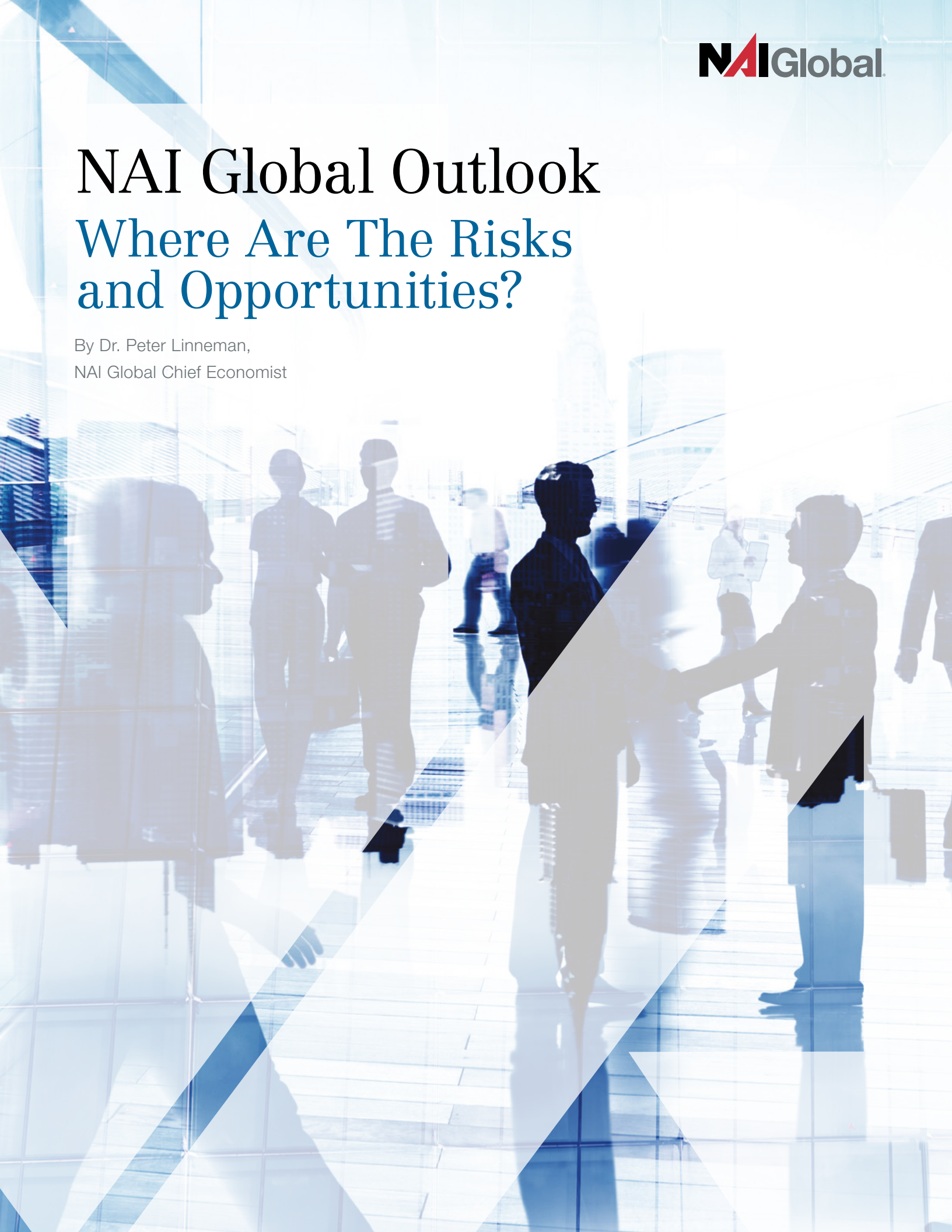


NAI Global Outlook

Where Are The Risks and Opportunities?

By Dr. Peter Linneman,
NAI Global Chief Economist



What Really Drives Cap Rates?

By Dr. Peter Linneman,
NAI Global Chief Economist

U.S.

The U.S. economy is fairly strong, but key indicators show that it remains well below long-term trend. For example, real GDP is more than \$2.6 trillion (12.8%) below the long term trend, while the employment shortfall is at 19 million jobs (11.6%). The GDP gap is equivalent to a shortfall of \$8,322 per capita, and in aggregate, exceeds the real GDP of France, the sixth largest economy in the world. The potential to fill this gap depends on the rebound of the housing and auto sectors.

We forecast 2.9 million new jobs in each year of 2015-2018 (about 2% per annum) and 2.7 million new jobs in 2019 (1.8%). In August 2015, the nation had 3.9 million more jobs than the pre-recession peak of 138.4 million jobs in December of 2007; however, it must be remembered that the population is 17.6 million greater than it was in 2007.

Particularly good news is that economic policy uncertainty is now stabilized near the historic norm. In the past year, economic policy uncertainty has normalized, as major legislative initiatives such as Obama Care and Dodd-Frank have passed into the rearview mirror. This decline in political economic uncertainty will fuel continued growth. And if only the Fed were to allow rates to reflect market forces, the economy would boom, as normalized interest rates generate the funds required for down payments to buy millions of more homes.

Auto sales continue to climb, surpassing historical averages, and making inroads into the production shortfalls of 2008-2012. Real auto sales have historically represented 6.9% of real GDP, versus just 4.2% in 2009, rising to 5.6% in 2015. Despite above-average production over the last year, the U.S. has

The biggest challenge facing the U.S. and global economy over the next 2-3 years will be coping with the double-edged uncertainty of when rates will rise and of what happens when they do.

under-produced about 8.6 million light trucks and cars on a cumulative basis since 2003; 221,700 lower than last quarter.

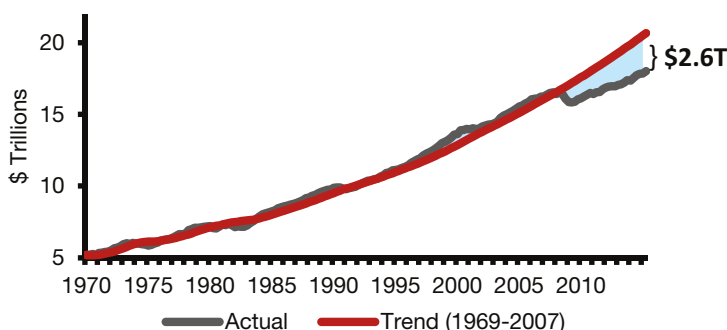
While residential construction activity – particularly, single-family homes – continues its slow recovery, the commercial sector has gained significant momentum over the last 12 months. Housing is reflected in GDP through both private, residential investment and spending on related goods and services. Combined, these factors have historically accounted for 18.2% of GDP, but only stood at just 15.4% of GDP in the second quarter of 2015. Reconstituting 280 bps of an \$18 trillion economy translates into about \$500 billion of incremental annual economic activity, which will be a powerful source of growth over the next 4 years.

The biggest challenge facing the U.S. and global economy over the next 2-3 years will be coping with the double-edged uncertainty of when rates will rise and of what happens when they do. In fact, the uncertainty about what happens in the face of interest rate increases is a far greater challenge than the reality of rising interest rates per se. That is, once rates rise, market participants will again be able to make decisions on how best to allocate scarce capital.

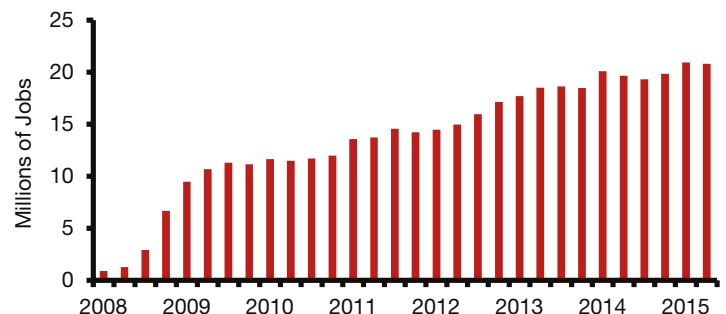
We are among a minority that believes that cap rates, and equity multiples in general, will basically hold even as rates rise. As support for this position we note that when equity multiples were at similar levels in late 2006 and early 2007, the short-term rate was 5.3% and the 10 year yield was at 4.7%. That is, we know that low cap rates (and high multiples) can co-exist with high interest rates. But for this to be the case, there must be an increased flow of funds, particularly of debt. Hence, a booming flow of funds looms on the horizon.

People correctly argue that other things equal, a rise in interest rates should cause cap rates to rise by increasing the weighted cost of capital. However, it is important to understand that “other things” do not remain equal as interest rates rise. In particular, as interest rates rise from artificially low levels, borrowers have a reduced incentive to borrow, and lenders have a notably increased incentive to lend. This incentive to lend manifests itself by changing “other things”, including offering: higher LTVs, slower amortization, longer periods of interest-only, reduced covenants, narrower debt spreads, reduced underwriting standards, etc. These factors result in an increased flow of debt as rates rise from artificially low levels. This results in a reduced weighted cost of capital and more money chasing a limited supply of NOI and properties, resulting in higher prices. This was the case

Actual vs. Trend Real GDP



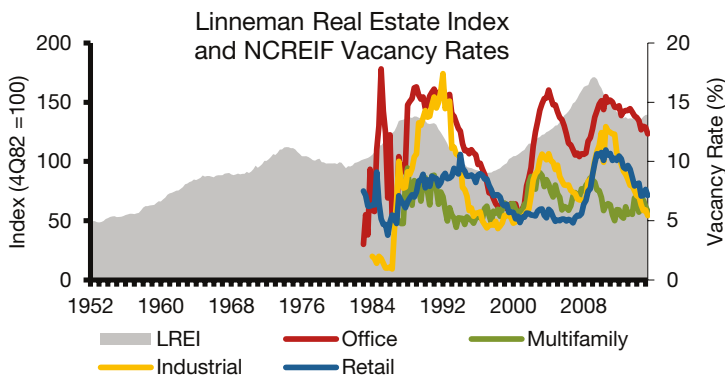
Implied Job Gap From GDP Shortfall



many times in the past, including 2006-2007, when high interest rates stimulated a dramatic flow of debt.

Today, there is an extraordinary amount of liquidity pent-up in the money center banks. Hence, as interest rates rise, these banks will have remarkably increased lending incentives. The resulting flood of debt, based on our research, will more than offset any negative impact of higher interest rates on cap rates.

Linneman Real Estate Index (LREI) is a key capital flow metric for commercial real estate, which is the ratio of the aggregate flow of commercial real estate debt to nominal GDP. The LREI reflects whether debt for commercial real estate is growing faster or slower than the economy. When the index is rising, it means that mortgage debt for commercial real estate is rising more rapidly than the economy (i.e., an easy capital market), and vice versa. Our research indicates that the best periods for real estate investments have occurred while the LREI is declining or in early recovery. That is, the time to invest is when credit markets are tight and deleveraging is underway. The LREI saw a steep deleveraging trend from the last peak in 2009 through 2012, and flattened from 2013 through early 2015. The second quarter of 2015 saw the first sign of a rising index, indicating that the window of opportunity still exists, but is narrowing. We expect the opportunistic environment will prevail over the next 2-3 years.



As job creation continues, we expect single-family and multifamily demand to require about 3.7 million plus 2 million additional housing units through 2019, respectively. These projections are based on a combination of pent-up household formations and expected population growth. An estimated 402,000 pent-up households will form, with 50% (201,000) owning and 50% renting, based on Linneman Associates' estimates. The disproportionately higher share of renters (versus the norm of 33%) is due to the relatively young age of many of the pent-up households. We expect the pent-up households to be formed over four years: 25% or about 100,000 in each year of 2015-2018.

About 5.3 million new households will form as the result of population growth of 12.5 million people over the next five years. Two-thirds (3.5 million households) will be single-family buyers; one-third (1.8 million) will rent.

Our fundamental housing supply forecast projects that new single-family home starts will ramp up to 800,000 in 2015, 950,000 in 2016, 1.1 million in 2017, and 1.3 million in 2018, while multifamily home starts will be 440,000 in 2015, and 500,000 per year through 2019. These projections compare with historical norms of 1.1 million new single-family homes and about 355,000 multifamily units per year.

Sustained job growth is the critical determinant of recovery in U.S. commercial real estate markets. Linneman Associates examined the historical relationship between employment growth and commercial property vacancy rates and determined that, over the long term, for example, every 100 bp (1%) increase in U.S. employment results in a decline of 43 bps in the U.S. office vacancy rate. The same analyses were conducted for the other property sectors as well, with the results indicating that if employment increases by 7.2% (10.2 million) from the second half of 2015 through 2018, we

Monetary policy has no more ability to solve the structural economic problems of European economies.

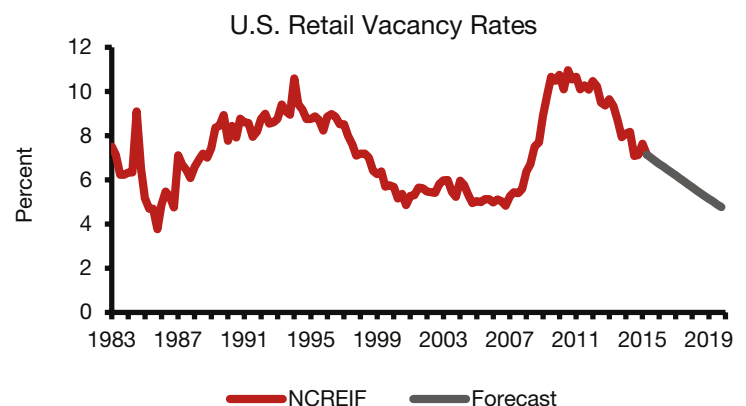
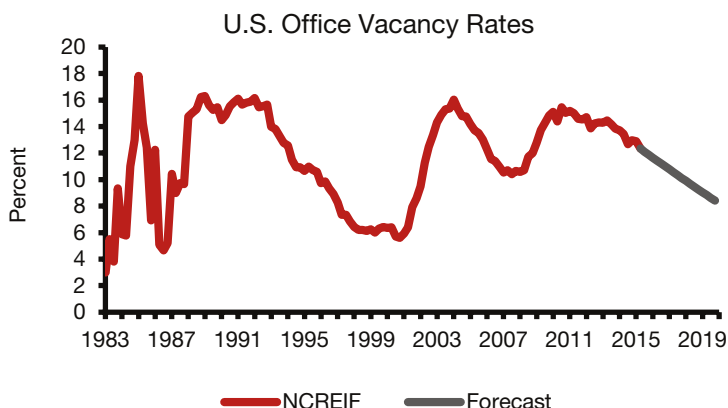
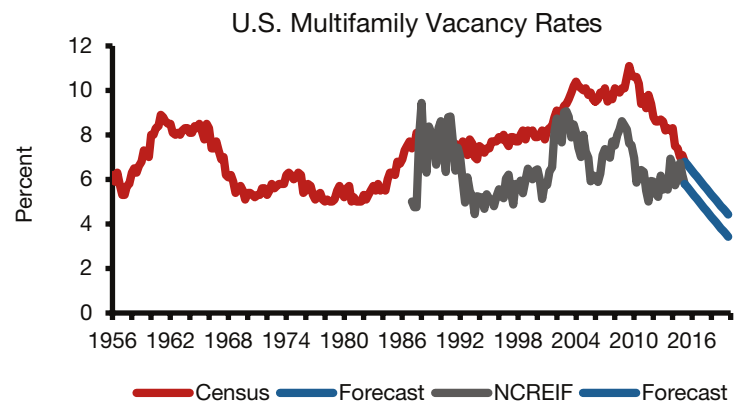
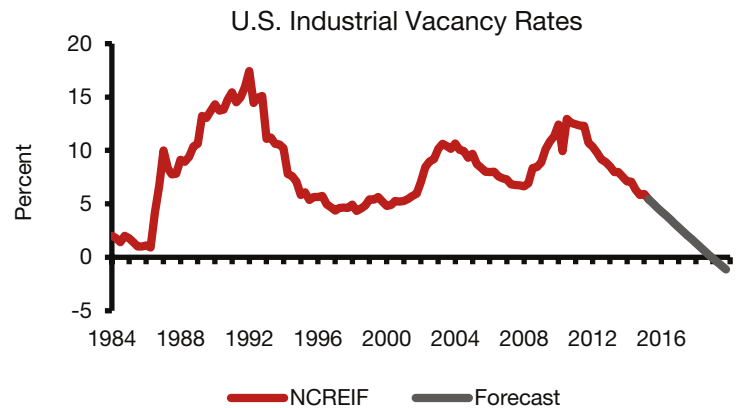
should see U.S. office, industrial, multifamily, and retail vacancy rates decline by approximately 310 bps, 520 bps, 190 bps, and 190 bps, respectively, through 2018. Similarly, we project that hotel occupancy rates will increase by 380 bps over the same period.

Eurozone

The economic situation in Europe is very fragile (at best). While growth has increased, it is weak and hampered by efforts of the ECB (European Central Bank) to do things beyond its power through quantitative easing and low interest rates. Monetary policy has no more ability to solve the structural economic problems of European economies than it can cure male baldness.

Despite some positive signs from Spain and Italy, Greece continues to be a farce. Eventually people will realize that Greece and Germany really cannot co-exist in a fixed exchange rate system such as the Euro. The Euro has survived the crisis of 2015, but continues to strangle the Euro-zone, and we continue to forecast its longer-term demise.

Unfortunately for Europe, and its common currency, its constituents have very little in common. The recent influx of migrants from the eastern side is a further reflection of the vastly different wills, attitudes and economic capacities to handle such a large population influx.



From a real estate perspective, most recent activity has been in core CBD markets, especially in Germany and London, and to a lesser extent in the recovering markets of Italy and Spain. Office market demand is generally weak, but London and the main German markets have exhibited some growth, while other central European cities have shown lower demand. Both the retail and the logistics sectors continue to be stronger performers, with particular demand growth in owner-occupied logistics properties designed to service online retail sales.

Asia

Asia now comprises 40% of the world economy. Growth in the region is expected to be 5.5-6% in 2015 as domestic consumption is driven by favorable macro tailwinds (lower oil, lower inflation and lower deficits). However, the major economies of the region face challenges.

Japanese growth remains permanently weak as “growth” via policy statements is the chosen path rather than competition reform. While the decline in Japanese population continues, the major cities continue to see an inflow of population, especially forming single member households, as the countryside empties. As a result, combined with Tokyo’s lack of supply, residential prices are increasing and cap rates have fallen to 2007 levels. Office demand is flat while logistics demand is picking up due to systems required for online sales.

China has been slowing and many wonder about China’s economic fate once its demographic dividend ends in a few years. The health of the banking sector has also been called into question. The Chinese government has made attempts to influence (more accurately, control) market signals by intervening in the markets, such as by managing its currency. However, the divergent economic conditions (and resulting monetary policies) of its various trading partners make it difficult to maintain a single policy with respect to its currency.

The Chinese residential real estate market is softening, with consumers generally having the upper hand. Meanwhile, office demand in the main business centers continues to be solid; however, construction pipelines remain robust.

India is now 18 months into the Modi administration. While the talking heads have proclaimed that the government has failed to enact its (very) aggressive agenda, it is clear that real progress and reform are underway. The longer term prospects remain attractive and India is likely to benefit from the dual pillars of urbanization and a demographic dividend which powered China over the past two decades. The past few years have seen a decline in mortgage lending by banks. However, the government seems to be taking steps to correct this (including allowing for capital injections into the public sector banks). Together with recently created REITs and a lower interest rate environment, things look fairly positive for the real estate sector in the medium term.

Within the residential sector, the mid-priced segment continues to show the highest level of demand. In retail, India is dealing with the problem of location. There are well-located malls and not-so-well-located malls (often across the street from one another). Retailers, customers and an increasing number of real estate investors and developers are only recently differentiating between them. Finally, demand for logistics continues to grow due to online retail needs.

Latin America

Latin America is a tale of two markets – Brazil and Mexico, with each having vastly different economic circumstances.

Brazil is in the midst of a severe economic stagnation as GDP has contracted 1.5%+ in the first half of 2015. This has been driven in equal measure by falling

Asia now comprises 40% of the world economy. Growth in the region is expected to be 5.5-6% in 2015 as domestic consumption is driven by favorable macro tailwinds.

commodity prices, the rising SELIC interest rate (which has been raised 7 times over the trailing 12 months through October 2015), and the return of heavy handed bureaucratic interventions. Housing prices have fallen over 2%, and the Brazilian real (R\$) has depreciated over 55% against the U.S. dollar in the past 12 months; the worst of almost any emerging market currency. Once the U.S. Fed begins raising rates, the flow of capital out of Brazil is likely to increase. The government is “investing” in jobs, in low cost housing, focusing on poverty reduction and ultimately hoping that the 2016 Olympics will have a miraculous impact on the country. Much like last year’s World Cup, the impact is unlikely to change the country’s fortunes, and is largely wasting scarce capital.

Mexico presents a vastly different economic story. GDP growth has been 2-2.5%. It is important to remember the extent to which Mexico’s fortunes are tied to the U.S., its largest trading partner, to whom it sends nearly 80% of its exports. The rise in export driven manufacturing (and all the related business demand) is driving consumer spending, as the middle class continues to grow and expand. The country has further benefitted from low interest rates, a limited fiscal deficit and a strong construction sector. While Mexico has seen undue violence (particularly drug related), it has been somewhat contained and has not had a notable impact on either the economy at large, or investor interest.