

Second tier cities to challenge for top spot

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- In this Outlook, we answer some of the most frequently asked questions from both real estate occupiers and investors. We do this by ranking markets based on key economic and market decision making factors. The year-end 2014 ranking allows for an instant comparison, while our 2017 ranking offers some time for strategic planning.
- Our markets face a mixed global economic outlook, with risk back into focus. Despite the US Federal Reserve finishing its tapering, Europe and Japan continue their monetary policy support. However, bond yields are projected to increase in 2015 and beyond. The extended period of low rates up to now has been good for both occupiers and investors.
- Mumbai is our top ranked global occupier office market (Figure 1). In this global ranking, we consider specific factors quantifying accessibility, availability and profitability. Apart from two Indian cities, US cities dominate our 2014 ranking with seven of the top ten. Surprisingly, no European cities are in the global 2014 top ten ranking. In a dramatic change, Shanghai is expected to top our 2017 ranking. Indian cities make up three and the US has four of the top ten cities. As most occupiers are not active across all industries, we present rankings for the specific sectors in specific regions.
- New York and London are our top ranked global investor markets (Figure 1). Both benefit disproportionately from high levels of relative trading volumes and liquidity. Despite the strong market recovery in 2014, we continue to see good relative value across most markets, especially in the US. This drives the dominance of US office markets, making up six of the 2014 top ten markets. However, when we look ahead to 2017, we do see a wider range of non-office and non-US markets come up. In fact, Hamburg, Shanghai and Singapore industrial markets come into the top ten, mostly based on their strong volatility scores, triggered by good long term capital value stability.
- Based on these rankings, second tier cities will successfully challenge for top spots in both our investor and occupier markets over the next three years.

Figure 1

Top five office market rankings, 2014



Source: DTZ Research, ESRI

2015 Annual Outlook

Introduction

The global economic recovery remains in limbo. After the slowest post-war recovery on record, the US and UK have made good progress with near 6% unemployment levels. But, slowdowns in Germany, France, Japan and China are offsetting this. Non-US central banks have been forced to prolong their quantitative easing as financial markets are not ready yet to face higher rates. This was highlighted by recent stock market volatility. Despite the uncertainty around growth, this prolonged period of historically low rates has proven beneficial for both occupiers and investors.

Most occupiers have benefited from both low wage cost and space occupancy cost inflation. This has allowed them to preserve their operating margins and retain cash to fund upcoming expansions, acquisitions and capital projects. Also, their costs of borrowing have improved, allowing them to pay down or refinance debt. The recovery has varied widely among key sectors, with technology-linked industries leading the way. The emergence of a new generation of Asian multi-national corporations is changing the competitive global landscape forever.

Low rates over the last three years have also permitted banks to take the required write-downs and sell loan portfolios. This has allowed overall leverage levels to come down and banks to start lending again. The yields in most core markets have already hit new historical lows. Having raised record amounts of new capital, investors are going up the risk curve and buying more in non-core markets. New development has been limited across Western markets, but is starting back up again. As long as rates stay low and capital remains abundant, trading volumes will set new records in the next two years.

But, if the economic recovery picks up speed, the increased demand combined with limited new development will trigger strong rent increases in the short term. New supply will slow down rental growth in the medium term. Rate increases will also reduce the relative value for property. But, capital pressure will continue to drive prices up in the short term, as funds will invest commitments regardless.

The structure of our 2015 Outlook is different from previous years, focusing on the three FAQs each for occupiers and investors. Finally, I thank my team for pulling together this fifth Annual Outlook.



Hans Vrensen
Global Head of Research
DTZ

FAQs to be answered

Occupiers

1. Can I access this market?
2. Is the right talent and space available there?
3. How much money can I make in this city?

Investors

1. Where can I buy real estate easiest?
2. How far along are we in the market cycle?
3. Which market offers the most attractive

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Section 1: Global Outlook

Economic and policy context

Economic growth still projected to improve

Figure 2 shows very clearly that in both the US and Europe, we have endured the slowest post-war economic rebound. But, from 2015 onwards, growth is projected to be positive across all three regions. Asia Pacific continues on its strong growth path, as before. More importantly, the US is returning as one of the main engines of global economic growth. As a result, the Fed has now stopped its quantitative easing. Despite a return of volatility in October, earnings growth has pulled stock markets back to more normal levels.

The return of the downside scenarios

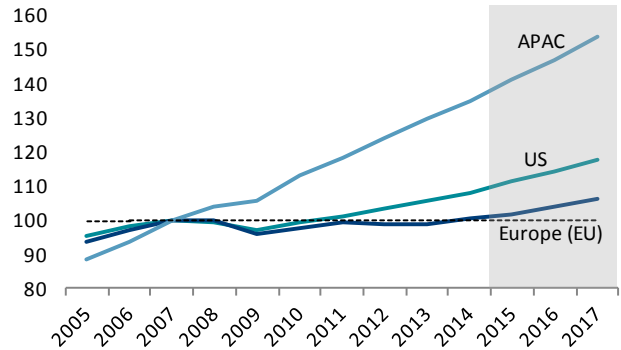
Despite a return of relative optimism last year, we have seen a recent uptick in the probability of downside scenarios happening (Figure 3). Despite this, the infamous euro-zone breakdown scenario remains off the radar. The key risk the euro-zone now faces is actually deflation. But, the worst case scenario for the global economy is a China banking crisis, brought about in part by overexposure to souring real estate loans. The dizzying array of government, regulatory and central bank initiatives continue to strike a fine balance between trying to prevent a next crisis, clean up from the last crisis and create new hurdles for surviving companies. This includes the recent ECB Asset Quality Review, which identified a further increase in non-performing loans. In short, bad things will still happen. But, they are likely to be less bad than what has already happened and what we feared two years ago.

Expected bond yield widening postponed

Government bond yields have moved on from their record lows in early 2013. US and UK yields have moved up, albeit at a slower rate than implied by forward pricing last year (Figure 4). As an exception, Singapore yields moved up in excess of forward pricing. But, German and Japanese yields were down reflecting the weakness. The very latest forward pricing implies a delayed and slower increase in yields. Despite the Fed finishing its tapering, Europe and Japan continue their monetary policy support. However, bond yields are projected to increase in 2015 and beyond. As before, this will impact property markets. The Fed ending its quantitative easing in October provided a signal that they are more positive about corporate profitability. This will also impact investors' expectations for income growth, despite the increased yields posing a higher yield hurdle for mixed asset class investors. The extended period of low rates up to now has been good for both occupiers and investors.

Figure 2

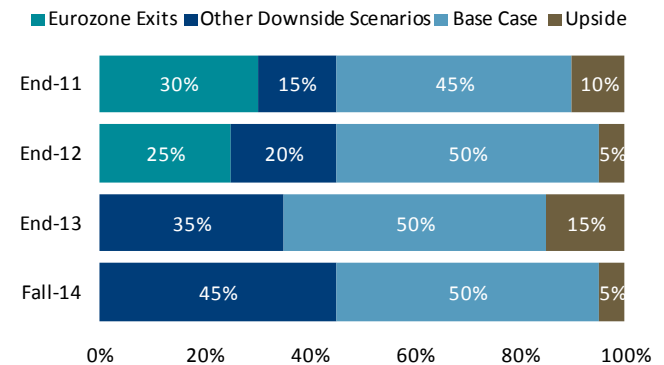
Indexed GDP growth (2007=100)



Source: Oxford Economics

Figure 3

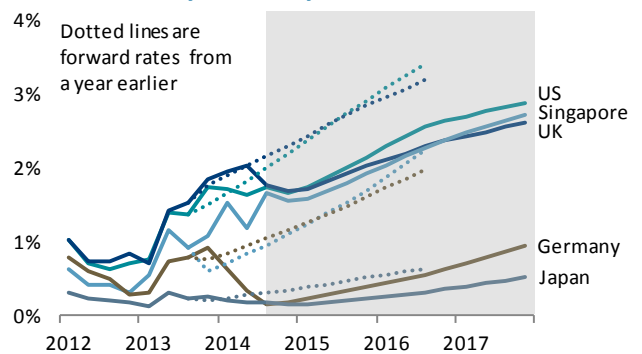
Estimated scenario probabilities



Source: Oxford Economics

Figure 4

Government five year bond yields and forward rates



Source: Bloomberg

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Box 1: Occupier Market Scoring

Introduction

A new generation of multi-national corporations are challenging the existing business establishment and expanding outside their home markets. To help them, we have developed this scoring mechanism to make better informed office location decisions.

Occupiers' decision making is multi-faceted

We recognise that occupiers' location decisions are multi-faceted. Typically decisions are driven by the industry in which they operate. Also, business functions, such as sales, service delivery and production require different locations. Access to talent, suppliers and customers are more generally applicable. However, structural factors such as political framework, tax and regulatory framework will impact different industries in different ways.

Careful selection of factors required for global comparison

Given the complexity of actual decision making our challenge is to carefully select factors that are both independent and quantifiable given the significant data limitations we face. Below we present our globally consistent comparison of the 60 largest cities worldwide, 20 in each of the three regions. We have given each factor an equal weighting, leaving room for further customisation if required. We find factors that already capture actual occupier decisions made in the past. This has led us to:

Six decision making factors addressing our key questions:

1. Can I access this market?
2. Is the right talent and space available?
3. Can I make money in this city?

Decision making factors	Business Factors	Property Factors
1 Accessibility	Foreign Direct Investment	Vacancy Rate
2 Availability	Location Quotient	New Supply
3 Profitability	Labour Productivity	Space Cost

Accessibility

By considering Foreign Direct Investment as a percentage of GDP, we identify which countries have been successful at attracting overseas investors in the past. The vacancy rate is an indication of how easily occupiers can access space

Availability

The Location Quotient (LQ) calculates a local market's relative strength or weakness in a particular employment sector, as implied by past occupier/employer decisions. For the global and regional rankings, we measure the LQ relative to our 60 city sample. We assume that a global conglomerate, active across more industries, prefers a less specialised and more diversified city. Talent, suppliers and customers across many industries will be more available in a diversified city when compared to a city strong in only one industry. However, if a company has a strong industry specialisation, it should prefer a city that is strong in its own industry sector. This is reflected in our sector rankings.

Availability (continued)

New supply over the last (and next) three years is an indication whether high quality space, which global corporations want, is in fact available to them. This is not a relative measure, but the actual square feet delivered.

Profitability

We use labour productivity on a local city level as defined by GVA per worker to measure local occupiers' ability to create revenue. GVA takes into account labour costs as well. Combined with our measure of costs per work station, we capture key profitability drivers for most occupiers.

Scoring System

Each factor is scored between 0 and 10 for each city, with 0 anchored on the least attractive score amongst the 60 markets and 10 on the best score. The market with the highest score is most attractive, with the maximum possible score at 60. This makes each of the rankings relative to the 60 cities in our sample.

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Global occupier outlook

Mumbai tops 2014 ranking, but US dominates Top Ten

At the moment, Mumbai, Tokyo and Los Angeles are the most attractive cities for occupiers globally (Table 1). Box 1 on the facing page describes the methodology we have used. The three cities score highly for a combination of reasons. Mumbai scores well in terms of its good accessibility and availability as measured by its broad industrial base, abundant supply and high vacancy rate (Figure 6). Mumbai is also cheaper than the majority of the 60 cities we have assessed. Tokyo and Los Angeles, however, are distinguished by especially high productivity in addition to good availability (Tokyo) and accessibility (Los Angeles). US cities dominate the 2014 Top Ten with seven cities. Surprisingly, there are no European cities in the 2014 Top Ten. Brussels (15th) and Dublin (16th) are the highest placed. Both score relatively well in terms of their accessibility to international occupiers.

Americas remains most competitive region, but APAC set to narrow gap by 2017

On a regional basis, the Americas' markets score higher than the other two regions (Figure 5). It scores well on a number of economic measures including economic diversity and labour productivity. In addition, the region is well placed in terms of availability of affordable space. We expect the Americas to continue to lead by year end 2017, but the big news will be the elevation of APAC. We expect APAC to become increasingly competitive over the next few years. Occupiers in this region will benefit from a marked increase in the volume of affordable space. Conversely, Europe as a whole is set to become less competitive relative to other regions, despite an improvement in the supply of affordable space. These regional trends underpin expected changes in our global rankings.

Chinese and Indian cities to take over Top Ten list for 2017

In a dramatic change, Shanghai is expected to top our ranking by year-end 2017, joined by Tianjin and Shenzhen in the number three and eight positions, respectively (Table 1). The Chinese cities are well placed in terms of accessibility to international businesses (as measured by FDI and vacancy) and availability (new supply). Tianjin also scores highly in terms of low occupancy costs. Similarly, Mumbai (2nd), Bengaluru (4th) and Delhi (5th) will mean that India becomes even better represented. Bengaluru is set to enter the Top Ten thanks to the significant supply of low cost space which will underpin a broad base of occupiers. The US will account for the remainder of the Top Ten, led by Dallas which will be boosted by the availability of relatively low cost space (Figure 6). Brussels will remain outside the global Top Ten, but the highest placed European city (16th).

Table 1

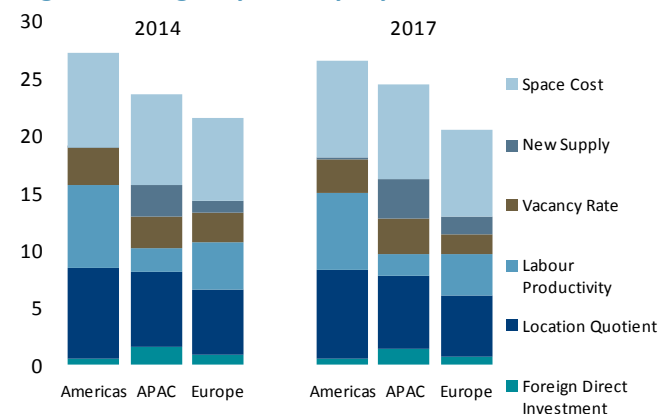
Top ten Global occupier office market rankings

2014	2017
1. Mumbai	1. Shanghai
2. Tokyo	2. Mumbai
3. Los Angeles	3. Tianjin
4. Dallas	4. Bengaluru
5. Delhi	5. Delhi
6. Atlanta	6. Dallas
7. New York	7. Atlanta
8. Chicago	8. Shenzhen
9. Denver	9. Philadelphia
10. San Francisco	10. Denver

Source: DTZ Research

Figure 5

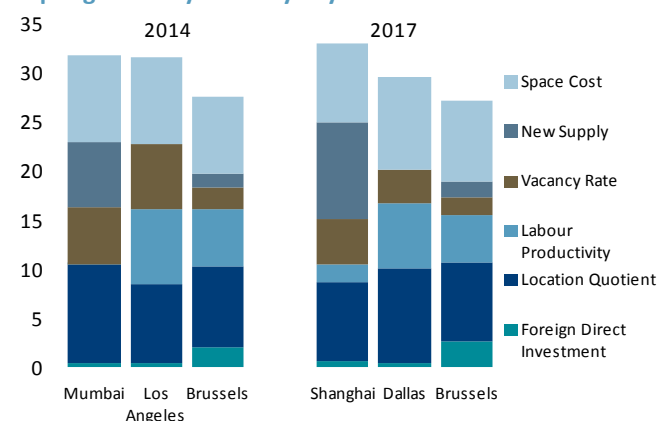
Regional average city score by key factor



Source: DTZ Research

Figure 6

Top regional city score by key factor



Source: DTZ Research

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Box 2: Investor Market Scoring

Introduction

A new generation of global investors has been emerging. To assist them, we have developed a scoring mechanism to make more informed decisions.

Investors decision making is multi-faceted

We recognise that investors face a number of issues in making investment decisions. These include, for example, the style of investment, risk and returns, the assumed holding period, current market pricing and the amount of capital available for investment.

Careful selection of factors required for global comparison

We focus on factors that we can quantify and focussed across 60 of the largest investment markets. This includes ten office, six retail and four retail markets for each of the three regions. Each of the four factors is scored between 0 and 25 for each market, with 0 anchored on the least attractive score amongst the 60 markets and 10 on the best score. The market with the highest score is most attractive and ranked top, with the maximum possible score at 100. This makes each of our rankings relative to the 60 markets in our sample.

Four factors to address three key questions:

1. Where can investors buy easiest?
2. How far along are we in the market cycle?
3. Which cities offer the most attractive opportunity?

1. Transaction volumes

We measure transactions as the total volume of sales in USD for each market sector over 2004-2008. This provides a proxy for both market size and liquidity. The market with the highest absolute volume achieves the highest score.

2. Relative Value

We use the DTZ Fair Value Index™ to measure relative value. The forward looking index measures the relative attractiveness of commercial real estate. We compare the returns an investor could expect against the required returns assuming a five year hold period. Markets with a higher index score are more attractive. The index uses our recently updated index (see Box 3 for more detail).

3. Market Timing

Market timing reflects the position of a market in the current cycle. We compare current capital values relative to their recent peak in the cycle. The markets furthest from its previous peak have the highest score.

4. Volatility

For volatility we have taken the standard deviation of capital values over the last 10 years. The market with the lowest volatility gets the best score.

Box 3: DTZ Fair Value Index™ upgrade

New local, time variant risk premiums

In Q3 2014, we enhanced our DTZ Fair Value Index™ by upgrading the risk premium, a key component of our required return. This was done through an update of both the risk multiplier and the base risk premium for each market. These changes better reflect local market volatility and allow for a more dynamic, time variant risk factor. We replaced our global risk multiplier with three new region-specific risk multipliers. The base risk premium was also upgraded from a constant and static regional risk premium to a new time-variant market-specific premium. These are based on five-year rolling historical standard deviation of total returns. This new measure allows us to give credit for volatility changes over time as markets mature. The impact of this enhancement on the Global All Property index scores was very limited (Figure 7).

Figure 7

DTZ Global Fair Value Index™ old vs new



Source: DTZ Research

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Global investor outlook

New York and London on top for foreseeable future, but recovery expected to broaden by 2017

Despite switching places, London and New York offices are the top ranked investor markets for year-end 2014 and 2017 (Table 2). To help investors, we have analysed 60 city sectors across the globe in order to assess their attractiveness. This analysis was based on four key factors and done as of year-end 2014 and 2017 (see Box 2 on facing page for more details on our approach). US office markets dominate the current ranking. More Asian and European markets come into the top ten for 2017. The expected broadening of the recovery into other property types is also evident. We see three industrial markets enter the top 10, including Shanghai and Singapore, and two retail markets (Munich and Chicago). The emergence of these markets highlights the opportunities in moving away from gateway cities as we move further through the cycle, and investors should start to focus on these markets going forward.

Scores less volatile for US and industrial markets

Figure 8 shows a broad range in the current scores across regions and sectors. Across the US markets, we note not only a higher average score, but also within a narrower range. Even the weakest US market (Denver offices) is ranked 33 out of 60. In contrast, there is much greater score diversity across Europe and Asia Pacific, with Asia Pacific having a relatively lower average score. This reflects Asia Pacific's positioning in the cycle. Also, there is a broader range of scores for office markets, reflecting in part the higher number of covered markets. Based on average scores across property types, little variation is evident. But, industrial markets are not only marginally ahead, but also have a lower volatility in scores.

As recovery widens, scores less driven by volumes

When considering the scores for individual markets, we can dissect the contribution of each of the four variables. This clearly shows that for the 2014 score in particular, volume of trading is a key decider (Figure 9). Both London and New York's scores are supported by their strong volumes of trading, offering investors access to a wide range of opportunities. New York also offers relatively attractive pricing, as based on the Fair Value Index. London's volume of trading offsets its high volatility and weaker pricing. Its score also reflects good pricing based on our revised Fair Value Index (Box 3). In future, we expect that for most markets volume of trading will become less of a differentiator, as liquidity increases across more markets. This is also supported by our 2017 ranking.

Table 2

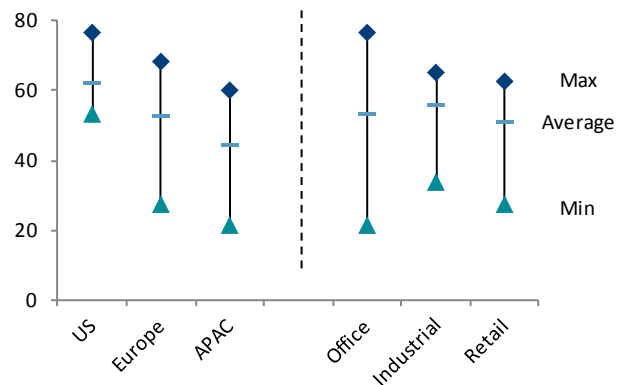
Top ten global investor market rankings

2014	2017
1. New York (Office)	1. London (Office)
2. London (Office)	2. Manhattan (Office)
3. Washington DC (Office)	3. Los Angeles (Office)
4. Chicago (Office)	4. Hamburg (Industrial)
5. San Francisco (Office)	5. Munich (Retail)
6. San Francisco (Industrial)	6. Washington DC (Office)
7. Madrid (Office)	7. Houston (Office)
8. Houston (Office)	8. Shanghai (Industrial)
9. Dallas (Office)	9. Chicago (Retail)
10. Atlanta (Office)	10. Singapore (Industrial)

Source: DTZ Research

Figure 8

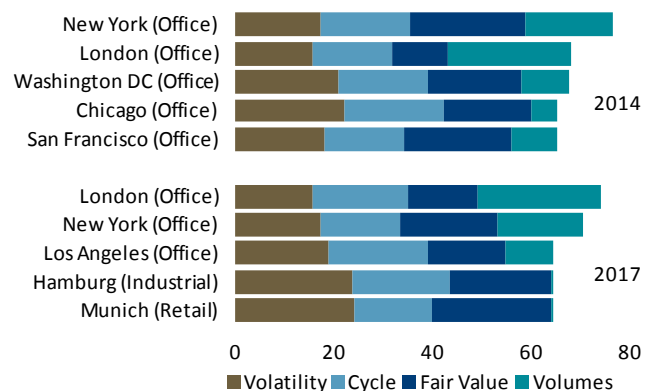
Regional and sector scores, 2014



Source: DTZ Research

Figure 9

Top 5 investor markets 2014 and 2017



Source: DTZ Research

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Section 2: Regional Outlooks

Europe occupier outlook

Brussels tops Europe in both 2014 and 2017

Brussels tops our European ranking (Table 3). Perhaps not that surprising as it is the home of the European Union and colloquially described as the “Capital of Europe”. The city scores highly on most of the six variables. For example, foreign direct investment accounts for a significant share of GDP. This reflects the fact that the city attracts a wide range of businesses wanting to be in close proximity to EU decision makers. Consequently, there is broad mix of occupiers employing highly productive workers. Dublin is similarly well placed because of its accessibility to foreign investment and high labour productivity. Warsaw, Amsterdam and Frankfurt also feature in the top five. All three are large economic and business centres and score highly in terms of having a relatively broad mix of industries and employers. Warsaw occupiers have also benefitted especially from significant and affordable supply over the last three years.

Milan and Rome have high relative FBS productivity

But, as mentioned before the dynamics for occupiers in each industry sector vary widely. If we take a closer look at the financial & business services (FBS) sector, we can identify some interesting trends. Europe’s most expensive office markets include its financial centres such as London, Paris and Zurich. As they are able to also achieve high levels of productivity, FBS businesses to-date have been prepared to pay for their high space and labour costs. However, lower cost cities such as Rome and Milan are also highly productive (highlighted in blue in Figure 10). FBS in these Italian cities accounts for 14% of total employment, but more than triple this as a percentage of GVA, at 45% and 42% respectively. Likewise, in Brussels and Amsterdam FBS accounts for nearly 50% of GVA, about double its share of employment.

Rome and Milan are relatively attractive to Financial & Business Services office occupiers

The five cities we have identified as being most attractive to FBS occupiers in 2014 share a number of characteristics including relatively high productivity and low occupancy costs (see Table 4). FBS is clustered (as measured by a relatively high location quotient) in Brussels, Copenhagen and Amsterdam due to agglomeration forces including the presence of existing clients, service providers and experienced staff. This should attract further FBS occupiers without escalating each business’ costs. Milan and Rome do not have a large absolute cluster of FBS businesses compared to elsewhere in Europe. But, the high levels of productivity identified earlier, should make it attractive for other FBS businesses to locate in these cities.

Table 3

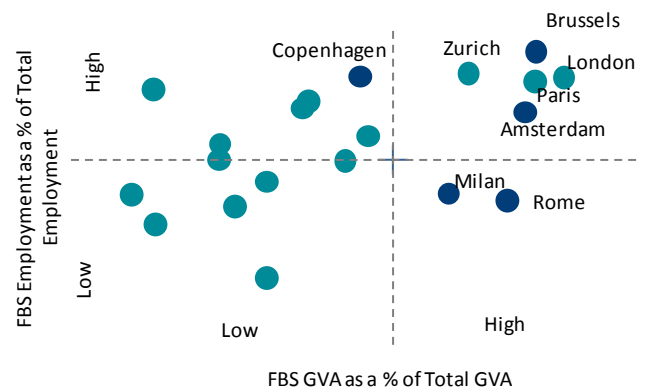
Top five European occupier office market rankings

2014	2017
1. Brussels	1. Brussels
2. Dublin	2. Warsaw
3. Warsaw	3. Frankfurt
4. Amsterdam	4. Amsterdam
5. Frankfurt	5. Prague

Source: DTZ Research

Figure 10

Financial & business services share of employment and GVA



Source: DTZ Research

Table 4

European Financial & Business Services (FBS) occupier locations rankings

2014	2017
1. Brussels	1. Brussels
2. Rome	2. Rome
3. Copenhagen	3. Copenhagen
4. Milan	4. Amsterdam
5. Amsterdam	5. Paris

Source: DTZ Research

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Europe investor outlook

London top, but Southern Europe has its day in the sun

London offices are ranked top among Europe’s investor markets and it is expected to retain its top ranking in 2017 (Table 5). But, the Southern European markets of Madrid offices (2nd) and Milan retail (4th) rank strongly in 2014 as they have only just begun to recover from the financial crisis and offer good relative value. Along with Rotterdam industrial, they are replaced in 2017 by Brussels and Amsterdam offices and Munich retail. With three of the top five European markets shifting between 2014 and 2017, we see a broadening of the recovery across the European investment markets. Offices are less dominant in the European rankings than in the global rankings, as discussed earlier. This is likely due to stronger liquidity in non-European office markets.

Volatility and relative value key, as recovery proceeds

Given the mixed economic outlook for Europe, we expect commercial real estate market recoveries to vary in speed and strength in the short term. But, as more markets recover, we expect investors to be motivated by the fundamental drivers of risk and return, as measured by relative value and volatility. When considered solely on these two variables, London office has a relatively poor showing in the lower left quadrant. Both Rotterdam industrial and Milan retail are doing very well in the upper right quadrant (Figure 11). But, given that London is our top ranked market, it is sensible to further review of all four key variables and how they drive each market’s score relative to other markets.

London’s high trading volumes drive its top ranking

London offices clearly show the top rank, due mostly to a very high relative trading volume score compared to all other markets in the region (Figure 12). But, the benefit of higher trading volumes is partly offset by a low score for volatility and relatively weaker value having led the recovery in Europe. Madrid’s high score is driven by its large remaining cyclical upside compared to previous highs and strong relative value. It is still early in its recovery. Rotterdam’s score, on the other hand, is driven by its historical stability and achieved a high score due to its low volatility. The London retail market benefits from an above average volume score and an average volatility score. But, it still ranks lowest of the 20 markets covered due to its poor cyclical position and relative value. These results make intuitive sense to us.

Table 5

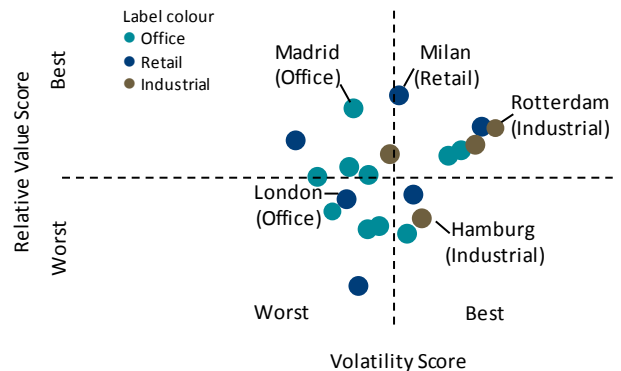
Top five European investor market rankings

2014	2017
1. London (Office)	1. London (Office)
2. Madrid (Office)	2. Hamburg (Industrial)
3. Rotterdam (Industrial)	3. Munich (Retail)
4. Milan (Retail)	4. Brussels (Office)
5. Hamburg (Industrial)	5. Amsterdam (Office)

Source: DTZ Research

Figure 11

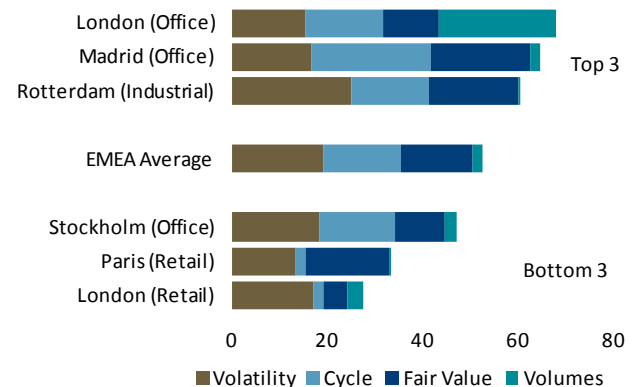
European relative value and volatility scores, 2014



Source: DTZ Research

Figure 12

Top and bottom three European investor markets, 2014



Source: DTZ Research

2015 Annual Outlook

APAC occupier outlook

Indian cities led by Mumbai top list for 2014

Mumbai tops our 2014 APAC occupier market ranking, followed by Tokyo and Delhi (Table 6). The three Indian cities score highly on most of the six measures of accessibility, availability and profitability. For example, Mumbai is the financial and commercial capital of India and characterised by a relatively broad mix of industries and occupiers, hence the high location quotient score. Consequently, there is a large pool of workers with a wide range of skills suitable to many different types of activity. Occupiers are attracted for many other reasons including those that we can measure: significant new office supply, high vacancy rate and low cost per workstation. These have helped to underpin Mumbai's position as the preferred destination for outsourcing, especially in the SBD and PBD sub-markets. But, cities across the APAC region vary widely and this is reflected in our six variables. For example, Tokyo and Singapore score well because of especially high productivity.

Chinese cities, led by Shanghai and Tianjin, set to surge in 2017 rankings

Over the next few years we expect Chinese cities, led by Shanghai and Tianjin, to surge in our ranking (Table 6). Shanghai has a broad mix of and value add occupiers. The city will be further boosted by good accessibility and availability by 2017 (see Figure 13). Similarly, Tianjin - fourth largest city in China and a major centre of trade, finance, logistics, TMT and high-tech manufacturing - is expected to enter the Top Five in 2017. Tianjin scores highly on a number of measures including accessibility (FDI as a share of GDP and vacancy rate), availability (new supply) and profitability (annual costs per workstation). Going forward we expect occupiers to benefit from increasing availability and as a consequence lower costs.

Chinese cities most attractive to manufacturing, but focus shifting to high tech and value added industries

Following APAC's emergence as the world's manufacturing centre, China evolved into the default choice for offshore manufacturing. But, that's changing now. Many multi-national companies are exploring relocating their core manufacturing to other parts of Asia Pacific, due to China's rising production and labour costs. This is further supported by China's own economic paradigm shift to diversify away from manufacturing. Traditional manufacturing occupiers no longer dominate China's largest commercial centres. Tianjin, Shenzhen and Guangzhou are attractive to a wider range of occupiers in trade, finance, logistics and high-tech industries. Their strong showings in our APAC manufacturing occupier market ranking (Table 7) is reflective of a shift in focus away from traditional to more high tech and higher value add industries.

Table 6

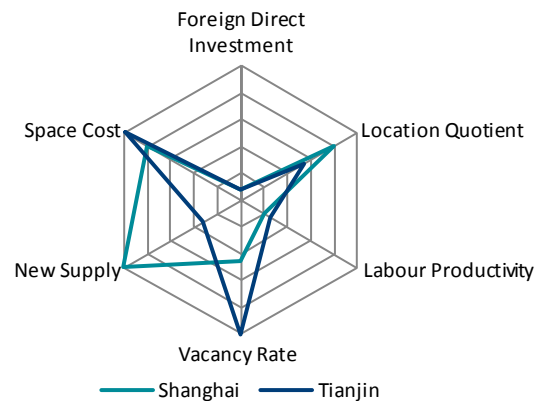
Top five APAC occupier office market rankings

2014	2017
1. Mumbai	1. Shanghai
2. Tokyo	2. Mumbai
3. Delhi	3. Tianjin
4. Bengaluru	4. Bengaluru
5. Singapore	5. Delhi

Source: DTZ Research

Figure 13

Shanghai and Tianjin analysis, 2017



Source: DTZ Research

Table 7

APAC Manufacturing occupier markets rankings

2014	2017
Tianjin	Tianjin
Shenzhen	Shenzhen
Guangzhou	Ho Chi Minh City
Ho Chi Minh City	Guangzhou
Bangkok	Bangkok

Source: DTZ Research

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APAC investor outlook

Stable APAC rankings dominated by industrial markets

Sydney Industrial is our 2014 top ranked investor market in APAC (Table 8). But, it is overtaken by Shanghai industrial in 2017 and relegated to 4th position. Industrial markets do well in our APAC rankings and are dominant, especially as only four are included in our analyses. There is relative stability in our APAC market rankings, as four of the 2014 top five Asia markets remain there in 2017. But, we should also recall that APAC markets have relatively low scores in the global context. The region's top market ranks only 18th globally and only four of 20 APAC markets rank in the top half of the 60 global markets covered. Most Asia Pacific markets suffer from low trading volumes and relatively diminished attractiveness, as we will discuss a bit later.

Many APAC markets overpriced and above their peak

Only few APAC markets are both currently under-priced and below their previous peak (Figure 14). In fact, Tokyo office stands out as being the only major market in this category. Singapore industrial, ranked second in 2017 is the other major market which offers potential upside even though it has now gone beyond its previous peak (i.e., in the upper left quadrant). With many markets either over-priced or above their peak, we see relative few attractive investor opportunities in the region. This is consistent with our previous published views from our recent Fair Value Index and Transaction-based Price Indices. However, transaction volumes are also taken into account in our total ranking.

Volatility scores drive high ranking of industrial markets

Tokyo office is the only APAC market which offers a relatively strong score with respect to its trading volumes (Figure 15). This proved to be a major factor in its achieving its second ranking in 2014. In general, industrial markets benefit from relatively low volatility and a more positive position in the cycle. The bottom three ranked markets show weak scores for both volumes and fair value. Having led the global economic recovery, many Asia Pacific commercial real estate markets have already benefitted from a significant upswing in the current cycle. Close to three quarters of the twenty markets we monitor now show capital values above their previous peaks. With initial yields already at historic lows in many markets, we see limited opportunity for further capital value increases. Expectation of higher bond yields in the coming period also means investors will demand higher required returns, making property in Asia Pacific less attractively priced, relative to other regions. Hong Kong, a key international market ranks second lowest in the region primarily due to high volatility and it being currently overpriced.

Table 8

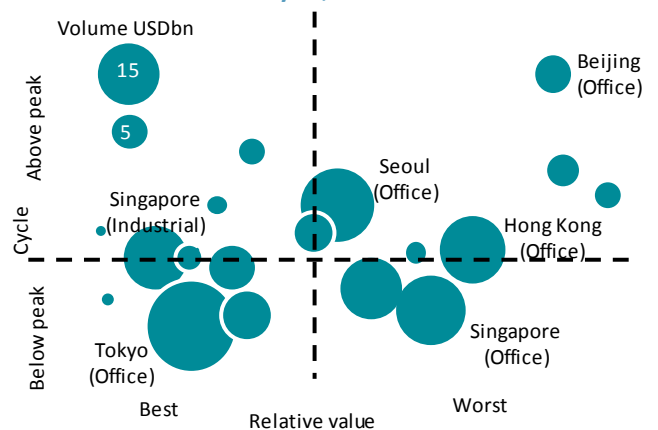
Top five APAC investor market rankings

2014	2017
1. Sydney (Industrial)	1. Shanghai (Industrial)
2. Tokyo (Office)	2. Singapore (Industrial)
3. Shanghai (Industrial)	3. Beijing (Retail)
4. Beijing (Retail)	4. Sydney (Industrial)
5. Sydney (Office)	5. Sydney (Office)

Source: DTZ Research

Figure 14

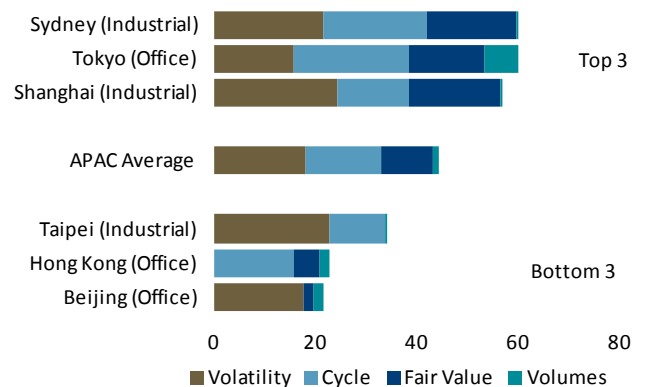
APAC relative value and cycle, 2014



Source: DTZ Research

Figure 15

Top and bottom three APAC investor markets, 2014



Source: DTZ Research

2015 Annual Outlook

North Americas occupier outlook

LA beats NY for 2014 top spot, but Dallas top for 2017

Los Angeles is the top ranked city, despite lacking a broad mix of industries and occupiers (Table 9). Our analysis shows that most North American cities also score well in terms of the availability and supply of office space, despite other significant differences among them. New York has especially high labour productivity while Dallas and Atlanta offer lower office space costs. We expect our ranking to evolve over the next three years with Dallas moving into top spot, thanks to high vacancy and continuing low costs which should attract a wide range of occupiers. Philadelphia and Denver enter the 2017 top five, due also to low occupancy costs and new supply. While we recognise that FBS and healthcare are expanding sectors in the US economy, we choose to focus on the Technology, Media & Telecommunications (TMT) sector.

High TMT occupier concentration on West Coast

As expected, San Jose, Seattle and Los Angeles have strong clusters of TMT employment (Figure 16). Each of these cities has a TMT employment location quotient (LQ) of 2.0 or more – double the national average. The LQ's relative sector employment comparison reflects the previous decisions of all existing TMT employers and space occupiers to locate in these cities. High sector LQs illustrate industry clustering. This implicitly reflects a wide variety of agglomeration factors including access to the right kind of talent, customers, service providers and other infrastructure. But, a high LQ is not the sole driver of what makes an attractive TMT location. Space cost and other issues are also considered.

Toronto and Philly do surprisingly well in TMT ranking

Unsurprisingly West Coast cities including San Jose, Seattle and Los Angeles are attractive to TMT occupiers (Table 10). More surprisingly is that Toronto and Philadelphia feature in our TMT top five. Neither city is especially associated with the TMT sector, hence the low location quotient (see Figure 16). To offset this, both are home to highly productivity labour forces in this sector. In the case of Philadelphia, it also provides relatively affordable office space. This also underpins its attractiveness to financial & business services which is highly concentrated in the city (with an FBS location quotient above 2). This strong FBS LQ, can partly explain the high TMT ranking. Separate analyses by DTZ suggest that the FBS sector is an increasingly important source of demand for TMT workers. This should reinforce the city's potential for TMT occupiers. Finally, we expect little change in the Americas TMT top five rankings between 2014 and 2017.

Table 9

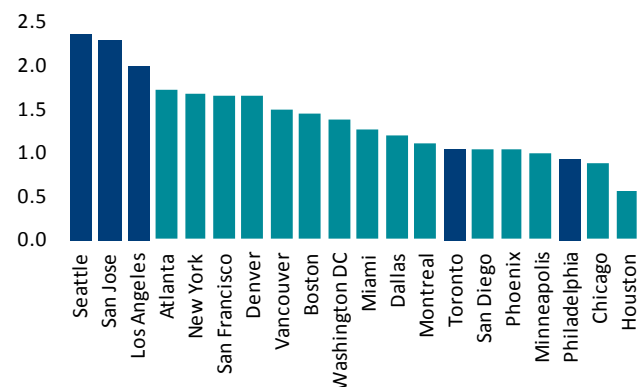
Top five Americas occupier office market rankings

2014	2017
1. Los Angeles	1. Dallas
2. Dallas	2. Atlanta
3. Atlanta	3. Philadelphia
4. New York	4. Denver
5. Chicago	5. New York

Source: DTZ Research

Figure 16

TMT employment location quotients by city, 2014



Source: DTZ Research

Table 10

Americas TMT occupier market rankings

2014	2017
1. San Jose	1. San Jose
2. Seattle	2. Seattle
3. Los Angeles	3. Los Angeles
4. Toronto	4. Philadelphia
5. Philadelphia	5. Toronto

Source: DTZ Research

2015 Annual Outlook

North American investor outlook

Offices dominate US rankings

New York office is our top ranked US investor market for both 2014 and 2017 (Table 11). Other major office markets, like Washington DC and Chicago are in our 2014 rankings, while Los Angeles comes into second place for 2017. Interestingly, Washington DC ranked 2nd as high scores in relative value and long-term market stability more than offset the current challenges in the leasing market related to federal budget contraction. In fact, office markets dominate the US top five rankings, with only limited showing for industrial and retail markets. But, US markets in general present attractive relative value opportunities for global investors. Even the lowest ranked US market (Denver office) has a global rank of 33 out of 60 markets. As mentioned, eight of the top ten 2014 global markets are in the US

All US markets under-priced

Based on our latest Fair Value Index results, all covered US markets remain under-priced. This reflects the current low bond yields and consequent low required return. In other words, we assume that investors require a lower return on commercial real estate investment, if they are forced to accept lower returns on alternative assets, like bonds. Figure 17 shows the 2014 position, with New York suffering from relatively high volatility. If pricing and volatility were the only two factors, Houston office and Dallas retail would be well positioned. But, other factors, like liquidity and cyclical position are also taken into account, which triggers a further review of the detailed drivers of each market's score.

Pricing reduces in the future

Our analysis shows that US markets, with the notable exception of New York, offer relatively low volatility and are also favourably positioned in the current cycle (Figure 18). Therefore, the main differentiation across the markets is their relative size in terms of trading volumes. The lowest ranked markets have shown relatively lower volumes and therefore offer only limited numbers of deal opportunities for investors. Reflecting its strong liquidity, New York remains the most attractive US market in the future, despite its relatively weaker Fair Value score. Washington office ranking is also partly driven by strong trading volumes.

Table 11

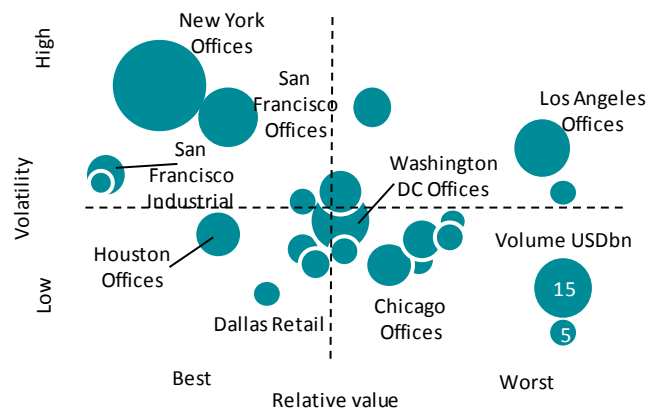
Top five US investor market rankings

2014	2017
1. New York (Office)	1. New York (Office)
2. Washington DC (Office)	2. Los Angeles (Office)
3. Chicago (Office)	3. Washington DC (Office)
4. San Francisco (Office)	4. Houston (Office)
5. San Francisco (Industrial)	5. Chicago (Retail)

Source: DTZ Research

Figure 17

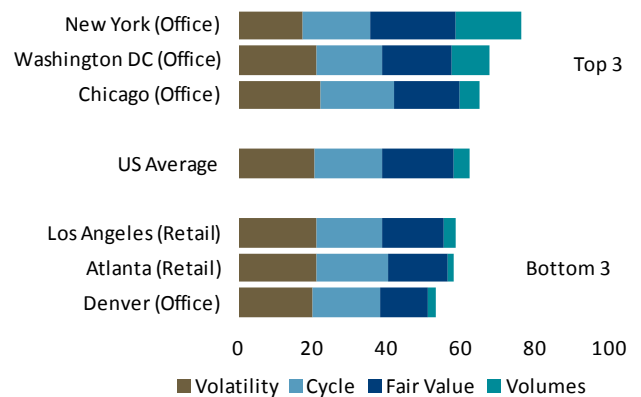
US relative value and volatility, 2014



Source: DTZ Research

Figure 18

Top and bottom three US investor markets, 2014



Source: DTZ Research

2015 Annual Outlook

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Global Office Review
India Office Demand and Trends Survey 2013-14
Sweden Computer Games Developers November 2013

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