THINK Global: Risk and return
Changing context of real estate returns in a globalised world

TH Real Estate
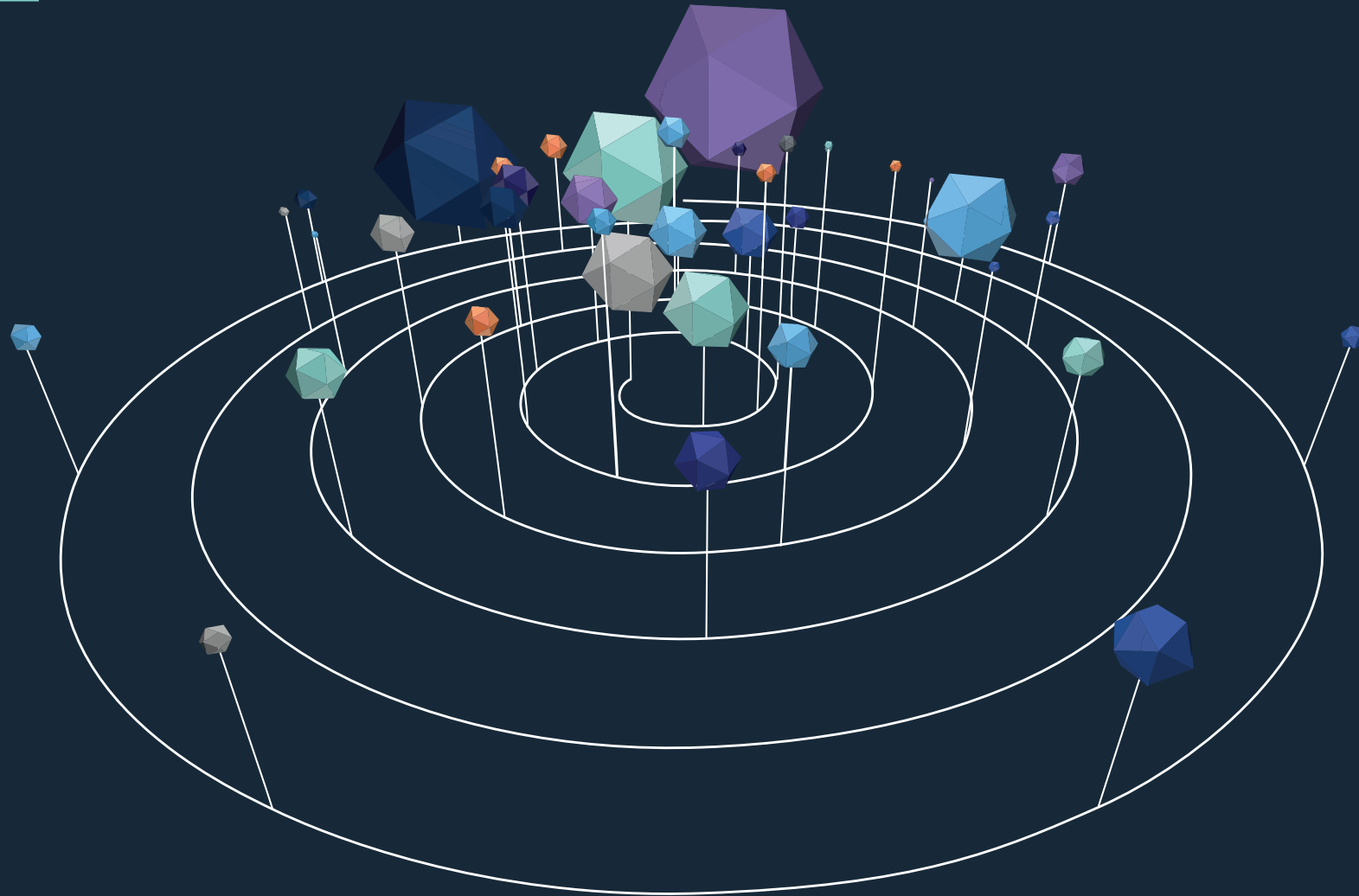
Data generating art

Using data from Fig.1 in this report, the image is an abstract representation of market size and aggregated property risk premium, for selected office markets around the world.

Introduction: The need for a global risk benchmarking in real estate

Real estate has become a globalised asset class. For an industry built on local market knowledge, the switch to a global perspective is a paradigm change. Traditionally, risks and opportunities have been viewed in a local or national context. In a globalised world, however, returns have to be benchmarked against a global framework. This framework can also inform risk management and allocation strategies.

Risk comparability across the globe is the objective for the TH Real Estate Global Risk Model and the content of this report. It covers markets in Europe, Asia and North America to benchmark real estate risk against expected performance. The model provides a method to understand real estate investment opportunities globally.

We analyse risk as local as possible, usually on the smallest level – the city market. Fig.1 provides an example of the type of data we can draw from the risk model, highlighting market size and aggregated property risk premium, for selected office markets around the world.

Fig.1: Risk and market size

Source: TH Real Estate Risk Model, JLL, 2015

Our rational: Measuring global real estate with the same yardstick

To address the need of a rapid globalising industry, global benchmarks and market comparisons across continents are paramount in steering decision making. TH Real Estate has analysed more than 2,000 data points to create a global risk model, benchmarking 59 cities in 29 countries, across office, retail and industrial sectors.

Within this data set, we have created an analytic framework that calculates real estate risk premiums over and above the country risk, defined by the "risk free" long-run interest rate or bond yield. Real estate specific risk factors include liquidity, volatility, income security and transparency.

Real estate risk premium feeds into the required return targets for each market. The results highlight stark differences between mature real estate markets with low real estate premium (eg. US and core Europe), and the nascent markets characterised by much higher real estate risk (eg. China).

Fig.2: Required returns for global office markets

Low   Required return   High
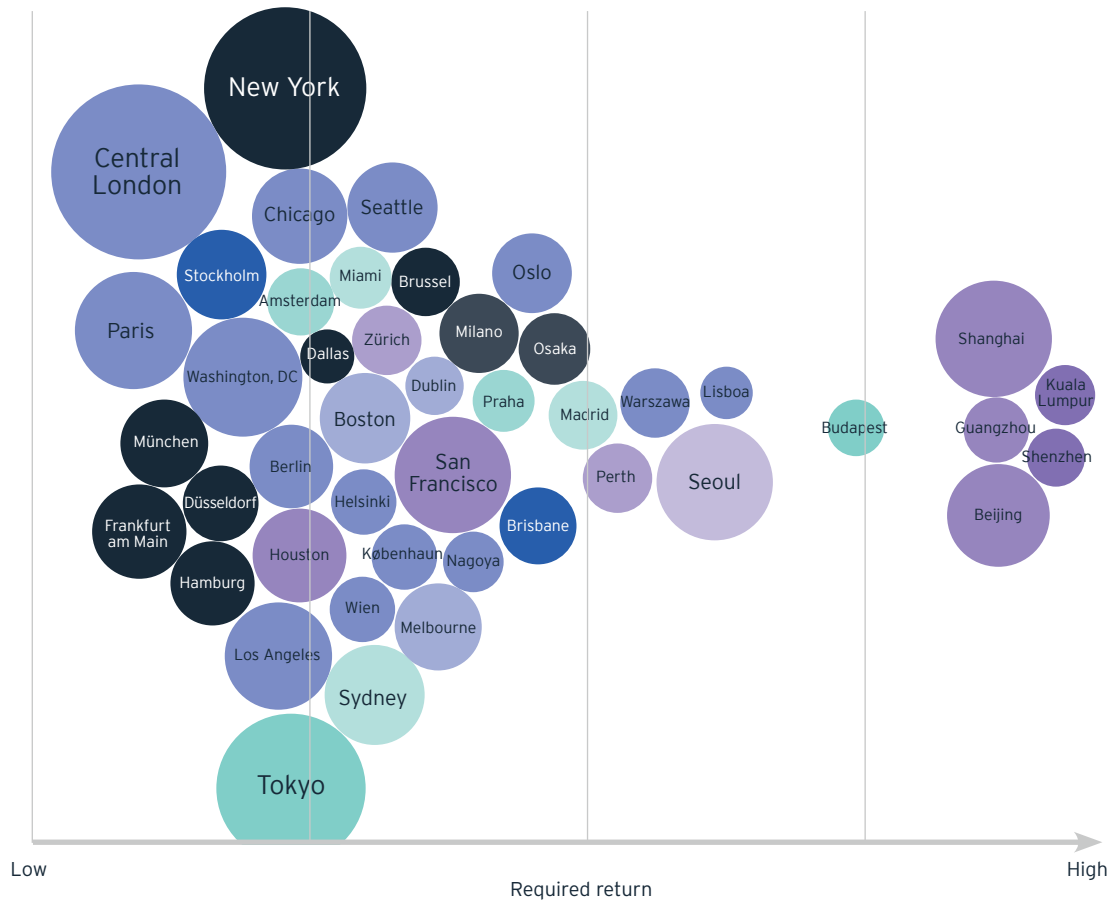
Source: TH Real Estate, 2015
Note: Based on global office markets, the size of the city circle relates to market size, and the colouring relates to the difference between expected and required returns.

Our method: The building blocks of risk

The model has been designed to assess the relative risk-adjusted returns across selected global real estate markets. The required return incorporates the current country risk-free interest rate, country real estate transparency, local market liquidity, relative to the size of the invested sector, and relative to the global traded sector, local market volatility of returns, and income security generated by lease terms and international corporate presence.

The resulting required return for the city/sector is subsequently compared to forecasts for expected returns over a five-year horizon, to establish whether the market is a recommended "buy" or "sell". Markets in which expected returns do not cover required returns should not necessarily be avoided, but acquisitions need to outperform their location/sector expected return in order to compensate for the risk.

It is important not to be too prescriptive, as the estimated parameters set for the individual building blocks for real estate risk premium (ie. liquidity, volatility, transparency) inevitably incorporate value judgements about risk premium; the framework is best conceived as a starting point that highlights market risk relativities.

The required return should not be interpreted as a hurdle rate. Indeed, individual investors will differ in their attitude to risk scores, eg. a very long-term investor may consider liquidity and volatility to be of lower importance, and would need to recalibrate the risk premium accordingly. The risk model is most useful in drawing out the relative differences between countries and sectors, and in providing market risk rankings within a global context.

Liquidity

The ability to sell at any point in the real estate cycle is the factor with the highest weighting in the TH Real Estate Risk Model. There are only a handful of markets that remained liquid over the last downturn, and even those markets were facing severe challenges at the time.

There are different ways to measure liquidity; from analysing the length of time that a property is introduced to the market until completion of a deal, and comparing the length of the sale process across markets. This information has been difficult to find.

We have decided to use a transaction volume based approach that measures five years of transaction volumes and its global market share. We have done this analysis on a sector level.

> New York, London and Paris are the most liquid markets. On the other end of the spectrum, with a high liquidity premium, are struggling markets like Athens and emerging markets such as Kuala Lumpur.

Transparency

For a global investor who is not rooted in local business culture, the level of transparency of the real estate operating environment becomes a key risk element. Decision making at a local authority level and availability of market information are elements for this category, which is underpinned by JLL's global real estate Transparency Index.

> Within our risk model, the UK is leading the transparency rankings, and Chinese and Malaysian cities are the most opaque markets.

Our method: The building blocks of risk (continued)

Income security

The quality and length of the underpinning income stream is also a key element for investors. We have captured income security in a global comparison of standard lease length as well as the presence of international occupiers. From the perspective of a global investor, the availability of multinational retail chains, office or logistics occupiers as tenants is generally preferred to smaller, local occupiers, based on their usually higher covenants strengths.

The UK and the US have the best combination of long lease length structure and a high level of occupiers active with a good covenant structure. China scores in the middle field and Japanese second tier cities are performing among the bottom.

Volatility

Besides the length and the quality of the income stream, a fourth cornerstone of our Global Risk Model is the measurement of volatility of income.

This is an especially interesting indicator, since some of the markets, which score well on liquidity and income security, such as London and New York, are also more volatile and will receive a higher risk premium on this score.

Cities such as Washington, DC, or German cities are typically less volatile, which sees them scoring ahead of places like New York or London with a higher volatility.

Fig.3: Building blocks of risk: Global office market risk around the globe

Key
Bond yield   Transparency   Liquidity   Volatility   Income security
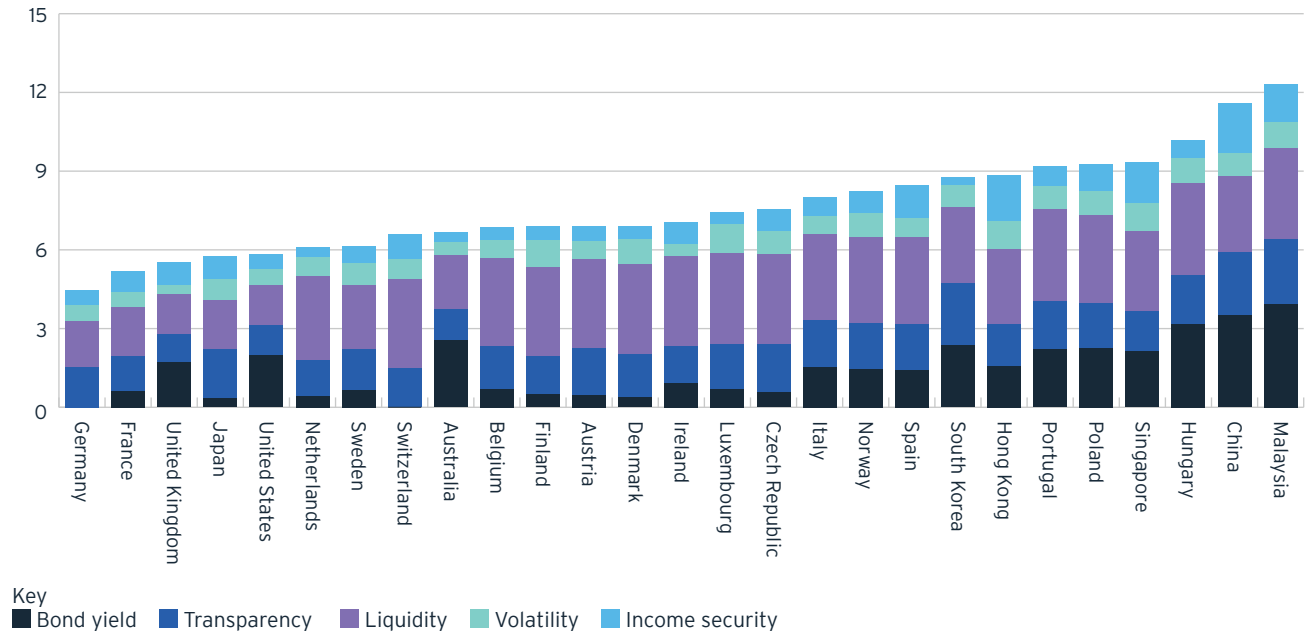
Source: TH Real Estate Risk Model, 2015

Global results

Office market

The results of the four risk model factors are mapped in Fig.4 for the office sector. This shows the four structural risk categories in isolation - leaving out the comparison to the expected returns. Looking at this structural risk environment, the global office sector is highly correlated with the maturity of the economy and the market size.

The UK and the US are clearly leading the liquidity measure. These markets are also scoring well on transparency and income security measures. On the other hand, looking at volatility, German markets are achieving the best scores, reflecting German occupier demand, which is less dependent on financial firms, and highly correlated with market movements.

America

Besides the UK, the US also scores strongly in the lowest risk category of offices. High liquidity levels, a large presence of good convened tenants, and a high market transparency, contribute to this low risk environment.

Europe

The three core markets - France, Germany and the UK - are the centre of European commercial activity and also the three largest markets within Europe in office transactions. Sweden also scores well, but its market size is considerably smaller than the others.

Asia-Pacific

Australia scores ahead of its neighbours, due to a transparent market and high density of international corporates being active in Sydney and Melbourne. Japan also scores well, with relative high trading volumes. An obstacle for Japan is still the relative low transparency and lack of international investors, compared to other mature markets.

475th Avenue, New York

Tour Areva, Paris

699 Bourke Street, Melbourne

Fig.4: Office real estate risk premiums

Key
- Low
- Low to medium
- Medium
- Medium to high
- High
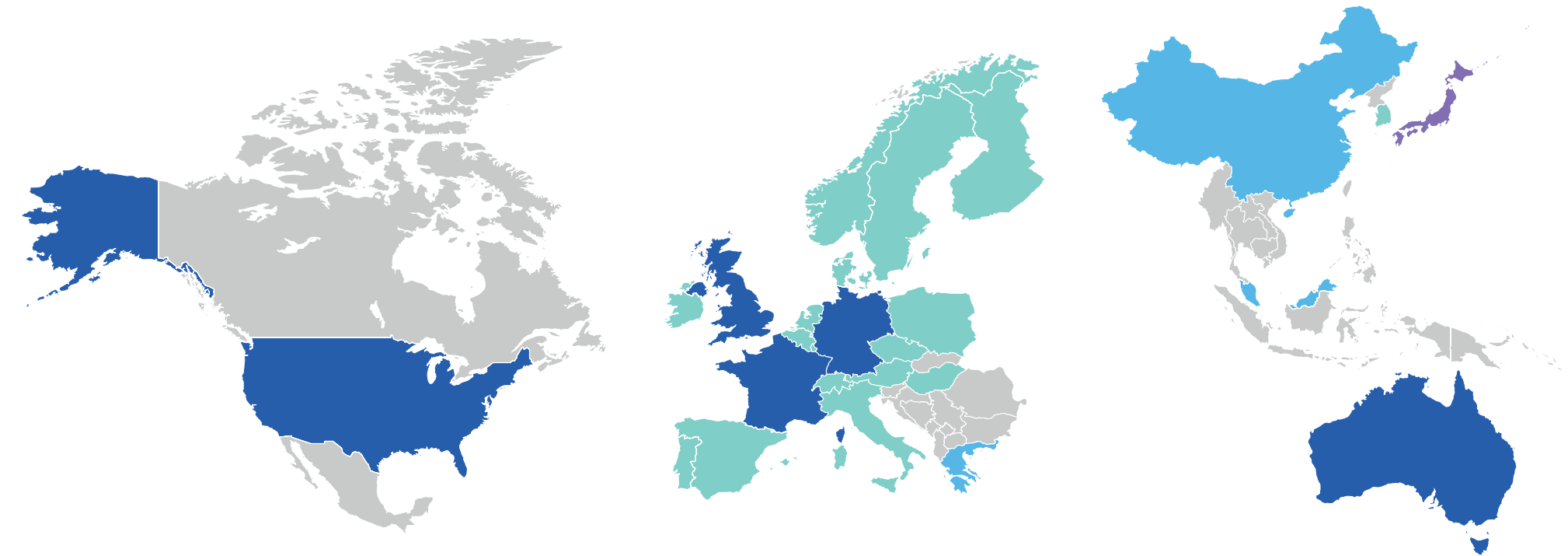
Source: TH Real Estate Risk Model, 2015

Retail: Shopping centres

The results of our shopping centre risk model reveal a relatively lower property related risk premium compared to other sectors. This is based on historic performances through the last crises, in which shopping centres remained more stable and largely more liquid than office properties.

America

Shopping centres in the US are considered as having low structural risk in general. Liquidity is high, even though the trading of top centres is more limited when compared to the global average, due to the typically long holding periods of REITs.

Europe

Southern Europe suffered liquidity problems during the latest downturn and a lower transparency rating resulted in a relatively high risk premium. Portugal, particularly, registers on the higher risk spectrum, due to low levels of recorded transactions.

Sweden, on the other hand, is a highly liquid market, however, the market size is limited, and not as many international retailers operate in Sweden as in the UK or Germany.

Asia-Pacific

The polarisation of Asia-Pacific remains strong. Australia exhibits the overall lowest structural risk to shopping centres, and Malaysia remains the riskiest of the markets that we monitor.

China is found in the higher risk category, despite a large number of international retailers operating in China.

Ala Moana Center, Honolulu

Bullring, Birmingham

Florentia Village Jingjin, Beijing

Fig.5: Shopping centre real estate risk premiums

Key
- Low
- Low to medium
- Medium
- Medium to high
- High
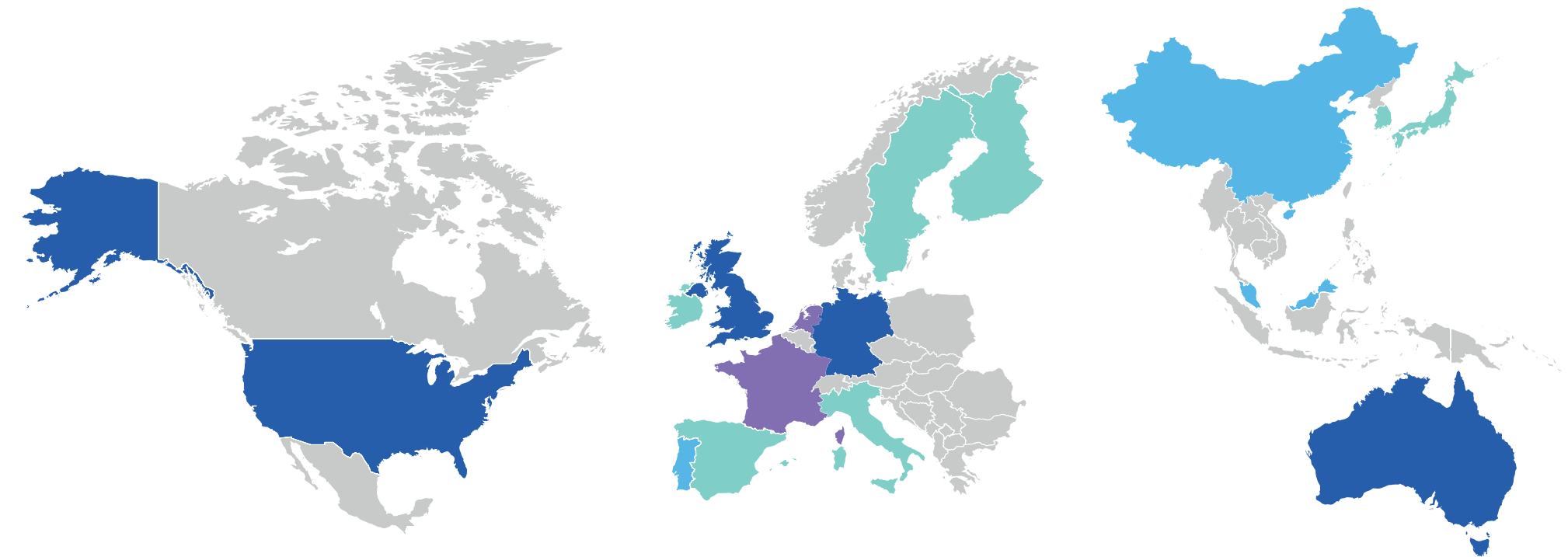
Source: TH Real Estate Risk Model, 2015

Industrial: Measuring the size of opportunity

The key application of the risk model is the comparison to expected returns. Current market conditions, such as bond yields and expected returns, are compared with the long-term structural conditions that have been determined by the risk model. Below is the example of the industrial sector, highlighting selective opportunities based on the risk model. This result has to be interpreted in the context of local market knowledge; on an asset level there will be specific outperformers or underperformers. This model serves as a reference point for global comparison purposes.

Fig.6: Logistics - Expected vs required returns

Key
- Transparency premium
- Liquidity premium final
- Volatility premium
- Income security premium
- Bond yield
- Expected return
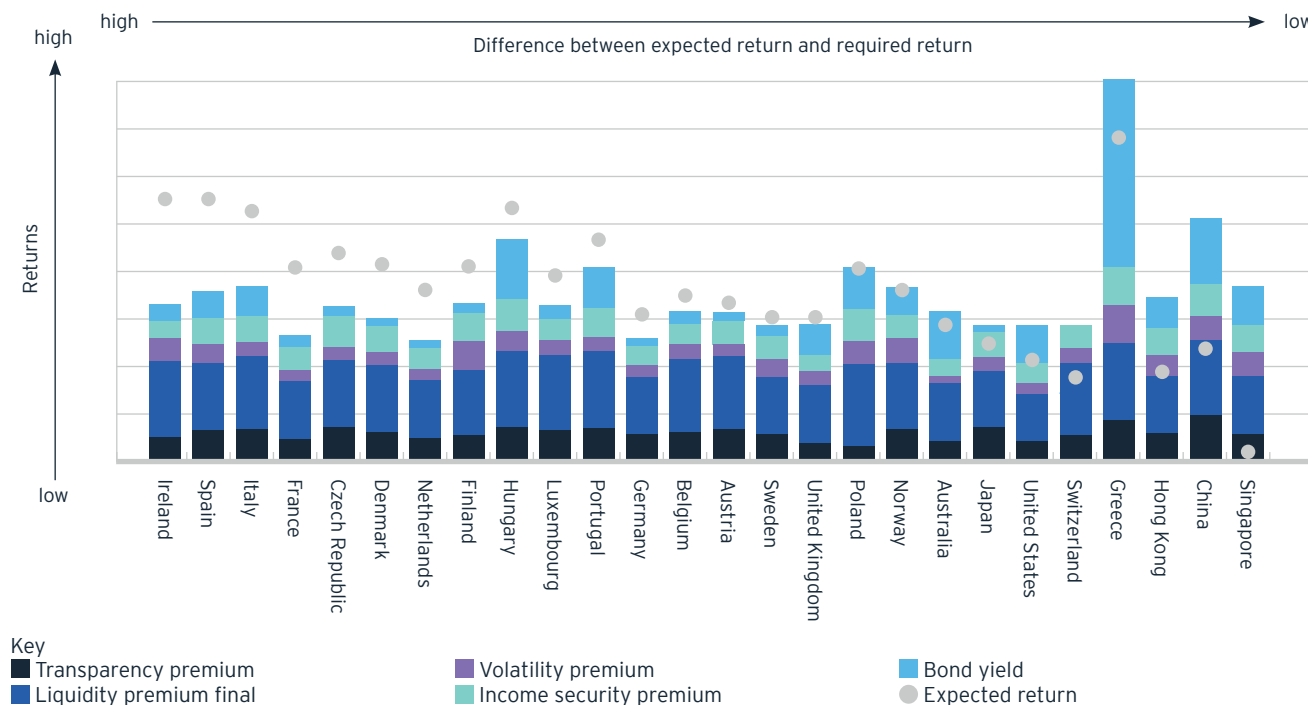
Source: TH Real Estate, 2015

America

America's logistics sector is the biggest logistic market globally in terms of volumes of trade. In recent years, expected total returns have dropped and the forecast for the next five years is relatively low.

Europe

Europe is looking exceptionally positive on this measure. This is related to the low bond yield environment, which makes markets look very attractive, however the low bond yield is an artificially low policy induced result, which could turn quickly.

Asia-Pacific

It is only China and Singapore that have expected return values far below required risk model returns.

Fig.6: Industrial: Measuring the size of the opportunity
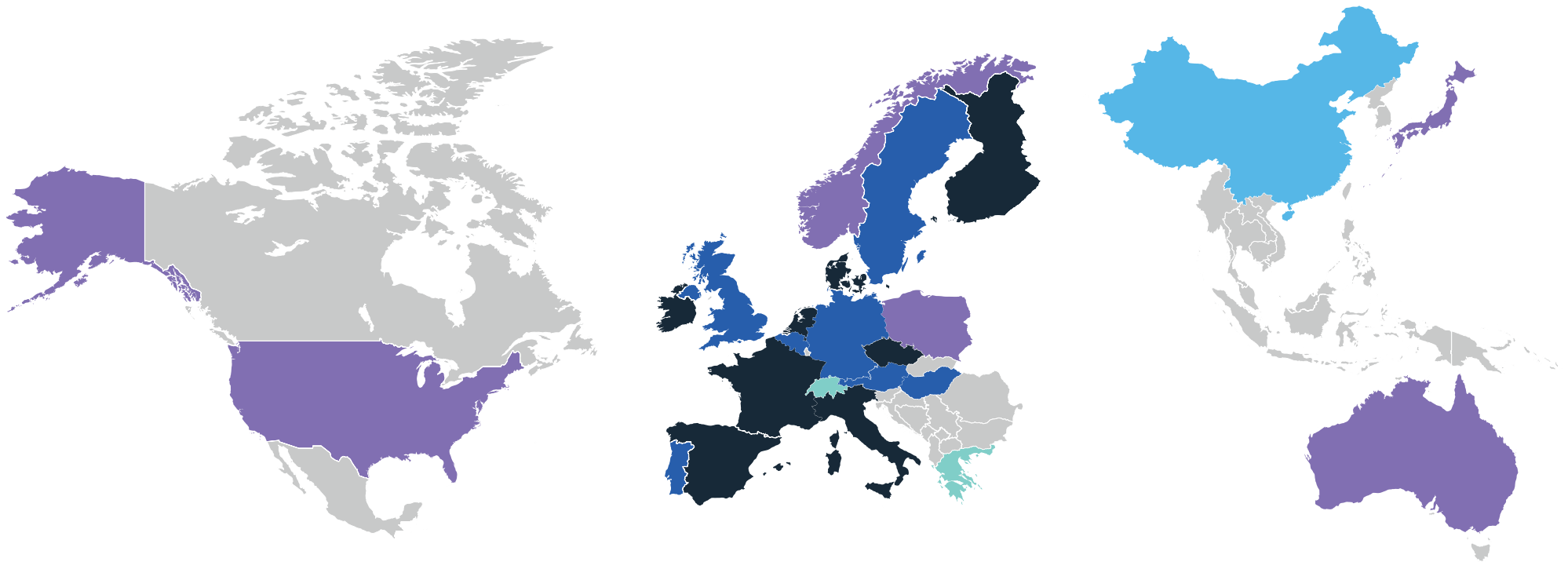
Key
- Outperformance
- Outperformance likely
- Risks covered
- Possibility of underperformance
- Underperformance

Source: TH Real Estate Risk Model, 2015

Summary: Risk understanding is key in a more complex investment world

The objective of the Global Risk Model is to rationalise and understand risk relativities across global markets. The review of markets unsurprisingly found risks to be lowest in the established investment markets. However, when expected returns are taken into account, other markets, including those in Southern Europe, offer better risk-adjusted returns. The previous section describing the opportunity gap in the industrial sector is a good example.

As the number of investable markets increases, portfolio construction possibilities will rise exponentially, meaning global investment strategies will becoming more complex. Therefore, a structured approach which facilitates the comparability of global markets is key to targeting optimal risk-adjusted returns for investors.

> Every investment we make is screened by our research team to ensure it is aligned with our risk view. Our global risk model makes market risk transparent and ensures consistency across our portfolio worldwide. Our global research capability steers responsible investment decisions, with the global risk model forming an integral part of our global research framework.

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