

A photograph of a modern glass skyscraper at night, illuminated from within, with a grid of white lines overlaid on the image. The building is reflected on a dark surface below it.

March 2019 / Research Report

GLOBAL REAL ESTATE STRATEGIC OUTLOOK

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1 / Executive Summary

A few key themes are playing out in global economy. First, global growth is slowing and as the financial markets faced turbulence towards the end of 2018, more investors are concerned about the end of the cycle. However, yield curves remain positively sloped, and the risk of recession for many countries appear low over the next twelve months. Second, monetary policy is showing nascent signs of converging recently to an easier path after diverging for some time during the past two years. The Federal Reserve (Fed) has signaled it can be more flexible on its tightening policies, and we do not expect the European Central Bank (ECB) to raise rates in the next 12 months. We expect “real” rates (interest rates minus inflation) to remain low over the next five years, supportive for real estate returns.

Real estate continues to perform well with the Global Real Estate Fund Index (GREFI) returning 9.25% year-over-year in Q3 2018, slightly lower than world equities at 11.9%¹ over the same time period, and much better than global bonds at -1.3%². However, if we accounted for the turbulence in equities towards the end of 2018, world equities returned only 3.4% on an annualized basis from September 30, 2017 through the end of January 2019, likely much lower than global real estate.

We remain constructive on real estate for several reasons. First, despite end-of-cycle fears, labor markets in many markets globally are healthy with low unemployment rates and wage growth. Second, initial yields relative to sovereign bond yields remain above their long-term average globally and provide reasonable risk premium compared to bonds. While this may not be the case for a number of countries or sectors, the global average remains attractive. Third, construction activity remains fairly disciplined in the aggregate and we see supply being limited due to factors such as rising construction costs.

Across the three regions, we expect Asia Pacific and U.S. real estate to outperform European real estate over the next three years. However, returns diverge across markets and sectors in each region. We are more positive on the industrial sector across the three regions as we see supportive structural trends especially with the growth of e-commerce. In addition, industrial still provides wider yields compares to other property types. For example, in Australia, industrial initial yields at 6.3% on average is 260 basis points (bps) higher than Australia office initial yields. Prime assets such as CBD office in gateway markets have attracted a lot of capital from global investors, which has lowered yields on these core assets and also lowered our expected returns. We see limited rent growth for many core office markets over the next five years. In contrast, many overlooked sectors and markets can still present good opportunities for better relative returns.

The U.S. economy continues to perform well with unemployment near a 50-year low. The effects of deregulation, tax cuts, and increased government spending has benefitted the economy, and the expansion is expected to continue at least through 2019 and likely 2020. While the medium-term outlook is more uncertain with yield curves flattening, we still think the risk of recession is fairly benign. As mentioned above, the Federal Reserve has signaled recently that it can be flexible on its monetary tightening policy. We expect U.S. unlevered total returns to be 5.0% over the next five years, led by industrial at 6.6% and followed by office at 4.7%. Returns vary quite a bit by market and sector. For example, we are overweight on Orlando apartments and West Palm Beach retail which can deliver returns in the high-6% to low 7%. At the same time, certain core markets such as New York City and Chicago are expected to produce muted returns in the 3-4% range for office and apartments.

Economic growth in Asia Pacific was good during 2018, supported by still-healthy global trade and good domestic demand. China's economy showed signs of stabilization, although there might be further cooling ahead due to moderation in retail sales and fixed asset investment. Australia's economy is more diversified and is also supported by good demographic trends. Export growth is strong in Japan, South Korea and Singapore. Labor market conditions are still good in most countries with unemployment either declining or holding steady. We see the ongoing trade conflict as the biggest risk factor

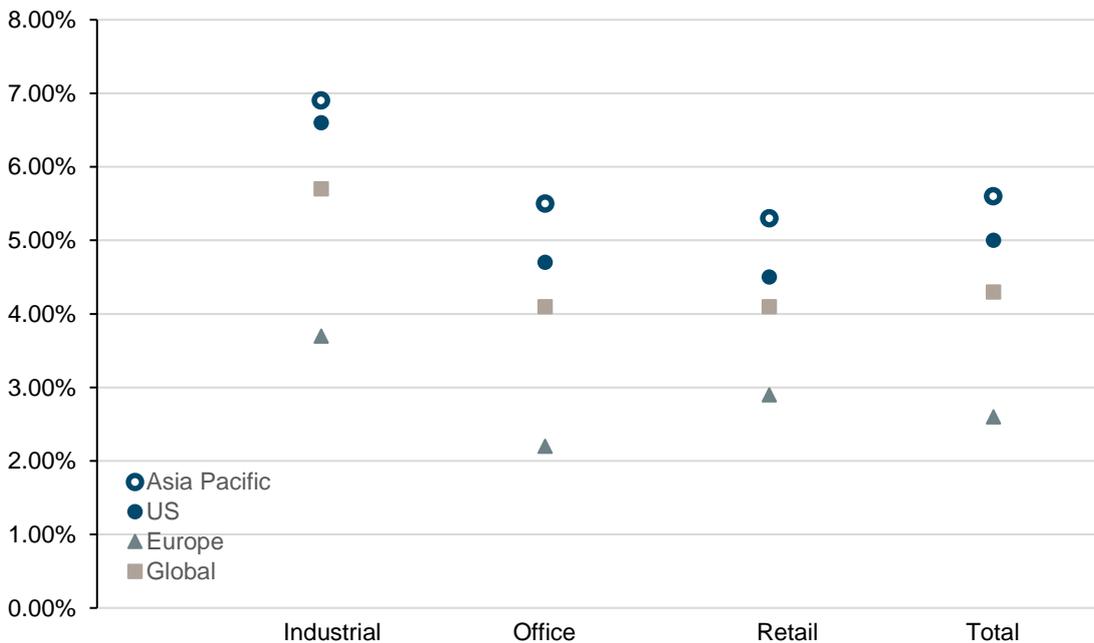
¹ MSCI World Index, year-over-year total return as of 9/30/2018

² Bloomberg Barclays Global Aggregate Total Return Index, year-over-year total return as of 9/30/2018.

for many countries in the Asia Pacific region. On the aggregate, we expect unlevered Asia Pacific real estate to generate returns of 5.6% over the next five years, driven by industrial at 6.9%. We are very positive on Australia’s potential to generate good real estate returns given its diversified economy and strong demographic trends. We expect Australian real estate returns to be 6.0% over the next five years. Other markets and sectors that we see attractive are Japan due to the wide initial yield spread to sovereign bond yields, and Singapore industrial.

European economic activity slowed during the second half of 2018 and sentiment has worsened. The slowdown was led by the manufacturing sector, and most acute in core Europe, with Germany and France recording multi-year PMI lows in December. The Nordics and Central and Eastern European (CEE) are clear outperformers, and current stresses in Italy are forecast to see weaker than average performance. Brexit remains an overhang for the United Kingdom, and there is more tail risk given the recent political impasse. Despite the more negative sentiment, wage growth and inflation has started to pick up. While the ECB ended its bond purchase program in December 2018, we do not expect any interest rate hikes over the next 12 months. We expect European real estate returns to be fairly muted at 2.6% over the next five years, with industrial expected to perform best at 3.7%. However, opportunities still abound when looking at markets and sectors. For example, we are overweight on the industrial sector in Dublin, Helsinki, and Warsaw where returns are expected to range from 5.5% to 6.4% over the next five years.

EXHIBIT 1: GLOBAL RETURNS BY SECTOR (5-YEAR TOTAL RETURN FORECAST NET OF CAPITAL COSTS, 2019-2023)



Sources: DWS. As of February 2019.

Note: Forecasts may not be a reliable indicators of future returns. No assurance can be given that any forecast or target will be achieved. Forecasts are based on assumptions, estimates, opinions, models and analysis which may prove to be incorrect.

2 / Global Economic and Political Highlights

The global economy's growth projections has slowed. The IMF has revised down its forecast for global growth to 3.5% in 2019 and 3.6% in 2020, 0.2 and 0.1 percentage points lower than the October 2018 projections. The downward revision to global growth has largely been due to the trade tariffs enacted by the U.S. and China, and slowing growth momentum during the second half of 2018. In addition, financial markets displayed turbulence during the fourth quarter of 2018. The S&P 500 declined 18.1% from September 30, 2018 through January 25th, 2019. Despite the more negative sentiment, economic growth in many countries still appears to be holding up with unemployment at record lows and wage growth picking up.

EXHIBIT 2: KEY MACROECONOMIC INDICATORS

	GDP		Inflation		Unemployment		
	2018E	2019F	2018E	2019E	2017	2018	10-yr Avg.
United States	2.9%	2.6%	1.9%	2.1%	4.4%	3.9%	6.8%
Eurozone	1.8%	1.3%	1.7%	1.4%	8.5%	7.8%	9.5%
U.K.	1.3%	1.5%	2.5%	1.8%	4.4%	4.1%	6.6%
Japan	0.8%	0.7%	1.0%	0.9%	2.8%	2.4%	4.0%
China	6.6%	6.0%	2.1%	1.5%	3.9%	3.8%	4.1%
Australia	3.0%	2.5%	1.9%	1.7%	5.6%	5.2%	5.5%
Singapore	3.3%	2.5%	0.5%	1.1%	2.2%	2.0%	2.1%
South Korea	3.1%	2.6%	1.5%	1.8%	2.7%	2.9%	3.5%

Source: DWS, Oxford Economics. As of January 2019.

Note: GDP and inflation 2018E and 2019F values for the United States, Eurozone, U.K., Japan, and China are from the DWS CIO Office. GDP and inflation 2018E and 2019F for Australia, Singapore and South Korea are from Oxford Economics. Unemployment rates are from Oxford Economics. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

The U.S. economy continues to be strong with unemployment near a 50-year low and more job openings than there are unemployed people to fill them³. Economic growth accelerated to about 3% (annualized) from a post-recession trend of about 2%, while 2.6 million jobs were created, pushing the unemployment rate down to nearly a 50-year low (3.9%). As the effects of deregulation, tax cuts, and increased government spending ripple through the economy, the expansion is expected to continue at least through 2019 and likely 2020. The medium-term outlook is more uncertain, however, with the flattening yield curve pointing to rising risk of recession. In the U.S., recessions typically only begin about 12-18 months after the yield curve first inverts. Therefore, we see limited recession risks in 2019 and into 2020. We still expect the Fed to increase interest rates once in 2019, and along with rising short-term interest rates, we expect initial yields on property to increase by 10-30 bps over the next five years.

Economic activity in Europe has slowed during the second half of 2018 and sentiment has weakened. Business and consumer confidence is trending lower and gross domestic product (GDP growth has slowed, but remain well above history. Despite a slight reduction in job growth, European Union (E.U.) unemployment continues to fall and is now at its lowest level since records began in January 2000⁴. The slowdown in activity was led by the manufacturing sector, in part specifically, the German automotive sector. This slowdown has been most acute in core Europe, with Germany and France recording multi-year PMI lows in December⁵. Regionally, the Nordics and CEE are clear outperformers, while capacity constraints in Germany and current stresses in Italy are forecast to see weaker than average performance. In France, sentiment indicators have declined, the growth outlook has deteriorated, and the outcome of the pension and the insurance reform will be less ambitious than initially expected. Brexit remains an overhang for the United Kingdom, and given the recent political impasse, there is more tail risk to our medium-term outlook. Despite the more negative sentiment, wage growth and inflation has started to pick up, and monetary policy is gradually tightening. The ECB ended quantitative easing at the end of 2018, and the Bank of England raised its base rate to 0.75% in August 2018. We do not expect the ECB to increase interest rates within the next year or two, and we expect another 25 bps hike from the Bank of England in August or November 2019.

³ Bureau of Labor Statistics. As of December 2018.

⁴ Eurostat, November 2018

⁵ Markit, January 2019

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Economic growth in Asia Pacific was good in 2018, supported by still-strong global trade and robust domestic demand. China's economy showed signs of stabilization, although there might be further cooling ahead due to moderation in retail sales and fixed asset investment. Australia is transitioning towards a more diversified economy, driven by non-mining sectors particularly in the main Eastern states. Export growth remained strong in Japan, South Korea and Singapore. Labor market conditions are still good in most countries with unemployment either declining or holding steady. However, economic activity has moderated towards the end of 2018 due to uncertainty with global and regional trade. Trade remains the biggest downside risk to growth in the region. Monetary policy remains accommodative in China, Australia and Japan, where central banks have kept policy rates low in favor of supporting domestic demand. In Hong Kong and Singapore, however, monetary policy is tied to the U.S., and therefore interest rates are higher in these two small economies.

Long-term interest rates have increased for some economies, and relatively unchanged for others. In the U.S. long-term interest rates rose ~50 bps from the fourth quarter of 2017 through the end of 2018⁶. Similarly, in Hong Kong and Singapore, long-term interest rates have risen 30-50 bps. The Federal Reserve, recently in late 2018 and early 2019, signaled a moderation in the pace of interest rate hikes. In contrast, in Japan, Germany and other parts of Europe, long-term interest rates remained relatively flat. The Bank of Japan and the ECB are still maintaining easy monetary policies to help support economic growth. This divergence in interest rates have led to an increase or decrease in hedging costs or gains for global investors who are looking to deploy capital abroad.

We see a few key downside risks to the current economic climate. First, the ongoing trade conflict especially between the U.S. and China may lead to reduced global trade and ultimately a slowdown in global economic growth. Second, a no-deal Brexit which would further impede growth in the United Kingdom and likely create repercussions for the rest of Europe. The current divided political climate in the U.K. is not supportive and we believe it is likely that Article 50 gets prolonged. Third, weaker growth in Europe driven by lower net exports and difficult political situations such as in Italy. We see wage increases, healthy labor market and positive private investments as offsets.

Trade Conflicts Update

In the September 2018 Global Strategic Outlook, we highlighted a few key points relating to the trade conflict ongoing especially between the U.S. and China. Since then, China has made a few moves that shows its willingness to open up its markets, such as cutting some import tariffs starting from November 2018 which will apply to all nations, and an announcement in January 2019 that it will grant new banking licenses to foreign banks within the next six months. In addition, there has been reports of China offering to purchase more farm products from the U.S. Both China and the U.S. agreed to delay imposing tariffs until they work out a trade deal with a deadline of March 1, 2019, although that deadline may be relaxed. We think it is likely that both countries will come to a resolution soon and no further punitive tariffs will be implemented. At least part of the tariff increases implemented in 2018 could be reversed.

In February 2019, the U.N. predicted that the European Union may benefit from a U.S.-China trade conflict, potentially gaining \$70 billion from getting new outlets for exports, and up to \$90 billion in additional trade due to larger value change changes in East Asia.⁷ However, the overall impact of the trade conflict will likely be negative on global growth with potential spillovers to commodities and financial markets. We believe that the most trade-sensitive markets such as Hong Kong and Singapore, and to a lesser extent, Germany and Japan, will be most vulnerable in the event that the trade conflict escalates.

⁶ Oxford Economics, January 2019

⁷ Key Statistics and Trends in Trade Policy 2018. Trade Tensions, Implications for Developing Countries. United Nations

There have been a few positive bilateral agreements, including the Korea-US Trade Agreement signed in May 2018, and the U.S., Canada and Mexico trade agreement (USMCA, replacing NAFTA) which was signed by the three Presidents in November 2018. The E.U. and Japan signed a free trade agreement in January 2019.

As far as implications to real estate, higher tariffs imposed on steel and other inputs important for construction has limited supply as development projects get put on hold due to escalating costs. Construction costs for new office buildings in the U.S. climbed 2.9% during 2018, up 130 bps from a year ago.⁸ In addition, the trade conflict can put a drag on the economy and result in reduced tenant demand. There are also fears that lower global trade can hurt warehouse demand. However, we find this to not be the case, even in port markets such as LA/Inland Empire. The industrial vacancy rate in the Inland Empire West submarket was stable year-over-year at 5.2%.⁹

Monetary Policy

A key theme for monetary policy globally is nascent signs of convergence. While the Federal Reserve is on a path of increasing interest rates, it has signaled it will be flexible as needed due to recent global economic and financial developments and muted inflation pressures. We expect the Federal Reserve to raise rates once in the latter half of 2019 to a range of 2.50%-2.75% by year-end. The federal funds rate is currently 2.25%-2.50%.

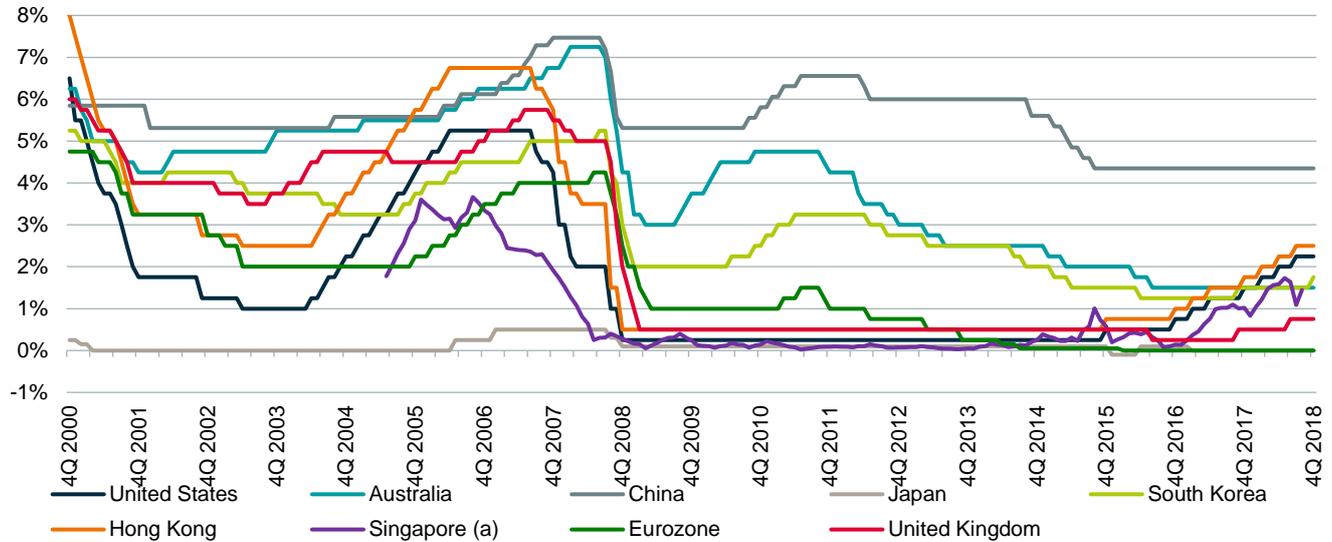
While the ECB ended its bond purchase program in late 2018, we think it is unlikely the ECB will raise interest rates over the next 12 months given the more sanguine outlook in Europe. The deposit rate remains at -0.4%. The central bank's economic growth projections have been revised down by 0.1% to 1.9% in 2019 and 1.7% in 2020. Given the more dovish outlook, we do not expect the ECB to increase interest rates in the next 12 months.

The Bank of Japan and the People's Bank of China continue to remain accommodative. The Bank of Japan remains accommodative with its policy rate held at -0.1% and the target for the 10-year government bond kept at zero. China's policy rate also remains accommodative at 4.35% (the policy rate was last cut in October 2015), with no indication of raising rates even as the Federal Reserve has done so.

⁸ Federal Reserve Bank of St. Louis, Producer Price Index by Industry, New Office Building Construction, December 2018

⁹ CBRE

EXHIBIT 3: POLICY RATES



(a) Based on the Singapore domestic interbank overnight rate
Sources: DWS, Oxford Economics, Bloomberg. As of December 2018.

The Bank of England raised its policy rate to 0.75% in August 2018 due to rising inflation. The Bank of England forecasts inflation to be 2.2% in 2019 and 2.1% in 2020. We expect the BoE to hike rates once more in 2019 by 25 bps, but may postpone a rate rise this year if Brexit uncertainty persists.

As global monetary policies have diverged, so has currency movements and hedging costs for real estate investors. In the September 2018 Global Strategic Outlook, we highlighted how swap spreads have moved throughout 2018; most notably, U.S. swap spreads have increased, consistent with higher interest rates. Since Autumn, swap spreads have actually slightly declined for many economies due concerns over global growth and volatility in the financial markets. U.S. three-year swap spreads declined by 29 bps since July 2018. Three-year swap spreads in Germany and Japan also slightly declined by 8-9 bps into negative territory in January 2019. Looking ahead, swap spreads can trend higher especially for the U.S. and the U.K. as the central banks in these countries are expected to raise interest rates once during 2019.

EXHIBIT 4: CURRENCY HEDGING COST OF CARRY

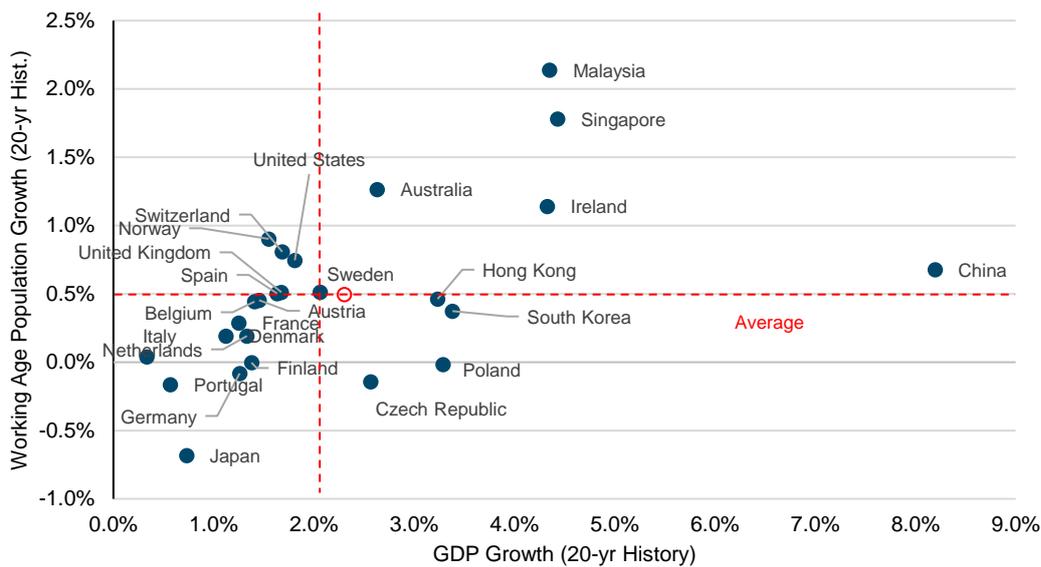
Investor Domicile	3-Year Interest Rate Swap (Jan-2019)	Currency of Investment Destination							
		AUD	JPY	KRW	CNY	EUR	CHF	GBP	USD
Australia	1.89%		1.9%	0.6%	-1.5%	2.0%	2.4%	0.7%	-0.8%
Japan	-0.02%	-1.9%		-1.3%	-3.4%	0.1%	0.5%	-1.2%	-2.7%
Korea	1.26%	-0.6%	1.3%		-2.2%	1.3%	1.7%	0.1%	-1.4%
China	3.41%	1.5%	3.4%	2.2%		3.5%	3.9%	2.2%	0.8%
Germany	-0.07%	-2.0%	-0.1%	-1.3%	-3.5%		0.4%	-1.3%	-2.7%
Switzerland	-0.48%	-2.4%	-0.5%	-1.7%	-3.9%	-0.4%		-1.7%	-3.1%
UK	1.20%	-0.7%	1.2%	-0.1%	-2.2%	1.3%	1.7%		-1.5%
US	2.66%	0.8%	2.7%	1.4%	-0.8%	2.7%	3.1%	1.5%	

Sources: Bloomberg, DWS. As of January 2019.

Population and Employment Growth

Looking longer term, good working population growth with a vibrant and young labor market base may attract employers to the region, which further solidifies the area’s economic footing. A higher active population would also help increase the potential long-term growth of a country/region. This consequently would support real estate returns as demand grows for rental apartments, offices, retail space and warehouses. Of course, other factors should also be weighed such as supply and demand balances or imbalances, economic drivers and regulatory environment. As in the chart below, there is generally a positive correlation between historical working age population growth rates and GDP growth.

EXHIBIT 5: GOOD WORKING AGE POPULATION GROWTH IS TYPICALLY POSITIVELY CORRELATED WITH GDP GROWTH



Source: DWS, Oxford Economics. As of January 2019. Note: Past Performance and forecasts are not reliable indicators of future returns. No assurance can be given that any forecast or target will be achieved. Forecasts are based on assumptions, estimates, opinions, models and analysis which may prove to be incorrect.

The Eurozone’s working age population is expected to grow at half its historical average at 0.2% through 2025 compared to 1990-2015 when it grew by 0.4%.¹⁰ While this would limit the Eurozone’s potential growth we expect growth as a result of excess capacity as well as migration into major cities which would allow the urban population to grow by 0.5%. We see a few key European markets that have better demographic support compared to average, namely Sweden, the United Kingdom, Denmark, France, the Netherlands, and Norway. We still see positive trends for Spain and Portugal as both are forecasted to have above-average employment growth rates. Even though Poland is forecasted to have very weak population growth and employment growth over the next five years, the domestic economy is particularly strong, drawing investment flows from the EU.

We see good demographic support from a few countries in the Asia Pacific region, specifically Australia, Malaysia and Singapore. Working age population growth is expected to be between 0.3%-1.4% and employment growth is expected to be between 1.0-2.7%. We can attribute these positive demographic trends to good birth rates and friendly immigration policies. On a real estate perspective, we are positive on Australia and Singapore especially for the office and industrial sectors, but more cautious on Malaysia due to oversupply issues. Hong Kong and Japan are expected to be weaker on the demographics front as the working age population is expected to decline 0.9% for both markets. Similar to Europe, in the case of Japan, urban migration into the major cities of Fukuoka, Osaka, Nagoya and Tokyo may allow the population of those cities expand from 0.4% in Fukuoka to 1% in Japan¹¹ through 2025. As such, we also maintain a positive view on

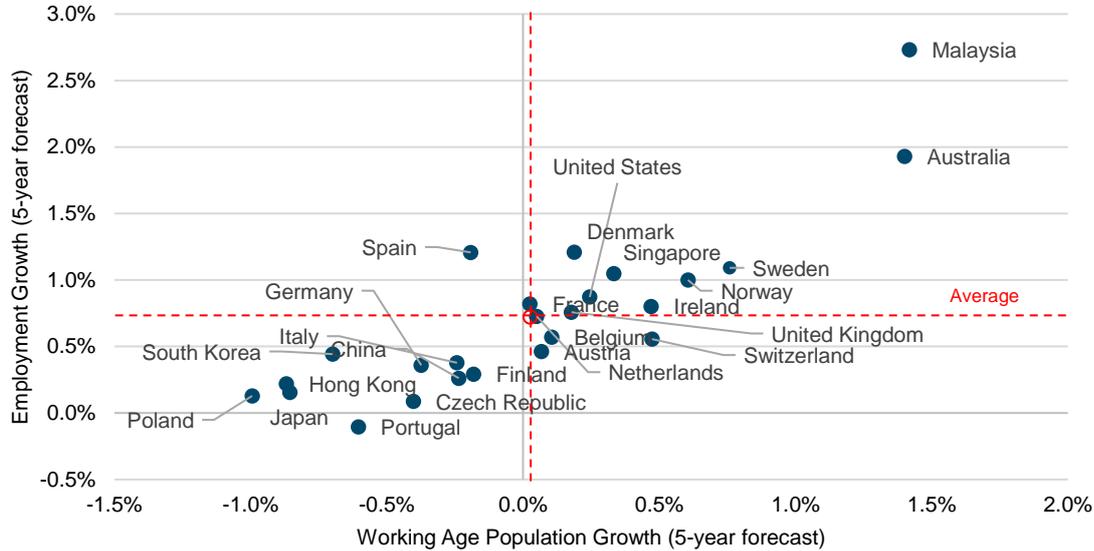
¹⁰ McKinsey Global Institute, “Urban World: Meeting the Demographic Challenge” pages 20-21 , October 2016,

¹¹ McKinsey Global Institute, “Urban World: Meeting the Demographic Challenge” pages 16-17 , October 2016

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Japan's real estate sectors in these major cities due to attractive real estate spreads over government bond yields, and record-low vacancy rates in the office sector and low unemployment.

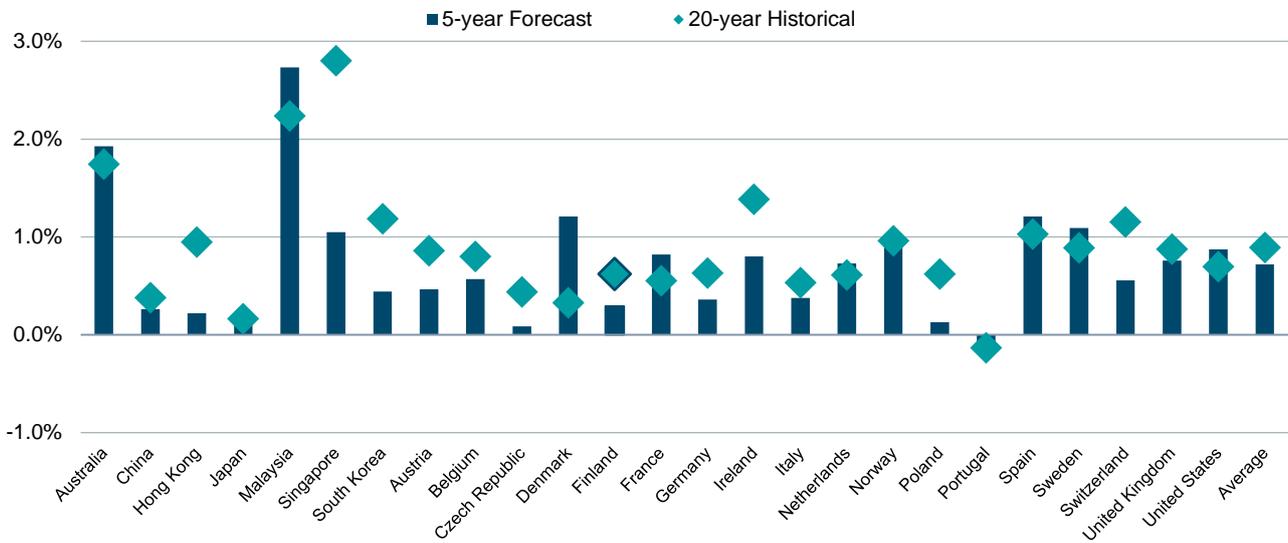
EXHIBIT 6: A NUMBER OF ECONOMIES ARE PROJECTED TO HAVE ABOVE-AVERAGE EMPLOYMENT AND WORKING POPULATION GROWTH



Source: DWS, Oxford Economics Note: Past Performance and forecasts are not reliable indicators of future returns. No assurance can be given that any forecast or target will be achieved. Forecasts are based on assumptions, estimates, opinions, models and analysis which may prove to be incorrect.

Below, we rank employment growth projections from Oxford Economics over the next five years by country. Australia, Denmark, Spain, Sweden and Singapore are expected to have relatively good employment growth, which should help support real estate returns, consistent with our regional views. Looking at the data on a relative basis to historical averages, forecasted employment growth are below historical averages, which is not surprising given most countries today are in the late cycle stages when growth starts to moderate. The Netherlands, U.S., Spain, Australia, Malaysia, Sweden, France and Denmark are expected to have forecasted employment growth above historical averages. Consistent with our views, we are overweight many Australian real estate markets such as Melbourne and Sydney. We see Australia as having some of the best demographic trends for a developed market, thanks to its welcoming policies for skilled migrants.

EXHIBIT 7: EMPLOYMENT GROWTH IS EXPECTED TO MODERATE FOR MOST ECONOMIES

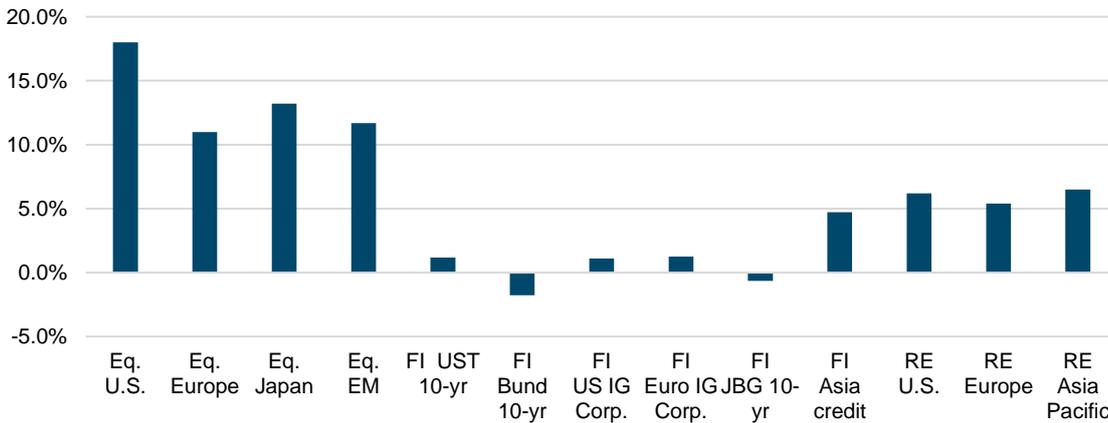


Source: DWS, Oxford Economics. Sorted by region and alphabetically by country. Note: Past Performance and forecasts are not reliable indicators of future returns. No assurance can be given that any forecast or target will be achieved. Forecasts are based on assumptions, estimates, opinions, models and analysis which may prove to be incorrect.

3 / Macroeconomic Implications to Real Estate

We are in a period of moderate global economic growth globally with slightly tighter monetary policy globally than we've seen over the last five years. Many of the countries we cover are in late-cycle stage, such as the U.S., U.K. and other mature Western European economies, Japan, and South Korea. Even though we are in late cycle, we are not at the end and there are likely a few more years of good positive relative returns to go. We still believe real estate is an attractive asset class and can provide a good risk premium compared to traditional asset classes such as equities and fixed income. The exhibit below highlights our 2019 CIO Views for major asset classes by region. As can be seen, we remain constructive on equities across the globe. However, real estate remains competitive with bonds given the low interest rate environment.

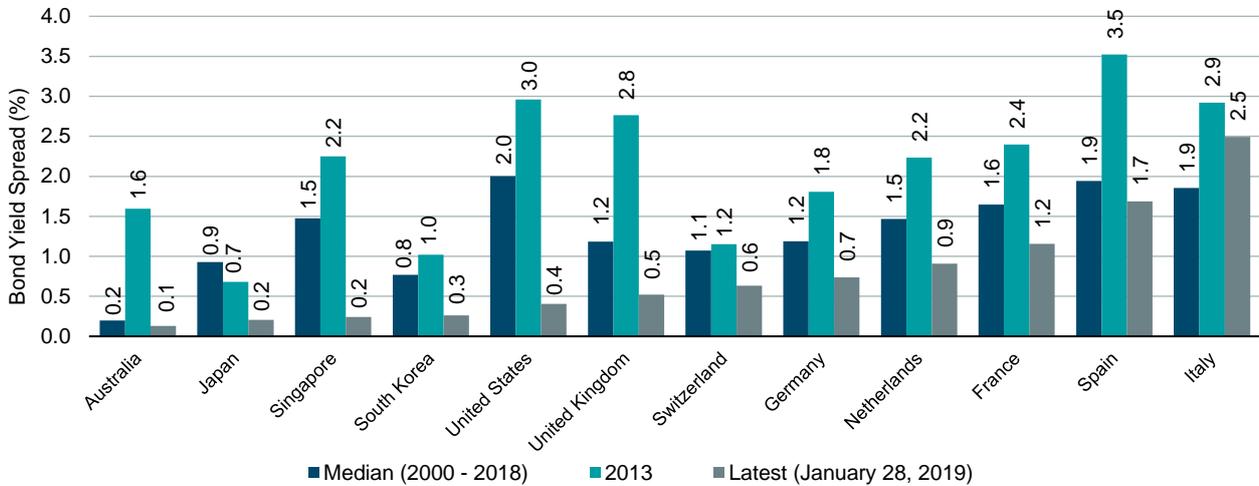
EXHIBIT 8: ONE-YEAR TOTAL RETURNS FORECAST BY ASSET CLASS



Source: DWS. As of February 2019. Past Performance and forecasts are not reliable indicators of future returns. No assurance can be given that any forecast or target will be achieved.

In addition, recession risks remain low in many of the countries we cover. As the following chart depicts, the yield curve (difference between 10-year and 3-month sovereign bond yields) remains positive. Historically, an economic recession is typically preceded by a negatively-sloped or inverted yield curve. Today, yield curves for the countries we cover are flatter than in 2013, and in most cases, flatter than the long-term median. However, we do not think that the scenario of flatter yield curves are necessarily a cause for concern in the short term given the environment of moderate economic growth.

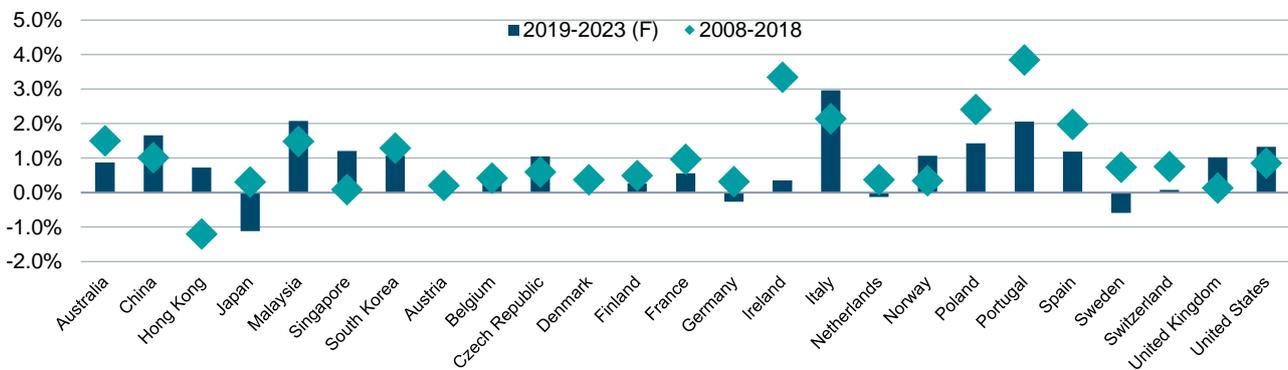
EXHIBIT 9: RECESSION RISKS REMAIN LOW IN MAJOR MARKETS



Source: Bloomberg. As of January 28, 2019.
 Note: Sorted by latest bond yield spread

Lower real yields (10-year sovereign bond yields minus inflation) have typically led to stable-to-higher real estate returns and vice versa. Real estate returns are typically supported in a low real yield environment as real estate becomes a more appealing asset class compared to fixed income investments. Investors have taken on a more cautious stance over the past few months and 10-year real yields have remained fairly low for a number of markets we cover. While short-term rates moved higher in the U.S. throughout 2018, they were relatively flat in the Eurozone, Japan and Australia, indicating muted inflation in these markets.

EXHIBIT 10: FORECASTED REAL SOVEREIGN BOND YIELDS BY COUNTRY REMAIN BELOW HISTORICAL AVERAGES FOR MANY ECONOMIES (10-YEAR YIELD – INFLATION)



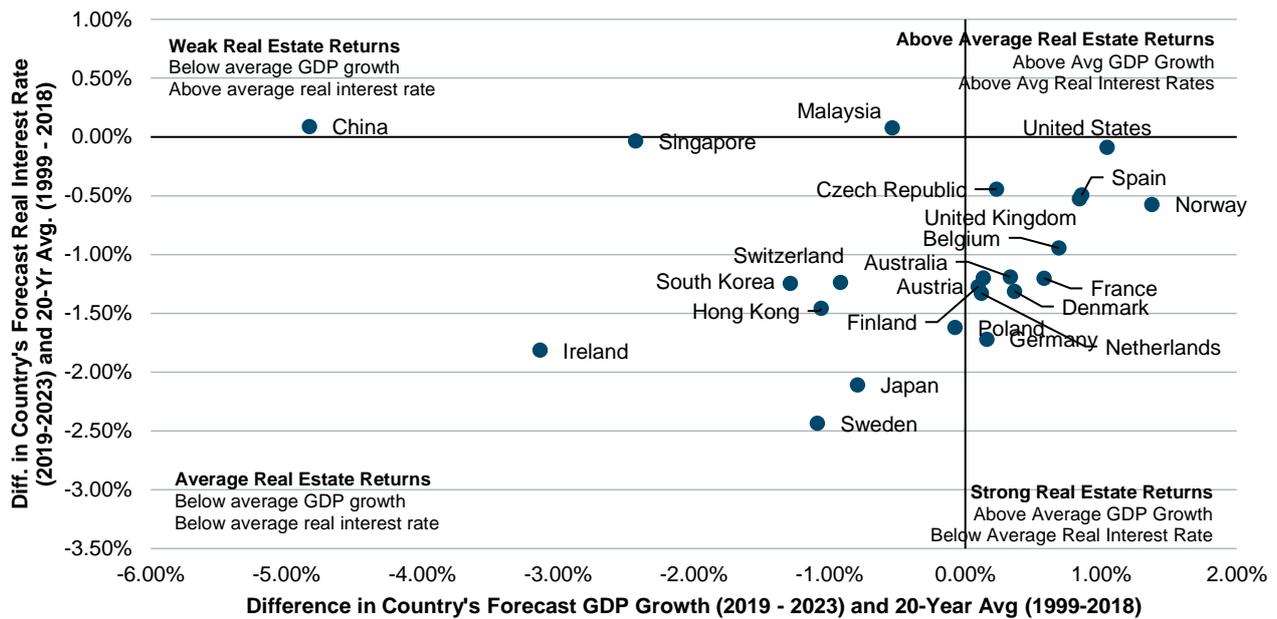
Source: DWS, Oxford Economics. As of January 2019.
 Sorted by region and alphabetically by country.
 Note: Frecasts are not reliable indicators of future returns. No assurance can be given that any forecast or target will be achieved. Forecasts are based on assumptions, estimates, opinions, models and analysis which may prove to be incorrect.

In the chart above, real yields are still expected to remain below the 10-year average for most countries over the next five years, thus still supporting economic growth and thus real estate returns. Certain countries are forecasted to have real yields higher than the 10-year average, including the U.S., China, U.K., Singapore and Hong Kong. In the U.S., the expected rise in real rates is expected to be a function of good economic growth which should support real estate fundamentals. However, for Singapore and Hong Kong, it is more due to their monetary policy ties to the U.S.

Past performance is not indicative of future returns. No assurance can be given that investment objectives will be achieved. Forecasts are based on assumptions, estimates, opinions, and hypothetical models or analysis which may prove to be incorrect. This information is for informational purposes and should not be construed as a recommendation, offer or solicitation

We expect lower real rates for the next five years compared to the 10-year average in Japan (-1.4%), Australia (-0.6%), Germany (-0.6%), Spain (-0.8%) and other parts of Europe. We are very positive on the property market in Australia due to continued economic expansion and employment growth. In Spain, we are confident on the residential market's outlook for rent growth.

EXHIBIT 11: ECONOMIC QUADRANT BASED ON 5-YR FORECAST GDP GROWTH AND REAL INTEREST RATES (10-YEAR SOVEREIGN BOND YIELDS LESS INFLATION)



Source: DWS, Oxford Economics. As of January 2019.

Note: Forecasts are not reliable indicators of future returns. No assurance can be given that any forecast or target will be achieved. Forecasts are based on assumptions, estimates, opinions, models and analysis which may prove to be incorrect.

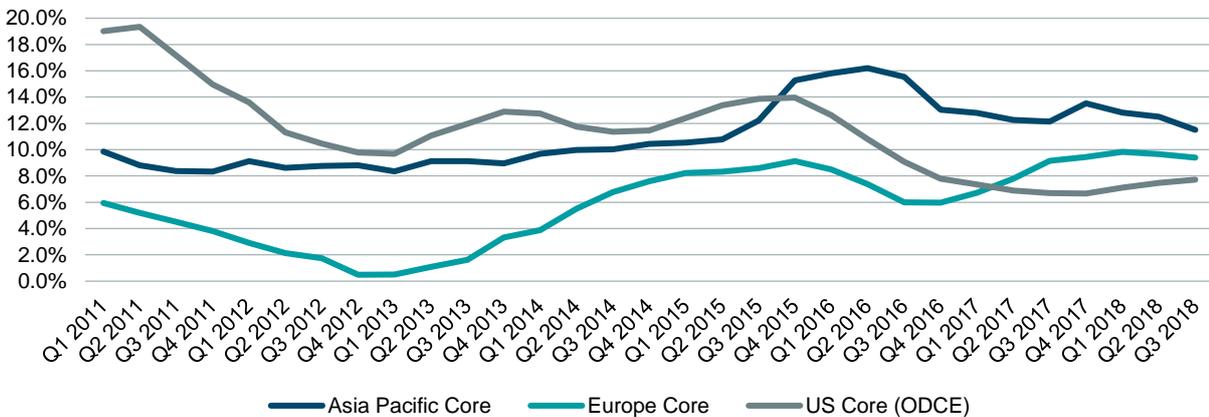
In the chart above, we compare the long-term average for GDP growth and “real” interest rates to the forecasted values from Oxford Economics. The ideal scenario for real estate valuations would consist of consistent economic growth coinciding with low real interest rates. Forecasted conditions over the next five years can be favorable for real estate in the U.S. Australia, and many parts of Europe including Spain, France, Denmark, the Netherlands, Finland and Germany. Economic growth is expected to be stable and compares favorably to history, coupled with lower real interest rates. While the U.K. appears to be favorable, we would take a more cautious tone given uncertainty around Brexit.

As mentioned before, in the case of Hong Kong and Singapore, monetary policy is likely tied to the U.S and therefore, these economies may experience higher interest rates which are not commensurate with their own growth rates, therefore leading to average real estate returns.

4 / Year in Review and Mid-Year 2018 Total Return Outlook

As of Q3 2018, the Global Real Estate Fund Index (GREFI) once again shows Asia Pacific core returns leading at 11.5% year-over-year, followed by European core funds at 9.4% and the U.S. core funds at 7.7%. The Asia Pacific core funds index continue to be dominated by Australia core funds at 64% of the index, followed by China at 8% and Japan at 7%. Australia has experienced strong real estate performance driven by good economic growth and healthy real estate demand. In addition, Australia is one of the more mature, transparent, and growing real estate markets in Asia Pacific with a healthy amount of foreign investor participation. The United Kingdom comprises the largest share of European real estate funds at 26%, followed by Germany at 19% and the Netherlands at 16%. Asia Pacific's stronger economic growth support good real estate returns, whereas Europe's recovery coupled with low interest rates have helped to boost the European real estate markets. U.S. real estate returns are normalizing.

EXHIBIT 12: GREFI DATA SHOWS AN OUTPERFORMANCE OF ASIA PACIFIC CORE FUNDS VS. EUROPEAN AND U.S. CORE FUNDS



Sources: ANREV, INREV, NCREIF, As of January 2019

The GREFI returns in the exhibit above are leveraged returns (c.20% in each region). For unleveraged real estate returns, we refer to returns series produced by MSCI and NCREIF (for the U.S.). Returns for most countries are moderating. Australia's 1-year returns at 10.9% is lower than last quarter's 11.2%, and also lower than the 5-year returns at 11.6%. U.S. real estate returns produced 7.2% year-over-year, lower than the 5-year returns of 9.6%. Japan's 1-year returns came in at 6.6%, also lower than the 5-year returns of 7.6%. Japan's returns are still attractive due to high risk premiums given still-low 10-year government bond yields at 0.01%.

Notable countries with accelerating real estate returns are the Netherlands (14.8% 1-year returns vs. 8.4% 5-year returns), Finland (6.6% vs. 5.8%), Spain (14.8% vs. 10.5%), and Germany (10.5% vs. 7.3%).

EXHIBIT 13: MSCI AND NCREIF GLOBAL REAL ESTATE PERFORMANCE (LOCAL CURRENCY)

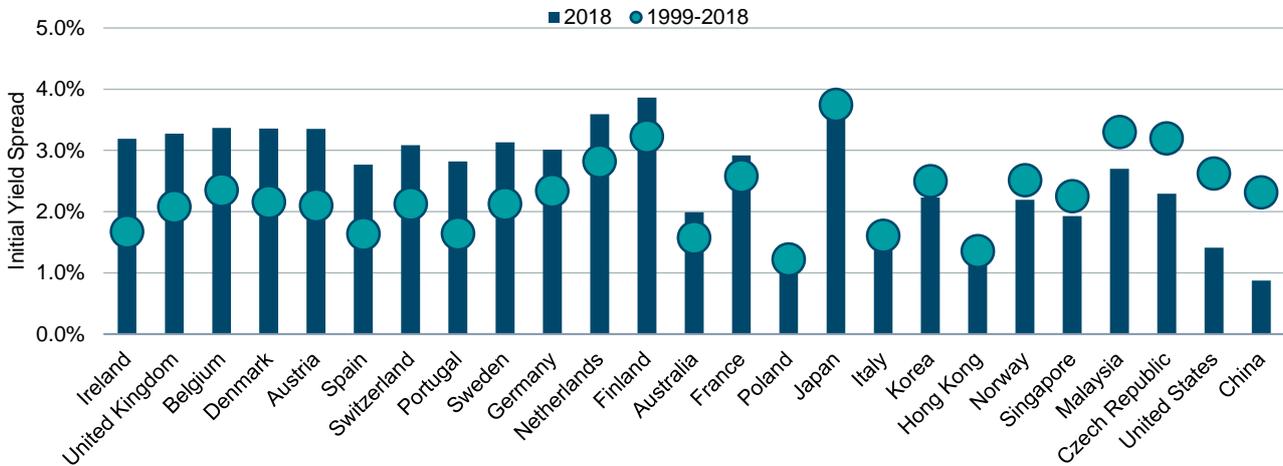
Country	1-year return	5-year return	As of	Index	1-year return	5-year return	As of
Australia	10.9	11.6	3Q18	Japan	6.6	7.6	3Q18
Austria	6.2	5.8	4Q17	Malaysia	6.7	8.7	4Q17
Belgium	6.5	6.1	4Q17	Netherlands	14.8	8.4	4Q17
China	7.9	8.4	4Q17	Norway	11.5	9.4	4Q17
Czech Republic	12.6	7.9	4Q17	Poland	5.8	5.5	4Q17
Denmark	5.7	6.0	4Q17	Portugal	11.6	8.0	4Q17
Finland	6.6	5.8	4Q17	Singapore	5.9	6.9	4Q17
France	7.9	8.9	2Q18	South Korea	6.9	7.6	4Q17
Germany	10.5	7.3	4Q17	Spain	14.8	10.5	4Q17
Global	8.1	8.9	4Q17	Sweden	11.1	10.8	4Q17
Hong Kong	10.3	9.6	4Q17	Switzerland	5.9	6.0	4Q17
Ireland	7.4	18.6	3Q18	UK	8.3	10.9	3Q18
Italy	6.2	4.2	2Q18	USA	6.7	9.3	4Q18

Sources: MSCI, NCREIF. As of January 2019. Data reflects the latest available.

Looking ahead, the exhibit below shows current yield spreads compared to historical averages, arranged by the difference in current and historical average initial yield spreads. In many instances, initial yield spreads are still above historical averages. In the U.S., initial yield spreads are lower today compared to historical averages as interest rates have moved higher but initial yields have held steady or declined slightly for some sectors.

Globally, the average yield spread to sovereign bond yields was 2.63%, 35 bps above the long-term average. After accounting for some yield expansion and slight increase in interest rates, we forecast the 2019 yield spread to sovereign bond yield to be 2.53%. If this occurs as expected, there would still be a 25 bps spread above long-term averages.

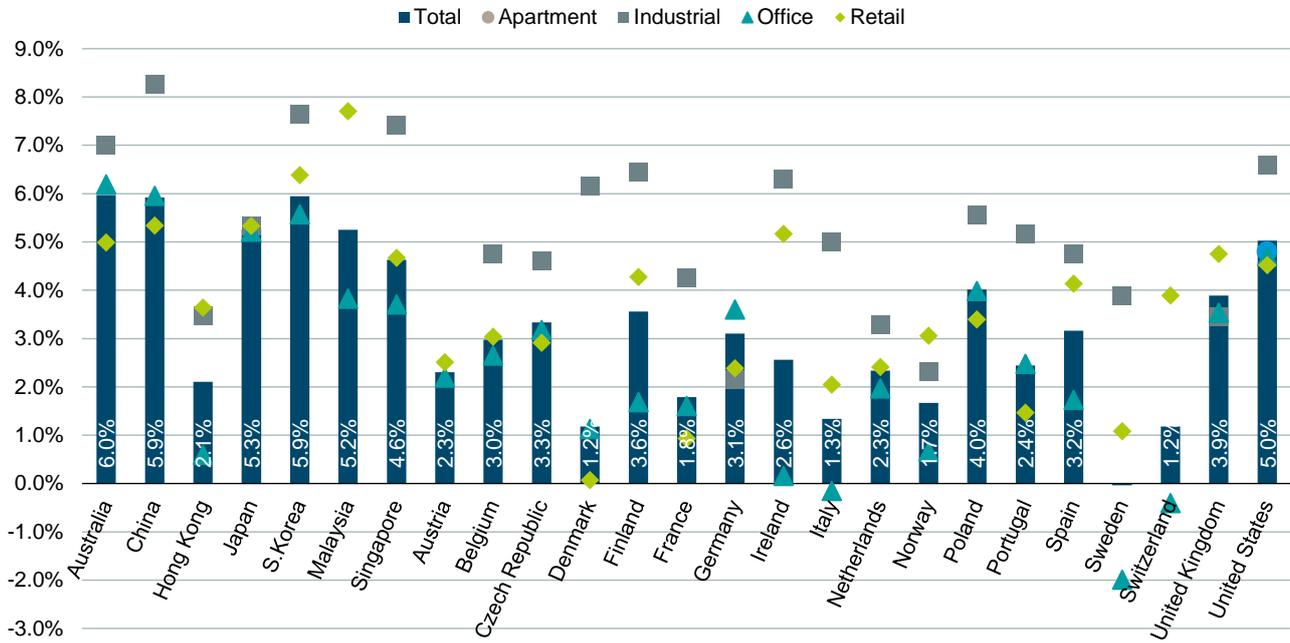
EXHIBIT 14: INITIAL YIELD SPREADS FOR MANY COUNTRIES ARE ABOVE THEIR 20-YEAR AVERAGE



Sources: DWS. As of January 2019. Initial yield spreads for each market based on equal-weight city and sector returns. Sorted by difference in forecasted 2018 initial yield spreads and historical averages. Note: Past Performance and forecasts are not reliable indicators of future returns. No assurance can be given that any forecast or target will be achieved. Forecasts are based on assumptions, estimates, opinions, models and analysis which may prove to be incorrect.

For our five-year total return forecasts, we consider a number of other factors, including the outlook for initial yield spreads, interest rates, occupancy, rent growth and supply and demand dynamics. We perform this analysis at a city sector level and aggregate these to the country level. The exhibit below depicts our five-year total return view by country and by property sectors. Our expected returns are shown on a property-level unleveraged basis. With a positive spread to lending costs, modest amounts of leverage would provide an additional return premium. Further, across our coverage area, we assume reversionary yields are higher by a range of 30-50 basis points. Given our sovereign bond views, this results in an income risk premium within range of its long term average. Finally, while there are wide variances in rent growth across our markets, the global aggregate average is within a range of inflation of 2%-3%. As a result, we expect real estate should provide total returns and risk premiums well ahead of the bond market.

EXHIBIT 15: AVERAGE ANNUALIZED 5-YR FORECAST RETURNS BY COUNTRY AND SECTOR (2019-2023)



Sources: DWS. As of January 2019. Total returns for each market based on cap-weight sector returns. Forecasts are based on assumptions, estimates, opinions, models and analysis which may prove to be incorrect.
 Note: Past Performance and forecasts are not reliable indicators of future returns. No assurance can be given that any forecast or target will be achieved. Forecasts are based on assumptions, estimates, opinions, models and analysis which may prove to be incorrect.

5 / Outlook for Real Estate by Region

5.1 U.S. Real Estate Outlook

2018 was a good year for U.S. real estate. As of the fourth quarter, vacancy rates were close to their lowest level in nearly 18 years and net operating incomes (NOIs) were up 4.1% year-over-year (four-quarter moving average).¹² Despite three Federal Reserve interest-rate hikes (and a fourth in December), cap rates declined slightly.¹³ And total returns to unlevered core real estate, measured by the NCREIF Property Index (NPI), was 6.7% (trailing four quarters), down from 7% in 2017.¹⁴

Still, there were areas of weakness, including malls and New York office and apartment buildings. Rising interest rates, together with slowing global growth and trade tensions, roiled financial markets, particularly in the fourth quarter. Many were left wondering whether these developments were transitory distractions or more worrisome early warning signals of the end of the real-estate cycle.

In our view, the near-term outlook remains positive, but with certain caveats. The U.S. economy is strong, with unemployment near a 50-year low and more job openings than there are unemployed people to fill them.¹⁵ We expect that positive momentum and fiscal stimulus will sustain a solid pace of growth — and real-estate absorption — through 2019 and likely 2020. Meanwhile, supply should remain manageable, constrained by labor shortages and rising construction costs. With vacancy rates already low, this environment should be conducive to healthy rent growth.

However, we believe that rising short-term interest rates will put a floor under cap rates and temper investment returns. Moreover, cyclical risks appear to be increasing. The yield curve has flattened, raising the specter of an inversion (long-term interest rates falling below short-term rates), a historically reliable harbinger of recession. This does not mean that a downturn is imminent: recessions typically follow 18-24 months after a yield-curve inversion, and the curve remains positively sloped, albeit mildly. However, it does imply that the cycle is in its later stages.

What are the implications for investment strategy? In our view it is too early to batten down the hatches, shunning growth-oriented sectors, markets, and assets that can thrive amid strong fundamentals. But it is not too soon to begin trimming risk in anticipation of future correction. Meanwhile, powerful structural forces, from demographics to e-commerce, are impacting real estate in ways that transcend the cycle. Our recommended sector and market allocations seek to account for both late-cycle and structural factors.

In a mature phase of the cycle it generally makes sense, in our view, to adopt sector allocations with a keener eye toward risk. This would imply tilting away from Office, a pro-cyclical sector, toward Retail, a more defensive one (Apartment and Industrial are historically market-neutral). At the same time, we recognize that corporate densification continues to weigh on the office sector while e-commerce is a boon and a bane for Industrial and Retail, respectively. Weighing these and other considerations, our strategy assigns a strong overweight to Industrial, a market weight to Apartment, and underweights to Office and Retail.

¹² NCREIF. As of December 2018.

¹³ Federal Reserve (interest rates); NCREIF (cap rates). As of December 2018.

¹⁴ NCREIF. As of December 2018.

¹⁵ Bureau of Labor Statistics. As of December 2018.

Industrial (Overweight): Posting total returns of 14.3% (trailing four quarters) in the fourth quarter of 2018, the highest level since early 2016, Industrial has established a commanding lead over other sectors.¹⁶ The strength of the fundamentals is difficult to overstate: as of the fourth quarter, the vacancy rate for core industrial property was 3.2% (four-quarter moving average), its lowest level on record and well below its 30-year average (8.4%), while NOI growth accelerated to 9.6% (year-over-year, four-quarter moving average), also a record.¹⁷ Virtually all cities and product types are profiting from the economic expansion as well as e-commerce, specifically the scramble to assemble the logistical capacity to provide same-day or even two-hour delivery of online orders, and to recirculate higher levels of returns. However, as construction has picked up in a few inland distribution hubs (i.e., Chicago, Dallas, and Atlanta), more supply-constrained coastal cities (e.g., Seattle, San Francisco, Los Angeles, and New York) have outperformed, a trend that we expect to continue.

Apartment (Market-weight): Apartment total returns, measuring 6.1% in the fourth quarter of 2018, have trailed those of the NPI since 2013 as an influx of new (primarily luxury, urban) supply has pushed vacancies higher and NOI growth lower.¹⁸ More recently, homeownership has also ticked up as ageing Millennials have belatedly entered the housing market, although strong household formation has sustained apartment demand. Given the volume of construction currently underway, we believe that supply will remain elevated through 2019. However, a tentative pullback of new starts points to lower deliveries in 2020. Moreover, financial imperatives, including rising home prices and mortgage rates and the capping of federal housing tax benefits, should sustain rental demand despite shifting demographics. Segments facing less near-term supply pressure (well-located, garden-style product) and markets with strong population growth (e.g., Phoenix, Atlanta, and Florida) should continue to outperform.

Retail (Underweight): Retail property tumbled from first place among major sectors in 2015 to a distant last place in the fourth quarter of 2018, recording total returns of just 2.2% (trailing four quarters).¹⁹ The October bankruptcy of Sears underscored the duress many retailers are facing in the e-commerce era, exacerbated by a lack of investment, innovation, unsustainable debts, and poor merchandising. Yet retail is not a lost cause. Malls, which typically have substantial tenant exposure to apparel and other goods that can be readily purchased online, delivered total returns of just -0.01% (trailing four quarters). But neighborhood and community centers, whose tenant mix typically features more in-demand services, including health care, dining, and fitness, produced returns of 5.1%. While Retail's travails are not over, we believe that well-located neighborhood and community centers with a healthy tenant mix will continue to fare reasonably well, and can provide income and downside protection to a portfolio.

Office (Underweight): Having lagged behind for most of the past 10 years, the office sector has recently performed relatively well, producing total returns of 6.8% (trailing four quarters) in the fourth quarter of 2018, second only to Industrial.²⁰ The office recovery from the financial crisis has generally been modest, but owners are now realizing substantial NOI gains (3.5% in the fourthquarter, year-over-year, four-quarter moving average) as they roll leases signed five or 10 years ago to today's higher market rates.²¹ We believe that this trend will continue to lift the sector's relative performance over the near term. However, we are more cautious over the medium term for several reasons, including: the ongoing densification of corporate space usage; constraints on future job creation amid low unemployment, an ageing workforce, and more restrictive immigration policies; and the inherent volatility of the sector as we move into the later stages of the cycle. Even so, several dynamic markets, including Los Angeles, Seattle, and Austin, should continue to outperform.

Coastal "gateway" markets (e.g., New York) have historically produced superior rent growth and price appreciation over the long term, courtesy of their density and supply constraints. Conversely, "regional" markets with fewer barriers to supply (e.g., Atlanta) have generally underperformed. Yet this pattern does not always hold in the short term. Over the past five

¹⁶ NCREIF. As of December 2018.

¹⁷ NCREIF. As of December 2018.

¹⁸ NCREIF. As of December 2018.

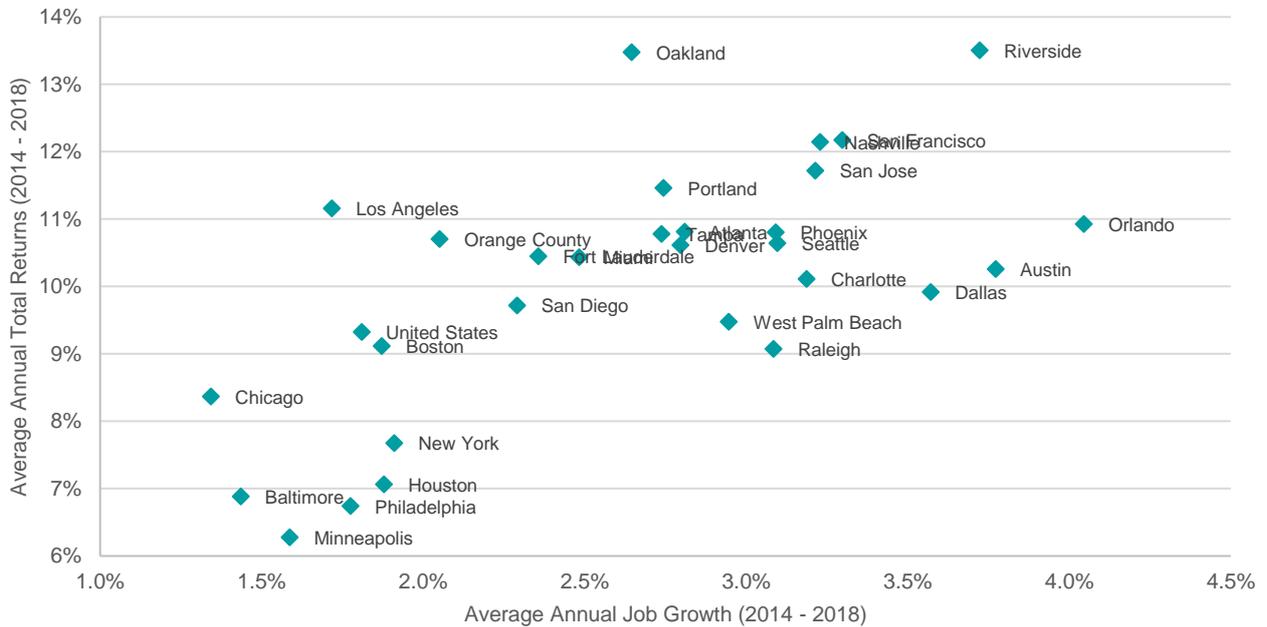
¹⁹ NCREIF. As of December 2018.

²⁰ NCREIF. As of December 2018.

²¹ NCREIF. As of December 2018.

years, job creation has arguably played a greater role in driving relative returns (see Exhibit 1). This has benefitted several regional markets, particularly in the Sunbelt, where lower costs have helped to attract an influx of businesses and people.

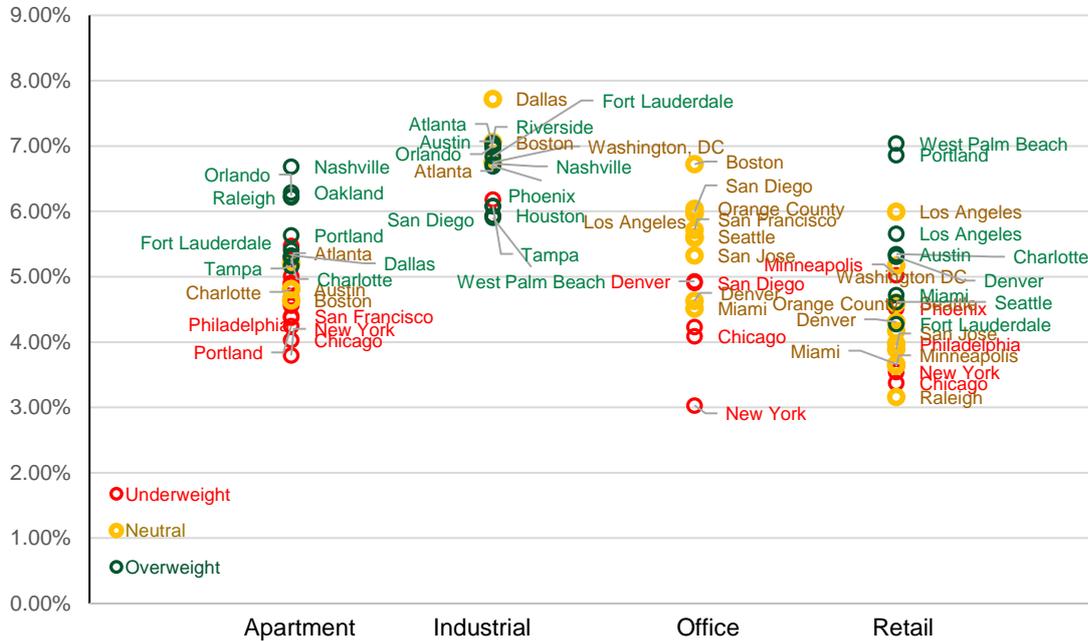
EXHIBIT 16: JOB GROWTH AND NPI TOTAL RETURNS (2014 – 2018)



Sources: NCREIF (total returns); BLS (job growth); DWS calculations. As of December 2018.

Given the central role that job creation plays in driving medium-term real-estate performance, our market picks are largely geared toward the most dynamic local economies. Among gateway markets we generally favor Los Angeles, San Francisco, and Boston, where tech-driven growth is outpacing new supply; we are also increasingly amenable to Washington D.C., which has historically proved relatively resilient through cycles thanks to its large government presence. Conversely, we are cautious toward New York and Chicago, beset with high costs and fiscal challenges. Meanwhile, federal tax reform, which capped mortgage and state and local tax deductions, should reinforce the demographic advantages of Texas, Florida, and other lower-cost southern locations (e.g., Atlanta and Nashville).

EXHIBIT 17: U.S. DISPERSION OF CITY-LEVEL RETURNS BY SECTOR (5-YEAR TOTAL RETURN FORECAST NET OF CAPITAL COSTS, 2019-2023)



Sources: DWS. As of February 2019.

5.2 European Real Estate Outlook

In the face of moderating economic growth, occupier demand increased once again in 2018, often reaching levels well above historical averages. Underlying strength across many parts of the market – particularly Spain, the Netherlands, Finland and the wider European logistics sector – continued during the second half of the year. Most sectors enjoyed improving occupier fundamentals over the year, yet the effects of structural challenges facing the retail market have intensified over the past 12 months, leading us to downgrade our outlook for the sector.

Following a record result in 2017, investment volumes were down by around 15% in 2018.²² However, there are a number of indicators of underlying strength in the market. Transaction volumes are still 25% above their ten-year average and certain sectors such as logistics and residential remain in strong demand;²³ lending terms remain favourable for borrowers; and there is a significant amount dry powder targeting European real estate.

At the market level, sentiment towards Poland remains strong, while Ireland, Portugal, and Belgium also saw investment activity rise in 2018. At the sector level, the shift towards the 'living sector' – senior housing, student housing, multifamily apartments and hotels – shows no signs of abating, with these sectors accounting for 25% of the market for the first time.²⁴ Logistics is also still in high demand, as e-commerce occupiers bring an additional source of tenant demand and rents continue to edge higher.

Despite the reduction in investment activity, pricing continues to tighten, although yield spreads remain attractive. European office yields compressed by 10 basis points in the year to September, with logistics yields down by 25 basis points. However, the retail sector is now starting to see signs of a correction in some markets.

Since the financial crisis, yield impact has been the main driver of capital value growth; however, it looks likely that yield compression is largely coming to an end. The current spread over long-term interest rates remains elevated, but with European 10-year bond rates forecast to move out by an average of 200 basis points over the next five years,²⁵ we foresee an outward movement in property yields of 50 basis points. This would lead to a narrowing of the real office yield spread to around 300 basis points, in line with the 10-year pre-GFC average.

As capital value growth is set to slow, total returns are likely to moderate over the next five years, with income return becoming the main driver of performance. However, when viewed in context with other fixed income investments there is still a clear case for real estate, with the German ten-year Bund currently yielding just 0.3%.²⁶

Generally speaking, we expect the number of suitable opportunities to meet fixed return targets at the prime end of the market to dwindle. With that in mind, we are increasingly focused on specific sub-markets, development opportunities, alternative sectors or asset management plays, but importantly without taking on excessive risk.

At a sector level, Logistics remains our strongest performer, supported by an income return some 100 basis points higher than offices. The outlook for shopping centre returns remains reasonable, although it's fair to say that risks are tilted to the downside for both rental growth and pricing. As we continue to stress, however, the retail market remains highly polarised, and there will be a wide disparity between the best and worst performing schemes.

On an absolute return basis, Iberia and the CEE markets are expected to see some of the strongest all-property returns over five years. Lower returns are typically expected in Core Europe, although Nordic logistics and Benelux offices are

²² RCA, January 2018

²³ RCA, December 2018

²⁴ RCA, November 2018

²⁵ Oxford Economics, January 2019

²⁶ Macrobond, as of 13th December 2018

foreseen as outperformers within their respective sectors. Having already gone through a price correction, we also see the U.K. market as a potential outperformer, although there is clearly a lot of risk around this outlook.

Office: With office-using employment growth running at well above the post-GFC average and construction activity remaining in check, the office occupier balance improved further in 2018. Rolling annual take-up reached a record level in the third quarter, while developers remain somewhat more cautious than in the previous two cycles. As such, European vacancy has fallen to just 7.1% and prime rents are growing at 4.6% per annum, a ten-year high.²⁷

We do expect a modest increase in vacancy over the next five years as new supply picks up gradually and employment growth begins to moderate. Nonetheless, with vacancy levels well below historical norms and many cities reporting shortages of good quality stock, we are forecasting European prime rental growth of 3.0% in 2019 and 2.0% per annum over a five year period, comfortably outpacing inflation.

In around two thirds of markets we have revised our five year rent growth outlook upwards, including the German cities, where vacancy is now below 4% on average.²⁸ Madrid and Berlin remain at the top in terms of expected growth, while we also expect rents in Lisbon to increase by more than 3.0% per annum. Other markets we expect to do well include the Paris CBD, where average vacancy is now below 2.0%; Helsinki, which has so far lagged behind in its recovery; and Barcelona, which continues to see significant momentum.

Conversely, we see a risk of affordability constraints beginning to bite in Stockholm and Dublin, despite strong underlying macroeconomic drivers. Continued uncertainty is also expected to weigh on the Central London market, with a further correction in headline rental values expected over the coming year.

The CEE region is set to offer the highest returns, but certain regional French and UK markets could also outperform over five years. However, despite the strength of the occupier market, prime, long-let offices often will not meet target return requirements. Prime office yields are now averaging 3.60% and pricing looks increasingly stretched, with Paris and some of the German cities now trading at 3.00%. Given this backdrop, taking on more active asset management could be appropriate.

Retail: It is highly likely that the retail sector once again underperformed the wider real estate market in 2018 – for the third year in a row.²⁹ Occupiers still face the impact of online sales migration and falling margins, while transaction volumes are down as investors struggle to understand the changing landscape. And despite low interest rates, yields are starting to drift higher as shorter leases, lower NOI growth and illiquidity all add to the retail risk premium.

Germany and France have recorded falling prime shopping centre rents over the past two years, while the United Kingdom is also suffering from weak disposable income growth, rising costs and one of the highest online sales rates in the world. On the other hand, Southern Europe and the CEE continue to perform well, buoyed by rising incomes and still-low levels of online penetration. While rental growth looks to have slowed in 2018, it is likely that both regions recorded double-digit prime total returns over the year.

We see no immediate turnaround in the retail property climate, but with a rental correction already underway in some markets and a considerable reduction in development activity, the seeds of recovery are being planted. In addition, given the sustained underperformance of recent years, the spread between prime shopping centre and office yields is now at its highest level on record.³⁰

There will continue to be marked differences between both locations and types of retail property. Over the five year period, we expect to see the strongest rental growth in Ireland, Spain and Poland. However, we do not believe that any market will be immune to the impact of online sales migration and as such, by the end of our forecast period prime shopping centres in Southern Europe and the CEE region are set to be underperforming the European average.

Logistics: Although economic growth has moderated, structural drivers continue to support occupier demand for logistics space. E-commerce is propelling requirements for modern distribution, fulfilment and last mile delivery space. Distribution

²⁷ PMA, DWS, November 2018

²⁸ PMA, November 2018

²⁹ INREV, November 2018

³⁰ PMA, Cushman & Wakefield, December 2018

Past performance is not indicative of future returns. No assurance can be given that investment objectives will be achieved. Forecasts are based on assumptions, estimates, opinions, and hypothetical models or analysis which may prove to be incorrect. This information is for informational purposes and should not be construed as a recommendation, offer or solicitation

hubs are also gravitating closer to population centres in order to serve store networks or last mile facilities more efficiently and quickly, particularly as consumers demand flexibility and faster delivery.

Importantly, logistics vacancy continues to fall. Although development activity has picked up significantly, particularly in the United Kingdom, we have not seen a surge in speculative construction. Vacancy across Europe now sits at close to 4%, which in turn has led to the emergence of rental growth.³¹ In total we anticipate that rents grew by just over 2% in 2018, with particularly strong increases in Iberia, Berlin, Copenhagen and Dublin. For example, rent growth in Berlin and Copenhagen was likely +10% in 2018, and rent growth in Dublin was likely 5.0%.

We expect logistics to remain the top-performing European sector. As yields may bottom out over the next 12 months or so, rent growth and higher income returns will likely drive total returns over the coming years. In total we expect rents to continue to expand by around 2% per annum, considerably more than the historical average.

At the market level, we predict some of the strongest rent growth in London, Paris, the Iberian cities, Milan and Munich. The sheer size of London and Paris coupled with a need to be close to customers will drive rents in the two gateway cities. While development has picked up in Spain, take-up has been strong, buoyed by the economic recovery as well as e-commerce growth, both of which we expect to continue well into the next decade.

But there are risks on the horizon for some markets: supply continues to ramp up across most locations, particularly in Spain, France, Poland and the United Kingdom. For example, office net completions in Barcelona in 2018 is anticipated to be 2.1% of stock, and in London (city), it is expected to be 4.9% of stock. Yields are reaching record lows, and values in a number of markets are now well above pre-crisis peaks. This is most notable in the United Kingdom; while recent performance here has surprised to the upside, we expect that it will moderate sharply going forward, underperforming the European average.

³¹ JLL, November 2018

EXHIBIT 18: EUROPEAN DISPERSION OF CITY-LEVEL RETURNS BY SECTOR (5-YEAR TOTAL RETURN FORECAST NET OF CAPITAL COSTS, 2019-2023)



Sources: DWS. As of February 2019.

Note: Forecasts are not reliable indicators of future returns. No assurance can be given that any forecast or target will be achieved. Forecasts are based on assumptions, estimates, opinions, models and analysis which may prove to be incorrect.

5.3 Asia Pacific Real Estate Outlook

While macroeconomic conditions in Asia Pacific saw a significant recovery in 2017 and the first half of 2018 supported by the cyclical upturn in global trade conditions, the latter half of 2018 saw signs of weakening economic indicators which suggest growth is likely to moderate ahead. Meanwhile, unemployment rates either held steady or continued to decline, particularly in Japan and Australia where unemployment rates dropped 40 bps year-over-year. Despite the tightening in global financial conditions, monetary policies in Asia remain broadly accommodative underpinned by low inflationary pressures. Nonetheless, risk factors persist ranging from uncertainties surrounding China's growth and economic health, tightening of interest rate policies in major developed nations to global trade risks, which could adversely impact regional trade and export demand. Barring any shocks or unexpected shifts in the baseline, regional economic growth is expected to remain broadly stable at 5.6% in 2018 and 5.4% in 2019³².

Real estate performance across much of the Asia Pacific region remains healthy on the back of strong capital markets and stable occupier fundamentals. Across the region, key cities in Japan, China, Hong Kong, Singapore and Australia continued to see healthy office leasing demand in 2018, while the weight of capital targeting quality assets have contributed to further cap rate compression in core markets. Office vacancy rates in certain key markets declined between 40 and 150 bps year-over-year through the end of 2018. The regional markets in Japan with healthy fundamentals appear increasingly attractive from a risk-return perspective within the context of a core strategy portfolio.

While property returns in recent years have been underpinned by rental growth and cap rate compression, total returns in the coming years are likely to be driven mostly by income yields with capital growth likely capped by yield expansion given increasing prospects of higher interest rates. Nevertheless, in our view, Asia Pacific commercial real estate markets are expected to deliver healthy core unlevered aggregate total returns ranging between 5.4% - 7.4% per annum (by sector) over the next five years with industrial returns outperforming office, retail and residential returns³³.

Office: Office markets in core cities across Asia Pacific continued to perform well, underpinned by steady occupier demand trends. Over the past twelve months, Singapore, Auckland, Sydney and Melbourne were the region's outperformers with effective rental growth ranging 8-13%, driven by a broad-based recovery in tenant demand led by business services. Rents in Hong Kong Central also performed well, supported by occupier demand from mainland Chinese financial services firms, and in Tokyo rental growth was supported by tight vacancy levels. At the other end, rents in markets such as Seoul (Yoido) remain in cyclical downturn weighed down by subdued demand and significant supply pressures. Other Australian cities have shown some early signs of stabilization with Brisbane and Adelaide experiencing marginal rental growth amidst a recovery in tenant demand.

The regional outlook for the office sector remains broadly positive with a reacceleration in economic activity and favorable demand-supply dynamics for most key office markets. Over the five year forecast period till 2023, vacancy rates in key office markets in Japan, Australia and Hong Kong are expected to increase only marginally from the current tight levels which are well-below the 10-year averages. In the Australian regional cities of Brisbane, Adelaide and Perth, occupancy levels are forecast to improve gradually on the back of a recovery in occupier demand. Singapore, which experienced a supply surge in 2017, is expected to benefit from a strong cyclical recovery as supply pressures subside significantly. On the other hand, vacancy levels are projected to increase in Kuala Lumpur and Guangzhou where large development pipelines are underway.

The medium term rental growth outlook remains relatively healthy across the region. We expect to see the highest rental growth momentum in the Australian cities of Melbourne and Sydney as a result of declining incentives underpinned by stable occupier demand combined with limited near term supply. Robust growth is also expected in the other Australian cities on the back of tenant demand recovery, while rental growth in Japan's regional cities is supported by the historically low vacancy

³² IMF Regional Economic Outlook: Asia Pacific, October 2018.

³³ Source: DWS, as at December 2018.

Note: f = forecast. There is no guarantee the forecasts will materialize.

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rates and strong corporate demand. At the other end, weak demand and significant incoming supply pressures are likely to cause negative rental reversions in Kuala Lumpur in the same period.

The APAC office sector is projected to yield annual total returns of 4-7% in most cities over the next five years through to 2023, on the back of healthy demand and moderate supply. While we continue to expect good returns from the core Australian cities of Sydney and Melbourne, regional cities in Japan such as Osaka, Fukuoka and Nagoya look increasingly attractive providing decent income and capital returns, and in turn some of the highest excess returns over the local risk free rate as well as levered returns with local financing. Office assets in Seoul are projected to yield moderate returns underpinned by decent income yields. On the other hand, returns in Tokyo should be more subdued due to current tight cap rates, while forecast five-year performance in Hong Kong is also projected to be relatively weak due to weaker rental growth and potential rise in future cap rates.

Retail: The rise in e-commerce remains a major driver in redefining the retail landscape in Asia Pacific. Multi-channel or 'Omni-channel' retailing as well as the emergence of mobile-based transactions have seen retailers changing their retail operating models and increasing the selection of goods and services available online often at lower prices than in-store. As a result, this could undermine profit margins for physical retail stores and consequently turnover rent leases at retail centres.

Diverging trends have also developed in the retail environment across the region. Retail sales continue to underperform in some major markets in the region including Singapore and Malaysia due to soft domestic consumption and subdued tourist spending. Rents have declined in Australia and remain stagnant in Singapore and Hong Kong, as retailers face margin pressures from weaker retail spending as well as increasing labour costs. On the other hand, key cities in China, South Korea and Japan continue to see healthy, moderate rental growth underpinned by resilient domestic consumption trends or strong tourist arrivals, despite competition from the ongoing proliferation of online retail. Nonetheless, structural shifts in consumer shopping behavior continue to exert pressures on retailers to divert resources from traditional bricks-and-mortar sales building up Omni-channel marketing strategies. As a result, the retail environment remains in favour of tenants as landlords are increasingly forced to offer better incentives especially in the discretionary retail space. Vacancy rates could start to inch upwards in decentralized areas on the back of growing supply while occupier demand from retailers is likely to remain stable in the most markets.

Over the five-year forecast horizon, major cities in Australia and China are expected to experience the strongest growth in retail rents in the region, although growth should be modest in sub regional centers (SRC) in Australia, where demand could be adversely affected by e-commerce and a slowdown in the housing market. In Seoul and Tokyo, retail rental growth is likely to be modest below 2% per annum, broadly in line with inflation expectations. Near-term rental growth is projected to be minimal in Hong Kong, Singapore and Kuala Lumpur where retailers contend with by high occupancy costs and diminished tourist spending.

The impact from online retail is expected to be felt more keenly in the discretionary retail segments such as apparel and electronics, compared to the non-discretionary segments such as staple food and daily necessities. Correspondingly, the divergent trends across different retail assets is likely to intensify with a "winner-takes-all" outcome, as well-located malls with strong positioning and good tenant mix continue to command premium rents while poorly-managed malls with weak or unclear positioning may be forced to reduce rents or explore significant repositioning or exit strategies. Looking ahead, retail assets in Seoul, China and Australia appear attractive underpinned by higher income yields. While Tokyo looks attractive with the highest projected excess returns (i.e. annual total returns minus bond yields), healthy spreads of circa 2%-4% are expected in most other key retail markets in the region.

Industrial: Prime logistics space across the region continues to see healthy take-up driven by e-commerce and third party logistics providers, resulting in positive rental growth trends across the region. The availability of prime development land and

quality modern warehousing facilities is critical for logistics markets undergoing modernization changes coupled with rising domestic consumption, particularly for locations such as Seoul and tier-one cities in China.

The rise of e-commerce trends is also gradually taking place in Southeast Asia, driven by the region's rapidly rising middle class population and consumption trends. This is exemplified by both Amazon's foray into the Singapore and Australian markets late 2017, and Alibaba's expansion through several acquisitions of local and regional e-commerce players operating within and outside China, outlining the increasing growth potential of online retail and needs for logistics spaces in the region.

In the industrial sector, e-commerce and third party logistics (3PL) companies are expected to remain major leasing demand drivers in the modern logistic space across the region, underpinned by rising e-commerce trends. Rental growth is expected to be moderate in the region at around 1%-4% per annum, broadly in line with inflation trends as tenants, 3PL companies, retailers and consigners remain mindful of logistics costs, with the exception of Perth and Adelaide where industrial conditions remain tough due to weaker leasing demand.

Owing to higher yields, increased transparency and strong underlying occupier demand, the industrial sector has provided consistently higher returns than the office and retail sectors, and is expected to remain attractive in the next five years. Five-year return forecasts for key cities in Australia, China, Singapore and Seoul look favourable at high levels in excess of 7%, though investment opportunities could be limited by the scarce availability of high quality completed assets in most of these markets. While total returns in Tokyo look to be one of the lowest in the comparison group, excess returns could turn out to be the highest on the back of expected low bond yields.

EXHIBIT 19: ASIA PACIFIC DISPERSION OF CITY-LEVEL RETURNS BY SECTOR (5-YEAR TOTAL RETURN FORECAST NET OF CAPITAL COSTS, 2019-2023)



Sources: DWS. As of February 2019.

6 / Global Portfolio Allocation Positioning

This section provides a generalized framework for international investing relative to an investors' local returns and the purchasing power of their home currency. This provides a disciplined approach to identify regions, markets and property sectors that may complement domestic portfolios and can either improve performance, reduce risk, or provide diversification.

The following table is generated from our previously published regional forecasts and hedging costs based on three-year currency swap spreads. There is no guarantee the forecasts will materialize. This analysis takes into account our expected returns, correlations, and potential currency hedging costs, but does not incorporate taxes.

We consider possible investment opportunities across specific countries as a means to help develop a global approach, which may also be able to minimize hedging costs and currency drag by establishing a portfolio which is also diversified by currencies. Those that adopt a longer investment horizon can expect to minimize currency fluctuations, thereby limiting the need for complex hedging overlays.

EXHIBIT 20: DOMESTIC VS. HEDGED EXPECTED REAL ESTATE TOTAL RETURNS (2019-2021)

		Hedged Country Level Returns												
Investor Domicile	3-Year Rate Swap	Home Ctry Return	Australia	Japan	Korea	China	Germany	Swiss	U.K.	France	Netherlands	Spain	Italy	United States
Australia	1.9%	6.3%	6.3%	8.2%	5.8%	4.2%	7.2%	4.0%	4.2%	4.7%	5.4%	6.6%	4.0%	4.7%
AUD														
Japan	0.0%	6.3%	4.4%	6.3%	3.9%	2.3%	5.3%	2.1%	2.3%	2.8%	3.5%	4.7%	2.1%	2.9%
JPY														
Korea	1.3%	5.2%	5.6%	7.6%	5.2%	3.5%	6.6%	3.4%	3.5%	4.1%	4.7%	5.9%	3.4%	4.1%
KRW														
China	3.4%	5.6%	7.8%	9.7%	7.3%	5.6%	8.7%	5.5%	5.7%	6.2%	6.9%	8.1%	5.6%	6.2%
CNY														
Germany	-0.1%	5.2%	4.3%	6.3%	3.8%	2.3%	5.2%	2.0%	2.2%	2.7%	3.4%	4.6%	2.1%	2.8%
EUR														
Swiss	-0.5%	1.6%	3.9%	5.8%	3.4%	1.9%	4.8%	1.6%	1.8%	2.3%	3.0%	4.2%	1.7%	2.4%
CHF														
UK	1.2%	3.5%	5.6%	7.5%	5.1%	3.5%	6.5%	3.3%	3.5%	4.0%	4.7%	5.9%	3.4%	4.0%
GBP														
US	2.7%	5.5%	7.0%	9.0%	6.5%	4.9%	8.0%	4.8%	4.9%	5.5%	6.1%	7.3%	4.8%	5.5%
USD														
Local Currency Return			6.3%	6.3%	5.2%	5.6%	5.2%	1.6%	3.5%	2.9%	3.6%	4.8%	2.2%	5.5%

Source: DWS, Bloomberg. As of January 2019. Note: Total returns for each market based on market-cap weighted sector returns. Green shading indicates hedged returns that are more than 100 bps above the home country return, yellow shading indicates hedged returns that are within a 100 bps range of the home country return and red shading indicates hedged returns are that more than 100 bps below the home country return. We have assumed that for each investor, the allocation to their home country is accounted for in their domestic real estate portfolio. Therefore the weighted-average return to the home cluster excludes the home country return. Note: Total returns for each market based on market-cap weighted sector returns. Green shading indicates hedged returns that are more than 100 bps above the home country return, yellow shading indicates hedged returns that are within a 100 bps range of the home country return and red shading indicates hedged returns are that more than 100 bps below the home country return. We have assumed that for each investor, the allocation to their home country is accounted for in their domestic real estate portfolio. Therefore the weighted-average return to the home cluster excludes the home country return.

EXHIBIT 21: COUNTRY LEVEL MARKET RETURN CORRELATIONS (LOCAL CURRENCY – HEDGED)

	1998-2017	Australia	Japan	South Korea	China	Germany	Swiss	United Kingdom	France	Netherlands	Spain	Italy	United States
Investor Domicile													
Australia		1.00											
Japan		0.70	1.00										
South Korea		0.70	0.55	1.00									
China		0.14	0.29	0.60	1.00								
Germany		0.19	0.18	-0.08	-0.27	1.00							
Swiss		0.43	0.10	0.58	0.07	0.02	1.00						
United Kingdom		0.45	0.40	0.48	0.09	-0.32	0.57	1.00					
France		0.78	0.34	0.64	-0.04	0.31	0.70	0.55	1.00				
Netherlands		0.75	0.51	0.48	-0.14	0.28	0.22	0.52	0.67	1.00			
Spain		0.75	0.58	0.46	-0.22	0.19	0.49	0.68	0.80	0.80	1.00		
Italy		0.63	0.39	0.47	-0.28	0.49	0.53	0.31	0.71	0.63	0.71	1.00	
United States		0.86	0.67	0.80	0.18	0.13	0.37	0.54	0.68	0.65	0.73	0.47	1.00

Source: DWS. As of January 2019. Past performance may not be indicative of future results.

Interest rates in the U.S. have increased over the course of 2018 which pushed up the three-year swap rate. The pace of increase in interest rates have decelerated over the past few months. The three-year swap rate in the U.S. is ~20 bps higher year-over-year. Nevertheless, swap rates in the U.S. remain higher than many other regions around the world. The swap rates in Europe and Japan remain close to zero.

Generally, investors based in the U.S. and Asia Pacific benefit from a hedging gain when investing in European countries and Japan. Conversely, investors based in Europe and Japan would experience a hedging loss when investing in the U.S. and most Asia Pacific countries.

From a diversification standpoint, hedged returns are relatively low for most countries. Correlations for unhedged returns are even lower, but investors would be exposed to currency volatility.

6.1 Australia

We believe Australian real estate can potentially provide an annual total return of 6.3% per year over the next three years, led by the office and industrial sectors at 6.9% and 6.8%, respectively.

Referring to exhibit 15, our forecasts suggest Australian investors could outperform their domestic market by investing in Japan, South Korea, Germany, the Netherlands, and Spain. Australian investors also benefit from currency hedging gains since swap rates in Australia are about 200 bps higher than in Japan and the Eurozone. In local currency terms, Japan is expected to perform on-par with the Australian real estate market. After hedging gains, the outperformance would be 190

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bps for Japan, and 90 bps for Germany. Real estate returns correlations in local currency terms are 0.70 for Japan and 0.19 for Germany, which would add diversification to an Australian investor's portfolio.

6.2 Japan

We forecast total returns in Japan to be 6.3%, led by the office sector at 6.5%, followed by the retail sector at 5.9%.

Referring to the hedged returns chart above, Japanese investors would find European markets most appealing due to similarly low interest rates. Hedging costs are minimal due to interest rates being at similar levels. While European country levels do not appear to beat Japan's real estate returns, there are many opportunities at the sector level. The industrial sector in Poland, Finland and Ireland are forecasted to produce returns of 6.5%, 7.7% and 7.6%, respectively. In addition, the correlation of total returns in Japan and Poland, Finland and Ireland are 0.76, 0.59, and 0.39, respectively.

6.3 South Korea

Total returns in South Korea are forecasted to be 5.2% for the next three years, led by the industrial sector at 7.7% followed by retail at 5.5%.

A South Korean investor can achieve higher returns by investing in Japan, Germany, Australia and Spain. Forecasted returns are projected to be 70 to 240 bps higher on a hedged basis. South Korean investors would still experience a hedging gain by investing in Japan and European countries by ~130 bps. Real estate return correlations are also quite low between South Korea and Japan, Germany, Australia and Spain, at 0.55, -0.18, 0.70 and 0.46, respectively. Therefore, South Korean investors would also get a diversification benefit by deploying capital in these countries.

Some benefits can come from investing in the U.S. if selective on sectors. U.S. industrial real estate is projected to produce returns of 7.1% in local currency terms, or 5.7% after taking into account hedging losses. A hedged return of 5.7% is 50 bps above the total country returns. Correlation of real estate returns are 0.80 between the two countries.

6.4 Germany

We forecast returns in Germany to be 5.2% over the next three years led by the office sector at 7.6%, followed by industrial at 3.5%. Indeed, returns appear muted for the German industrial and retail sectors.

Higher returns may be achieved by investing in Japan where hedged total country returns are projected to be 110 bps ahead of Germany's returns. As interest rates in Japan are similarly low, hedging costs are minimal. Other European countries can also be attractive especially when looking at certain sectors. Industrial in Ireland and France are projected to produce total returns of 8.2% and 6.1%, respectively. Correlations are also low at 0.49 for Ireland and 0.39 for France, providing diversification benefits.

6.5 Switzerland

Swiss real estate returns are projected to be fairly muted over the next three years at 1.6%. The office sector is projected to produce returns of 0.3% and the retail sector is projected to produce returns of 4.0%.

The three-year swap rate in Switzerland is very low at -0.5%, even lower than other European countries and Japan, which results in a hedging loss when investing abroad. Nevertheless, there are still many opportunities for Swiss investors to obtain higher real estate returns by investing in many core markets in Asia Pacific and other European countries. Hedged

returns over the next three years for Australia, Japan and South Korea are projected to be 3.9%, 5.8%, and 3.4%, respectively. These returns are 180-230 bps higher than home country returns. Germany, Netherlands and Spain also screen well and hedged returns are forecasted to be 4.8%, 3.0%, and 4.2%, respectively.

Diversification benefits may come by investing globally. The correlation of real estate returns in Switzerland to real estate returns in Australia, Japan and South Korea range from 0.10 to 0.58, which are relatively low. Correlations with Germany, the Netherlands and Spain are even better, ranging from 0.02 to 0.49.

6.6 U.S.

We forecast U.S. total returns to be 5.5% over the next three years, led by the industrial sector at 7.1% followed by the office sector at 5.3%.

U.S. interest rates are higher compared to many other economies. The three-year swap rate stands at 2.7%, which is much higher than the near-zero swap rates in many European countries and Japan. Thus, U.S. investors would experience a hedging gain when investing in real estate abroad. Mature economies in Asia Pacific screen well, with hedged returns ranging from 6.5% in South Korea to 9.0% in Japan. Hedged returns in Australia are projected to also be attractive at 7.0%. In Europe, Germany and Spain screen well with hedged returns of 8.0% and 7.3%, respectively. The Netherlands is also quite attractive at 6.1%.

As for diversification, benefit can come from having low correlations of real estate returns with Germany (0.13), Japan (0.67) and the Netherlands (0.65). Correlation of U.S. real estate returns with Australia stands at 0.86 and South Korea at 0.80.

7 / Appendix

EXHIBIT 22: FIVE YEAR HISTORICAL RETURNS (2012-2017 OR 2018)

Country	2012	2013	2014	2015	2016	2017	2018
Australia	9.2%	9.2%	10.4%	14.0%	11.8%	12.0%	
Austria	6.6%	6.1%	5.2%	5.7%	6.0%	6.2%	
Belgium	4.3%	3.3%	6.7%	8.2%	5.7%	6.5%	
China	6.8%	9.1%	8.8%	7.4%	8.9%	7.9%	
Czech Republic	3.9%	3.5%	7.1%	8.4%	7.9%	12.6%	
Denmark	3.9%	3.6%	5.4%	7.8%	7.7%	5.7%	
Finland	5.9%	4.4%	5.5%	6.2%	6.1%	6.6%	
France	6.6%	5.2%	6.1%	8.6%	8.1%	8.4%	
Germany	4.4%	4.8%	5.9%	8.3%	7.3%	10.5%	
Global	7.0%	8.3%	10.0%	10.7%	7.5%	8.1%	
Hong Kong	16.2%	10.5%	11.7%	8.7%	6.7%	10.3%	
Ireland	3.2%	12.3%	36.2%	25.2%	12.6%	7.9%	
Italy	1.8%	2.1%	2.5%	4.6%	4.1%	6.0%	
Japan	4.0%	6.3%	8.2%	8.6%	7.5%	6.9%	
Malaysia	11.7%	11.0%	10.9%	8.3%	6.8%	6.7%	
Netherlands	1.0%	0.0%	3.9%	8.7%	12.2%	13.9%	
Norway	5.1%	5.2%	8.3%	11.6%	10.6%	11.5%	
Poland	5.5%	4.4%	5.9%	6.8%	4.6%	5.8%	
Portugal	0.1%	1.4%	6.7%	10.2%	10.6%	11.6%	
Singapore	8.4%	7.7%	8.3%	7.6%	5.2%	5.9%	
South Korea	7.4%	6.5%	9.6%	7.7%	7.4%	6.9%	
Spain	-2.5%	0.1%	9.2%	15.1%	14.2%	14.8%	
Sweden	6.4%	6.9%	8.4%	13.8%	14.0%	11.1%	
Switzerland	6.9%	5.9%	5.2%	6.5%	6.4%	5.9%	
UK	2.9%	10.9%	17.9%	13.3%	3.6%	10.3%	
USA	10.5%	11.0%	11.8%	13.3%	8.0%	7.0%	6.7%

Sources: MSCI, NCREIF. As of January 2019. Data reflects the latest available on an annual basis.

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- Adverse changes in law and regulation including environmental laws and regulations, zoning laws and other governmental rules and fiscal policies;
- Environmental claims arising in respect of real estate acquired with undisclosed or unknown environmental problems or as to which inadequate reserves have been established;
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