Real Estate Insight

February 2019

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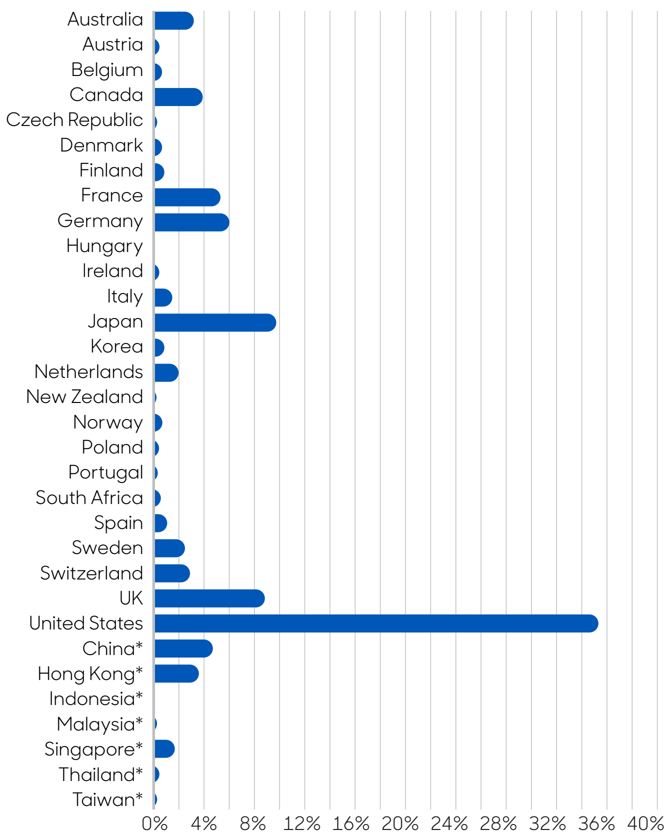
Executive summary

- Real estate has long been considered a mainstream asset class for institutional investors. But for most, there has been a strong bias for real estate investments in their own country, with exposure to domestic markets of up to 100%.
- Many investors, often incorrectly, associate non-domestic real estate investments with higher risk than domestic ones. Although our research indicates that global diversification leads to **lower** not **higher** portfolio risk. However, this misconception often leads to investors choosing higher-risk strategies for their non-domestic investments relative to domestic or avoiding investing internationally altogether.
- Non-domestic real estate investments can provide more choice with new sectors and strategies. They also provide an opportunity to take advantage of any mispricing in core, non-domestic markets.
- We argue that non-domestic real estate can provide an efficient way of achieving higher risk-adjusted returns through diversification.
- Investing in a direct, diversified, global or regional portfolio is only possible for the very largest investors. Hence, indirect investments are the entry route for most investors thinking about a diversified, non-domestic, core real estate allocation.
- Taxes, fees, currency, leverage and implementation risk generally are important considerations that play a role in deciding the appropriate non-domestic allocation and potential opportunity set.
- Although theory indicates that currency rates revert to the mean over time, currency fluctuations can have a significant impact on shorter-term performance and currency hedging may be a consideration to avoid unintended risk.
- Local knowledge is key to successful investment in non-domestic markets because of differing legal and regulatory safeguards globally; varying levels of transparency, differing levels of liquidity, etc. As a result of these potential hurdles, accessing global investment expertise should not be underestimated in realizing the benefits of global diversification.

Improving your real estate portfolio's investment performance by including non-domestic real estate

Real estate has long been considered a mainstream asset class for institutional investors. But investors tend to have a strong bias for domestic real estate. The step from domestic to non-domestic real estate investment is not a trivial one and in some cases it may not be an appropriate solution. However, there are many potential benefits from creating a regional or global allocation, which we describe below. In this paper, we focus on non-domestic investments in global markets.

Chart 1: Estimated Global Real Estate Country/Region Sizes 2017



Source: MSCI, February 2019.
*All data is to end 2017 apart from the asterisked data which is to end 2016.

01

More opportunities

For most investors, moving outside their domestic real estate market rapidly expands the opportunity set and access to differing real estate cycles; potentially higher returns; allows access to specialised vehicles and improves diversification as an investors local market typically only represents a fraction of the overall real estate universe. For a UK investor, the investment universe could be expanded significantly as shown by allowing investments in other global regions and countries.

02

Access to sector and strategy opportunities

Not all domestic real estate markets are alike. In some countries, for example, institutional investment in specific real estate sectors is possible, whereas in other countries it is not. The clearest example of this is the residential sector where a typical institutional portfolio may have from zero to over 50% in the sector, depending on the country. Residential real estate along with various other less institutionally developed sectors such as student accommodation and retirement living have been some of been the most sought after real estate sectors globally in recent years. This is due to their low risk to income; the growth potential from rapid population increases and positive demographic drivers in these sectors and the diversification benefits afforded by these parts of the market as their demand drivers are different to most other commercial real estate sectors. Historically, the correlation between these sectors and the traditional commercial sectors has been lower than between the more mainstream commercial sectors. Global markets provide more opportunities for accessing these types of sectors.

Another example of how countries differ is demonstrated by the current growth of the global logistics sector. Some countries are more important for global supply chains and others are more advanced when it comes to e-commerce and logistics demand.

Emerging sectors like healthcare, senior housing and student accommodation are much more available in some countries than others. Such differences create different drivers and opportunities for various specialist sectors globally.

03

Diversification or Higher absolute returns

There are two separate return objectives for investors considering an investment outside their domestic market.

a. Diversification and higher risk-adjusted returns (core-style allocation)

   Or

b. High absolute returns (value add/development, leveraged) In the short term, experienced investors may think that their domestic real estate market offers poor value; this often starts the drive to look for opportunities outside of their home country. Implicit in this is the use of the domestic return as the hurdle rate for non-domestic investment. We believe that this demand for a risk premium has led to some of the disappointment that investors have experienced when investing elsewhere.

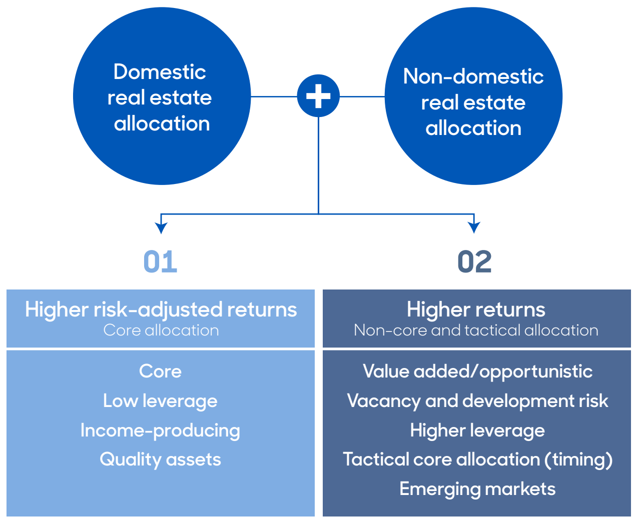
Over the long term, higher returns are only available by taking on more risk; investors who keep their domestic market return as a hurdle are typically pushed up the risk curve when they invest elsewhere as they seek higher returns than those expected in their domestic market. A higher gross return is therefore required in order to deliver an acceptable return net of fees and taxes that compares favourably to the return that could have been expected in the investor's home market – and those higher gross returns mean taking on more risk.

We suggest that by focusing on the return side of the equation in isolation is likely to deliver potentially unwelcome outcomes. Particularly if the risk associated with achieving those higher returns is not taken into account. We suggest looking at:

- both risk and return.
- diversification of the real estate portfolio.
- diversification of the multi-asset portfolio.

As markets are not synchronised, a bigger investment universe provides different opportunities throughout the cycle, which allow investors to take advantage of mis-pricing in core non-domestic markets and also markets that are expected to deliver higher returns than a domestic investor's home market. Understanding and calibrating where countries are in terms of the stage of the real estate cycle and identifying areas of strong, structural demand relative to market supply can provide lower risk opportunities for value-add or development activities.

Chart 2: Allocation – what are you looking for from real estate?



Source: abrdn, February 2019.

04

Higher risk-adjusted returns

Investing globally gives rise to the potential for higher risk-adjusted returns within the real estate portfolio and at the multi-asset level. The theory is straightforward: the non-domestic, global real estate portfolio outweighs a domestic-only real estate portfolio in terms of return per unit of risk.

If the correlation between the domestic and non-domestic portfolio was 1, there would be little reason to hold the domestic portfolio at all since doing so would lower the return per unit of risk. Given that the correlation between the domestic portfolio and the non-domestic portfolio is not 1, then it makes sense to hold some exposure to the domestic portfolio – thus creating a home bias. In general, the bias is likely to be higher than just the market weight.

Table 1: The theoretical impact of adding non-domestic property to a domestic portfolio

Correlation = 0.6	Domestic %	Global %	Combined %
Return	6.0	6.0	6.0
Std Dev.	12.0	8.0	8.0
Return/risk	0.5	0.75	0.75
Weight in combined	7.0	93.0	100.0

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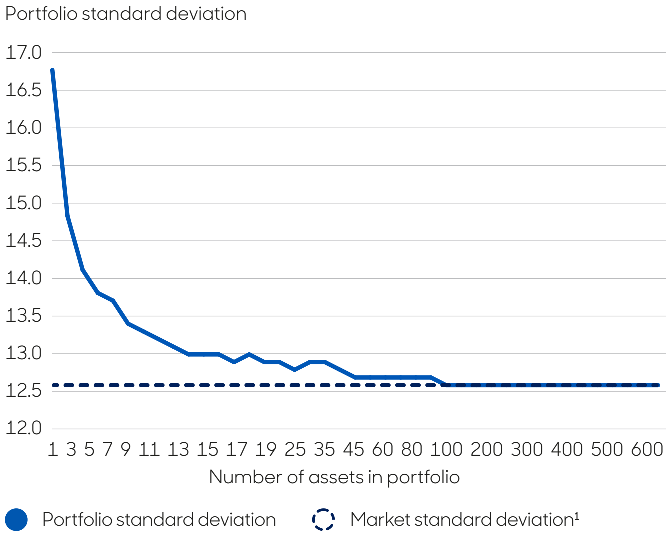
Source: abrdn, February 2019.

Assumptions	
Return	Annual return of MSCI Global Annual Property Index and the MSCI UK Annual Property Index
Std. Dev.	Forward looking view on market standard deviation. Domestic = weighted average of country assumptions
Correlation	Average correlation between UK and global real estate indices

Chart 3: UK property: risk reduction and portfolio size



[1] Assuming holding all assets in simulation.
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Source: IPF, July 2015.

The example in Table 1 shows a set of assumptions for a (hypothetical) domestic portfolio and a global real estate portfolio and how they could be combined when looking to maximise risk-adjusted returns. This implies that to maximise the risk adjusted returns a domestic weighting of 7% should be held with 93% non-domestic.

The table demonstrates the theory of far higher risk-adjusted returns for the combined portfolio than for the domestic only portfolio, but the reality can be quite different. In Section 3, we look at the impact of leverage, fees and tax.

05

Risk reduction and diversification within a real estate portfolio

The benefits of real estate as an asset class are well known among most investors: attractive risk-adjusted total returns, a high and stable income return, and diversification benefits when held in a portfolio with equities and bonds. While these features are valid for the overall market, they don't always hold true for individual assets or smaller portfolios. As asset-specific risks (location, sector, tenant, building, etc.) are high for individual properties, a relatively high number of assets are required in a portfolio in order to replicate the favourable characteristics of the overall market. In this section, we will briefly look at two objectives when deciding appropriate portfolio size:

a. Risk reduction – how many assets are required for portfolio volatility to approach market volatility.
b. Diversification – how many assets are required in a portfolio in order for real estate market returns to be reflected in a specific real estate portfolio.

a. Risk reduction

Based on analysis of the UK real estate market (see IPF, Individual Property Risk, July 2015), a portfolio of 100+ assets eliminates most asset-specific risks. The volatility of the overall portfolio (standard deviation of returns) converges with the market-level risk (Chart 3) and the asset-specific risk is virtually eliminated. But even a portfolio of just 20-30 assets can provide significant risk reduction. The number of assets required is dependent on lot sizes, the more unequal the lot sizes the higher the portfolio size required to reduce the risk. A low cross correlation of total returns between assets (given differences in location, sector, tenant type, lease structure) results in significant risk reduction.

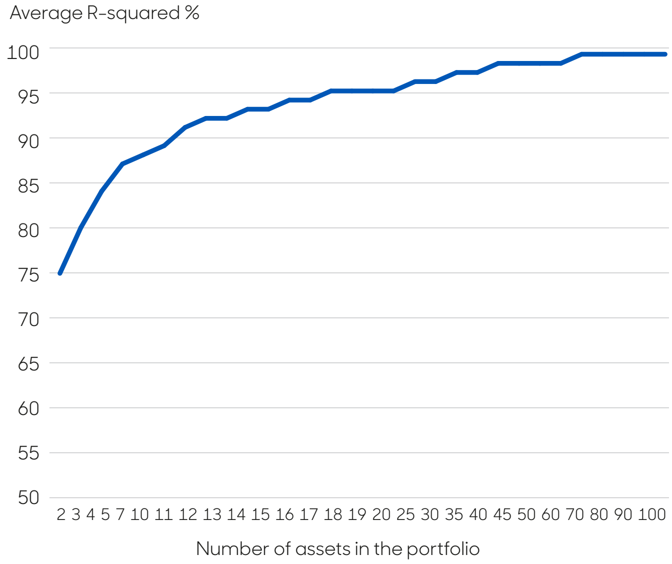
An allocation across multiple regions (such as Europe or globally), rather than specific to a particular country, should lead to greater risk reduction benefits given lower cross asset correlations. This reflects the benefits of having a diversified portfolio across several countries with exposure to varying local economic conditions, interest rates cycles, and real estate lease structures (such as lease indexation, rental uplifts or lease lengths). With a portfolio of twenty assets diversifying outwith the home market does not necessarily mean diversifying into twenty differing countries. Investing in two or three assets in a particular country minimizes costs and maximizes operational efficiencies and should still afford investors the benefits of diversification. Investors should be cognisant that implementation risk is elevated in global markets given the differing legal and regulatory safeguards, etc. and should therefore give this some consideration in terms of the target markets. How abrdn identify markets with lower implementation risk is covered further on.

b. Diversification

A larger portfolio also leads to diversification – this is the degree to which overall real estate market returns determine the returns of a specific real estate portfolio. The smaller the portfolio size, the greater the asset-specific risk that drives the return of the portfolio. Chart 4 shows the R squared (degree of relationship) of portfolio returns with market returns as the portfolio size increases for the UK for the period from 2002 to 2013. A portfolio of only 20 assets results in an R squared of over 95%. A portfolio of 100 assets results in an R squared of over 99%. As a pan-regional or global portfolio is structured to be spread across multiple countries, it is unlikely to track local real estate market indices in each case, though a high R squared is still to be expected (over 90%).

Chart 5 that follows illustrates the importance of diversification particularly when there are periods of market stress such as the global financial crisis in 2007/2008. It is clearly evident from the range of returns shown that single country specific risk was elevated given that the extremes of the total return range varied between +12.7 (for South Africa) and -35.3% (for Ireland). A diversified portfolio of assets total returns would have been closer to the global markets outturn of -7.7% in 2009 compared to -21.8% for the UK market over this period.

Chart 4: UK property: risk reduction and portfolio size



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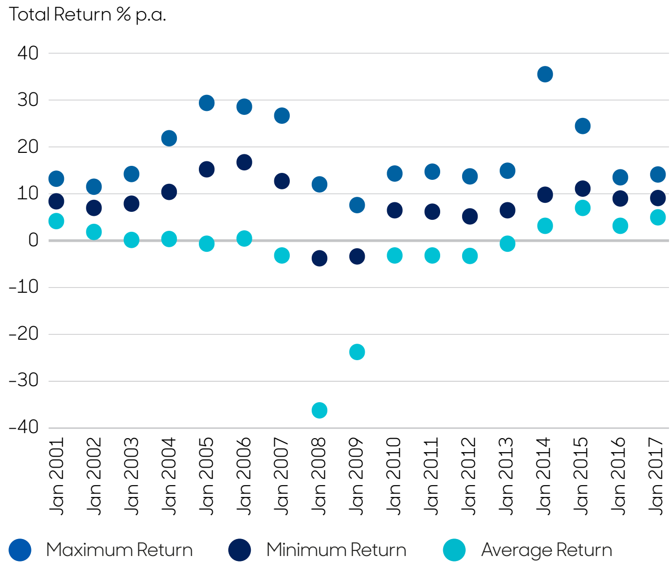
Source: IPF, July 2015.

Chart 5: Range of Global Returns, 2001 to 2017



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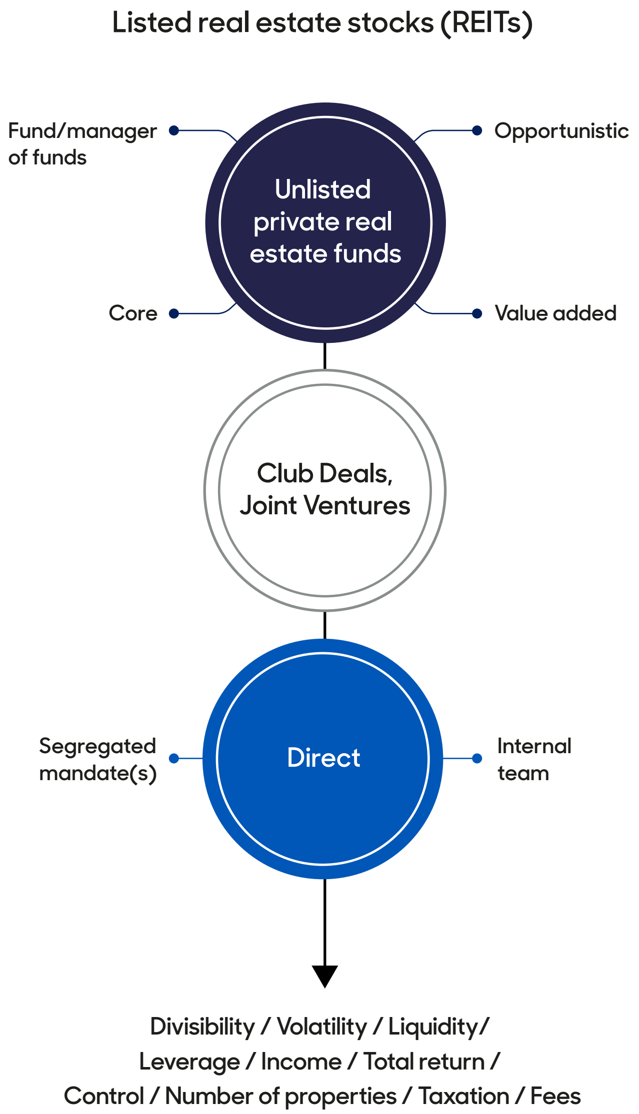
Source: MSCI, abrdn, February 2019.

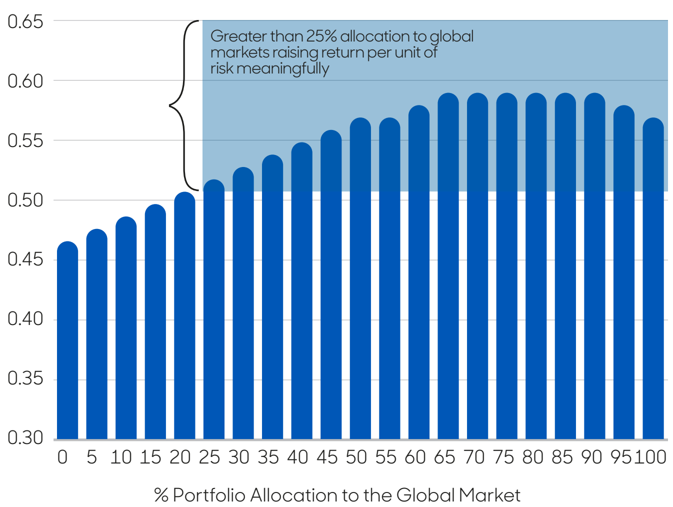
Chart 6: Many entry points into real estate and trade-offs



Source: abrdn, February 2019.

Chart 7: Impact on Portfolio Return per Unit of Risk as Global Allocation Rises

Allocation to the Global Market (%) and Portfolio Return Per Unit of Risk



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06

Access points to real estate and trade-offs

Investors need to consider how they intend to access real estate markets as this will determine whether an international or domestic solution makes the most sense, or if a blend of the two is more appropriate. As described in the section earlier, the real estate portfolio's risk adjusted returns and volatility will be dependent on portfolio size. This has implications for how investors should gain exposure to different markets: whether they should invest directly into non-domestic properties or gain exposure to indirect real estate investments. Investment size is not the only variable that plays a role when thinking about non-domestic investments; there are a series of trade-offs between risk, returns and liquidity (Chart 6).

Assuming that an investor wishes to diversify risk across countries and real estate sectors, a global or regional portfolio using the direct investment route is restricted to all but the very largest investors given the volume of capital required. For example, assembling a global portfolio of around 20 assets with an average lot size of 40m would require a fund size of 800m. Managing this portfolio across a variety of differing regions would also incur significant costs in terms of accessing local knowledge, access to globally integrated systems for managing the assets and expertise in tax and structuring across the differing regions. There are also the practical problems and elevated costs associated with assembling a team in local markets to manage direct assets. The size of the global allocation in the context of the overall portfolio is also important as anything less than a 25% allocation to global markets is unlikely to contribute significantly to increasing overall portfolio return per unit of risk as shown in Chart 7.

Indirect real estate investments access properties through public or private unitised vehicles. Public vehicles include real estate investment trusts (REITs); private vehicles include unlisted real estate funds or funds of funds. REITs have a high, short-term correlation with the stock market, but the medium-term return tends to be correlated with the underlying real estate market. This reflects the relatively high dividends REITs pay to investors and their focus on income-producing assets. Unlisted funds, or funds of funds, tend to behave more like the underlying real estate market, with a lower correlation to listed stocks when looking at performance. Just like listed real estate, investors should be aware that unlisted funds can trade at a discount or premium to net asset value (NAV) depending on the point of the cycle, the reporting period for valuations, fund leverage and evidence for pricing.

Be aware of leverage, taxes and fees

Not only do the characteristics of the underlying real estate markets determine the optimal non-domestic allocation, but the choice of how to enter these markets is not a trivial one. Four key factors determine the extent to which an investor should have non-domestic real estate exposure.

1. **Taxation (and its impact on return)**
   In some instances, going global is likely to mean that the returns available to domestic investors are not always available to non-domestic investors where there are punitive tax regimes in non-domestic markets that are less favourable for overseas investors. While vehicles can be structured to minimise the leakage from tax, it is not possible to completely eliminate this drag on return. This is important because as the return on the global portfolio falls, its relative attractiveness falls too. Specialist advice on tax structuring to minimize tax leakage is key for global investors.
2. **Fees (and their impact on return)**
   Accessing unlisted vehicles incurs a cost and this lowers the net return to the investor. Investing in a fund of funds will incur another set of fees for fund selection and management. That said, these costs are offset by the cost savings associated with not having to build an internal real estate investment team (as it does with investing in listed funds).
3. **Currencies (and their impact on risks or returns)**
   Investing in non-domestic real estate adds another layer of volatility in terms of currency risk whereby translating the returns made in a non-domestic market may change when translated into the home currency. Risks can be hedged, to some extent, but that will come with a cost and they can significantly reduce returns.

   Table 2 shows the same analysis as Table 1, but here we adjust for slightly higher fees/costs for managing a global portfolio relative to a domestic one. We also include a tax leakage that reduces returns for the non-domestic portfolio by 0.5 percentage points per annum. Note that different fee levels and tax leakages vary significantly between investors, markets and legislations, and must be investigated on a case-by-case basis. You will note the domestic versus non domestic weighting has now changed to 22% and 78% to maximise risk adjusted returns.
4. **Leverage (and its impact on risk)**
   Real estate investment vehicles may use leverage to some extent, but it tends to increase risk faster than it increases returns. Once leverage is added, the relative attractiveness of a core non-domestic portfolio tends to diminish as risk-adjusted returns are likely to fall.
5. **Implementation and liquidity risk**
   Given that non domestic markets will differ in terms of their transparency (how reliable is performance information? How readily available is fundamental real estate market data? How robust are the governance and regulatory measures in the non-domestic markets?); levels of corruption (is there a sound legal framework supporting ownership and right to income?); ease of doing business in the non-domestic market (bearing in mind the relative cost and complexity of the regulatory process and the strength of legal institutions and protection), etc., the need for local investment expertise should not be underestimated. Without teaming up with a seasoned global operator with significant local presence can adversely impact returns as a result of the pitfalls outlined. Similarly, the level of liquidity in a market can also be key in realizing investment goals. If liquidity in a particular market is relatively limited can an exit be implemented at the end of a defined hold period?

   Following on from the potential shortcomings in some less well developed non-domestic markets, implementation and liquidity risk can be elevated where markets are not as transparent, have higher levels of corruption, are not as easy to do business in, are much smaller than the home market, etc. At abrdn, we have spent a lot of time and effort thinking about and quantifying implementation risk culminating in the development of our GREIR (Global Real Estate Real Estate Implementation Risk) Index as shown below:

Table 2: A practical example of adding non-domestic property to a domestic portfolio

Correlation = 0.6	Domestic %	Global %	Combined %
Gross return	6.0	6.0	6.0
- Management fee/cost	0.5	1.0	0.9
- Tax leakage	0.0	0.5	0.4
= Net return	5.5	4.5	4.7
Std. Dev.	12.0	8.0	8.1
Return/risk	0.46	0.56	0.58
Weight in combined	22.0	78.0	100.0

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Source: abrdn, February 2019.

Table 3: A practical example where the domestic portfolio is unleveraged whilst the global portfolio has 50% leverage

Correlation = 0.6	Domestic %	Global %	Combined %
Gross return	6.0	6.0	6.0
- Management fee/cost	0.5	1.0	0.5
- Tax leakage	0.0	0.5	0
= Net return	5.5	4.5	5.5
Std. Dev.	12.0	16.0	12.0
Return/risk	0.46	0.28	0.46
Weight in combined	98.0	2.0	100.0

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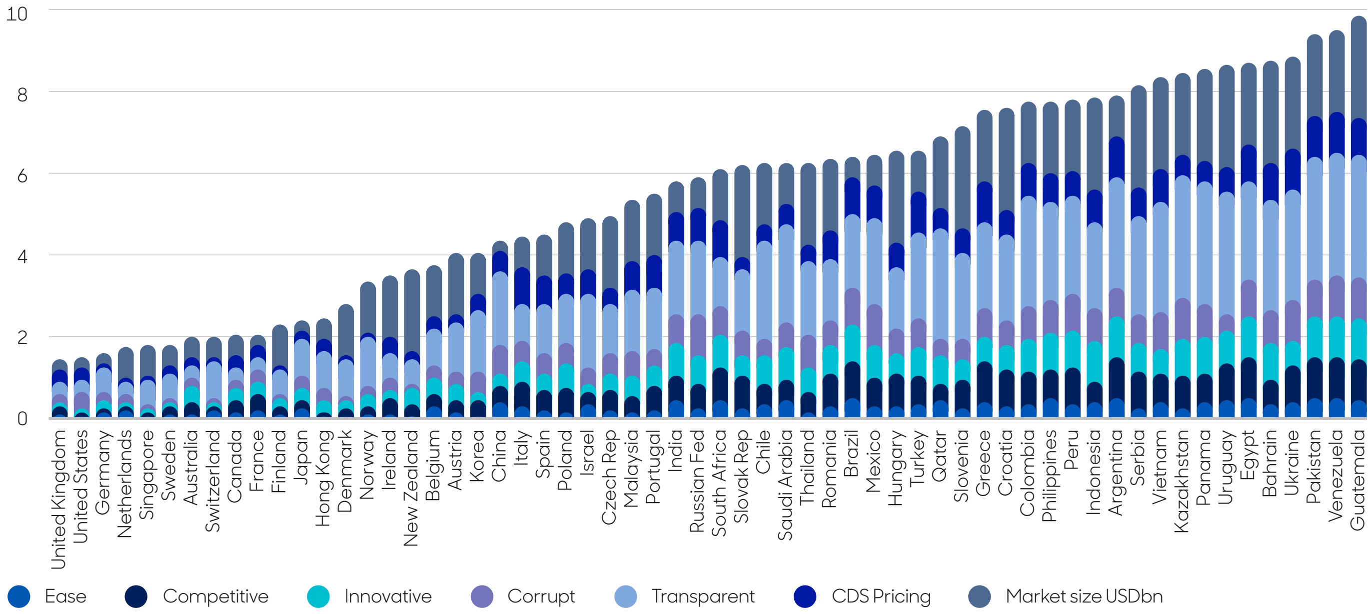
Chart 8: GREIR (Global Real Estate Implementation Risk) Index



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As shown, when deploying capital in global markets, the abrdn GREIR index points to the left hand side of the chart as being the most attractive countries to invest in as there will be least risk to achieving the target returns as a result of higher levels of transparency, better legal and regulatory controls surrounding ownership and also reduced levels of corruption, greater liquidity and so on in these markets. The GREIR index is dynamic and indicates how risk in a market is changing over time based on the underlying factors.

What then does this mean for investors?

- The logic of investing globally is well understood in other asset classes and the logic is no different for real estate – access to higher return opportunities, risk reduction, diversification and access to a broader range of specialist sectors.
- The opportunity set for investing globally has advanced considerably in recent times and now offers a much broader number and sophistication of opportunities and managers.
- A solely domestic portfolio will deny UK investors access to 92% (approximately) of the global universe.
- A domestic focussed portfolio also denies home based investors the scope to diversify their core strategies and limits their ability to take advantage of more value-add strategies in non-domestic markets that offer higher returns as a result of differing regional market cycles.

Our research demonstrates that an investor with a solely domestic portfolio should consider the advantages of an allocation to global markets whilst being cognisant of the need for technical expertise to help with the challenges associated with implementing strategies in unfamiliar jurisdictions.

- Scale is an important factor and will be significant in determining whether a non-domestic allocation is obtained directly, indirectly

  or a combination of the two.

Conclusion

As outlined, there are a range of factors including taxes, fees, currencies, market knowledge, liquidity and implementation risk that make it more challenging for real estate investors to invest internationally. Despite the hurdles, there is a clear advantage as demonstrated for most investors to explore these opportunities as they can improve portfolio performance by increasing absolute returns and/or risk-adjusted returns by diversifying into global markets.

In this paper, we used a theoretical example with realistic assumptions to show what proportion of a real estate portfolio should be allocated to non-domestic real estate, if maximising the risk-adjusted return is the goal. The non-domestic allocation varies from 93% (if no differences in taxes and fees are assumed), to 78% (when adjusting for fees and taxes), and to 2% (if we assume the non-domestic portfolio uses 50% leverage and the domestic allocation is unleveraged).

Important Information

The value of investments and the income from them can go down as well as up and investors may get back less than the amount invested. Real estate is a relatively illiquid asset class, the valuation of which is a matter of opinion. There is no recognised market for real estate and there can be delays in realising the value of real estate assets.

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