TH Real Estate

a nuveen company

European cities since 2007

Size doesn't matter

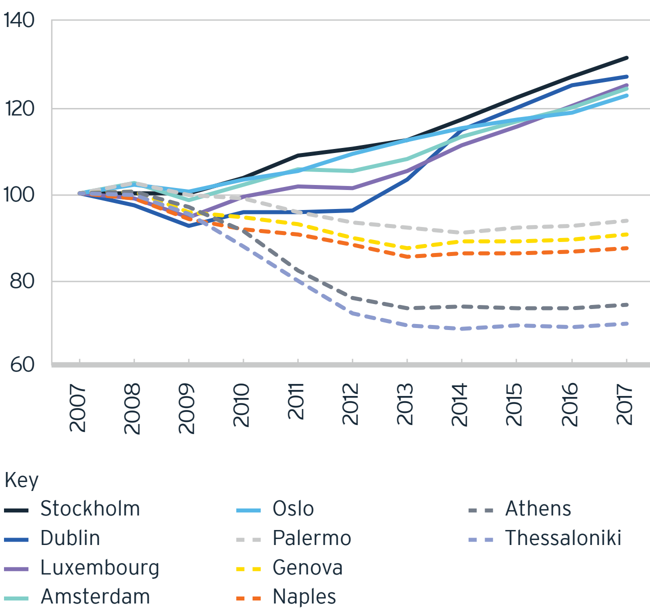
Introduction

Over a decade has passed since markets peaked in 2007. The 10-year period had no shortage of economic events including a once-in-a-century Global Financial Crisis (GFC) followed by the Great Recession and the Eurozone crisis, as well as radical monetary policies which had never been tried before. As the recovery took hold in the last couple of years, new cracks appeared in the form of Brexit and a change of direction in US global economic and trade policy. To keep this report of a retrospective evaluation of cities simple, we have used city GDP growth as a benchmark. We stress that the success and resilience of a city depends on a lot more than just GDP growth, and that 10 years is too short a period to pass judgement on a city's future. In fact, our analysis confirms that these single factors are only one piece of a much larger puzzle.

Differences are enormous

While the best performing city, Stockholm, is almost a third larger in terms of GDP than 10 years ago, the hardest hit city, Thessaloniki, is about a third poorer than before the GFC. Including emerging markets, the gap gets even wider with Warsaw adding 46% to city GDP between 2007 and 2017, while Dnipropetrovsk in the Ukraine lost 23% over the same time period.

Fig.1: GDP performance of five slowest and fastest growing cities in Europe (index: 2007=100)



Source: TH Real Estate Research, OEF, Q3 2017

Our global strategic advice is centred on cities rather than countries as it can provide investors with more clarity on what a portfolio may look like. Our innovative, city filtering allowed us to process global cities through a four stage filtering system, resulting in a list of cities we believe are 'future-proof' cities.

Stefan Wundrak
Head of European Research

Note: Real estate is less developed, more illiquid, and less transparent compared to traditional asset classes. Investments will be subject to risks generally associated with the ownership of real estate and foreign investing, including changes in economic conditions, currency values, environmental risks, the cost of and ability to obtain insurance, and risks related to leasing of properties.

Does size matter?

Fig.2 shows that some of the largest European cities, such as London with nine million inhabitants, or Berlin, are among the top performing cities. However, also some of the smallest cities in the sample, such as Luxembourg with just roughly 100,000 inhabitants, Brighton, Leipzig or Toulouse are also top performers. At the bottom of the list are large cities, with populations of more than a million people such as Naples, as well as smaller cities, such as Cardiff with 300,000 inhabitants.

Fig.2: Top performing cities

Rank*	Best cities	Total growth since 2007 (%)	Rank*	Worst cities	Total growth since 2007 (%)
27	Stockholm	31.5	132	Zaragoza	1.2
28	Dublin	30.7	133	Cardiff	1
39	Luxembourg	25	136	Sheffield	0.5
41	Amsterdam	24.3	137	Valencia	0.2
44	Oslo	22.5	138	The Hague	0.1
45	Leipzig	22.4	140	Porto	-0.4
48	London	21.2	142	Belfast	-1.7
49	Berlin	21.1	143	Lisbon	-2.1
51	Toulouse	20.1	148	Rome	-6
53	Nuremberg	18.9	149	Turin	-6.1
54	Gothenburg	18.5	150	Palermo	-6.4
56	Bristol	17.1	153	Genova	-9.8
57	Brighton	17	154	Naples	-12.7
58	Munich	16.2	158	Athens	-25.9
60	Copenhagen	15.7	159	Thessaloniki	-30.4

Source: Oxford Economics, National Statistics Offices, TH Real Estate, 2018
*Ranking is of 202 European cities, of which Western European cities have been selected

City-level success is possible in any country

The top-15 cities are spread over 10 countries, large countries such as Germany (with three) and the UK (with three), understandably have more than one city in the top 15. Only Sweden is punching above its weight sending Stockholm and Gothenburg into the top 15. Over the past 10 years, the bottom of the pile is dominated by Southern European cities. During the Eurozone crisis, Italy, Spain, Portugal and Greece suffered disproportionally, which had a strong impact on every city in that region. However even then, there are stark differences between cities. For example, Thessaloniki, lost five percentage points more of its GDP than Greece as a whole, while Athens held up better than the average.

Luxembourg

Toulouse

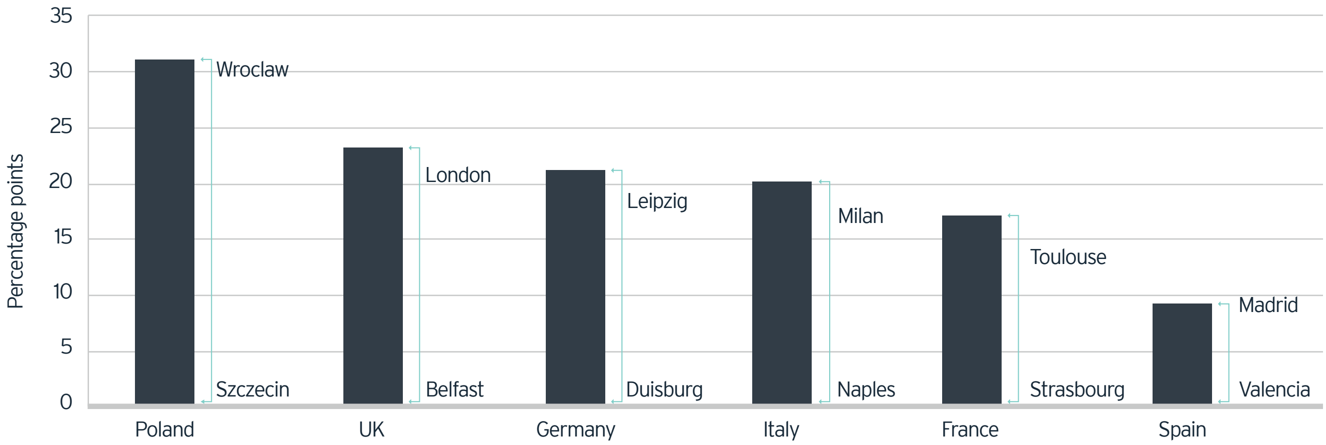
Athens

In larger countries, where the sample of cities is bigger, the importance of cities is more visible

Fig.3 illustrates the UK as a case in point: London, Brighton and Bristol were among the fastest growing cities in Europe, whereas Cardiff, Sheffield and Belfast are in the bottom 15. Munich, Berlin and Leipzig are three German cities outperforming over the past 10 years. Due to Germany's overall strong performance over that time period, no German city fell into the bottom 15, however the differences are nevertheless very large. Germany's strongest growing large city, Berlin, saw GDP growth of over 20% since 2007, whereas Duisburg grew by just 1%. The same is true in countries that had a difficult time. For example, Genova in Italy has lost 10% of its GDP, while Milan managed to grow by 8%, despite strong national headwinds.

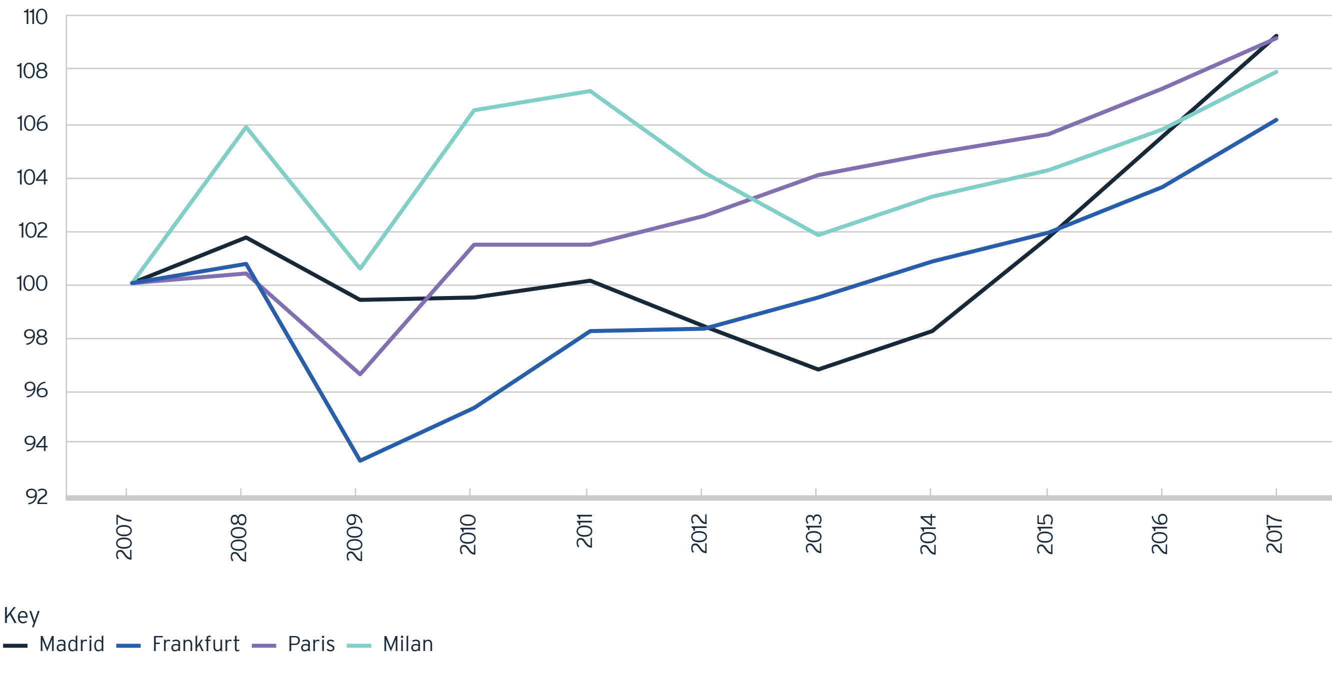
In Spain, Madrid's GDP grew by 9% versus just +1% in Zaragoza. In inter-country comparisons, Milan outperformed Frankfurt, and Madrid performed even better than Paris (Fig.4).

Fig.3: Difference in GDP growth from 2007 to 2017 (percentage points), best versus worst city in each country



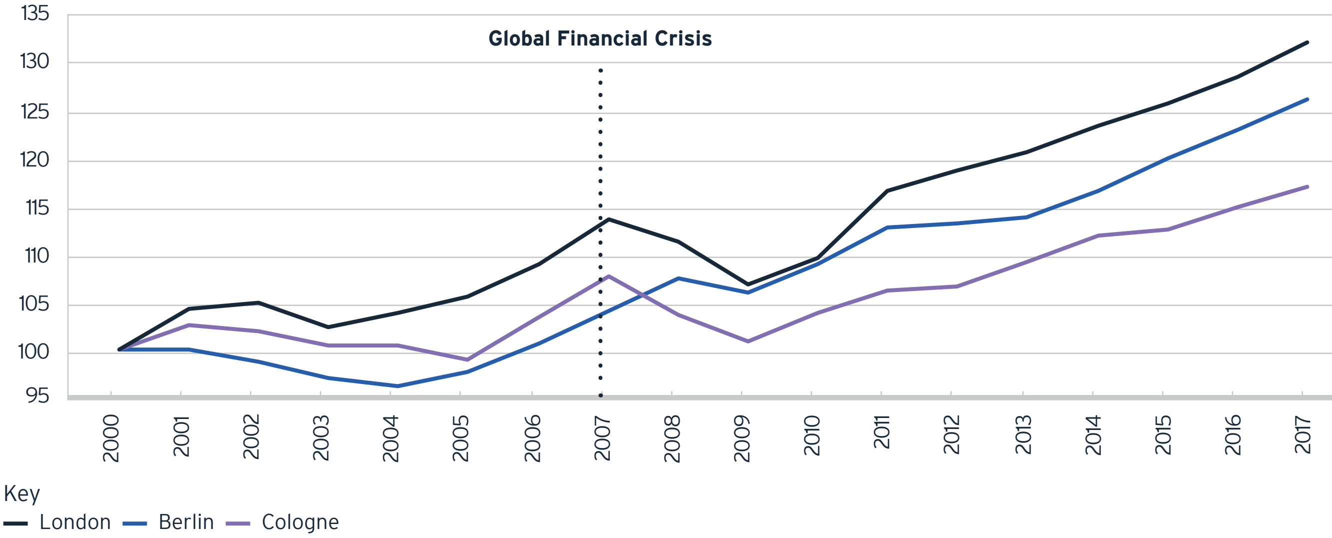
Source: TH Real Estate, OEF, 2018

Fig.4: GDP performance of selected cities (index: 2007=100)



Source: TH Real Estate, OEF, 2018

Fig.5: GDP performance of selected cities (index: 2000=100)



Source: TH Real Estate, OEF, 2018

Real surprises are rare

As seen in Fig.1, only two cities look really out of place. Leipzig in East Germany defied expectations and came in a smidgen above London, which is no small feat. The Hague seems out of place at the bottom of the league table, achieving zero growth since 2007. In the case of the Netherlands, it has to be noted that only Amsterdam rose above the overall poor performance of the Dutch economy after the GFC, however, The Hague, being the seat of the country's government, got hit double as the public sector was trimmed significantly. This is a one-off effect and not that relevant as the Randstad cities Amsterdam, Rotterdam, Utrecht and The Hague should be treated as one economic entity.

Usually, government cities are popular for their quiet stability, although in a public debt crunch of Euro crisis proportions they were hit like a tech city after a bubble. Rome and Brussel's relatively poor performance falls into the same category as both cities strongly depend on their (national) public purse.

Leipzig is a much more interesting case. Like most East German cities, it was all but written off, with forecasts of significant demographic decline witnessed in the 1990s and early noughties set to continue, or even accelerate. Instead, Leipzig has risen like a phoenix and was the fastest-growing city in Germany, ahead of Berlin. With smart city policies, the local government has managed to revive Leipzig's pre-war strengths of excellent universities and a heritage in the tech industry and trading. The additional benefit of a high quality of life, signified by affordable housing costs and a dollop of Berlin's Bohemian culture, made the offer for companies and new residents irresistible. However, most struggling cities have tried similar strategies, but with generally much less success. Leipzig is the unicorn, winning against the odds.

Fig.5 demonstrates that while Berlin's recent success was predicted by many, the city had been largely underestimated until recently, and considering its performance until 2000, forecasters may be forgiven their errors. Berlin was no match for London during the noughties and was even trailing Cologne, which had since lost business to other German cities.
For example, media to Berlin and insurance to Munich and Hannover.

Cologne

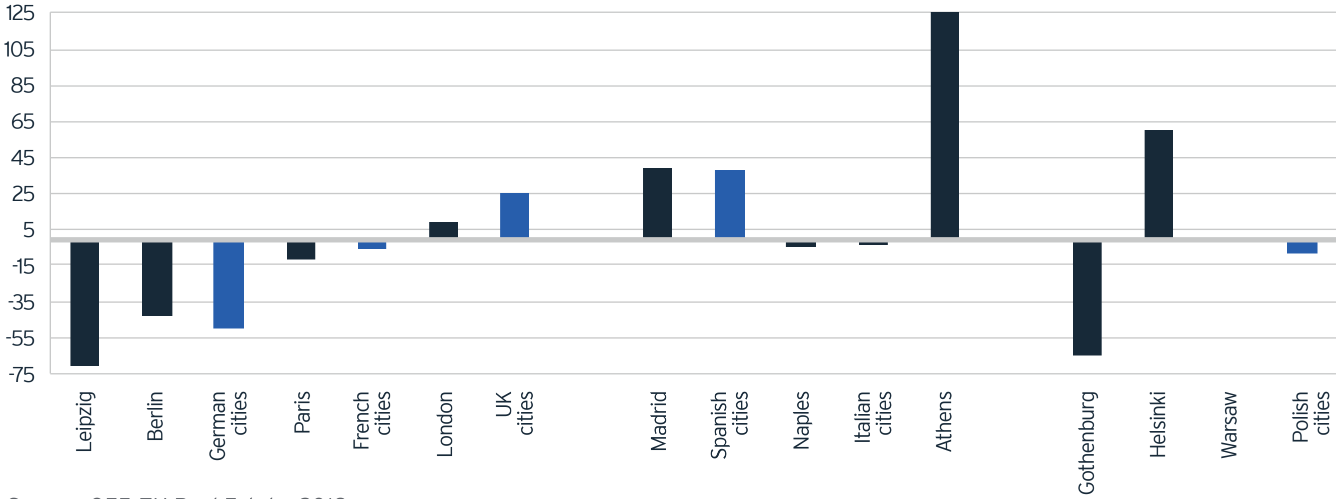
The Hague

Leipzig

Never trust forecasts alone

While the actual winning cities are scattered over many different countries, forecasts on a city basis bring out strong country biases. Latest projections (Fig.6) suggest that all 20 German cities in the sample will finish the next 10 years significantly lower in the ranking compared to the past 10 years. Surprise star Leipzig is to drop 70 places down the ranking and Berlin by 43 places. Similarly, French cities are expected to drop even further despite their relatively weak performance after the GFC. Paris is projected to fall down the ranking by 12 places. Gothenburg, which like Leipzig, has also been surprisingly strong over the past decade, is predicted to not repeat this outperformance, and is estimated to decline by 65 places. Stockholm is also expected to drop by 30 places.

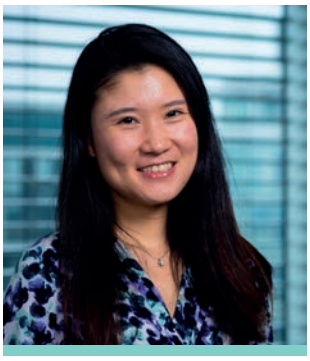
Fig.6: Change in GDP growth ranking, 2017-2027 compared to 2007-2017



Source: OEF, TH Real Estate, 2018

On the flip side, almost all UK cities are forecast to do much better than in the past. Belfast should climb 56 places from the bottom of the European ranking, and Cardiff is expected to improve by 63 places. Even London, already in the top 10, is set to improve further. Athens and Thessaloniki, meanwhile, would make a jump from the very bottom to the very top of the list in terms of GDP growth.

This demonstrates, rather neatly, why our city filtering process does not rely on model based forecasts alone. While these forecasts bring valuable information, they are too limited to assess cities' performance prospects and resilience. City forecasting models start with overall country growth forecasts, which make them very dependent on the accuracy of economic forecasts at national level. For example, a forecaster with high expectations for Switzerland will show relatively stronger forecasts for all Swiss cities compared to a forecaster with bearish views on that country. This methodical issue is why our filtering process has been built with 12 scoring factors across human, economic, and social capital, as well as growth forecasts.



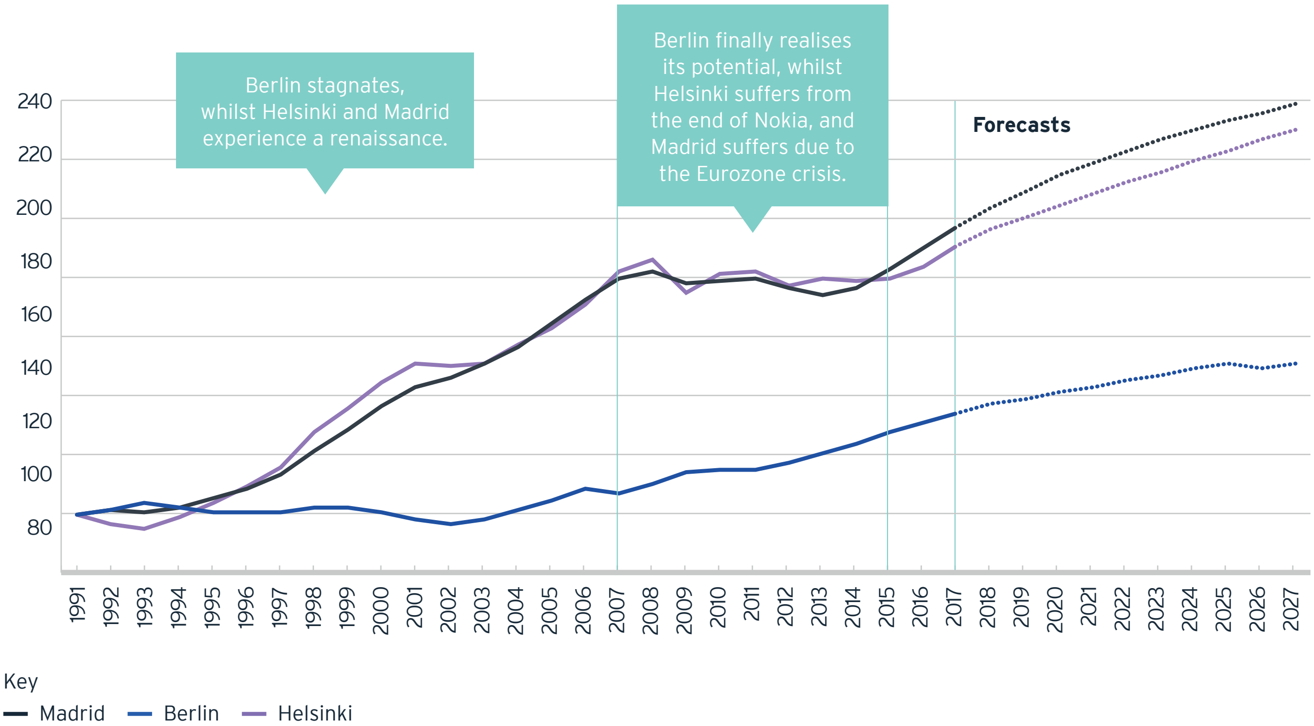
By drilling down to a city level, we can identify the unique DNA of that city and the compelling reasons to invest. However, what drives success is not necessarily clear, and it is important to consider a variety of factors and DNA types. In some cases, it is about scale and the depth of employment opportunities, where new urbanites are prepared to sacrifice space and air quality for the associated financial gain. In other cities, it is the quality of life or climate that attracts and retains people. Some cities have a unique ability to attract talent owing to their rich history and heritage.

Haoran Wu
Research Analyst

Never write-off a winning city

Fig.7 demonstrates the flaw of forecasting models, which naturally rely on past data and fail to pick up structural strengths or soft factors defining the resilience of a city. Helsinki and Madrid performed exceptionally well in the 1990s and 2000s until the GFC threw them off track in 2008. After a seven-year period of stagnation and even slight decline, growth is very strong again in both cities. Helsinki had to digest the demise of Nokia, and Madrid had to see Spain through the Eurozone crisis and painful economic reforms. Berlin took from 1989 (the fall of the wall) to 2003 to show some signs of life, and the city didn't reach its full potential until 2007, after recovering from damage inflicted during its 40 years as a divided city.

Fig.7: GDP performance (index: 1991=100)

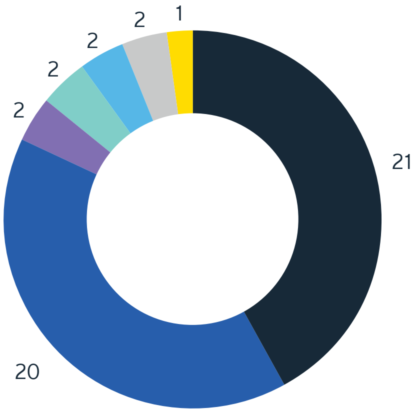


Source: TH Real Estate, OEF, 2018
Note: Forecasts cannot be guaranteed

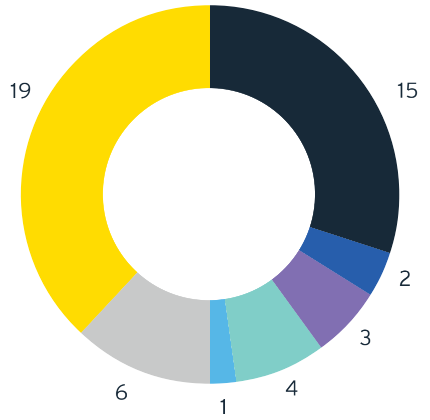
Europe has a sizeable emerging market opportunity

Using the entire sample of cities, i.e. including cities in very small countries (e.g. Iceland, Slovenia etc.), and not excluding any countries for risk monitoring reasons (e.g. Russia), the past growth pattern (Fig.8) reveals a strong outperformance of Europe's emerging markets. 21 out of the 50 fastest-growing cities in Europe are located in Eastern Europe, and another 20 cities in Central Europe (in the more developed countries which are member states of the European Union). Within the group of emerging markets, Turkey dominates with eight cities in the top 15 alone. Istanbul is impressive in absolute numbers too (Fig.9); it achieved GDP growth of $114bn over the past 10 years, second only to London with $170bn, and ahead of Paris with $65bn. Turkey has experienced political instability, run by a government blatantly ignoring the rule of law and suffering from shaky macroeconomics with, for example, inflation running at 16% in 2017. However, this demonstrates that very strong growth tends to come at the price of an underdeveloped institutional and economic framework. It is also important to note that growth in emerging cities comes off a very low base; the fastest growing European city over the past 10 years was Gaziantep in Southern Anatolia, yet following this very strong growth, its GDP per capita is still only 8% of Zurich and 20% of Madrid. Despite 1.3 million people living in greater Gaziantep, the city will remain a tiny real estate opportunity for many years to come.

Fig.8: Number of cities in the top 50 (out of 159)*



Number of cities in the bottom 50 (out of 159)*



Key

- Eastern Europe
- Central Europe
- Benelux
- Germanic
- Nordics
- UK and Ireland
- South and France

Source: OEF, TH Real Estate, 2018
*By GDP growth between 2017 and 2027
Note: Forecasts cannot be guaranteed

All other regions contribute only one or two cities each to the top 50. However, a glance at the bottom 50 cities reveals that emerging markets are volatile and no one way bet. While accounting for the vast majority of the 50 fastest-growing cities over the past decade, two Central European and 15 Eastern European cities are also in the bottom 50 cities regarding GDP growth over the past 10 years. For obvious reasons, Southern Europe is overrepresented at the bottom of that list as the selected time period includes the GFC and the Eurozone crisis. With six UK and four German cities falling into the bottom group, it becomes apparent that individual cities regularly perform very differently to their respective country trends. Some German cities did not grow at all despite a healthy economy providing strong tailwinds.

Real estate opportunities exist in every corner of Europe

Fig.9 focuses on absolute growth instead of growth rates. From a real estate perspective, a large city growing by a smaller margin may add more potential investment opportunities than a much smaller or less affluent city growing at a faster rate. Fig.9 confirms London's dominance over the past decade in terms of absolute growth, particularly in comparison to Paris, which is not much smaller, but has had a rougher ride since 2007. On the flip side, however, all the other UK cities are dwarfed and of limited relevance compared to London (within the UK). That contrasts with Germany, which has six cities in the top 30 in regard to total contribution to GDP growth, but all significantly smaller in terms of total expansion over the last 10 years. Interestingly, the four Turkish cities in the top 30 have grown by slightly more than all the Germanic cities (including Swiss and Austrian cities) combined (Fig.10).

However, the most important finding, is that even over this specific and rather unusual time period, cities in every region in Europe have made a significant contribution to overall growth. Despite the Eurozone crisis, both Madrid and Milan, the most important commercial centres in Southern Europe, are among the 20 strongest-growing cities in Europe (in absolute terms). Mighty Paris shared significant growth with other cities in France, namely Toulouse and Lyon. All three capitals of the Benelux region (Brussels, Amsterdam and Luxembourg), which was disproportionally affected by slow growth after the GFC, have made it into the top 30. All of the Central European cities in EU member countries contributed about the same as the three Benelux countries (Fig.10), which is primarily down to Polish cities excelling. The standout performers are the Scandinavian cities with all three capitals, Oslo, Copenhagen and Stockholm, in the top 15 cities in terms of total growth contribution, with Stockholm not far behind the much larger Paris.

Fig.9: Cities ranked by total growth

Rank	Cities ranked by total growth	$bn since 2007
1	London	170
2	Istanbul	114
3	Dublin*	85
4	Paris	65
5	Stockholm	46
6	Munich	34
7	Berlin	30
8	Warsaw	27
9	Ankara	26
10	Zurich	24
11	Amsterdam	24
12	Stuttgart	23
13	Oslo	22
14	Madrid	21
15	Copenhagen	19
16	Milan	17
17	Birmingham	15
18	Bucharest	15
19	Izmir	15
20	Hamburg	13
21	Luxembourg	13
22	Nurnberg	12
23	Lyon	12
24	Vienna	11
25	Brussels	11
26	Manchester	10
27	Frankfurt	9
28	Katowice	9
29	Toulouse	9
30	Bursa	9

Source: Oxford Economics, National Statistics Offices, TH Real Estate, 2018
*National accounts anomaly distorts Dublin figure by a large margin

Fig. 10: Which cities have grown the most? (Out of the top 30 cities in Fig.9)

Cities in region	$bn since 2007
UK and Ireland*	205
Turkey	163
Germanic cities	156
France and South	124
Scandinavia	87
Central and Eastern Europe	51
Benelux	47

Source: Oxford Economics, National Statistics Offices, TH Real Estate, 2018
*Adjusted to $10bn

Copenhagen

Brussels

Conclusion

Our one-dimensional analysis, using only a single factor over a specific time period, highlights the complexity of cities and the need to use a wide range of data sources to select cities into an investment universe. Cities are constantly changing and go through life cycles with periods of fast expansion, as well as stagnation and even temporary decline. Therefore, it makes sense to occasionally put cities on a hibernation list when the cycle is not in their favour. It would have been a mistake to write off London as a global city when its population declined from 8.5 million in the 1940s to 6.5 million in the early 1980s; it took until 2015 for London to surpass its former peak. Similarly, we don't give up on The Hague, Rotterdam, Bilbao, Helsinki, Edinburgh, Frankfurt, Sofia, Bordeaux, Geneva and Rome just because GDP growth over the past 10 years was a bit underwhelming. Rome, above all, can look back to quite a few renaissances over the past 2,000 years.

We believe you can achieve diversification within any one region by understanding the unique drivers of each city, looking beyond gateway cities and ensuring a mix of city personalities rather than using a single factor.

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