2012-2013 ANNUAL REAL ESTATE UPDATE

California Public Employees' Retirement System

November 2013

CONTENTS

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, Senior Vice President:
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 for 13 years inclusive of real estate acquisitions, development, and consulting as well as agricultural commodities trading.

REAL ESTATE PORTFOLIO

CalPERS' *Real Estate Portfolio*:

1. **Significantly improving portfolio metrics towards strategic targets**
   a) **More control through separate accounts**
   b) **Lower leverage, stronger debt-service coverage**
   c) **Increased focus on emerging managers, Responsible Contractor Policy, and sustainability**
   d) **Increased alignment and reduced investment-management fees**
2. **Facing challenging market factors**

REAL ESTATE UNIT

CalPERS' *Real Estate Unit*:

1. **Making significant progress towards achieving 2011 Strategic Plan goals**
2. **Implementing changes that make CalPERS a better investor**
3. **Enhancing asset management capabilities, particularly risk management, to reduce the likelihood of another 2009 write down in the future**
4. **Facing resource challenges**
   a) **Alignment and compensation**
   b) **Legal**
   c) **Valuation**
   d) **Technology**

HISTORICAL CONTEXT

CalPERS' experience over the last real estate cycle:

CalPERS ($ Billions)	6/30/2004	6/30/2008	6/30/2013
Core Partnerships*	8.7	11.2	13.0
Noncore	3.3	10.7	10.6
Total Real Estate	12.1	21.9	23.7
% Noncore	**28%**	**49%**	**45%**
Total CalPERS Portfolio	166.2	239.2	257.9
Real Estate as a % of the Total Portfolio	**7%**	**9%**	**9%**

*Based on QPR classifications, includes 6/30/13 QPR Base Core, DT Core, Legacy Core, and DT Value-Added

1. **Almost doubled invested capital and tripled the number of partnerships, primarily through passive interests in commingled funds**
2. **Increased use of leverage, recourse debt, cross-collateralization, etc.**
3. **Invested more heavily in early life cycle assets, namely land and development**
4. **High vintage-year concentration**

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:

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

Strategic Plan remains relevant and prudent.

1. **Strong Strategic portfolio performance**
2. **Greater control of portfolio**
3. **Consistent with CalPERS' Investment Beliefs**

MARKETS DYNAMICS

CalPERS faces a challenging and highly competitive investment market:

1. **There are approximately 450 real estate funds in the market targeting aggregate capital commitments of $168 billion**
2. **Sovereign wealth funds, high net worth, and other large direct investors**
3. **Persistent low interest rates fueling demand for income-producing assets**
4. **Capital flows putting upward pressure on pricing**
5. **Pockets of distress still exist but are less widespread**

PROPERTY MARKET CHALLENGES

Core Market Dynamics (not unlike 2004):

1. **Stabilized assets in gateway cities appear to be fully priced**
2. **Cap rates at historic lows**
3. **Low economic growth**
4. **Occupancy and rent growth recovery lag pricing**

International Markets:

1. **Developed markets (e.g., Europe) opportunities not part of Strategic Plan**
2. **Developing markets have slowing growth outlooks**
3. **Legal issues**
4. **Social and demographic changes**
5. **Exchange rates**

IMPLEMENTATION CHALLENGES

Implementation challenges include:

1. **Maintaining focus and diligence on implementation of Strategic Plan**
2. **Desire to put more capital to work**
3. **Core separate account managers report that it is difficult to invest and generate returns in excess of hurdle rates**
4. **Lack of control over Legacy commingled investments**
5. **Reinvestment risk**
6. **Availability of appropriate human and other resources**
7. **Compensation**
8. **Significant resource allocation to Responsible Contractor Policy, Environmental Social & Governance, and Emerging Market initiatives**

STRUCTURAL IMPROVEMENTS

Structural improvements have significantly reduced risk:

1. **Improved investment process (Annual Investment Plans, Real Estate Investment Committee)**
2. **Improved analytical tools (AREIS, quarterly portfolio reviews)**
3. **Cross-portfolio collaboration with other asset-class leaders (Investment Strategy Group)**
4. **Focus on current income versus capital appreciation**
5. **Cost controls**
6. **Cultivation of internal staff**

CONTINUED MONITORING

Several areas merit diligent oversight:

1. **Emerging markets exposure**
2. **Progress towards long-term strategic targets (i.e., Base versus Domestic Tactical; orderly disposition of Legacy portfolio assets)**
3. **Staff’s compensation program**
4. **Reliance on outside resources; internalize whenever possible**

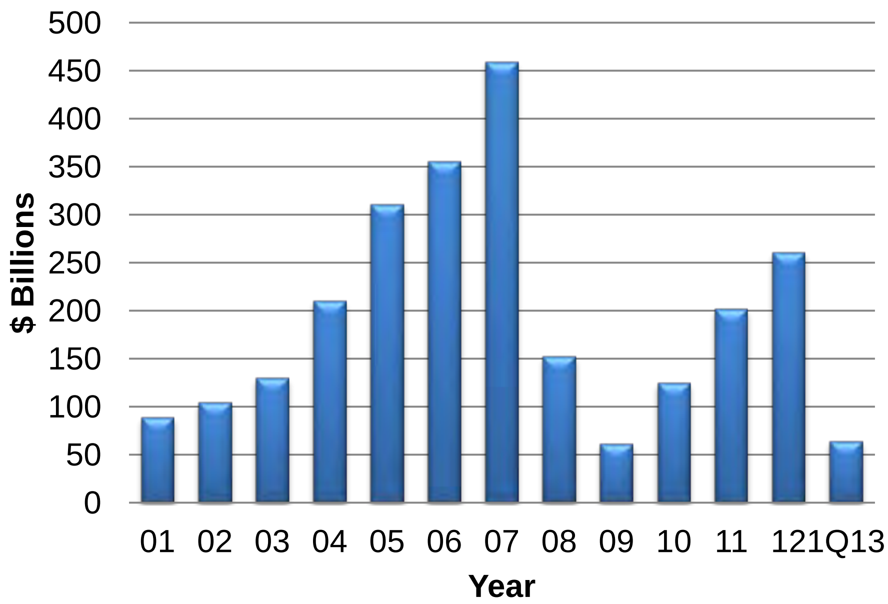
CONCLUSION

1. **Strong progress on 2011 Strategic Plan objectives, portfolio management initiatives, and REU operational efficiency**
2. **Portfolio showing positive performance in line with expectations around Strategic Plan**
3. **Market conditions are challenging**
4. **Now is not the time to relax investment guidelines, which are acting as an appropriate governor on acquisition pricing**
5. **Reaching target allocation will likely be a deliberate process**

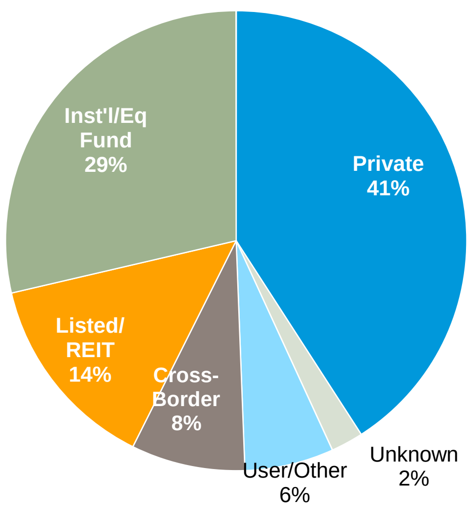
SECTION 2 APPENDIX

CAPITAL FLOWS

Real Estate Transaction Volumes



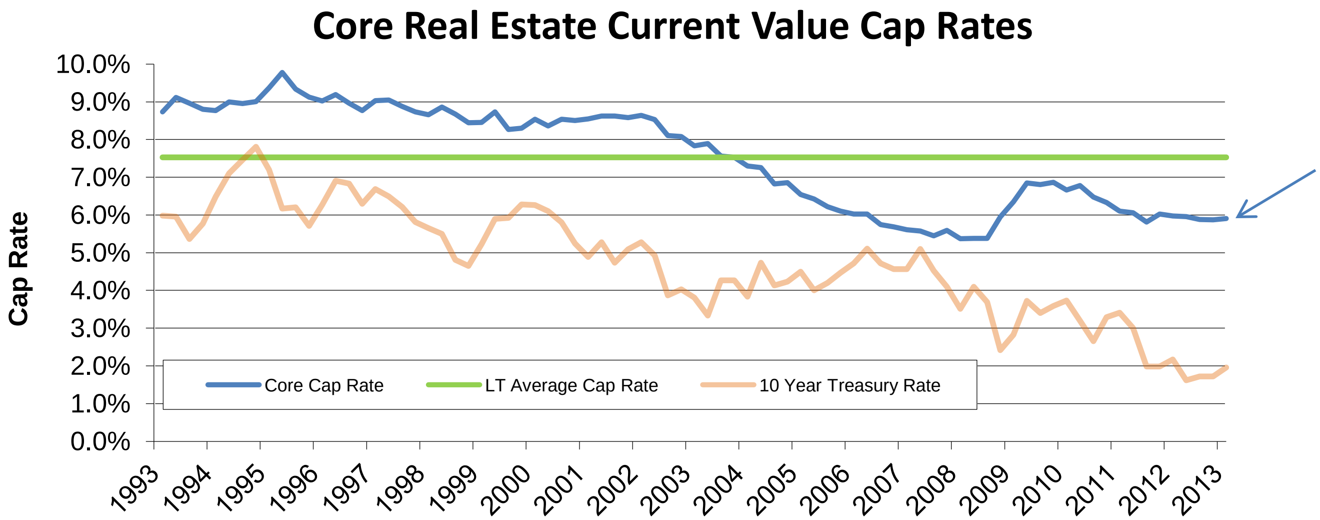
Capital Sources



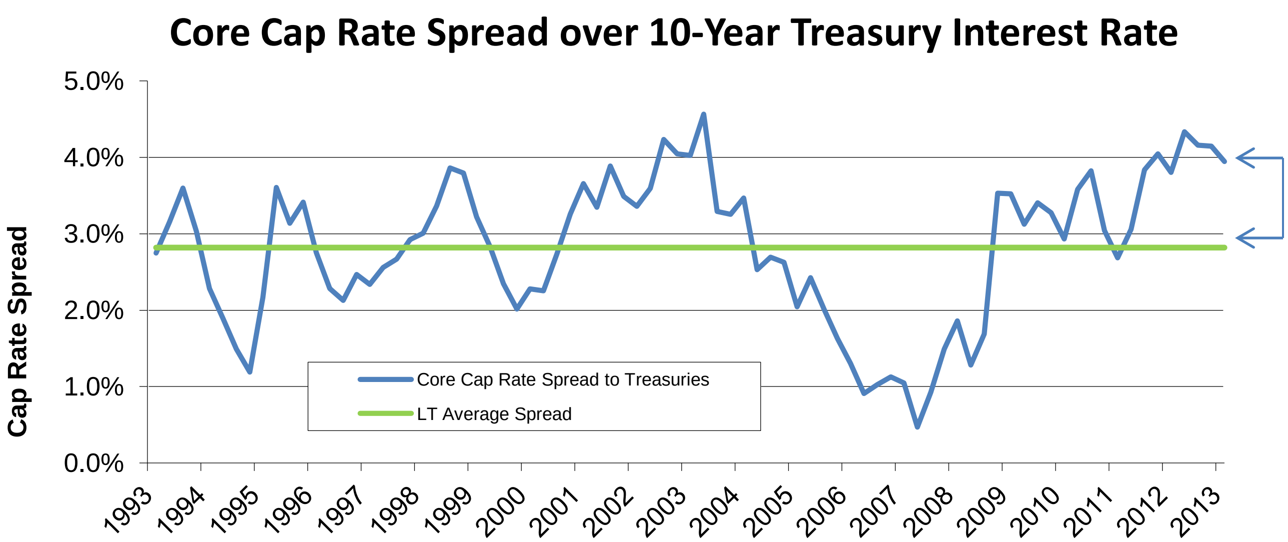
U.S. commercial transaction volumes have picked up but are still below peak levels. Part of the competition to investment managers are international investors who view U.S. commercial properties in gateway cities as relatively attractive safe havens.

Sources: Real Estate Capital Analytics, Deutsche Asset & Wealth Management. Data is not rolling from prior periods.

REAL ESTATE CAP RATES



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

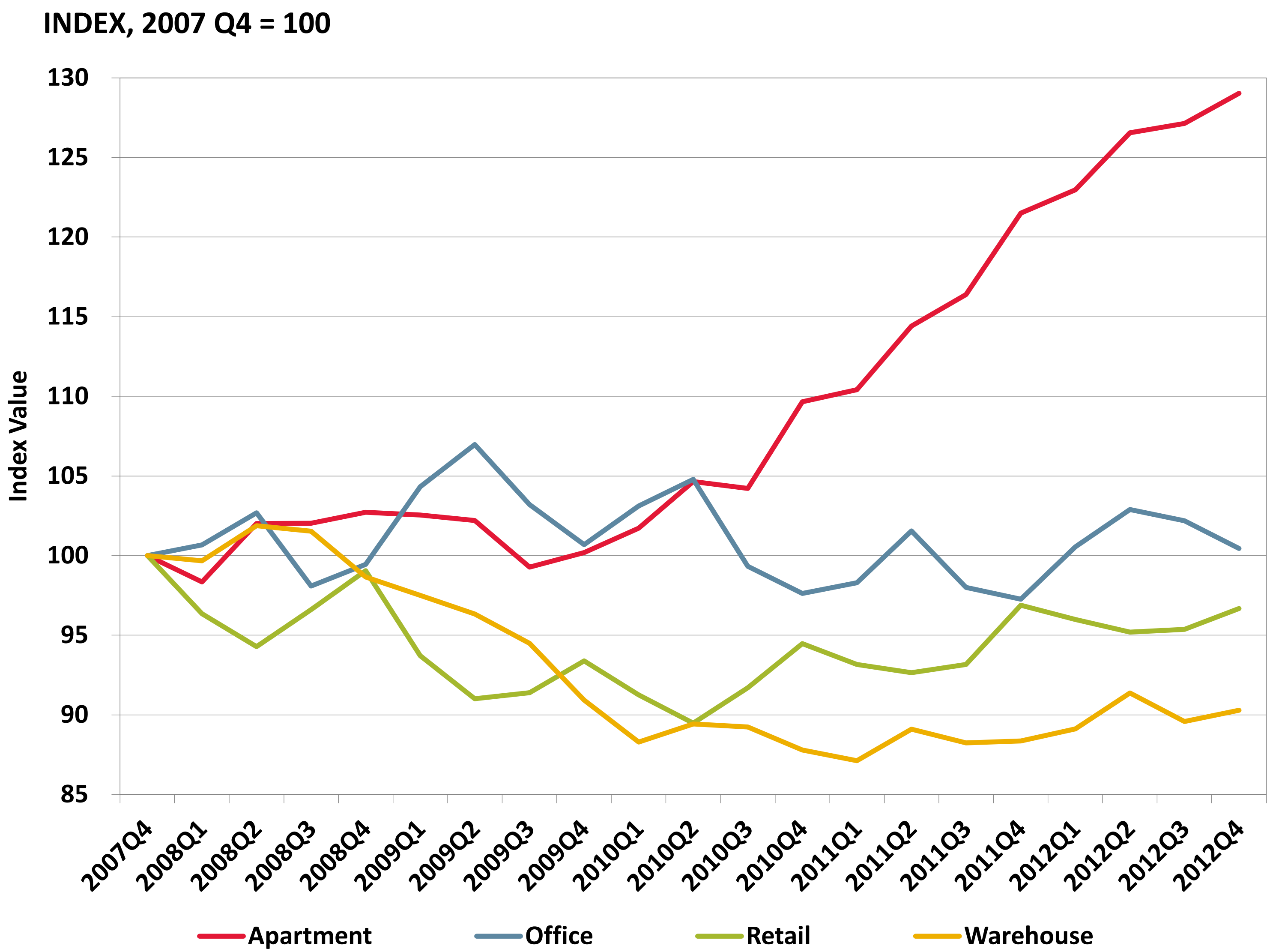


…however, cap rate spreads over treasuries are nearly at historic highs, implying that real estate may be relatively "inexpensive."

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

Sources: 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

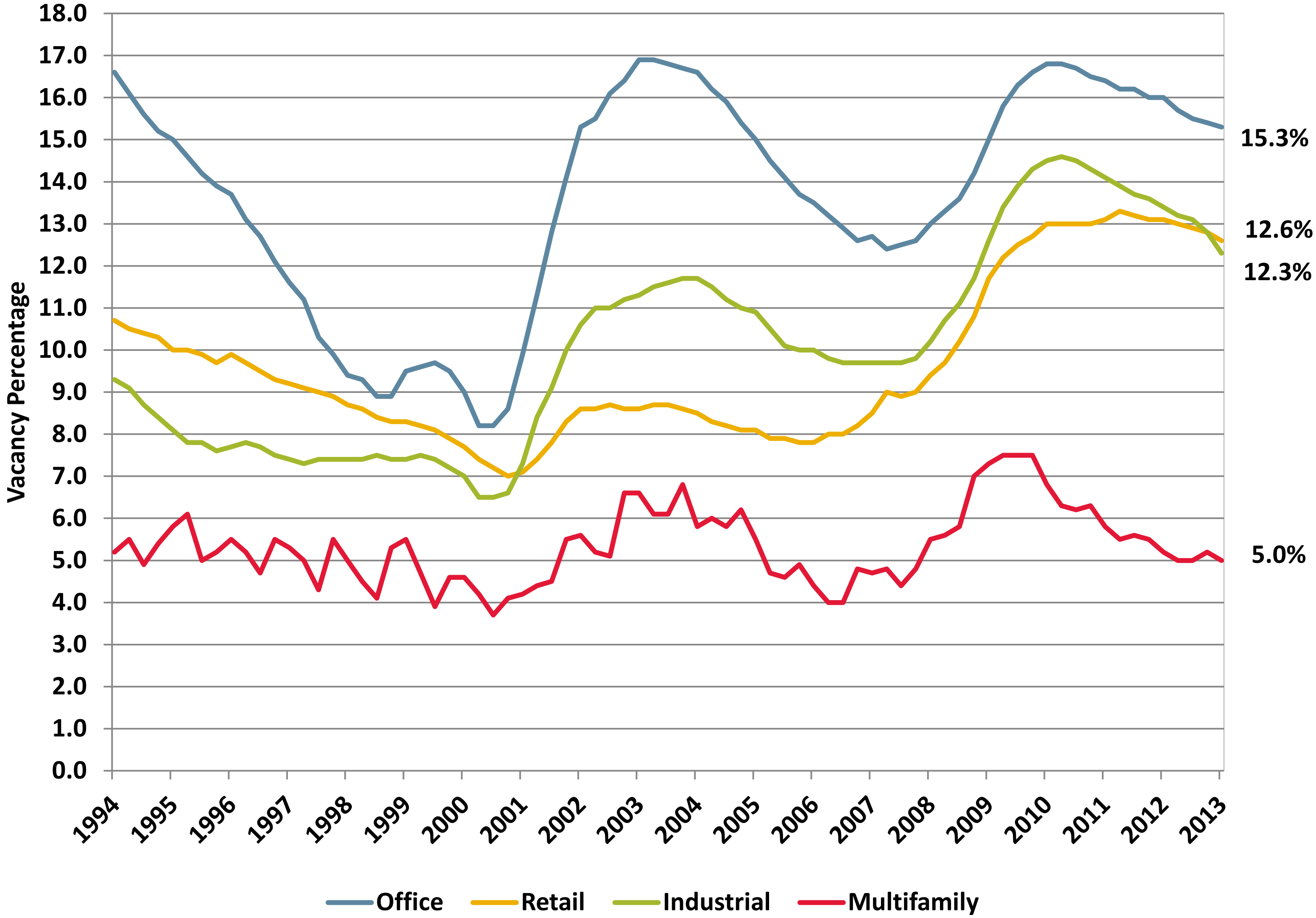


Apartment Net Operating Income (NOI) is up nearly 30% since start of recovery.

Other property types are still flat or down.

Source: NCREIF

PROPERTY FUNDAMENTALS: VACANCY



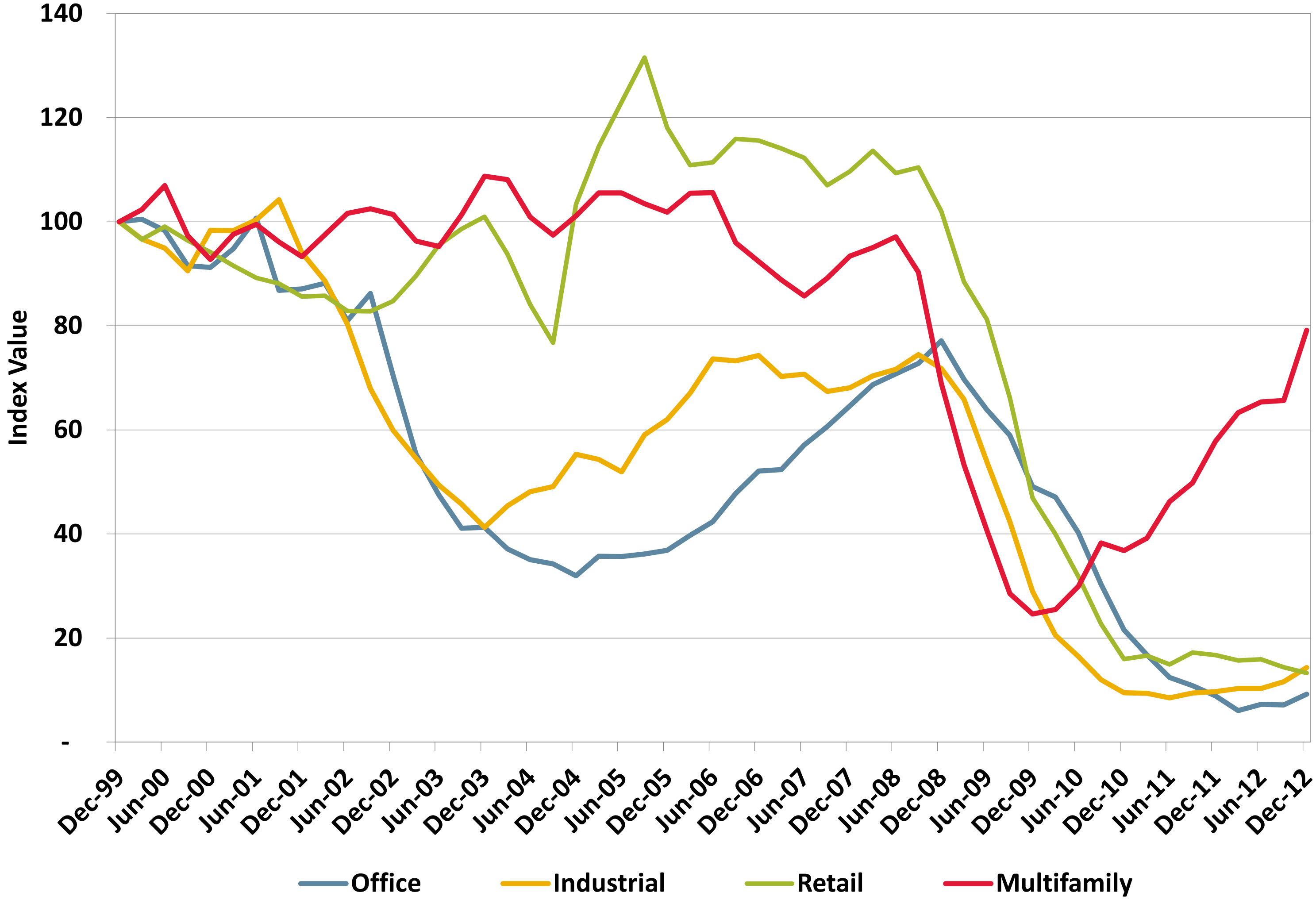
Occupancy rates have begun to improve for all property types, but only apartments have fully recovered.

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

Source: CBRE-EA, AEW

REAL ESTATE SUPPLY

INDEX, 1999 Q4 = 100

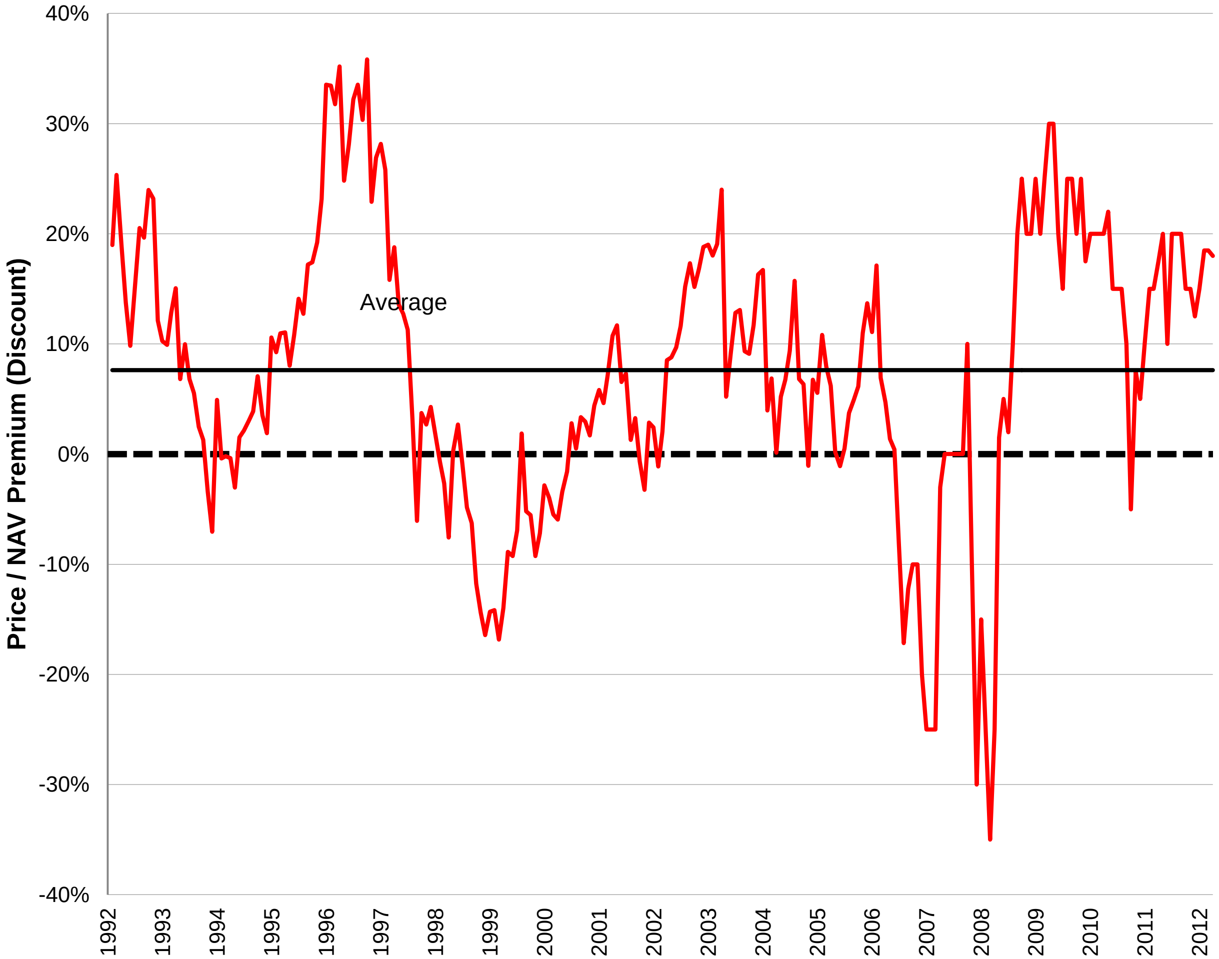


Apartment construction is nearly back to pre-recession levels, but total housing construction remains well below household growth.

Construction in other property types still at multi-decade lows.

Source: CBRE-EA, Census, AEW

PUBLIC REAL ESTATE: U.S.

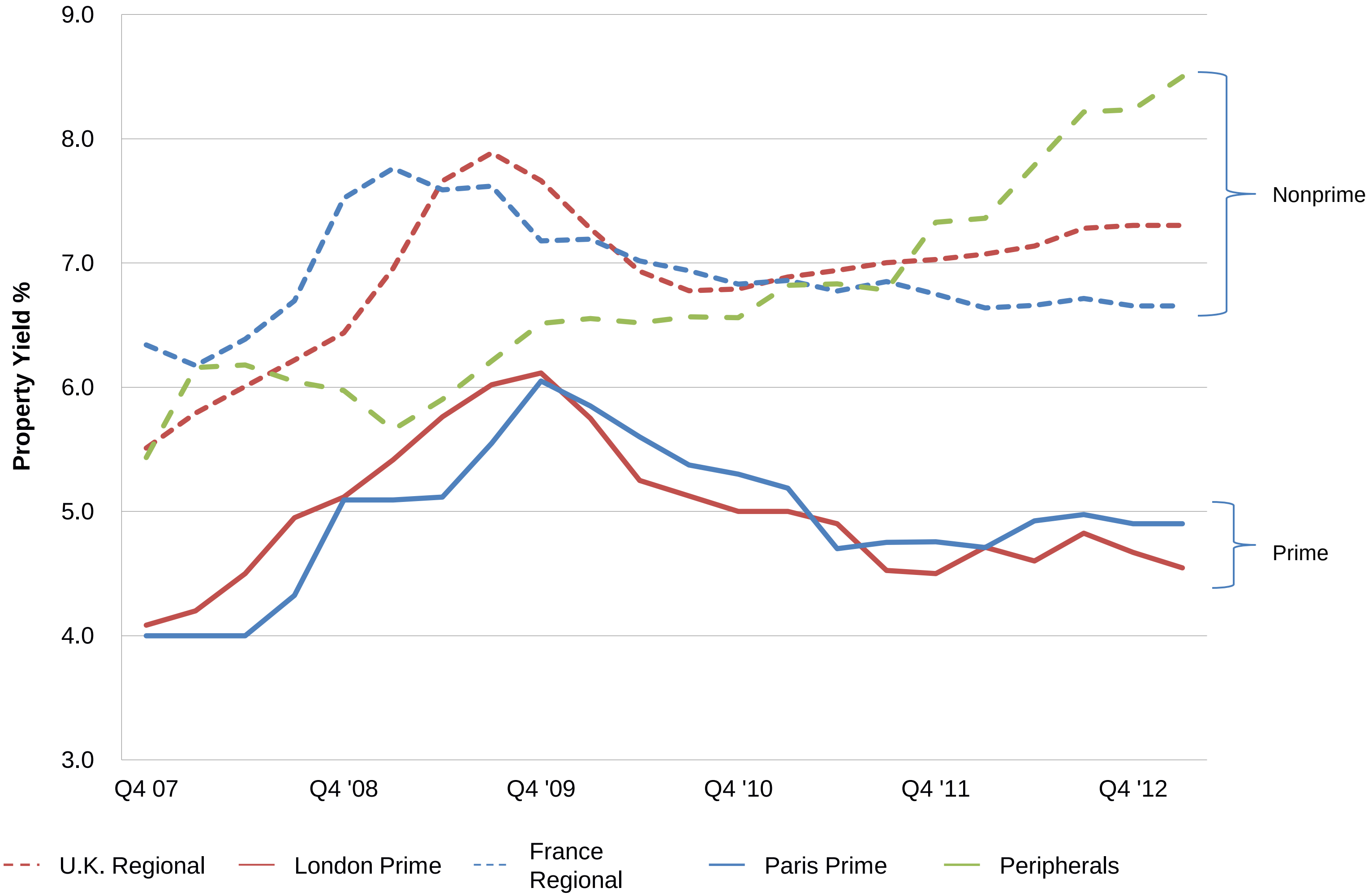


U.S. REITS currently trading at an approximate 18% premium to underlying NAV.

Source: Morgan Stanley, Green Street Advisors. Through March 31, 2013.

EUROPE: PRIME VS. NONPRIME

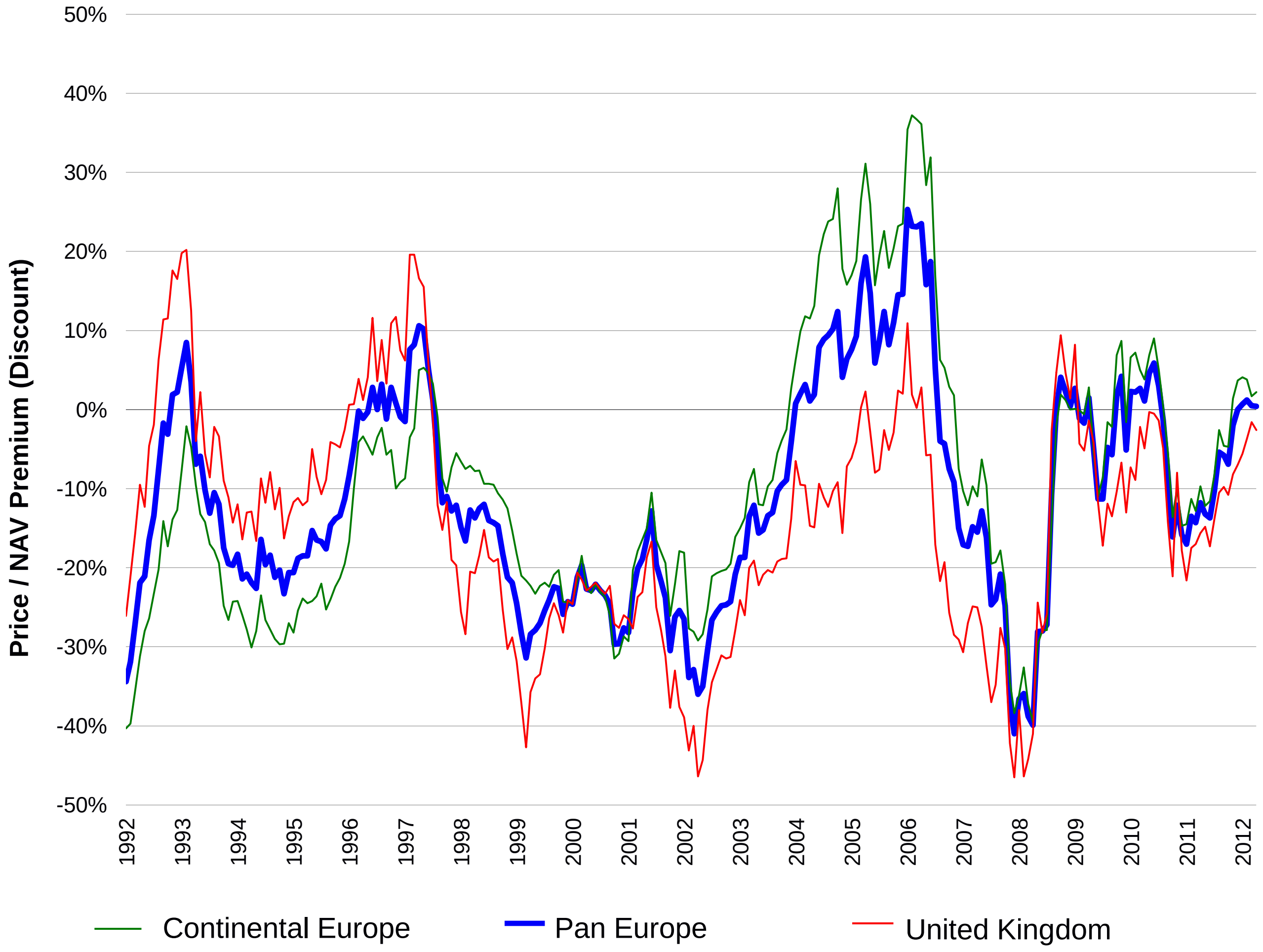
TTM Rolling Average, Office and Retail Transaction Yields



Spreads between prime and nonprime markets have dramatically increased, as there has been a "flight to quality" in Europe.

Source: Real Capital Analytics, Morgan Stanley. As of March 31, 2013.

PUBLIC REAL ESTATE: EUROPE

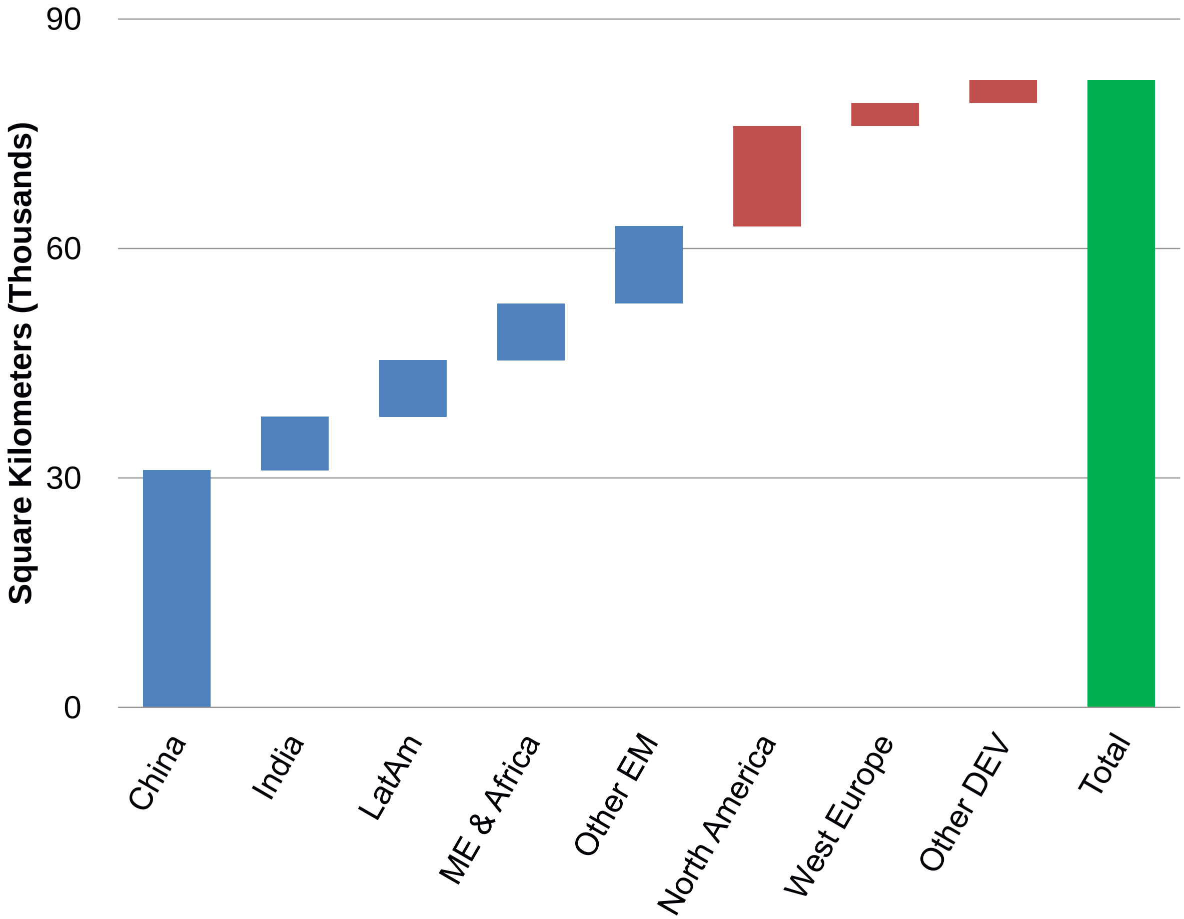


European REITs are trading near the underlying NAV.

Source: Morgan Stanley. Through March 31, 2013. Pan Europe includes the U.K., France, Spain, Sweden, Finland, the Netherlands, Italy, Austria, Germany, Switzerland, and Belgium. Continental Europe excludes the U.K.

ASIA: LEADING DEMAND FOR SPACE

Projected Demand for Residential and Commercial Space, 2010–2025

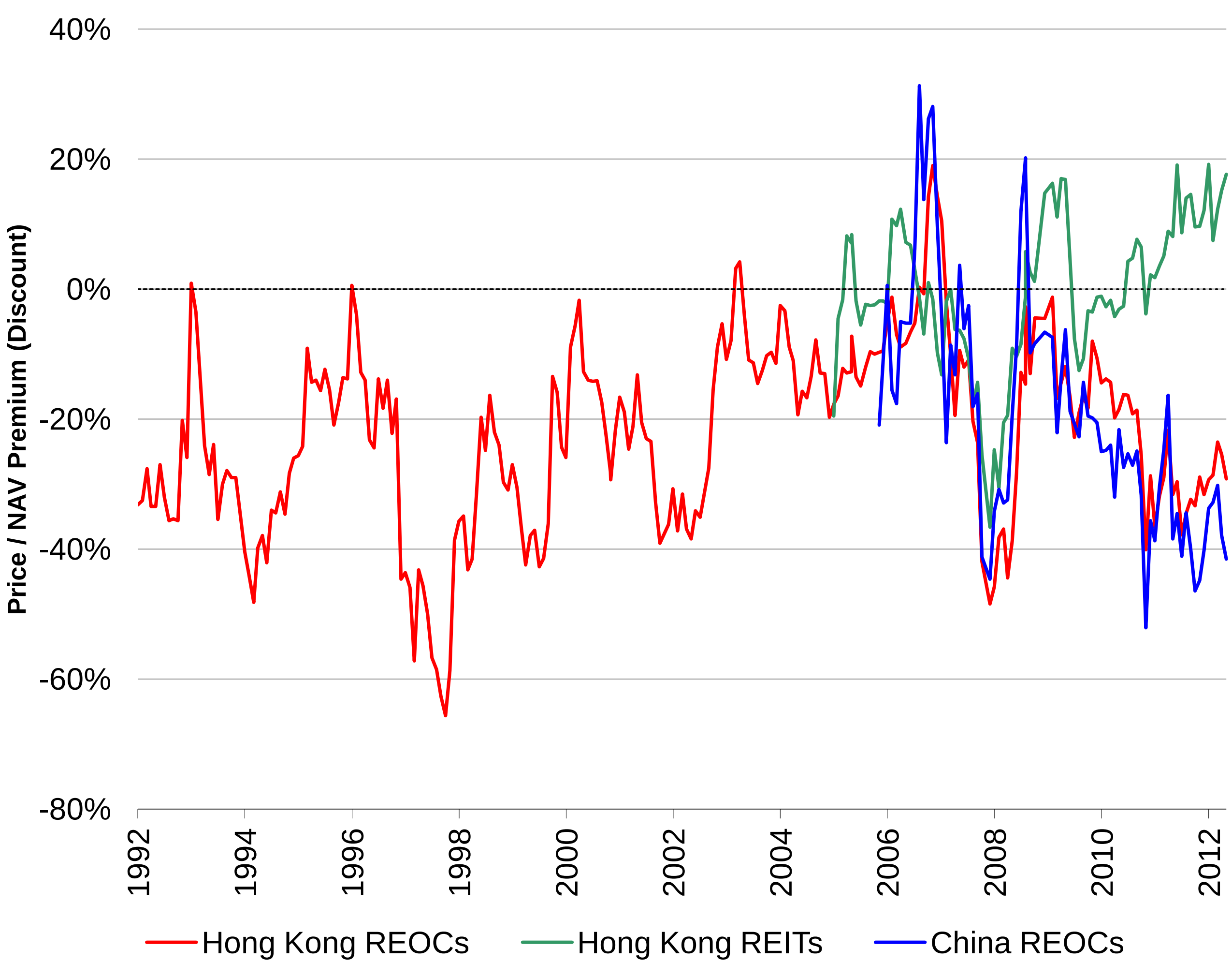


China and India are projected to account for 46% of the world's demand for residential and commercial space.

Emerging markets are expected to account for 77% of demand.

Source: Morgan Stanley, Institute of Economic Affairs, McKinsey Global Institute. As of June 2012.

PUBLIC REAL ESTATE: ASIA



Hong Kong REOCs traded at wider discount, as weaker residential sales hurt investor confidence. Hong Kong REITs traded at wider premium following share price gains.

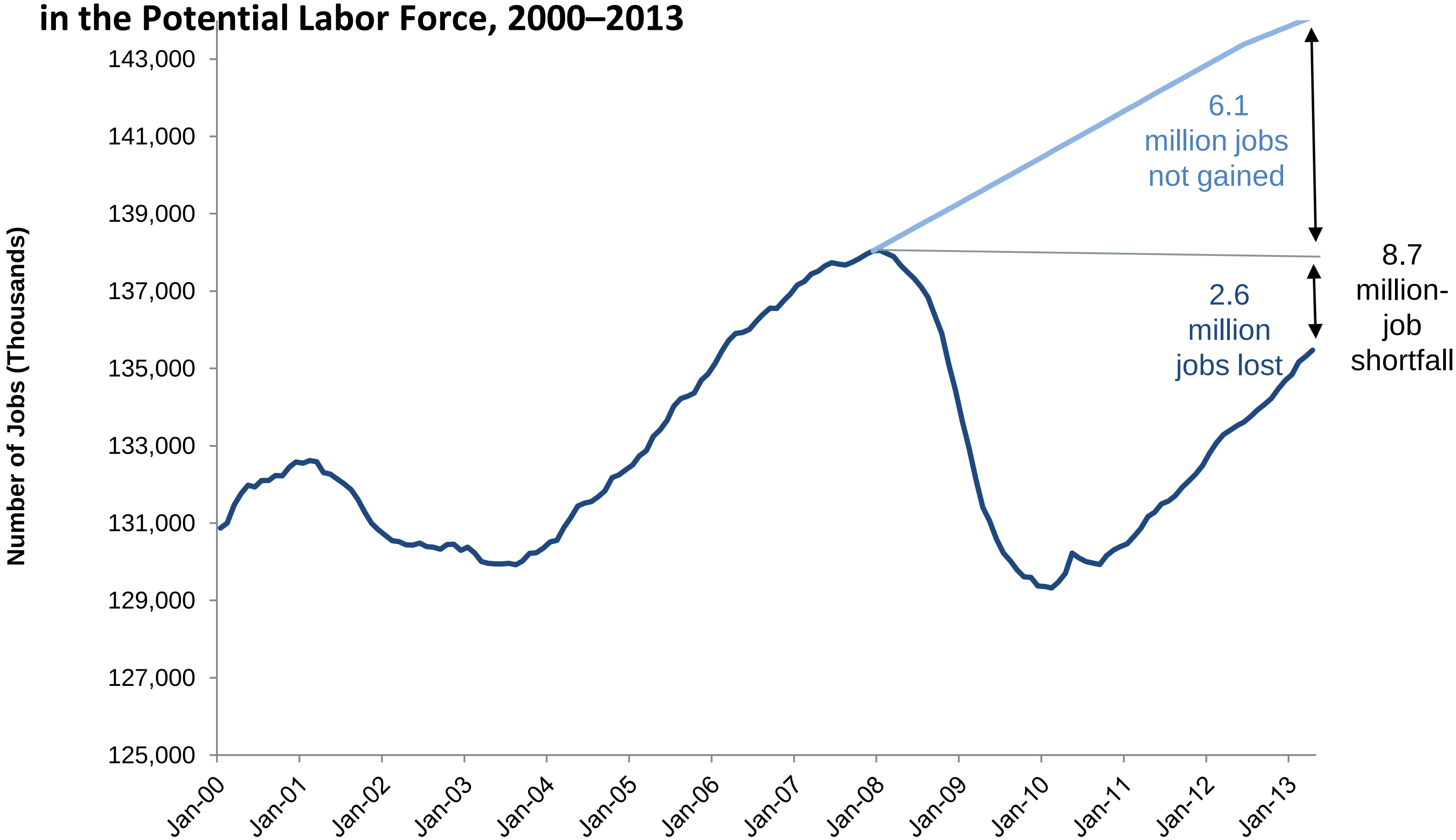
China REOCs traded at wider discount on concerns over further policy measures to cool housing demand.

Source: Morgan Stanley. Through March 31, 2013.

EMPLOYMENT

Recession has left a job shortfall of nearly 9 million.

Payroll Employment and the Number of Jobs Needed to Keep Up with the Growth in the Potential Labor Force, 2000–2013



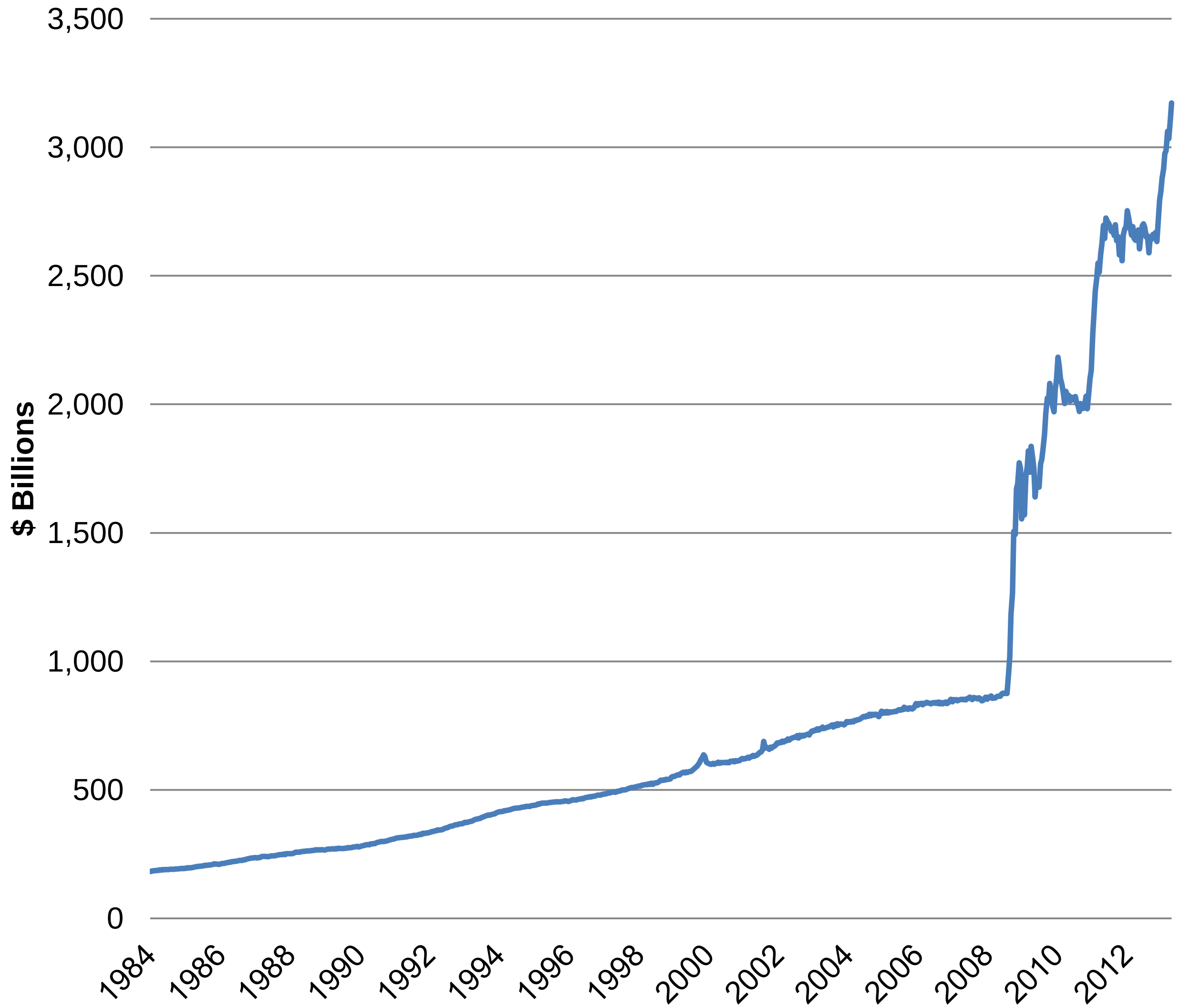
The U.S. has not fully recovered all of the jobs lost due to the 2007 recession.

Accounting for population growth, the U.S. is approximately 8.7 million jobs short of the pre-recession growth projection.

Significant new supply of industrial, office, and retail space is not expected until employment recovers.

Source: Economic Policy Institute

U.S. MONETARY SUPPLY



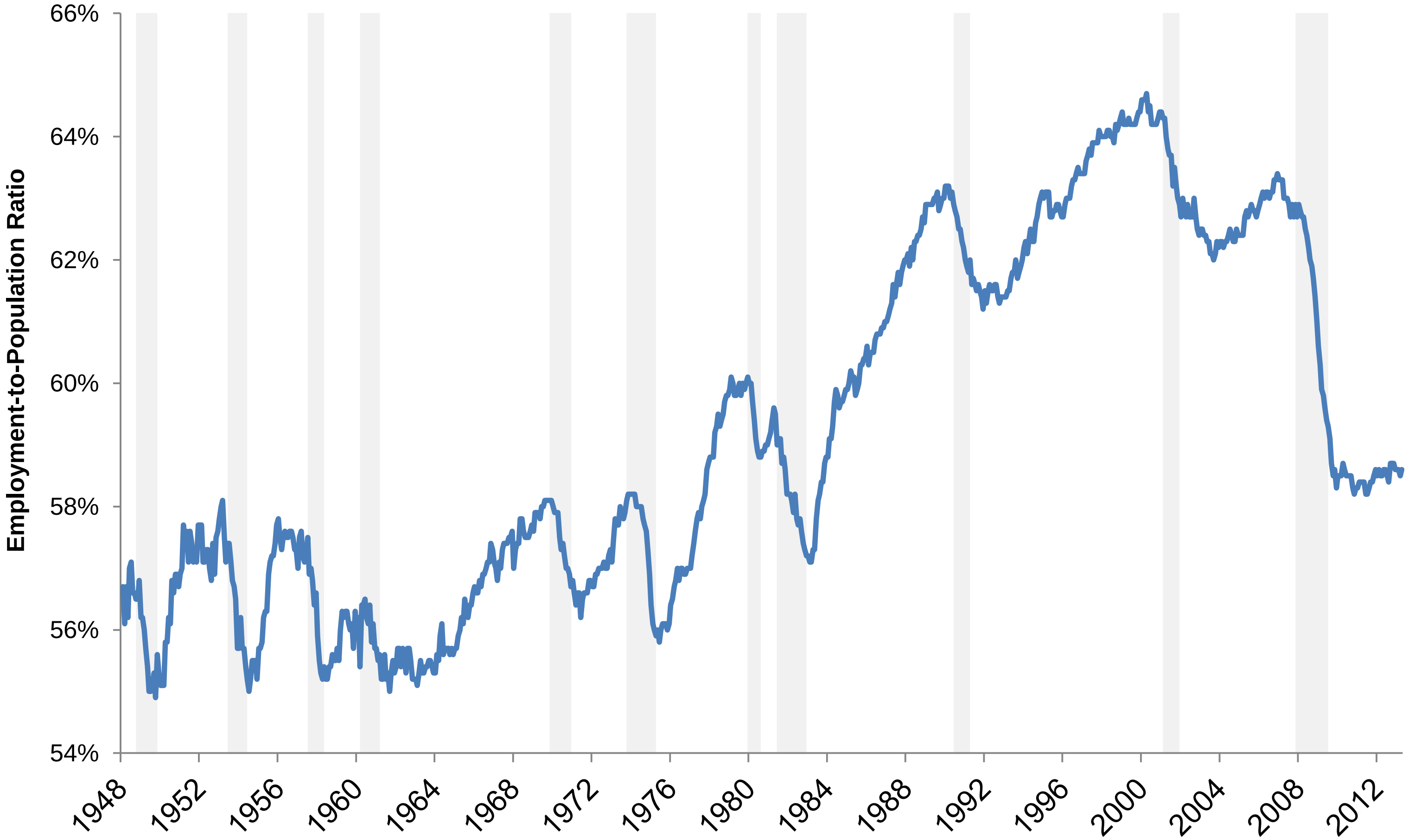
The U.S. monetary supply has dramatically increased since the recession.

Will this spur significant inflation in the future?

Source: Federal Reserve

U.S. EMPLOYMENT

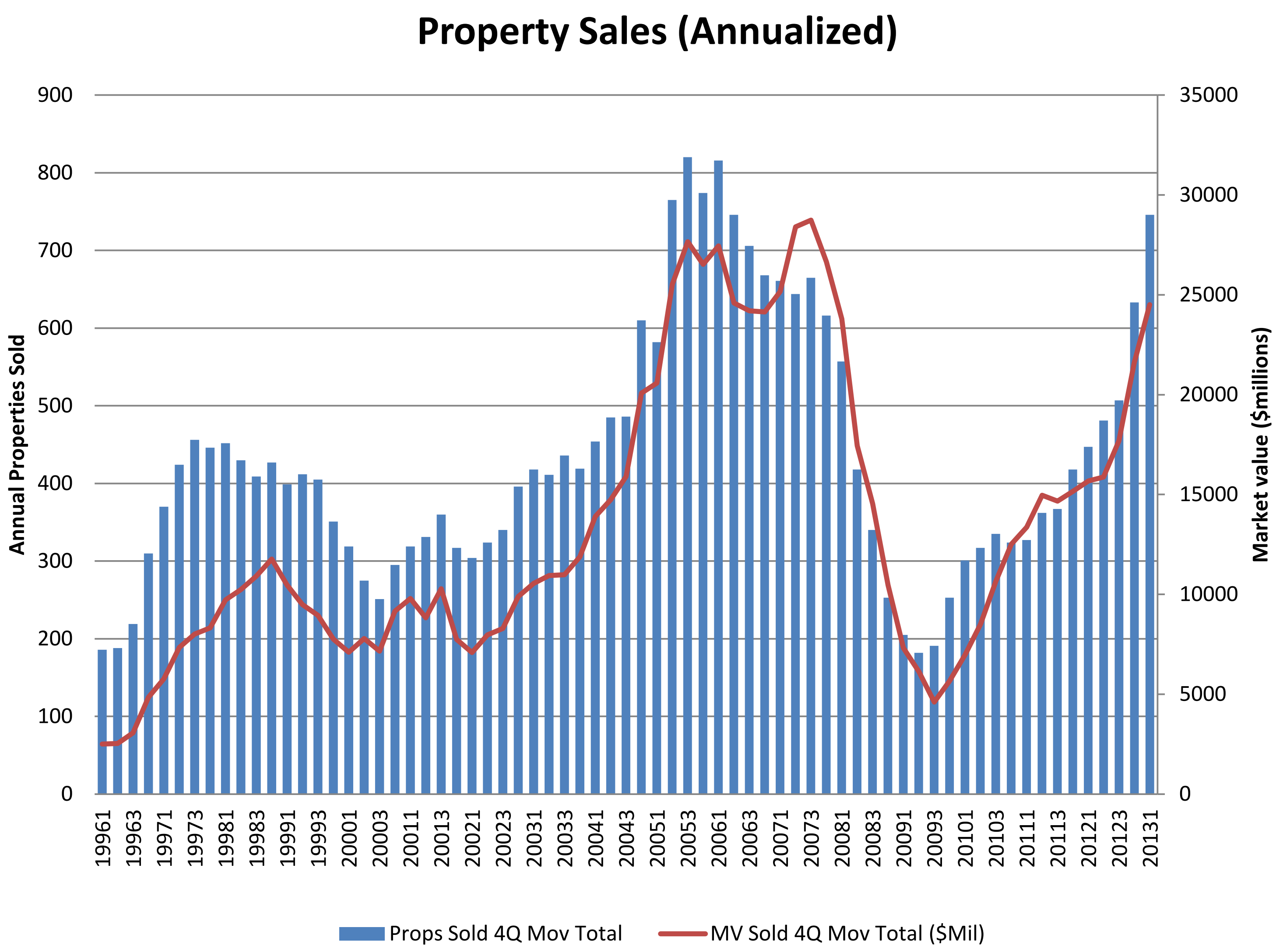
Employment-to-Population Ratio of Total Population Age 16 and Older, 1948–2013



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

Source: Economic Policy Institute. Shaded areas denote recessions.

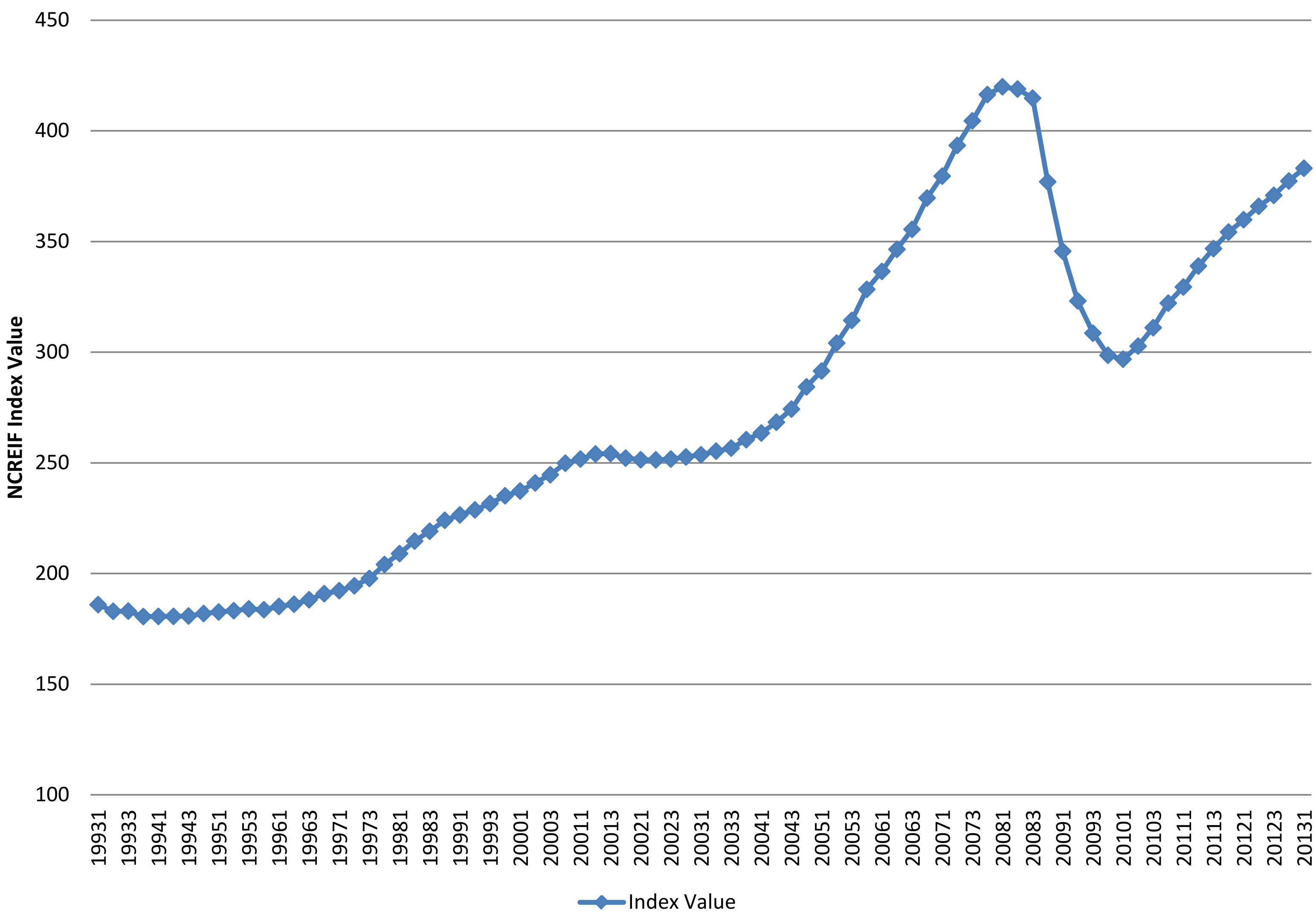
U.S. COMMERCIAL TRANSACTIONS



Transaction volume within the U.S. commercial market has picked up but is still below peak levels.

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

REAL ESTATE RECOVERY

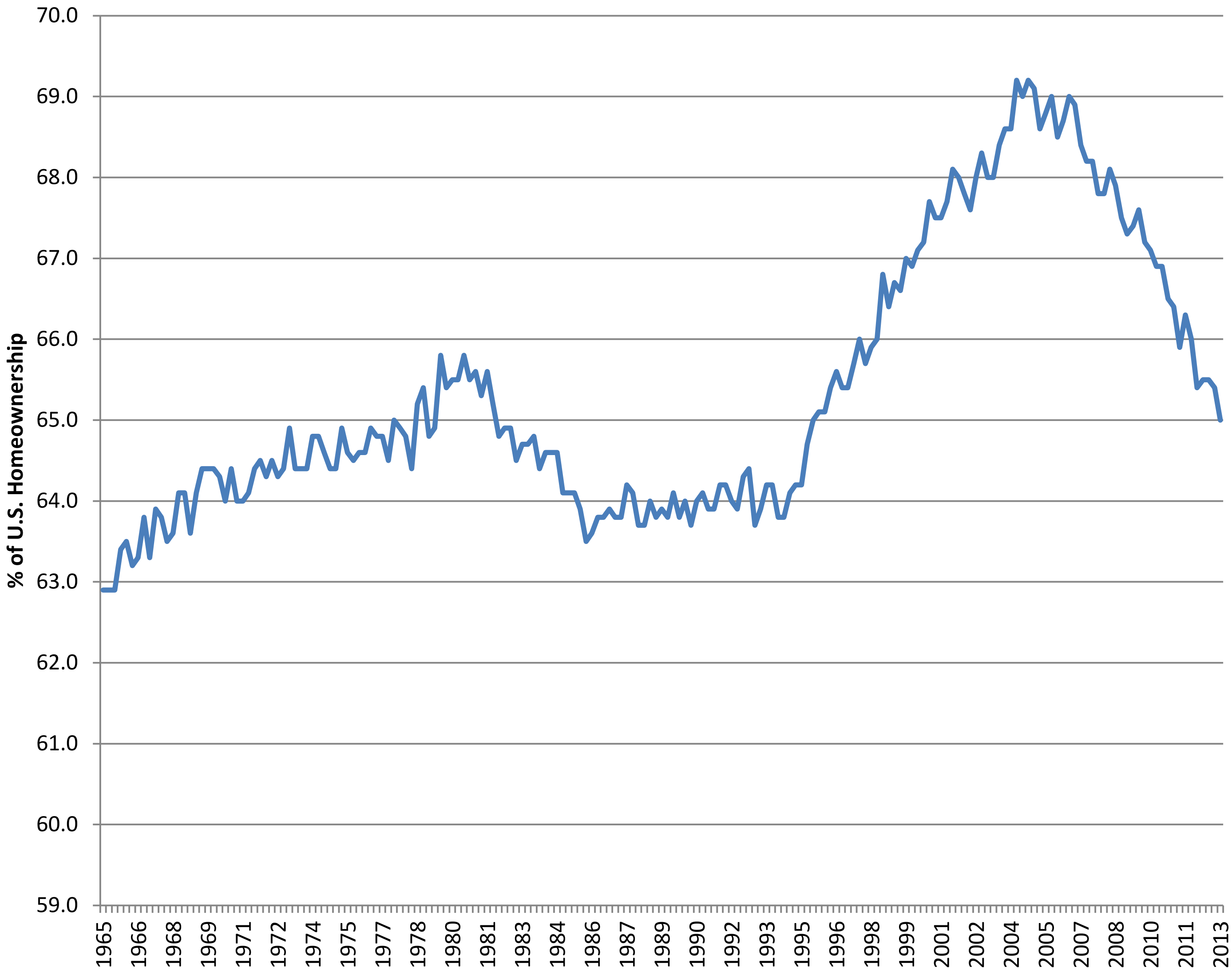


The NCREIF Index value is 8.5% off its peak as of Q1 2013.

Peak-to-trough values were down 29%.

Source: NCREIF

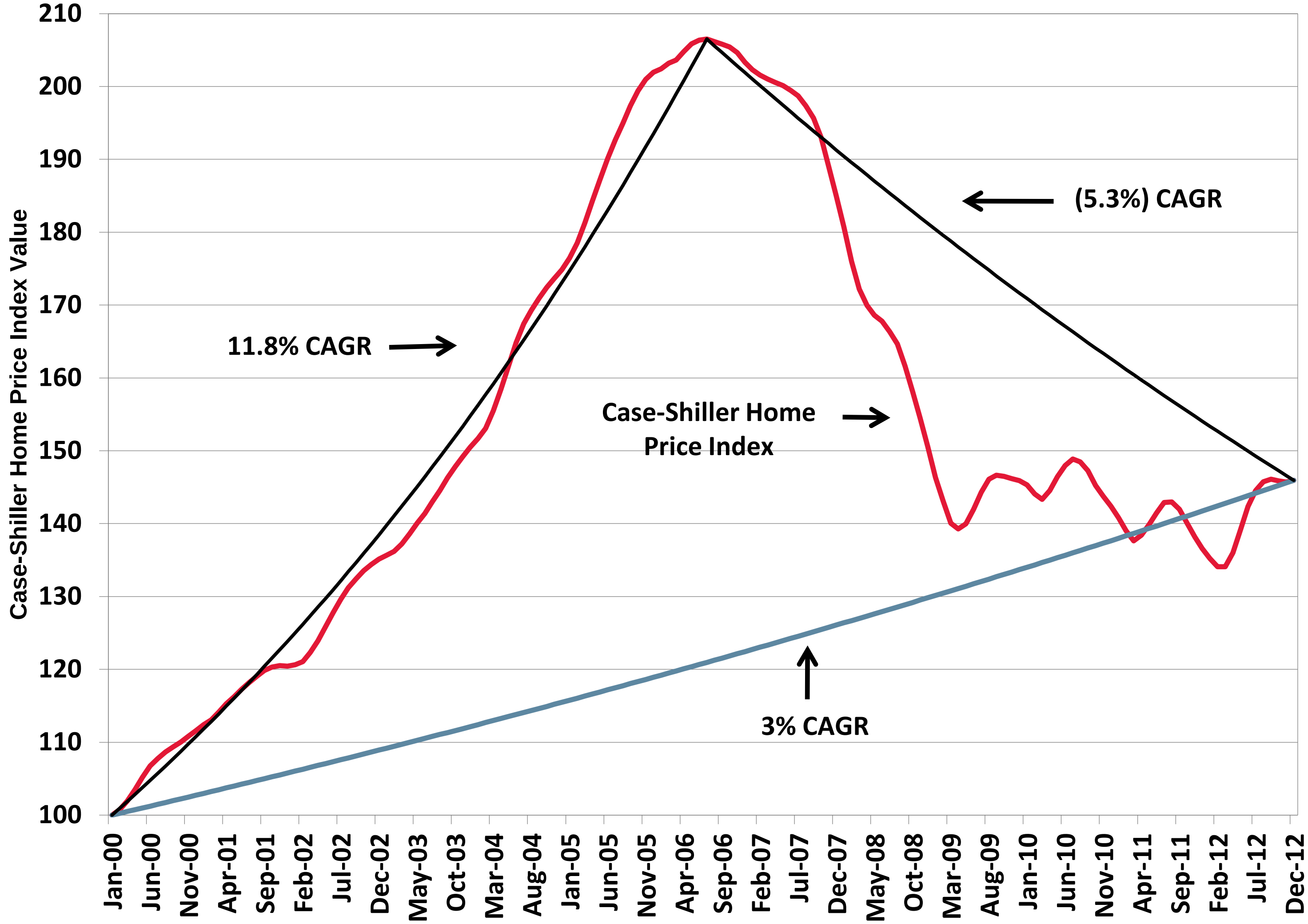
U.S. HOUSING MARKET



Homeownership in the U.S. is nearing its long-term historic average.

Source: U.S. Census Bureau

U.S. HOUSING MARKET

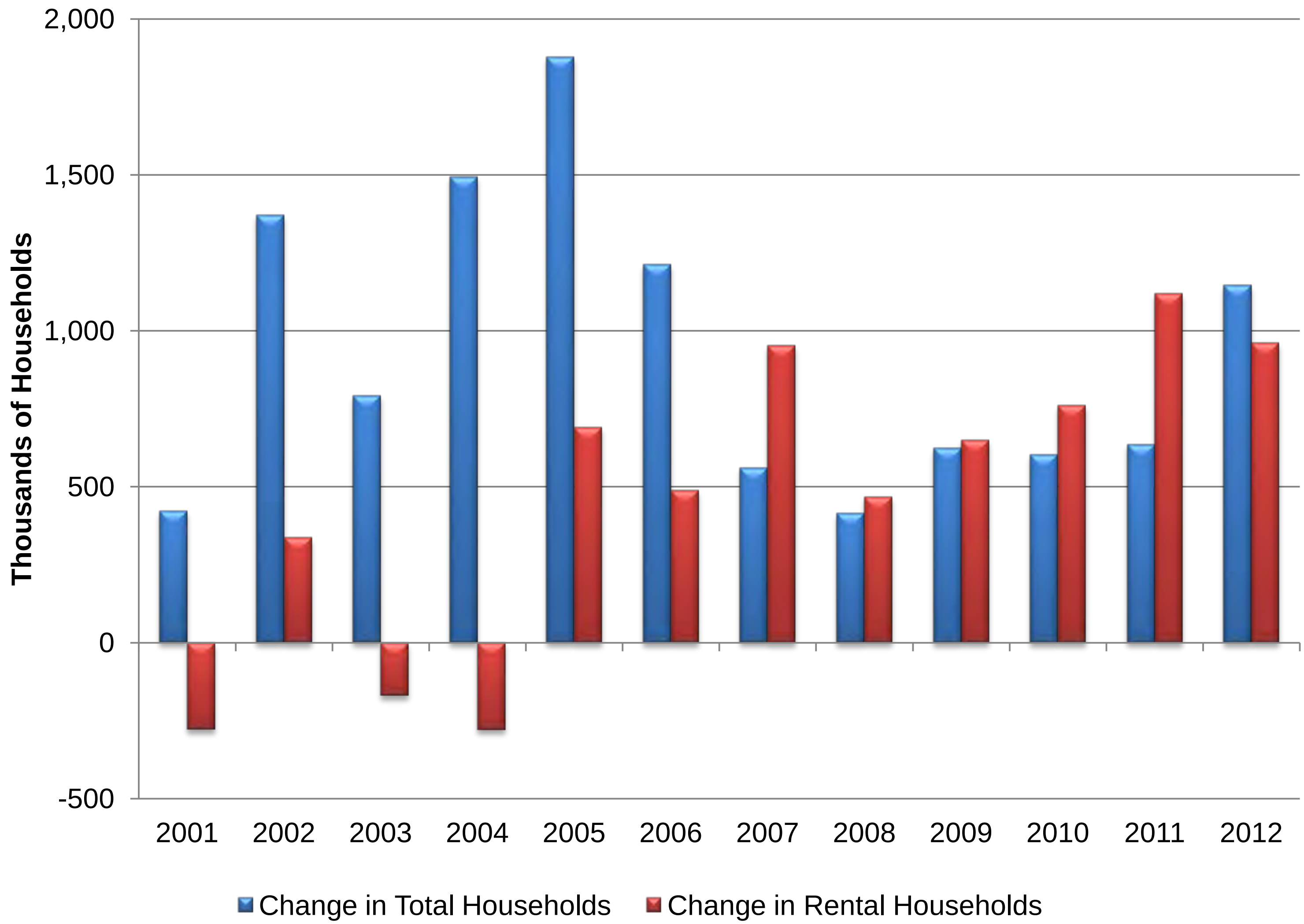


Housing is finally beginning to recover. Average home prices are up 6% but much higher in some of the hardest-hit markets.

Core Logic estimates that 1.7 million home-owners moved from negative to positive equity during 2012.

Source: S&P/Case-Shiller, AEW

U.S. HOUSEHOLD FORMATION

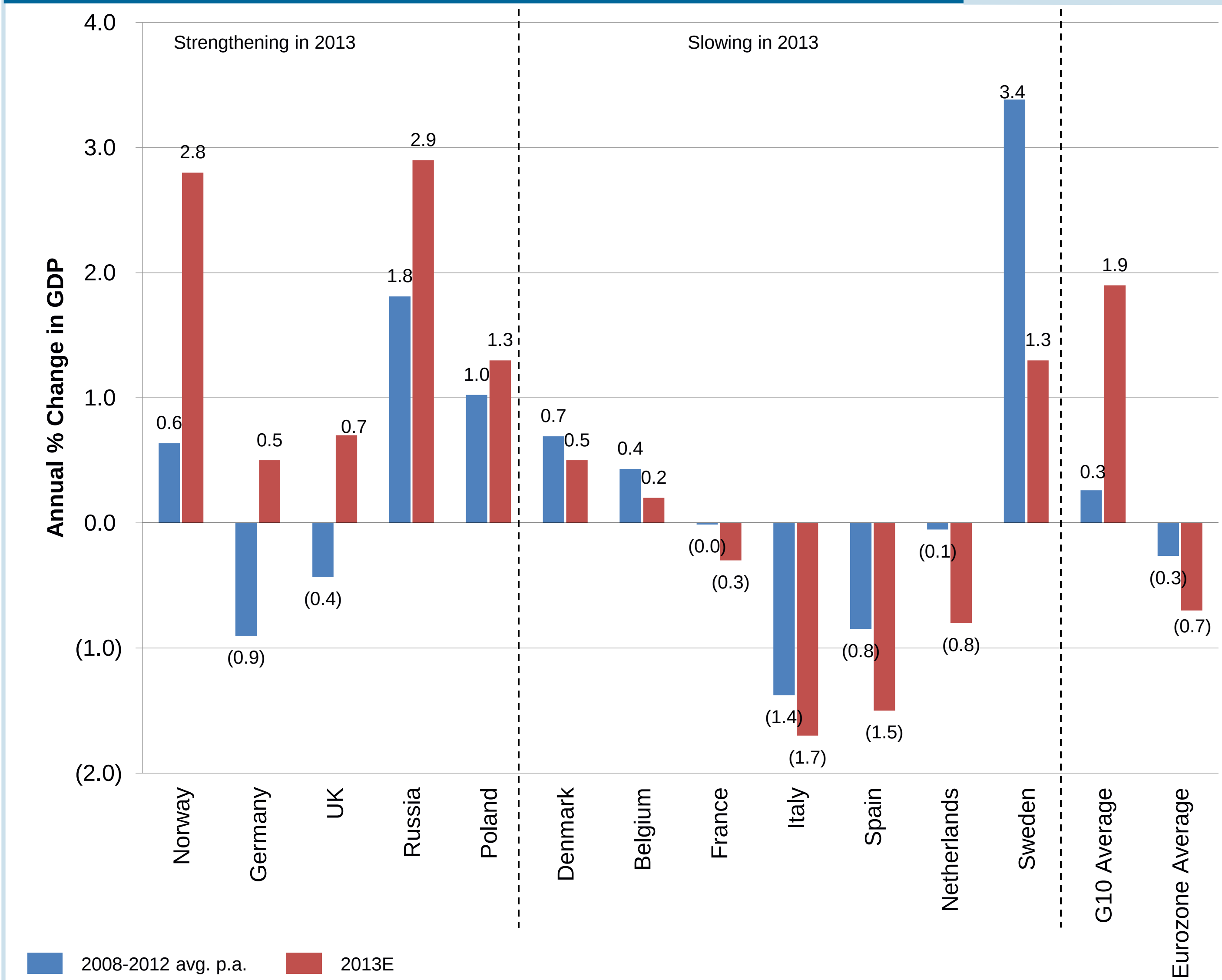


Since the recession, household formation has been roughly half of prerecession levels.

If job recovery continues, households will hit a tipping point where delayed household growth should result in above-normal levels of formation for several years.

Source: S&P/Case-Shiller, AEW

EUROPE: REAL GDP GROWTH



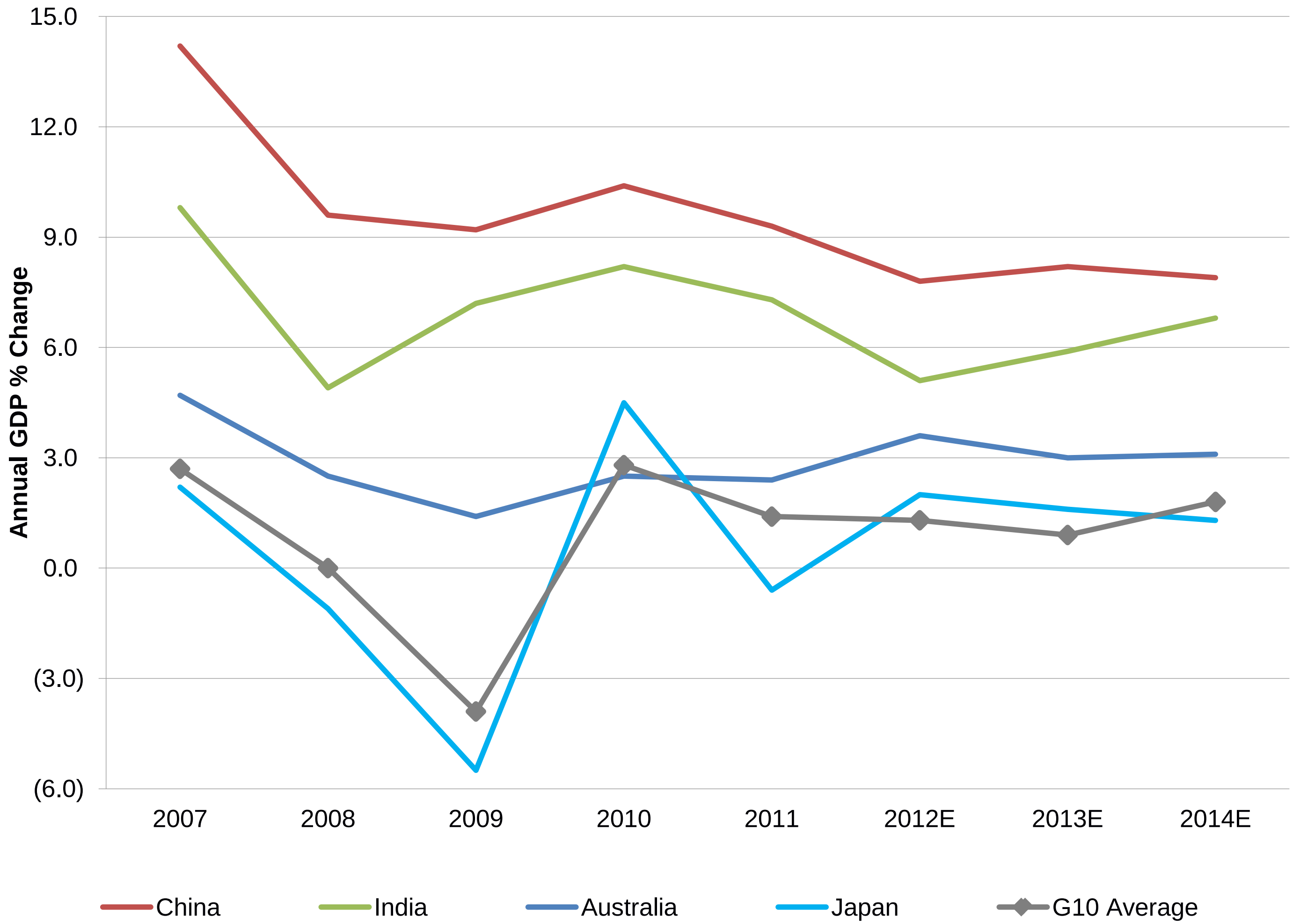
Near-term outlook is sluggish for most of Europe.

Across much of Europe, 2013 GDP growth will be slower than the 2008–2012 average.

The U.K. and Germany may improve slightly in 2013, while France, Netherlands, Italy, and Spain are likely to slip into a recession.

Source: Morgan Stanley

ASIA: GDP GROWTH



Asia is expected to continue its overall growth, led by China.

Australia has reduced interest rates to stimulate growth.

Japan has implemented stimulus efforts as well.

China is seeking to shift from an export-driven economy to a domestic consumption–driven economy.

Source: Morgan Stanley. As of April 2013.

DISCLOSURES: This document is provided for informational purposes only. It does not constitute an offer of securities of any of the issuers that may be described herein. Information contained herein may have been provided by third parties, including investment firms providing information on returns and assets under management, and may not have been independently verified. The past performance information contained in this report is not necessarily indicative of future results and there is no assurance that the investment in question will achieve comparable results or that the Firm will be able to implement its investment strategy or achieve its investment objectives. The actual realized value of currently unrealized investments (if any) will depend on a variety of factors, including future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions and circumstances on which any current unrealized valuations are based.

Neither PCA nor PCA's officers, employees, or agents make any representation or warranty, express or implied, in relation to the accuracy or completeness of the information contained in this document or any oral information provided in connection herewith, or any data subsequently generated herefrom, and accept no responsibility, obligation, or liability (whether direct or indirect, in contract, tort, or otherwise) in relation to any of such information. PCA and PCA's officers, employees, and agents expressly disclaim any and all liability that may be based on this document and any errors therein or omissions therefrom. Neither PCA nor any of PCA's officers, employees, or agents make any representation of warranty, express or implied, that any transaction has been or may be effected on the terms or in the manner stated in this document, or as to the achievement or reasonableness of future projections, management targets, estimates, prospects, or returns, if any. Any views or terms contained herein are preliminary only, and are based on financial, economic, market, and other conditions prevailing as of the date of this document and are therefore subject to change.

The information contained in this report may include forward-looking statements. Forward-looking statements include a number of risks, uncertainties, and other factors beyond the control of the Firm, which may result in material differences in actual results, performance, or other expectations. The opinions, estimates, and analyses reflect PCA's current judgment, which may change in the future.

Any tables, graphs, or charts relating to past performance included in this report are intended only to illustrate investment performance for the historical periods shown. Such tables, graphs, and charts are not intended to predict future performance and should not be used as the basis for an investment decision.

All trademarks or product names mentioned herein are the property of their respective owners. Indices are unmanaged, and one cannot invest directly in an index. The index data provided is on an "as is" basis. In no event shall the index providers or its affiliates have any liability of any kind in connection with the index data or the portfolio described herein. Copying or redistributing the index data is strictly prohibited.

The Russell indices are either registered trademarks or tradenames of Frank Russell Company in the U.S. and/or other countries.

The MSCI indices are trademarks and service marks of MSCI or its subsidiaries.

Standard and Poor's (S&P) is a division of The McGraw-Hill Companies, Inc. S&P indices, including the S&P 500, are a registered trademark of The McGraw-Hill Companies, Inc.

CBOE, not S&P, calculates and disseminates the BXM Index. The CBOE has a business relationship with Standard & Poor's on the BXM. CBOE and Chicago Board Options Exchange are registered trademarks of the CBOE, and SPX, and CBOE S&P 500 BuyWrite Index BXM are servicemarks of the CBOE. The methodology of the CBOE S&P 500 BuyWrite Index is owned by CBOE and may be covered by one or more patents or pending patent applications.

The Barclays Capital indices (formerly known as the Lehman indices) are trademarks of Barclays Capital, Inc.

The Citigroup indices are trademarks of Citicorp or its affiliates.

The Merrill Lynch indices are trademarks of Merrill Lynch & Co. or its affiliates.