Wealth Management

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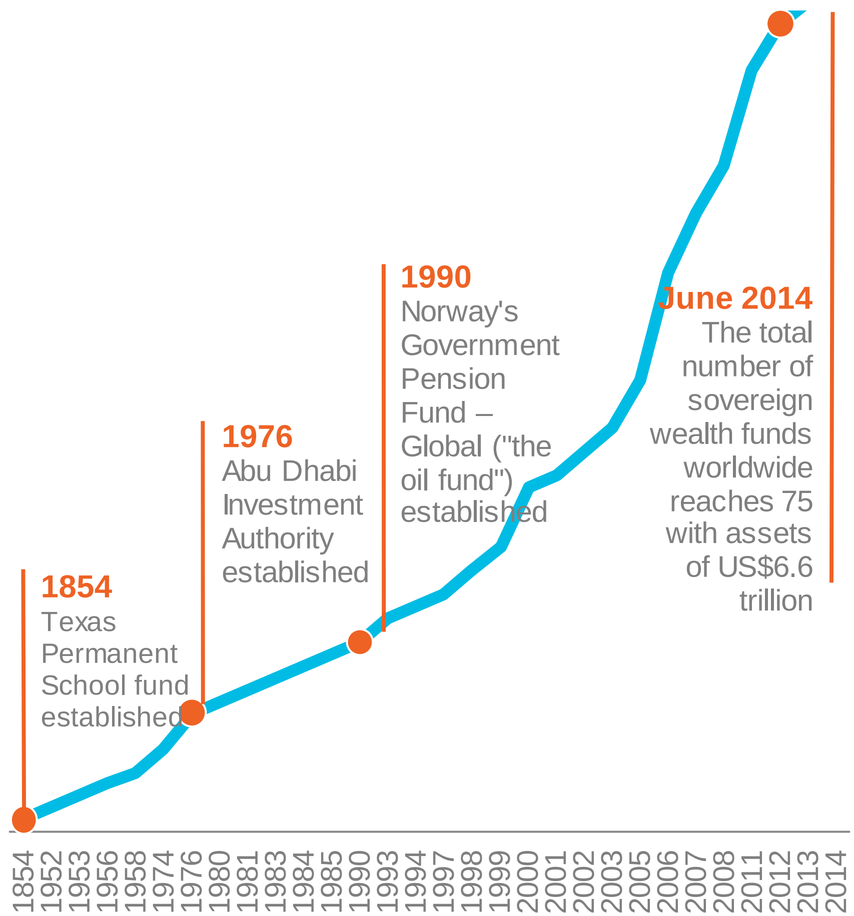
Competing Investors

Cumulative number of SWFs



Source: Sovereign Wealth Fund Institute (as of June 2014)

The SWFs with assets of US$40 billion+

Origin	Fund	Value (US$billions)
Norway	Government Pension Fund – Global	**878**
UAE	Abu Dhabi Investment Authority	**773**
Saudi Arabia	SAMA Foreign Holdings	**738**
China	China Investment Corporation	**575**
China	SAFE Investment Company	**568**
Kuwait	Kuwait Investment Authority	**410**
China	Hong Kong Monetary Authority Investment Portfolio	**327**
Singapore	Government of Singapore Investment Corporation	**320**
China	National Social Security Fund	**181**
Singapore	Temasek Holdings	**173**
Qatar	Qatar Investment Authority	**170**
Australia	Australian Future Fund	**90**
UAE	Mubadala Development Company	**90**
UAE	Abu Dhabi Investment Council	**90**
Russia	National Welfare Fund	**88**
Russia	Russia Reserve Fund	**86**
Kazakhstan	Kazakhstan JSC	**78**
Algeria	Revenue Regulation Fund	**77**
South Korea	Korea Investment Corporation	**72**
UAE	Investment Corporation of Dubai	**70**
Kazakhstan	Kazakhstan National Fund	**68**
Libya	Libyan Investment Authority	**66**
UAE	International Petroleum Investment Company	**65**
Iran	National Development Fund of Iran	**59**
USA	Alaska Permanent Fund	**52**
Malaysia	Khazanah Nasional	**41**
Brunei	Brunei Investment Agency	**40**

Provided By: IPD

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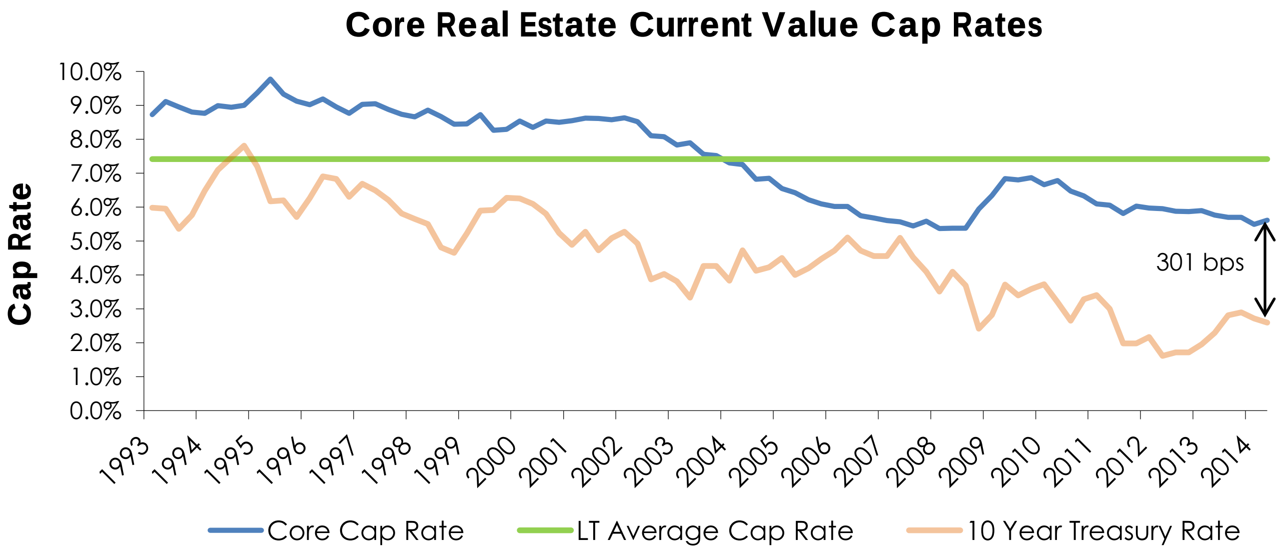
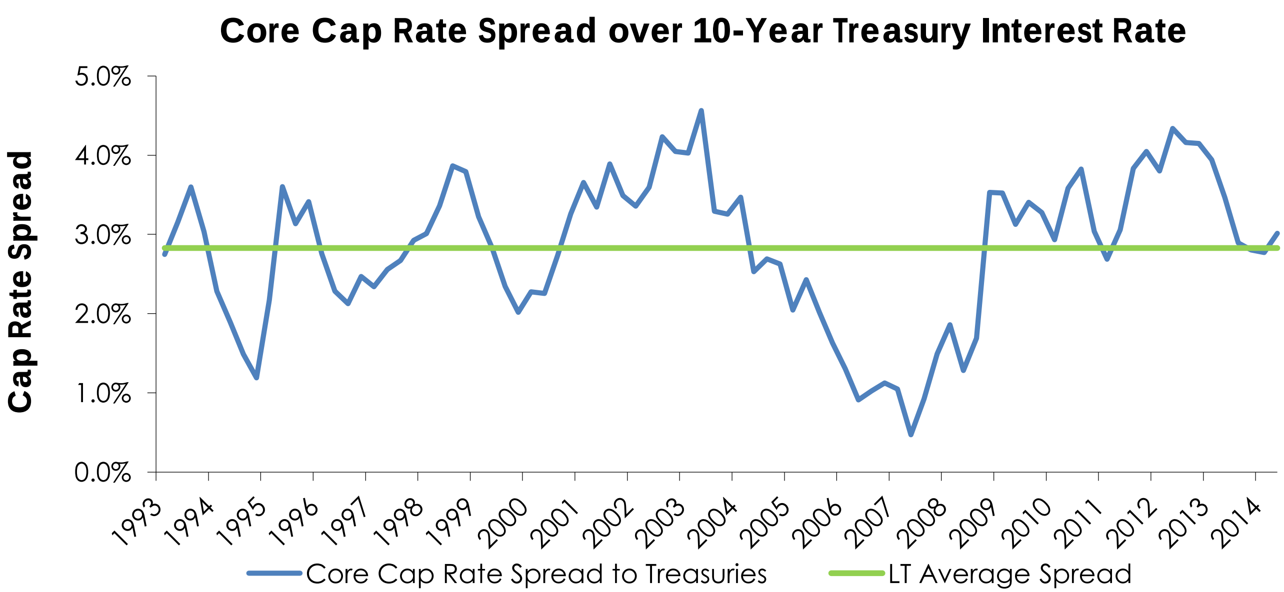
Real Estate Cap Rates



Current cap rates are nearing historic lows, which implies that real estate is "expensive"….

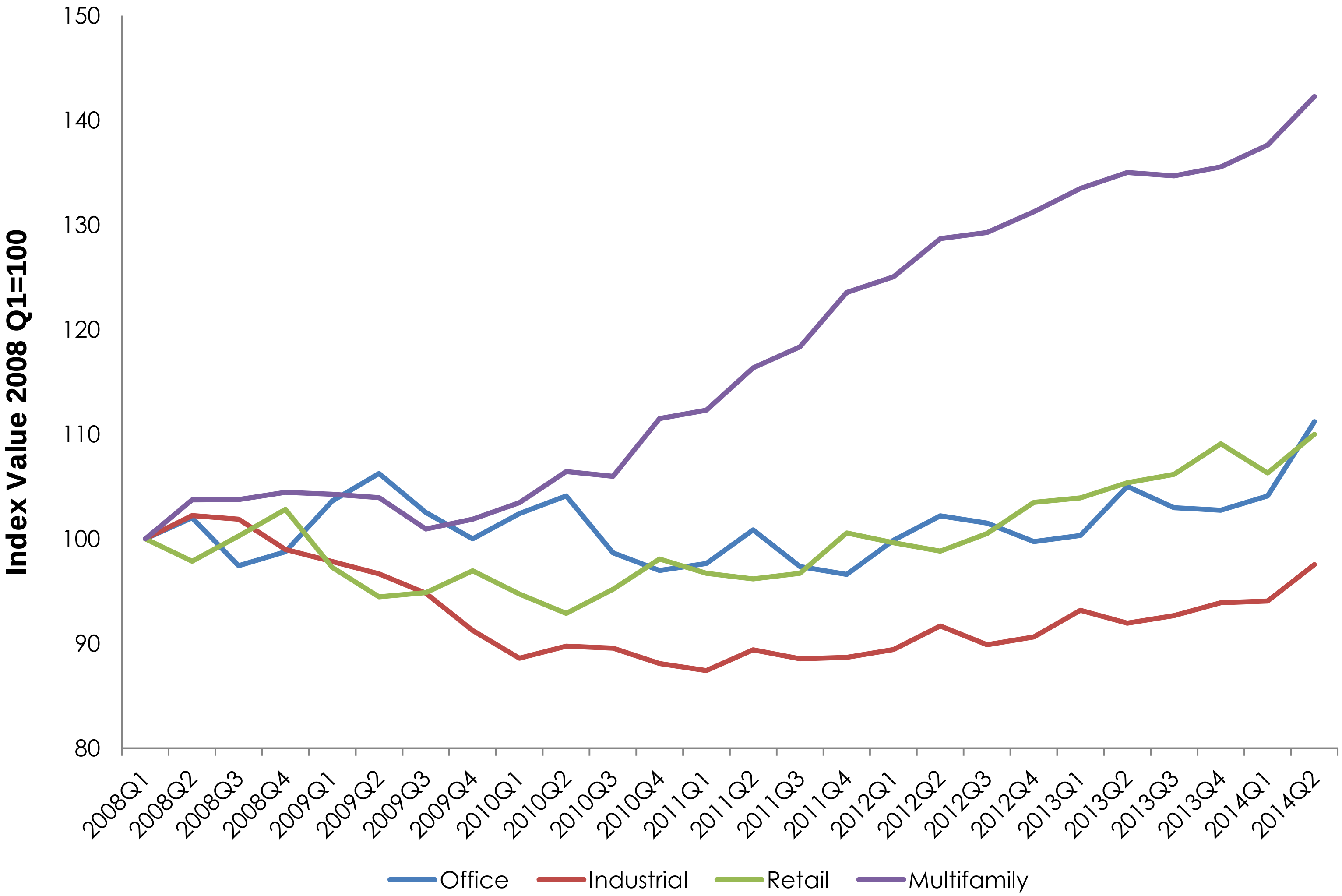


…and cap rate spreads over treasuries are near the long-term average spread.

Core real estate prices may be able to withstand a moderate increase in interest rates.

Source: NCRIEF, www.ustreas.gov. Cap rates used in the above two tables are the trailing four quarter average of the NCREIF current value cap rate.

Real Estate Recovery: NOI



Multifamily Net Operating Income (NOI) is up 40% since start of recovery.

Retail and Office are up 10%.

Industrial is down, but looks to be gaining traction.

Source: NCREIF

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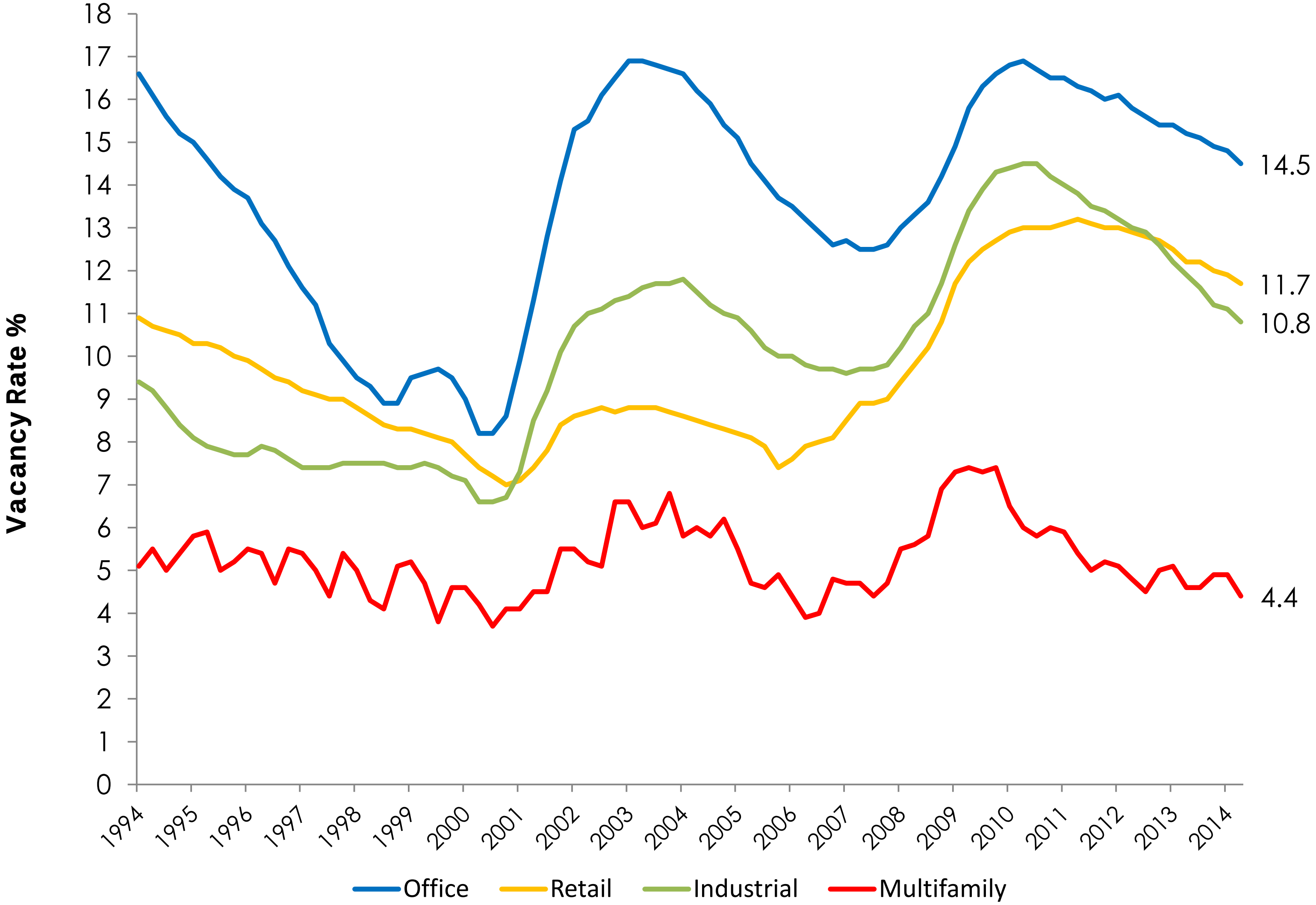
Property Fundamentals: Vacancy



Vacancy rates have begun to improve for all property types, but only multifamily has almost fully recovered.

Multifamily fundamentals have largely been driven by changes in household formation as opposed to overall job growth.

Source: AEW

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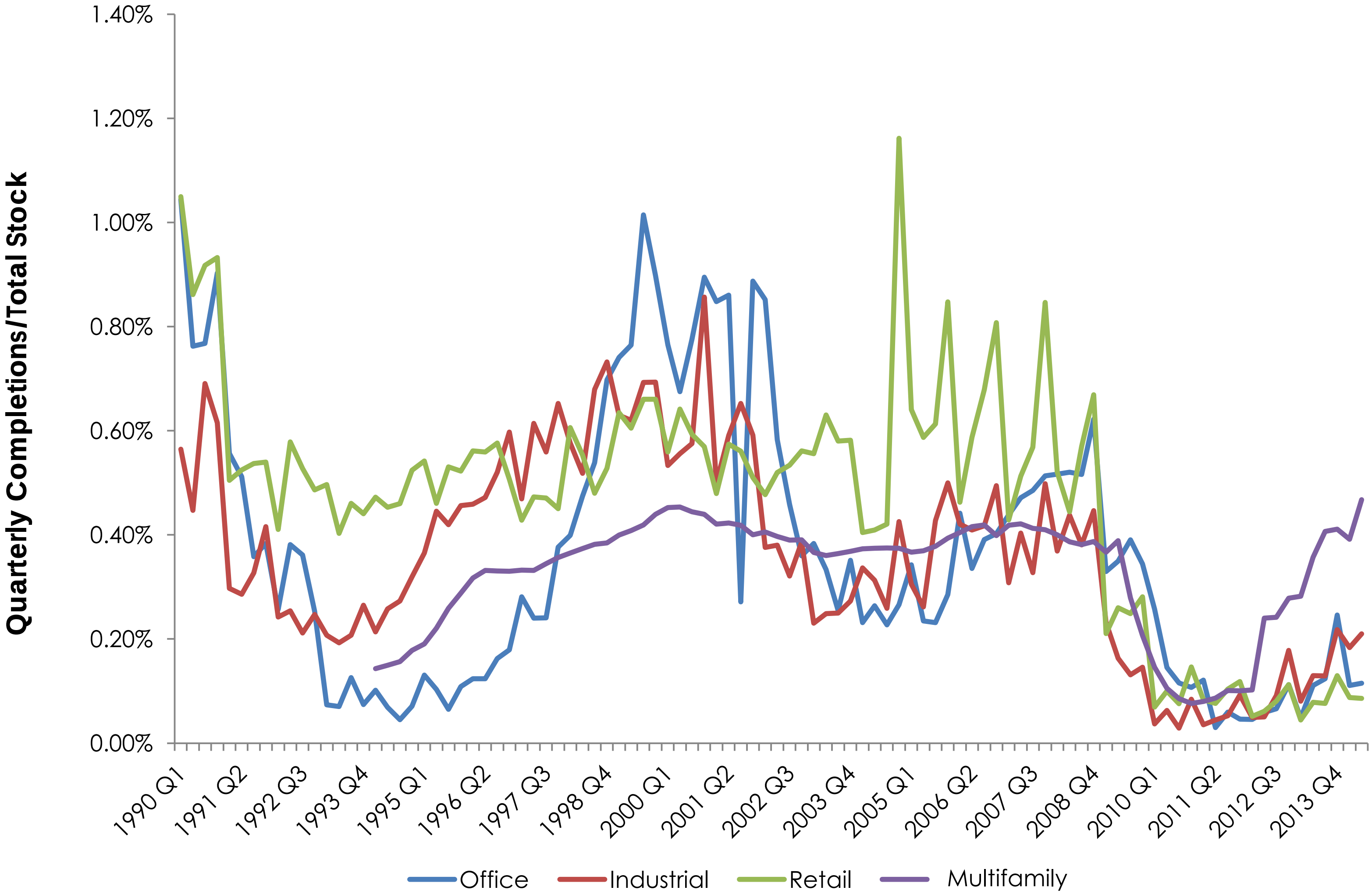
Real Estate Supply

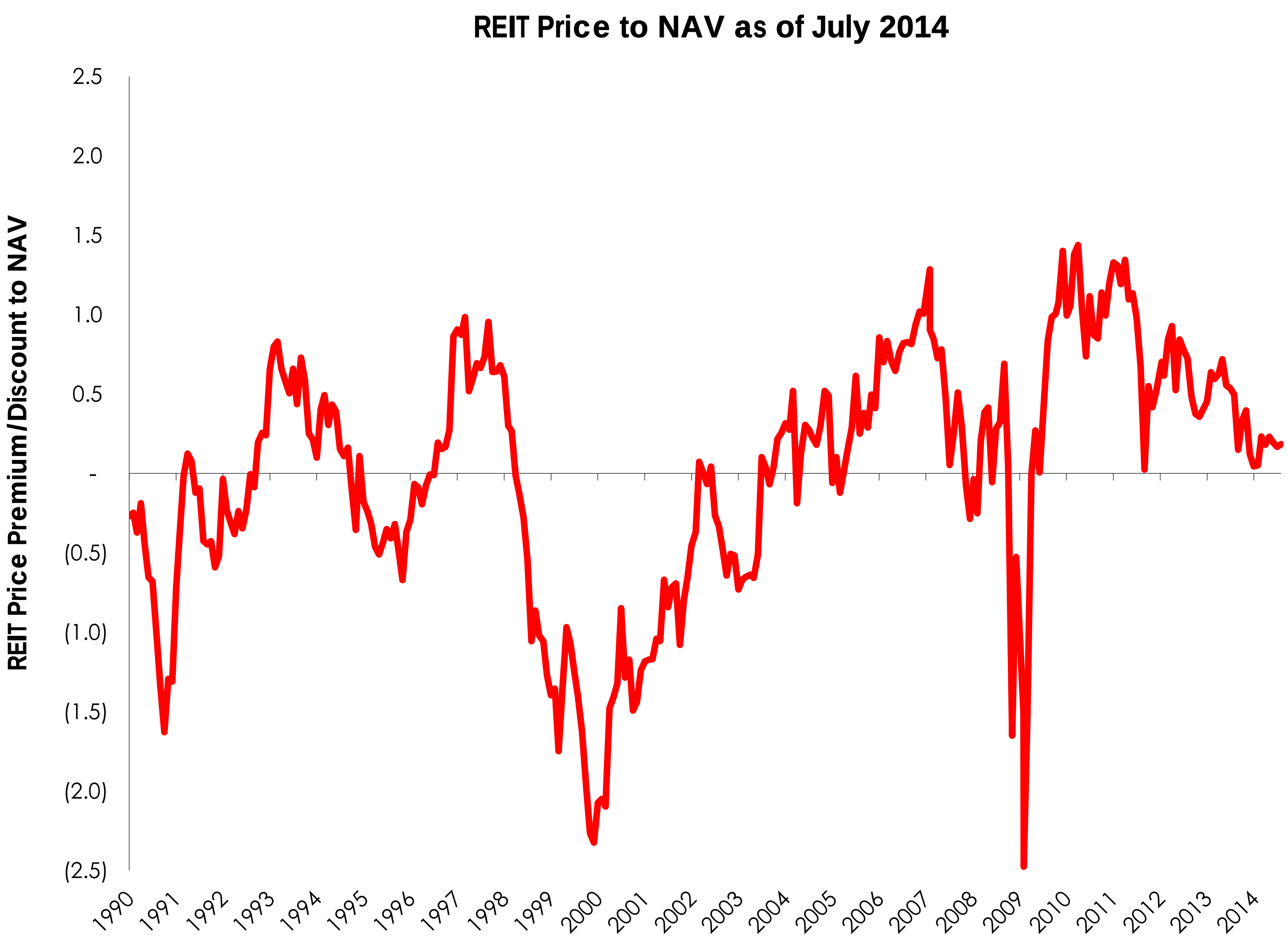


Multifamily construction has exceeded pre-recession levels.

Construction in other property types is beginning to increase, but is still very low.

Source: CBRE-EA, Census, AEW

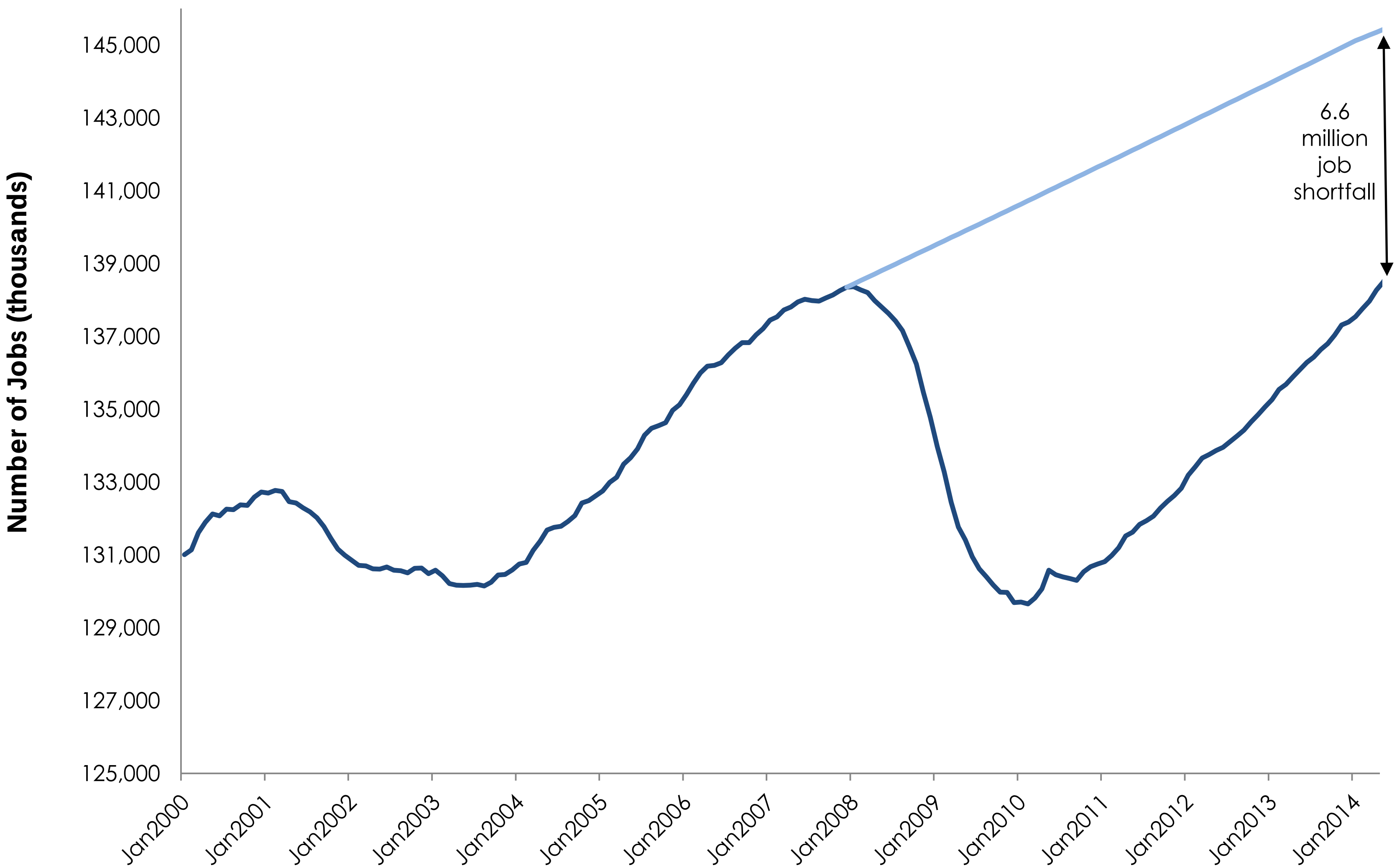
Public Real Estate: U.S.



Source: AEW

Employment

Payroll employment and the number of jobs needed to keep up with the growth in the potential labor force, 2000–2014.



The U.S. has fully recovered all of the jobs lost from the 2007 recession, however…

accounting for population growth, the U.S. is approximately 6.6 million jobs short of the pre-recession growth projection.

Significant new supply of industrial, office and retail space is not expected until employment catches up with population growth.

Source: Bureau of Labor Statistics, Economic Policy Institute.

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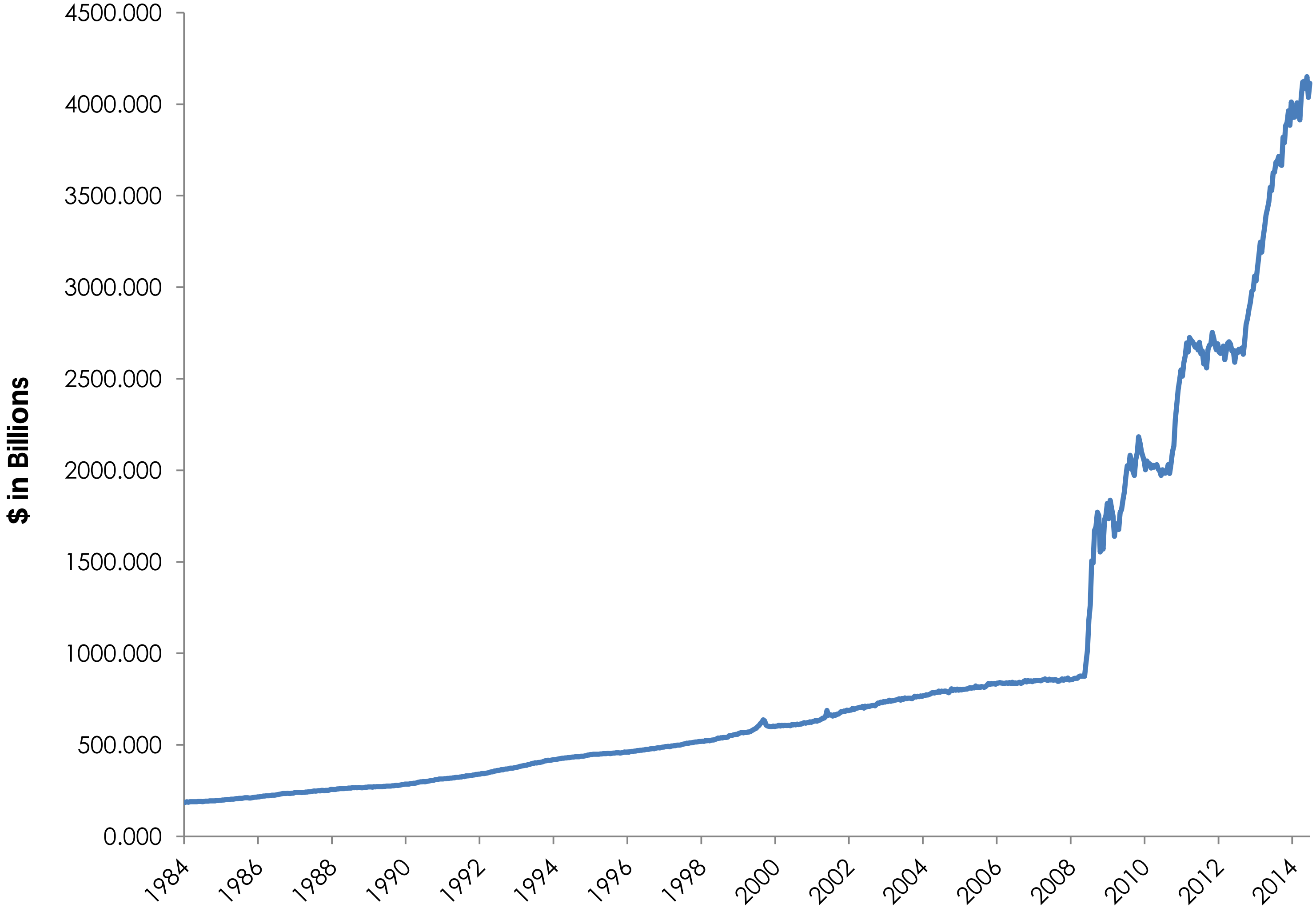
U.S. Monetary Supply



The U.S. Monetary Supply has dramatically increased since the recession.

When will this spur inflation in the future?

Source: Federal Reserve

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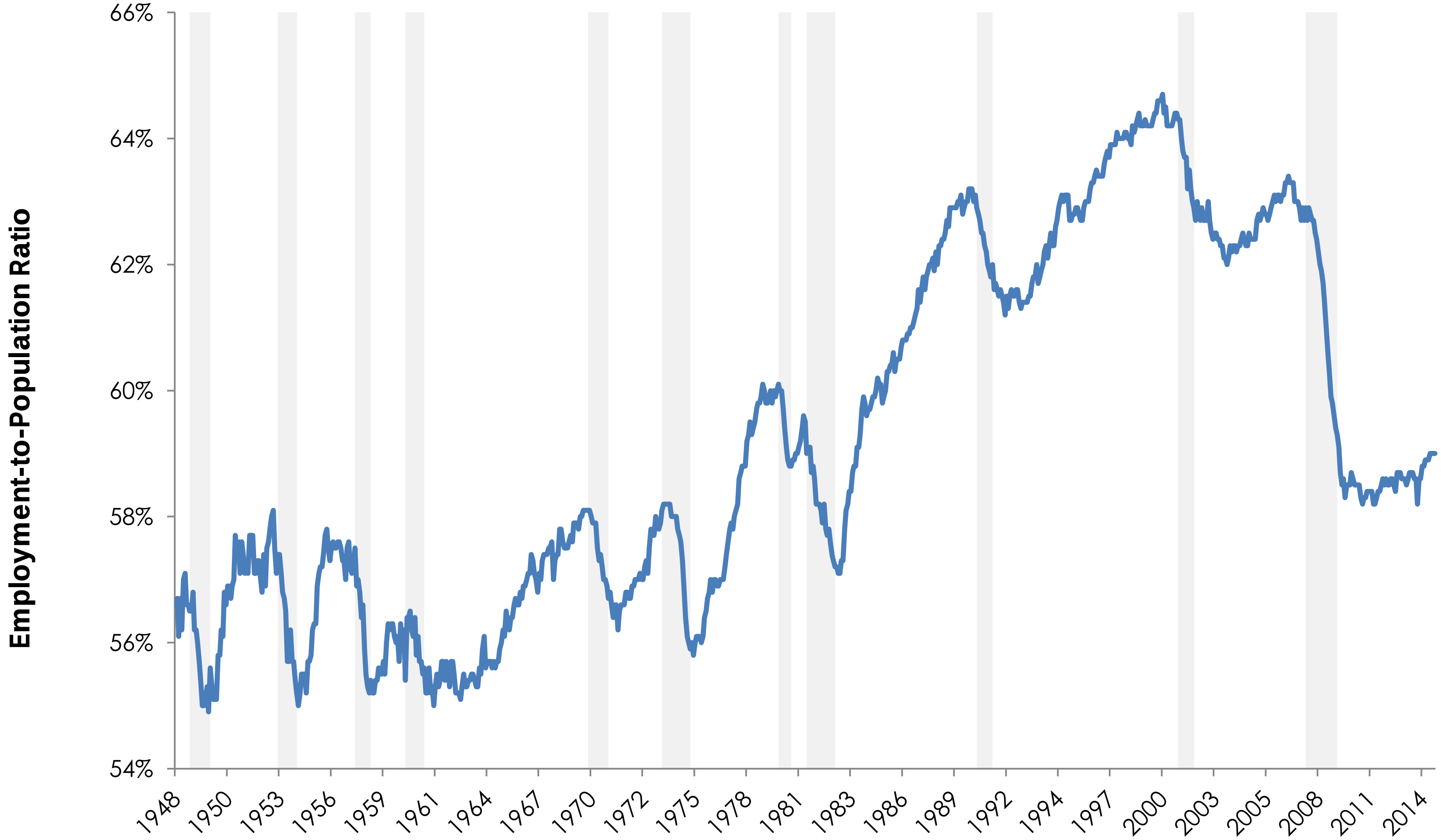
U.S. Employment

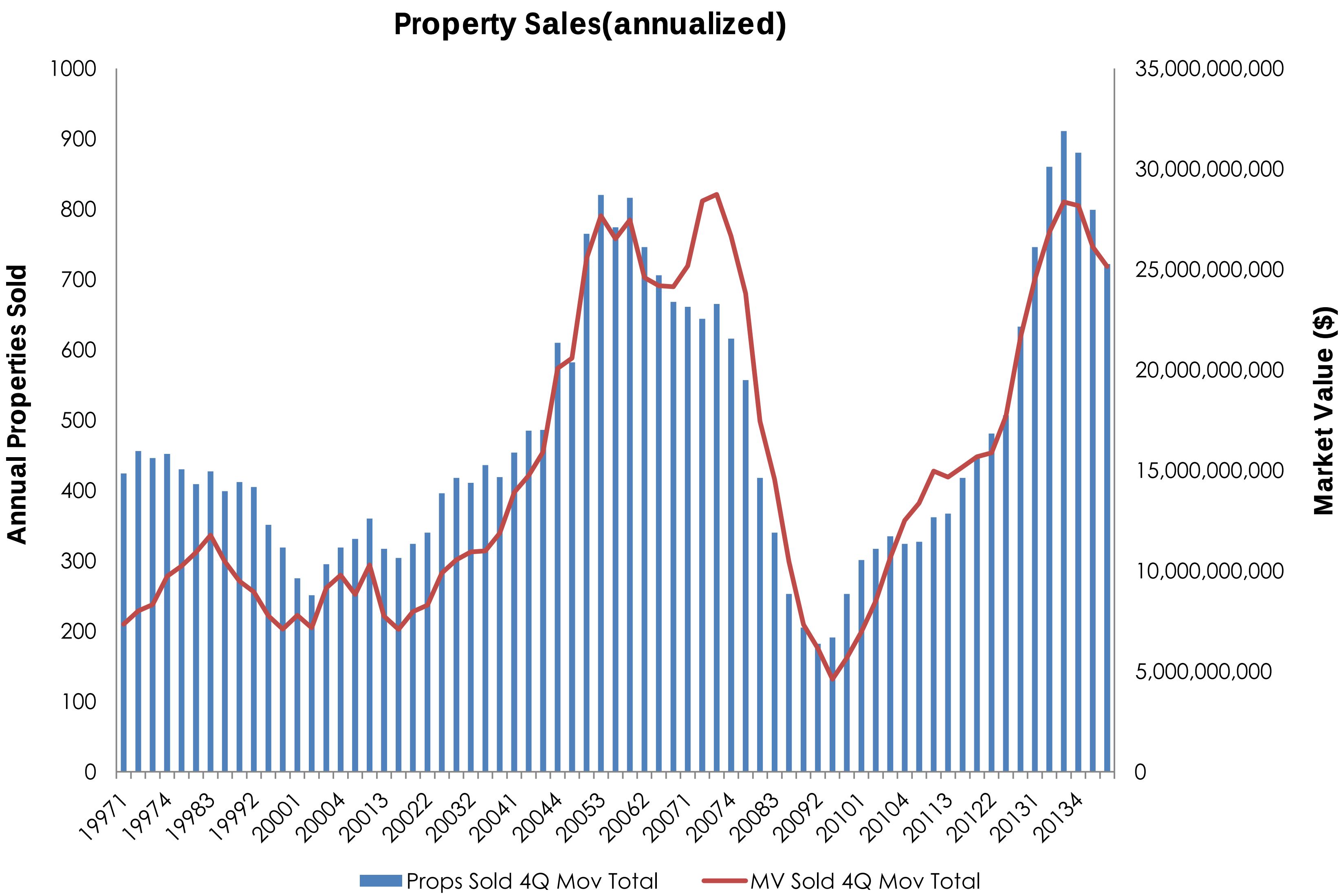
Employment-to-population ratio of total population age 16 and older, 1948–2014



Although unemployment figures have begun to improve, the U.S. workforce is far from its pre-recession levels.

Source: Bureau of Labor Statistics. Shaded areas denote recessions.

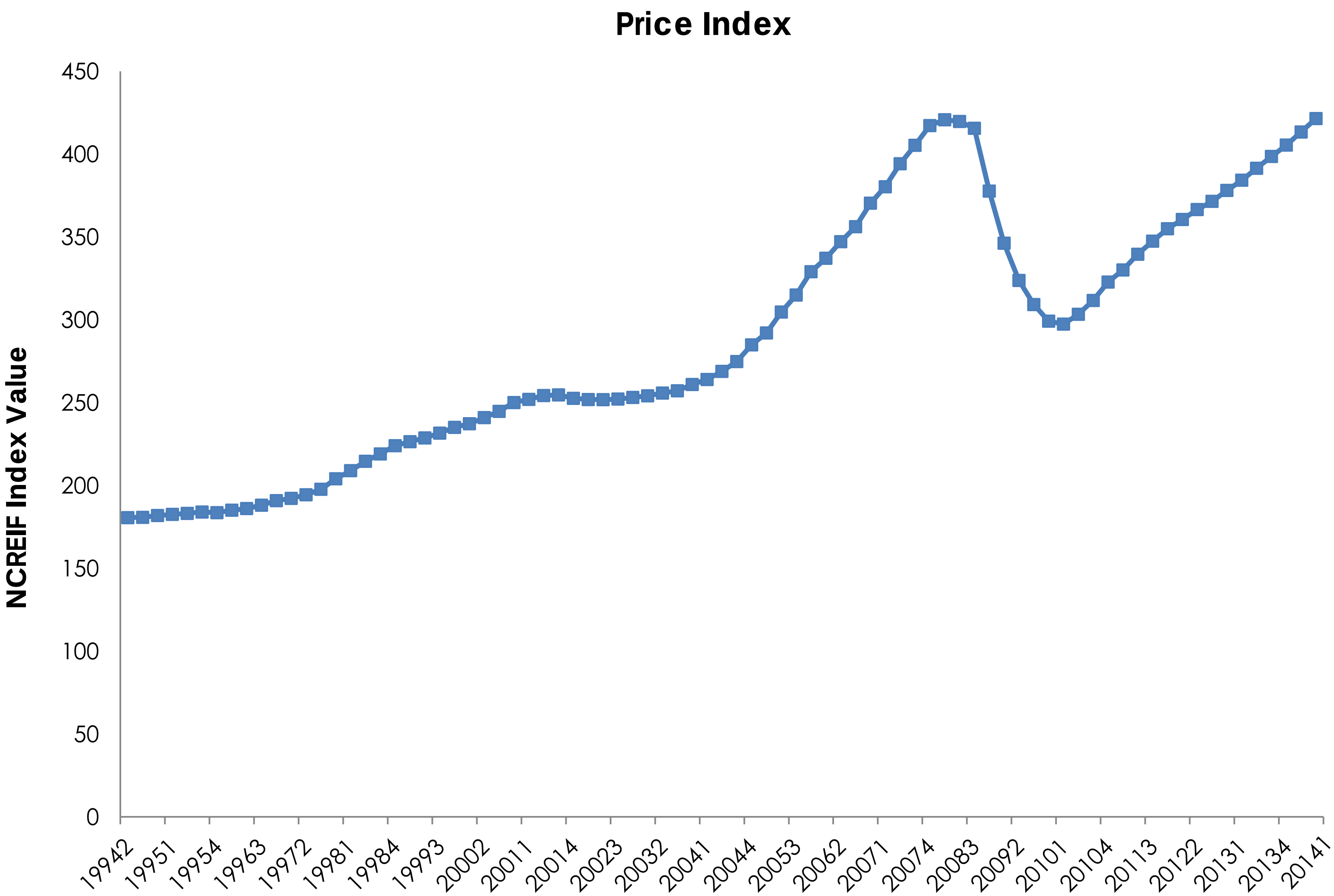
U.S. Commercial Transactions



Transaction volume within the U.S. commercial market has picked up, almost reaching peak levels.

Source: NCREIF. Each data point represents the rolling one-year total of transaction volume.

Real Estate Recovery



The NCREIF Index value has returned to its peak.

Peak-to-trough values were down 29%.

Source: NCREIF

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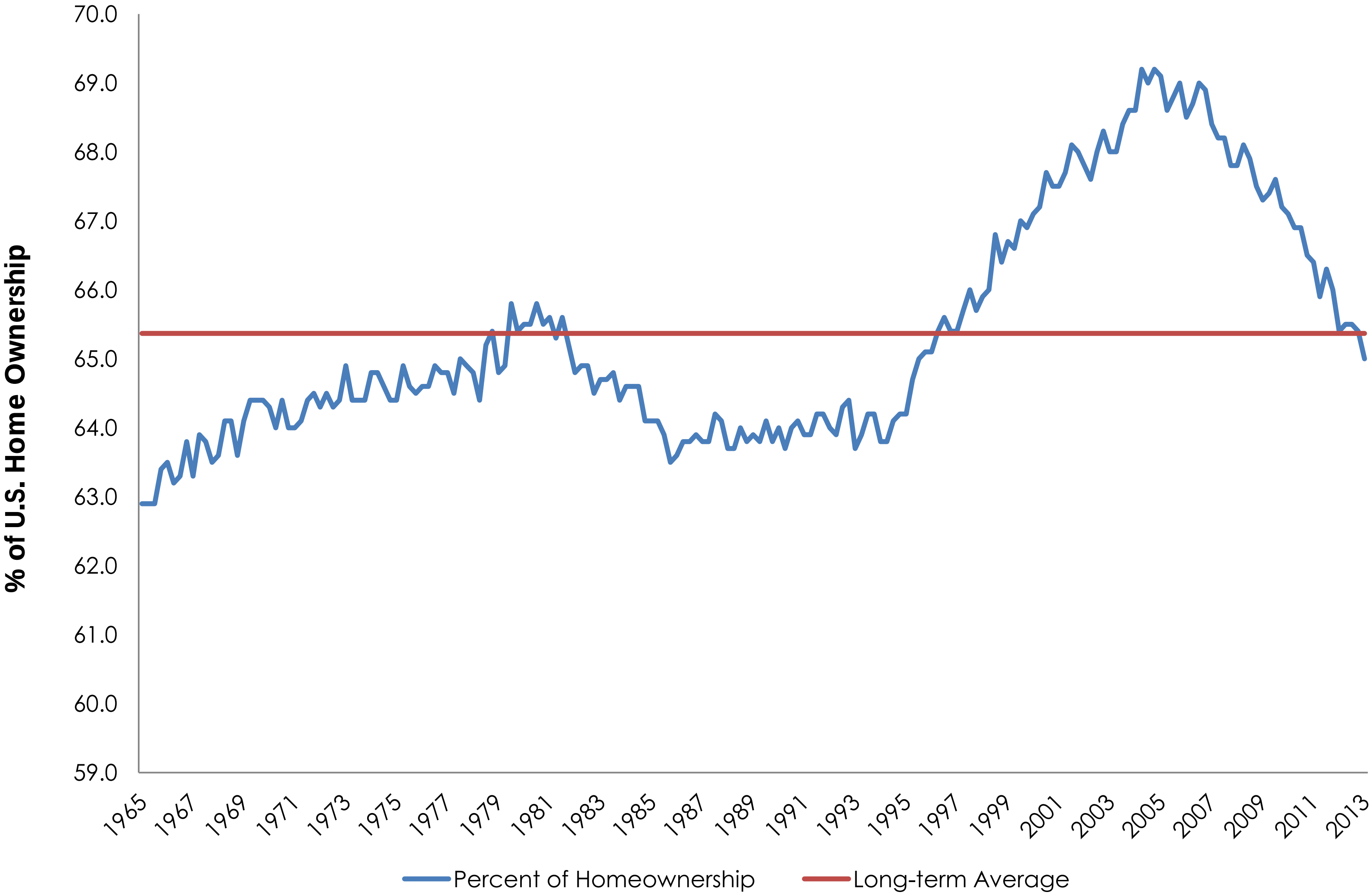
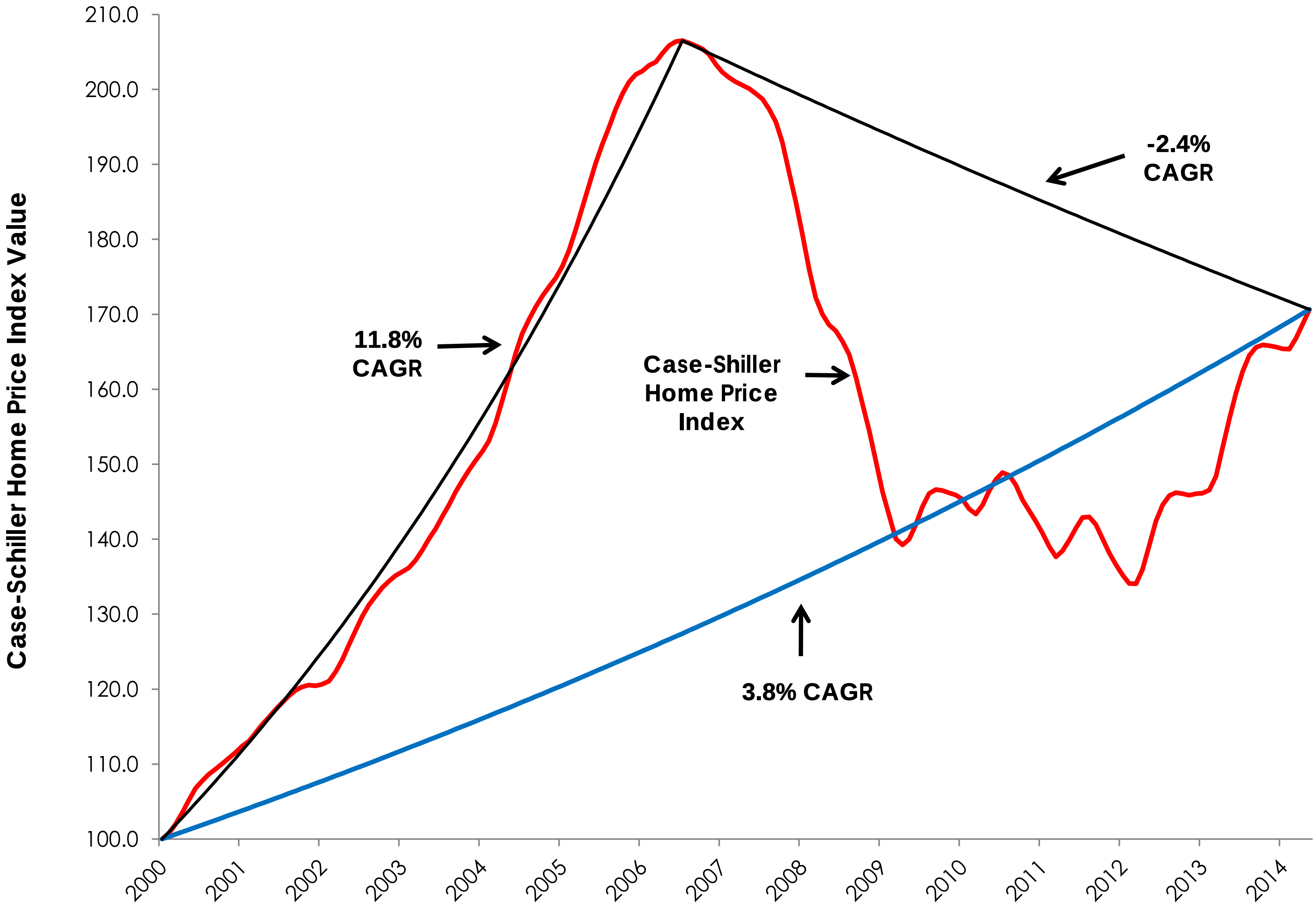
U.S. Housing Market



Homeownership in the U.S. has dropped below its long term historic average of 65.4%.

Source: U.S. Census Bureau

U.S. Housing Market



Housing finally began to recover in 2012.

The Case-Schiller Home Price Index Value has risen 27.5% since its trough in 2012.

Source: S&P/Case-Shiller, AEW

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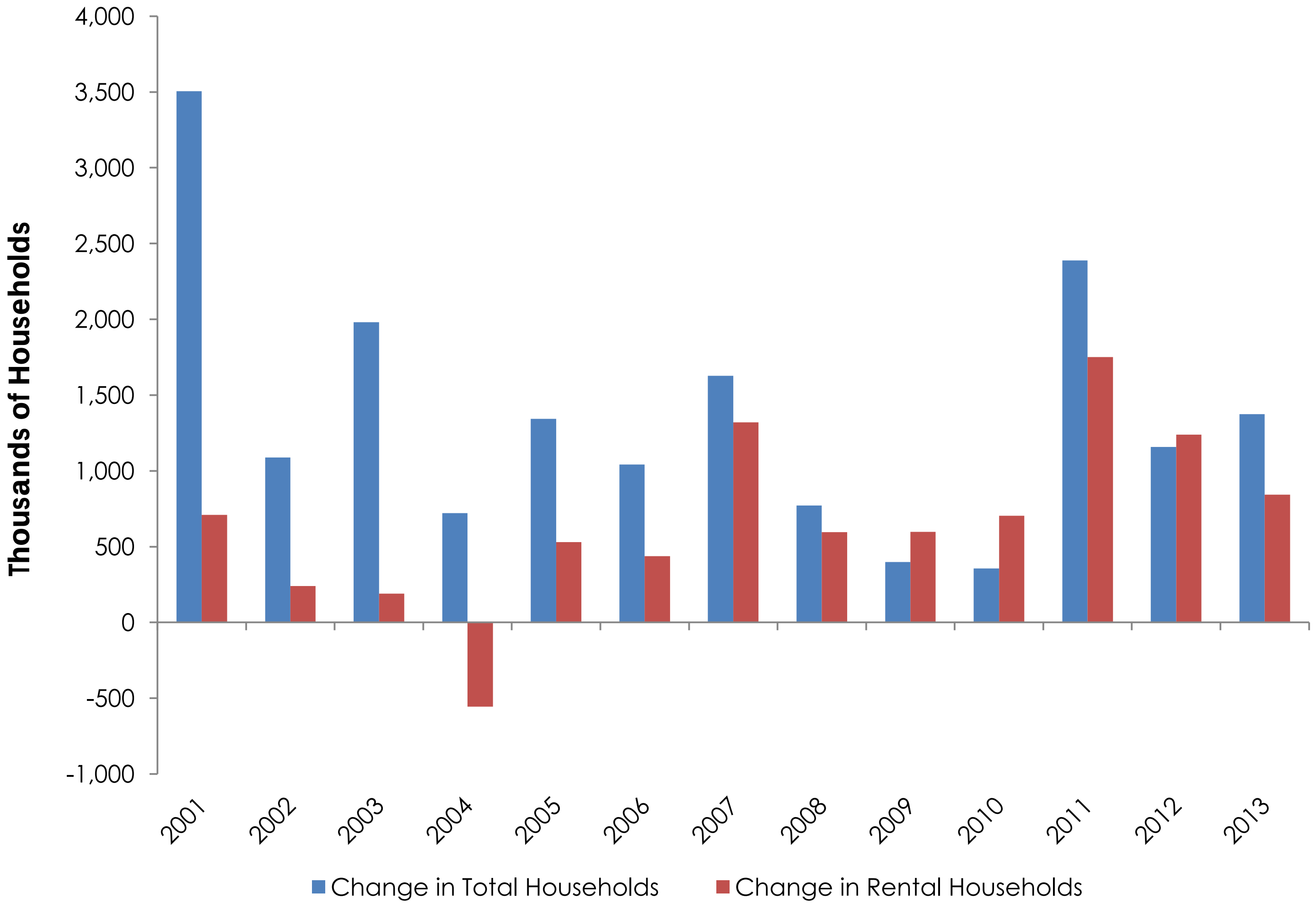
U.S. Household Formation

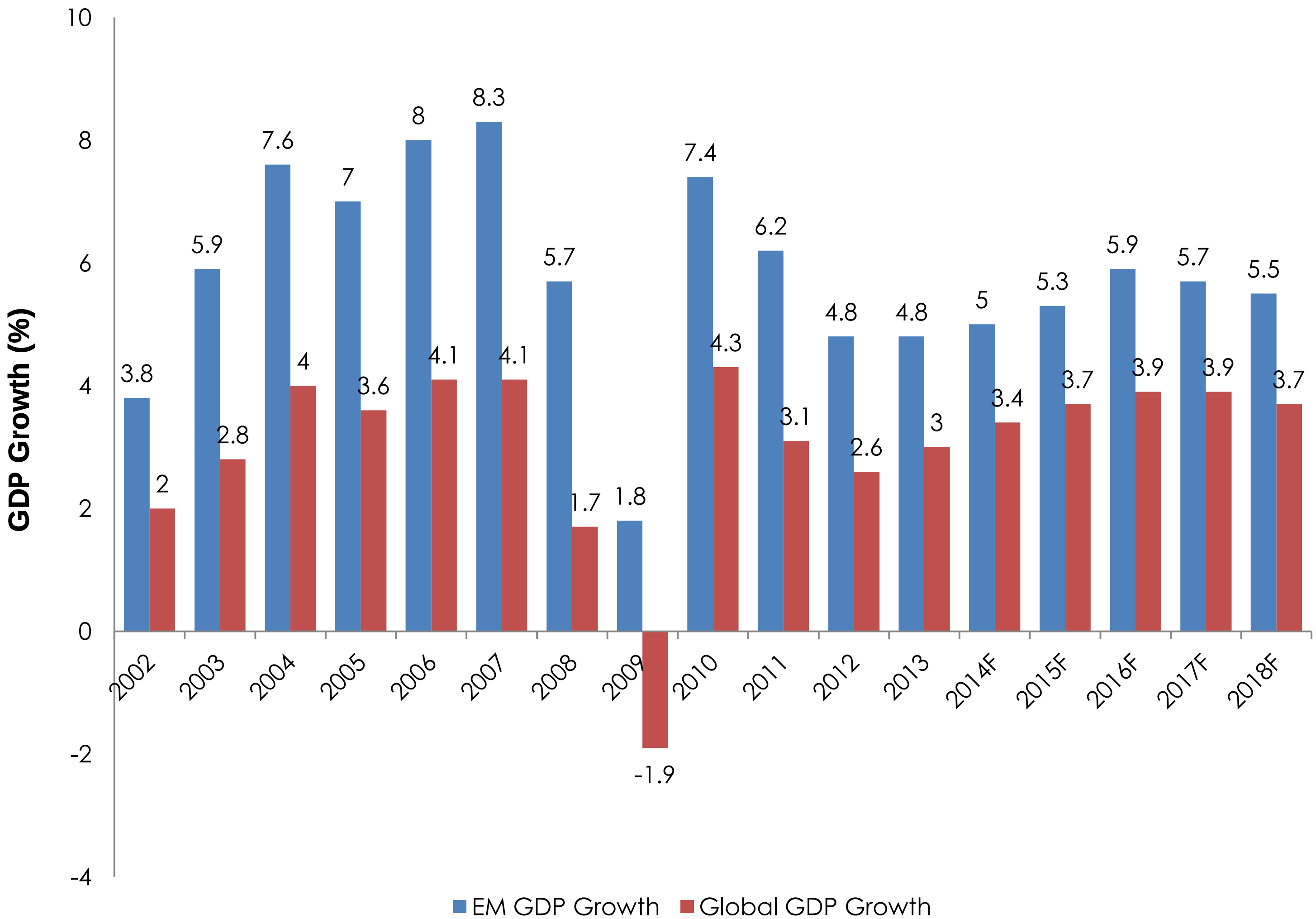


After the lull in household formations between 2008 and 2010, a spurt of household formations occurred in 2011.

Formation of rental households remains high. At some point, the market might see a tipping point where renters turn into buyers.

Source: S&P/Case-Shiller, AEW

Emerging Markets GDP Growth



Future estimates predict that the gap between global GDP growth and emerging markets GDP growth is closing.

Source: IHS Global Insight , Morgan Stanley

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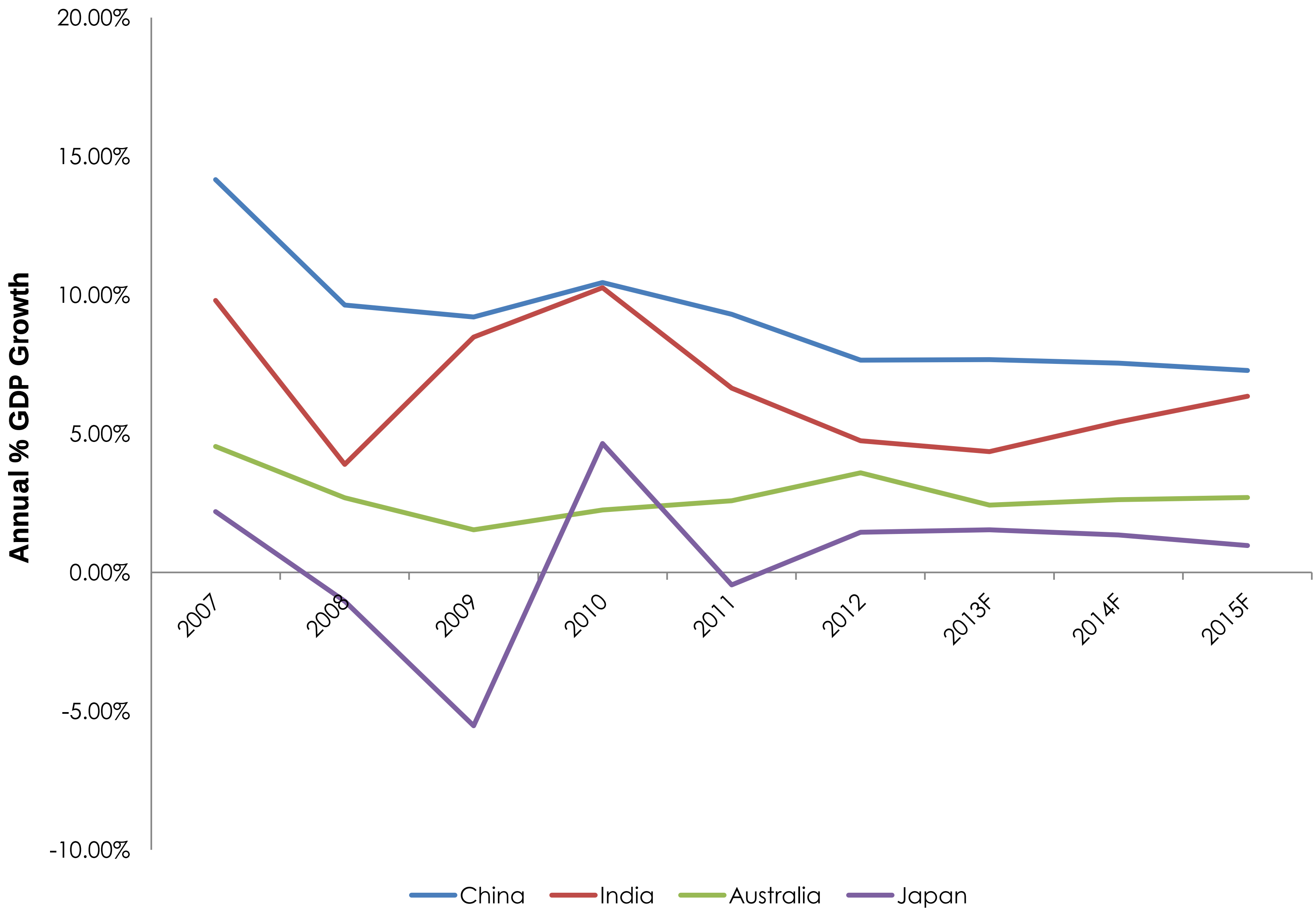
Asia-Pacific: GDP Growth



Asia is expected to continue its overall growth, although the growth of China and Japan's economies are slowing.

Source: International Monetary Fund: World Economic Outlook. As of April 2013

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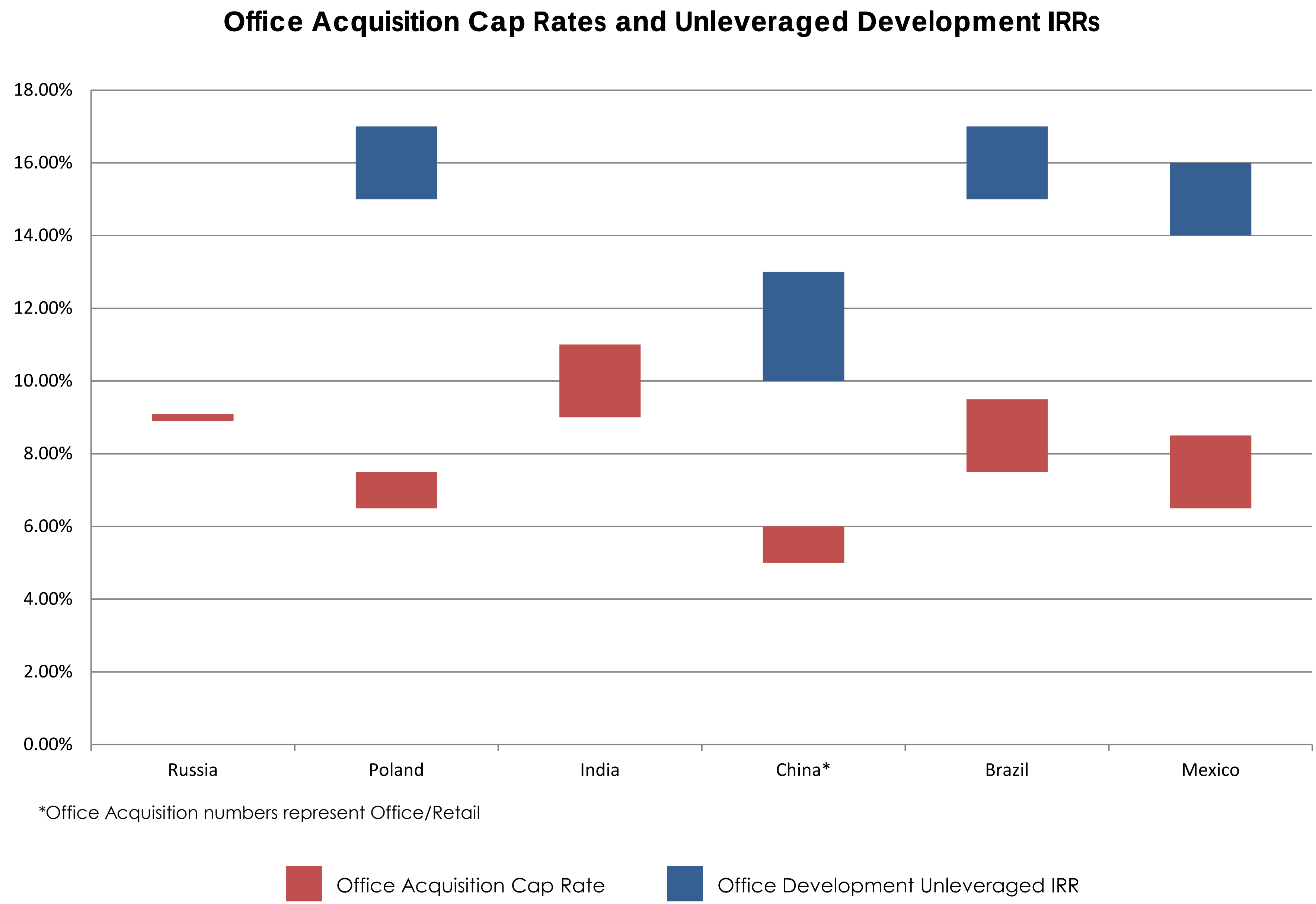
Emerging Market Office



Source: Hines

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