2014 was the best year in seven for logistics real estate. Net absorption and occupancies reached new highs across an array of markets. Rents rose in nearly every market where Prologis operates, a positive for the NOI growth outlook. Economic growth continues to prove variable, although recently expanded monetary policies and declines in the price of oil augment the outlook. Capital flows increased, leading transaction volumes toward prior peak levels and propelling asset values higher, which in turn translated to double-digit unleveraged returns in several regions across the globe. While development is more common, it is not yet excessive by historical standards or in light of incoming demand.

2015 could be even better, but risks also seem more pronounced. Yield dynamics indicate further upside to values as nominal cap rates remain significantly higher than government bond yields in most markets. However, capital flows will likely mean that acquisitions continue to be competitive. Development is expanding moderately as rising replacement costs act as a governor. In addition, macroeconomic growth has been uneven, relying on government and monetary policies as consumers and businesses hold back.
Logistics real estate markets have entered 2015 on a strong note. Globally, net absorption, occupancies and asset value growth reached new highs in the current cycle. Rent growth has been steady and above-trend. Yet, substantial differences have surfaced around the world.

In the U.S., NOI growth has begun in earnest and is boosting values. Yet, double-digit unleveraged returns of the past are harder to sustain with cap rate compression slowing. Still, operating conditions are strong. Occupancies have risen above prior peak levels and 2015 is expected to see healthy rent growth. The sizable decline in the price of oil is a positive for consumers, and in turn, users of logistics real estate. Development, now more common, represents another avenue for capital deployment. Replacement costs are rising, which is governing development starts, a support to values and rents.

In Europe, values have jumped from trough levels and market dynamics suggest further upside in the coming years. Cap rates across the region have not yet eclipsed prior cycle lows, and their spread to interest rates is nearly 500 basis points—among their highest in history and in excess of other regions around the world. Recovery has been fragmented but conditions are improving thanks to structural demand drivers and low new supply. And although economic growth has been variable, the combination of lower oil prices and government and monetary policies have stabilized the outlook.

In Latin America, capital markets are less competitive and thus leave upside to real estate values. In Mexico, the combination of structural and cyclical drivers led to an occupancy recovery that is now fairly complete. Yet, cap rates are at greater-than-normal discount to comparable properties north of the border. Despite weak economic growth in Brazil, sentiment is improving. The central bank’s commitment to controlling inflation, combined with potential government reforms, has stabilized the capital markets.

Chinese logistics real estate markets continue to be built out despite the recent moderation of economic growth. Chinese markets remain notably underserved relative to developed and emerging market peers, creating a rising tide of demand. Capital looking to access logistics real estate has only grown, pushing yield constants farther below 7% (and cap rates, adjusting for land leases, farther below 6%).

In 2015, the Japanese real estate market is likely to build on the momentum of 2014. Supply pipelines are high but vacancy rates are near zero and demand for new facilities is up as customers upgrade to modern buildings. Asset values seem poised to grow; there is a spread between public and private valuations along with an outlook for rent growth.

Nevertheless, there are risks to monitor. The global economic expansion is uneven. Recent changes in foreign exchange rates and oil markets have provided a boost but could have unanticipated effects. The wall of capital seeking logistics real estate creates two considerations. First, asset values may overshoot fair value and lead to stagnation. Second, while competition to acquire properties lifts values, capital seeking a home may transition to development, diluting potential rent and value gains.
Real estate operating conditions are strong. Vacancy rates reached 6.5% at the end of 2014, the lowest in 15 years. Rents rose a further 8%, following on an even stronger performance in 2013. Many markets, such as those in Texas and California, are at their strongest point in multiple cycles, highlighted by an improvement among smaller and Class-B users in the past year. Completions totaled 117 million square feet, just half of new demand of 226 million square feet, leading the vacancy rate down 60 basis points. While supply has risen from its trough, the pipeline amounts to 150 million square feet and is below incoming demand. On the margin, the supply pipeline has a greater share of larger facilities, illustrating balance at that end of the market, with undersupply among smaller- and mid-sized facilities.

Surging economic growth is lifting demand for logistics real estate. GDP is estimated to have grown 2.4% in 2014 and is forecast to grow 3.2% in 2015. Lower oil prices are reducing energy imports and increasing consumer spending power. This shift likely will lift logistics demand in the short term but may reverse if oil prices return to prior levels. Indeed, leading indicators of demand begin 2015 in a strong position, including our survey of customer activity levels (the Industrial Business Indicator) and other measures of economic activity, such as new jobs.

The operating environment in the U.S. is poised to be even stronger this year. Prologis forecasts another year of 225 million square feet of demand, likely ahead of completions (in the range of 170 million square feet). Vacancy rates will fall into the low-6% range. At the same time, the development pipeline should expand – including among smaller- and mid-sized facilities – to create a balanced market heading into 2016. We believe rent growth will continue to grow above-trend but also moderate from its recent spikes in 2013 and 2014. Replacement costs have jumped in the past few years, initially led by rises in land values and labor costs. More recently, general contractors have exercised greater pricing power, restoring their profit margins. Higher replacement costs provide support for current values and rental rates. In-place rents are falling farther behind market. As these leases roll to market, NOI growth is expected to accelerate, approaching about 5% per year in the coming years.

**EXHIBIT 2 Operating Fundamentals, U.S.**

Source: CBRE-EA (historical), Prologis Research (forecast)

**EXHIBIT 3 Development Pipeline, Major U.S. Markets**

Source: CBRE, JLL, Cushman & Wakefield, Colliers

Note: The percentages within the axis labels are market-level development pipeline as a proportion of trailing four quarter sum of net absorption. Pipeline as of December 2014.

**Executive Summary:** The year ahead will be dominated by strong operating conditions across a range of markets and size categories. The economic backdrop is surging amid near-record low vacancy rates, supporting an expansion in rental rates. The NOI growth expansion is coming into view, particularly as in-place rents have fallen farther behind market rates. At the same time, values have recovered fully and cap rates are below their prior cycle low, so returns are poised to normalize.
Transaction volumes are elevated heading into 2015. Total logistics transactions were approximately $8 billion in 2014\(^4\) (after removing non-comparable transactions in the industrial sector). Volumes recovered near prior peak levels as recently as 2012 and have stayed elevated. In addition, several notable transactions were pending at the end of the year, pointing to a record 2015. The combination of strengthening fundamentals and capital flows led asset values up 7% in 2014,\(^5\) more than any other property type. Cap rates for Class-A properties fell to 5.3% in Q4 2014, down nearly 10 basis points in the quarter and 30 basis points during the year.\(^6\)

It appears that the return environment will normalize in the coming years. After another year of double-digit returns,\(^8\) investors are beginning to wonder if pricing is too full. In our view, asset values are fair but no longer ‘cheap’. Asset values in many markets and for multiple size categories remain at a discount to replacement cost, but the gap has narrowed in recent years. One countervailing point is that cap rates and underwritten IRRs remain at wide spreads to the fixed income markets. As of January 2015, logistics Class-A cap rates were more than 350 basis points higher than 10-year nominal treasury bonds. By comparison, we estimate a normalized spread to be in the 200 basis point range, leaving considerable room for interest rates to rise. Capital flows are lifting asset values, and 2015 could be another year of outsized returns.

Many U.S. markets have healthy investment performance. Growth leadership over the past few years has been driven by a combination of higher-barrier port markets (e.g., Miami, NY/NJ and all major West Coast markets) and Texas markets, led by that region’s economic boom.\(^9\) More recently, some early recovery markets such as Houston and Miami continue to enjoy outsized returns, but at a moderating pace. In contrast, markets late to the recovery but with a notable improvement in their fundamental backdrops in the past year have begun to surge, among them Chicago and Atlanta. In addition, investment performance has strengthened for smaller and infill product.

EXHIBIT 4 U.S. Market Vacancy, Current vs. Prior Cycle

![Vacancy Cycle Diagram]

**EUROPE**

**Executive Summary:** Operating conditions stabilized across most European markets in 2014 and capital flows led to material declines in cap rates. However, Europe’s expansion is not yet firmly established, as macroeconomic growth is making little progress. Although market vacancies continue to fall, effective rental rate increases remain gradual. Prospects for improved economic growth coupled with elevated cap rates leaves room for sizable value gains.

The logistics real estate market improved in 2014 despite weak economic growth. In aggregate, market vacancy rates fell 150 basis points to 7.2%, benefitting from structural demand drivers and low new supply. Net absorption was 6.1 million square meters (66M sf), the best since 2007 as an end to the recession encouraged new leasing. Substantial variation exists across markets; many U.K. and Northern European markets already have elevated occupancies. The recovery included gains in several lagging markets in both CEE (e.g., Poland, Budapest) and Southern Europe (e.g., Marseille, Paris, Madrid). Yet, the rental rate recovery has been gradual as competition for vacancies has been moderate. At the same time, certain submarkets effectively had no available supply, which permitted declines in concessions and increases in headline rents.

Despite the variable fundamental backdrop, the recovery in values has built notable momentum. Transaction markets became much more active, with volumes eclipsing prior peak levels. In general, asset values are depressed relative to prior peaks, although the U.K. recovery has pushed rental rates and values to new highs. And while activity has been focused in the major Western markets, investors have begun to broaden their mandates to a swath of markets in Southern Europe and CEE. Appraised values rose more than 10% in 2014 as cap rates compressed 50 basis points. Cap rates for Class-A properties reached 6.2% on average, with yields near 5% in the U.K. but still above 7% in a range of Southern and CEE markets. Cap rate declines have been a boon for values, although the re-pricing of logistics real estate has attracted more development. Although predominantly build-to-suit over the past few years, new supply has moderated net effective rental rate growth. Prospects for further cap rate declines could continue to keep effective rent growth at a moderate pace in the near term, albeit likely a net positive for asset values.

The economic backdrop is a key uncertainty across the continent, but progress is expected to energize demand for logistics real estate. The U.K. leads, with healthy economic growth. On the continent, growth has been muted, but is improving. Still-cautious business and consumer sentiment is at work, along with still-high leverage levels. The ECB’s expanded quantitative easing program is aimed at increasing available capital to businesses and consumers, driving greater investment, consumption and, eventually, inflation. In addition, the significant drop in the price of oil, while augmenting deflationary pressures, comes at just the right time to help jumpstart economic growth, as it increases real

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**EXHIBIT 7 Operating Fundamentals, Europe**

Source: CBRE, JLL, DTZ, Gerald Eve, Prologis Research
The expansionary phase can last several years as demand accelerates and absorbs speculative construction in incomes and, in turn, consumption. Yet, the potential for persistent deflation is a key risk to monitor, as it can limit aggregate demand in its own right and exacerbate nominal debt loads. Putting these factors together, GDP growth in the EU is expected to accelerate moderately this year to 1.1%, up from just 0.5% last year.11

2015 will lead more logistics real estate markets into expansion. Development is low relative to incoming demand and historical precedent, which should bring market vacancies even lower. Russia’s recession poses some risk to markets, particularly in the CEE, yet these markets have been able to diversity their economies since the last Russian crisis in the 1990s. In addition, we expect ongoing cap rate declines and value gains to attract more supply, which we expect will elongate the rental rate recovery cycle as these new developments compete for existing tenants.

Cap rate dynamics illustrate further upside to value. With cap rates now down to 6.2%, they are approaching prior cycle lows on average and already have reached those levels in a handful of markets. However, the fundamental backdrop is materially different today compared with the prior cycle. Current interest rates are low, now just 1.3% across the region on average, leading to a spread to cap rates of 490 basis points. The spread is high compared with the prior cycle (which fell below 200 basis points) and with global peers such as the U.S., where the spread is now 350 basis points. The ECB’s recent unveiling of quantitative easing, and its extended time commitment, likely will create additional fund flows to real estate and upward pressure on values, similar to what has happened in the U.S. in the past few years.

EXHIBIT 10  Cap Rates and 10 Year Treasury Note, Europe

<table>
<thead>
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<th>Year</th>
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<th>Cap Rate 2006-2008 Avg.</th>
<th>10 Year Treasury Note</th>
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<td>6.4</td>
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<tr>
<td>2014</td>
<td>3.2</td>
<td>3.1</td>
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</tr>
</tbody>
</table>

Source: CBRE, Eurostat, Prologis Research
Note: Cap rate stabilized to 95% occupancy

EXHIBIT 11  Fundamental Operating Cycle, Europe

Source: Prologis
Operating conditions are healthy. Market vacancies ended the year at 3.8% in Tokyo and 0.4% in Osaka. Rental rates are on the rise. Growth in the logistics arena has attracted new entrants to the development industry and the current supply pipeline is the highest on record. At the same time, Japan is severely underdeveloped relative to other developed economies. And, replacement costs have moved materially higher in the past few years, on increases for both land and labor rates, which will act as a governing factor going forward.

Cap rate compression is a continuing tailwind for returns. The BoJ’s recently expanded quantitative easing program supports a variety of financial markets, including the J-REIT market, where implied cap rates have fallen below 3.5%. By comparison, current appraisal/transaction cap rates are in the high-4%/low-5% range, leaving room for compression (but this will take time to play out).

Low oil prices are a tailwind for logistics demand drivers in Japan. Historically, falling oil prices have an inverse (inflationary) relationship to hourly wages in Japan. After declining steadily since 2013, seasonally adjusted real disposable income in December increased by 3.2%m/m. Rising labor costs coupled with the recent decision to delay the consumption tax increase should benefit Japanese consumers in 2015 and ultimately prompt demand for logistics real estate.

Stable expansion for logistics real estate. Although vacancy rates rose moderately in 2012 and 2013 (albeit from near-0% levels), they appear to have stabilized in 2014 as demand balances higher supply. Conditions are strongest in tier-one cities where supply and demand cycles are balanced. New supply has picked up most notably in tier-two and tier-three cities. Rent growth is healthy in tier-one cities, continuing in the mid-single digits range. Ongoing replacement cost growth acts as a support to further rental rate increases. Investment performance has also been healthy; ongoing NOI growth has attracted capital to the market, a weight on cap rates.

Macroeconomic crosscurrents represent headline risk but are not yet a headwind to true demand for logistics real estate. Two main cyclical trends are at play. First, while the pricing correction within the housing market has become increasingly pronounced in smaller cities, recovery may soon begin. Targeted government stimulus measures, along with an ongoing structural shift of urbanization, has eased the housing price correction. Indeed, the pricing correction appears to be stabilizing, as 56 out of 100 cities saw m/m price decreases in January, down from 70 in December. Second, leverage on corporate balance sheets has increased meaningfully in recent years. Still, the long-term rise of domestic consumption is the chief demand driver in China, rather than these cyclical crosscurrents.

**EXHIBIT 12 Fundamental Operating Cycle, Asia**

Source: Prologis
Logistics fundamentals were balanced in 2014. Demand and the development cycle both advanced in 2014 and vacancies drifted modestly lower, reaching 8.3% by the end of the year.\(^\text{18}\) Mexico’s six major markets absorbed 1.4 million square meters (15M sf) and 1.5 million square meters (16M sf) of completions in 2014. Conditions are balanced in Mexico City; annual demand growth is poised to rise above prior cycle levels as the market enjoys structural and cyclical growth drivers. Cap rates seem poised to decline, although there are few transactions to judge recent price changes.

Along the border, the recovery gained traction in the past year. Among North American markets, the border was the last to recover and supply has been relatively inactive. An increasingly healthy U.S. coupled with the decline of the peso versus the dollar has boosted demand. Rent growth has been healthy and, while supply is mostly in check, it has begun to increase (notably in Juarez).

Upbeat outlook heading into 2015, but downside risks merit monitoring. GDP is forecast to growth 3.2% in 2015, up from just 2.1% in 2014.\(^\text{19}\) In addition, leading economic indicators are generally firming, notably among consumer-oriented metrics, following the improvement in the macroeconomic backdrop in the U.S. However, industrial production has stalled since October, mining production in particular, driven by falling oil prices. In addition, prospective U.S. Fed rate increases pose a risk to emerging markets, Mexico included, and should be monitored.

Despite a depressed macroeconomic climate, demand for modern logistics facilities is stable. Vacancies have also held steady for bulk distribution facilities as development activity has come to a near-halt amid macroeconomic and financial market volatility. Broader market vacancies are drifting higher due to new supply of smaller modular facilities. These assets do not compete directly with bulk distribution facilities, so rents continue to rise for institutional-quality logistics facilities. The structural demand drivers in Brazil have become clear in the past year given growing demand for bulk distribution facilities despite economic crosscurrents.

The fundamental cycle may be near its nadir. Sentiment among businesses and economists is on the rise despite depressed leading indicators and elevated inflation expectations. Reasons for hope exist on two fronts. First, the central bank’s consistent focus on limiting inflation, typified by a further 50 basis point rise in the SELIC to 12.25% in January, is a long-term positive for financial market stability and foreign direct investment. Second, while the business community was disappointed by Aécio Neves’ election loss, the appointment of Joaquim Levy to finance minister is good news. Levy’s focus on supply-side reforms is a positive change in tack. Indeed, financial markets are taking note; long-term nominal and inflation-adjusted bonds have been stable after a notable sell-off in 2014 leading into the October election.
Endnotes

1. CBRE – Econometric Advisors for U.S. net absorption, completions and vacancy rate data
2. Prologis estimates
3. Consensus Economics
4. Prologis forecasts based upon CBRE-EA data
5. Real Capital Analytics. Warehouse only facilities sized greater than 50,000 square feet and built after 1975
6. NCREIF
7. Prologis data
8. Unleveraged total return, per NCREIF
9. Return data is based upon NCREIF’s unleveraged industrial returns
10. Prologis data. Cap rates stabilized to 95% occupancy.
11. Consensus Economics
12. CBRE
13. Morgan Stanley
14. Goldman Sachs
15. Jones Lang LaSalle
16. Prologis data
17. Soufun, Goldman Sachs
18. Six main markets in Mexico. Prologis estimates based upon data from CBRE and JLL
19. Consensus Economics

Forward-Looking Statements

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