August 2016

Real assets, real expertise.

Global ex-UK real estate exposure

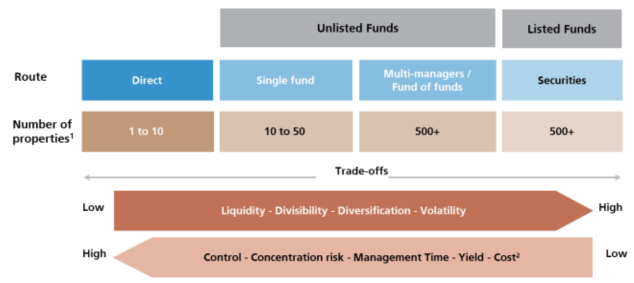
A changing approach

Across most real estate markets, the conventional practice for investors has been: (a) invest in their domestic market; and then (b) consider cross border opportunities. Real estate investment has not been exclusively domestic, but there has been a strong home bias for the majority of investors. Real estate markets differ across the globe and are subject to different risks and local practices. With investor expertise typically focused on domestic markets, this forms a deterrent to those wishing to invest beyond their domestic markets, above and beyond the very real concerns around currency risk, transparency, and tax issues.

The starting point for investment in real estate outside the home market has typically been to demand a risk premium over the returns on offer at home, whether or not this is appropriate. Typically, the requirement of higher returns has driven investors to accept risks that they may not choose to take on locally. These risks were often magnified by the additional layer of volatility introduced through relatively high leverage, not to mention currency and other market-specific risks. Not surprisingly, this frequently lead to poor experiences and underperformance for investors going offshore.

This approach is changing with global real estate investment becoming more accessible, increasingly transparent, and better understood in a multi-asset context. In particular, the ability to select funds across the globe where the managers are specialists in their local markets has offset the asymmetry of information between domestic and non-domestic investors. Investors can now access real estate globally, with broadly the same risk profiles as they adopt locally. Nonetheless, it is not straightforward to implement a global strategy and a great deal of due diligence is required to make the correct decisions along the way.

1. Gaining exposure to equity real estate



Source: UBS Asset Management, Global Real Estate
Note: Investors should consider their own diversification needs when making an investment decision
1 Number of properties is illustrative only, beneficial scale based on degree of diversification
2 Refers to implicit acquisition costs and management fees

Gaining exposure to the asset class via REOCs or REITs can be a low cost alternative to acquire diversified exposure and access expert management without the enormous funds needed for a direct portfolio. Investors also benefit from higher levels of liquidity over the private market route. The downside is that, in the short-to-medium term, shares in real estate companies exhibit volatility similar to the wider stock market, rather than the underlying property assets. The price of liquidity is heightened levels of volatility.

In between direct investment and the public markets lies the unlisted funds route. Unlisted funds may be closed-ended or open-ended. They offer a balance between volatility and liquidity, though not all investors may be eligible to invest in them or find them tax efficient, especially cross border. Nonetheless, they can enable an investor to access unitized real estate vehicles which come in many shapes, sizes, and risk profiles. In this way, investors can choose a single fund with balanced exposure which would tend to track a broad market index, or can concentrate their allocation in specific funds that invest in particular sectors, markets or styles.

For many investors, unlisted funds are an appropriate choice. The largest investors can, with a reasonably small team, select their own funds whereas other groups can pool resources with like-minded investors and mandate a fund-of-fund manager or multi-manager platform with the operation of their real estate exposure. Here, rather than investing directly or indirectly through a single unlisted fund, a portfolio of unlisted funds is selected by a manager and actively positioned. This removes the concentration risk of being exposed to a single fund (or manager) but adds a layer of fees in recognition of the manager's ability (and direct time costs) to select and carry out due diligence on funds which are assessed to offer good risk-adjusted returns for a particular strategy. The additional fee may also be warranted by the diversification and risk reduction produced by the strategy.

As the fund-of-funds approach has grown, individual unlisted funds have derived a higher proportion of their investors from these vehicles. This route may be appropriate for investors without the necessary in-house expertise or those investors that are heavily invested in their domestic market but with little global exposure. Such regional or global strategies that exclude exposure to the domestic market are becoming an increasingly common choice for investors seeking global exposure to add to their existing local direct investments.

Going global – risk profiles

Within the unlisted fund space, investment style can be classified as core, value-added or opportunistic, linked to the underlying characteristics of the fund and properties (Figure 2). While these styles have been defined by various industry associations, such as the European Association for Investors in Non-Listed Real Estate Vehicles (INREV) or the National Council of Real Estate Investment Fiduciaries (NCREIF) in the US, there is no single global definition.

2. Unlisted funds "risk styles"

	Core	Value added	Opportunistic
		Satellite	
Buildings Tenants	Well-let; little development	Some vacancy and development	Significant vacancy and development
Income component of total return	High	Medium	Low
Fund diversification	Diversified	Balanced	Concentrated
Leverage	0 - 40%	40 - 60%	60%+
Risk	Low		High

Source: UBS Asset Management, Global Real Estate

Styles relate to the classification of fund risk. There are effectively three layers to a fund's risk profile: the risk related to the individual assets (specific risk); the geographical and sector diversification within the fund (market risk), and the level of leverage used in the fund. These layers combine to determine a fund's style.

For most institutional investors, core real estate funds are likely to deliver the level of return and diversification benefit which they need. Typically these funds have low leverage and invest in low vacancy, income-producing assets in the traditional sectors[1], benefiting from high quality tenants secured on long leases. In excess of 70% of the fund's total return performance is expected to be delivered through income. This risk style typically has regular liquidity openings though, as with all real estate investments, exit liquidity is a function of the supply of and demand for assets. At the other end of the risk spectrum would be a fund with a sizeable development exposure in a single sector and high levels of leverage. This would commonly be viewed as an opportunistic fund where most of the total return performance is derived at the end of the investment horizon when the asset is sold or the equity released through an equity market listing.

In the middle are value-added funds which may take leasing and refurbishment risk, but typically would not undertake ground-up development, or at least would seek to limit such exposure. Value-added funds typically employ greater leverage and attempt to take advantage of growing demand in the occupier markets to make relatively quick and higher returns, for example, by buying (semi-) vacant assets or properties requiring refurbishment. These funds, like opportunistic funds, are typically closed-ended and offer only limited liquidity via the direct sale to another investor. This is called a "secondary" sale and can involve a discount or premium to net asset value linked to the performance of the fund.

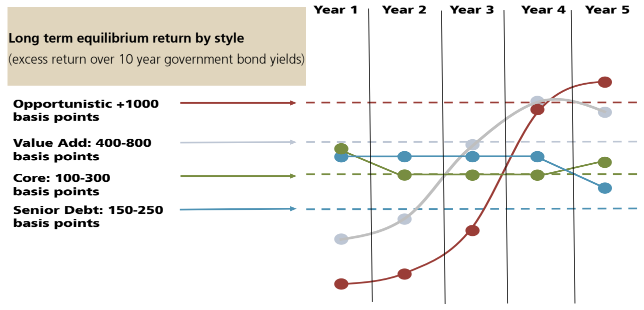
Going global – expected returns

Investors must decide the role of property in their multi-asset portfolio: a stable, dependable ballast of returns versus enhanced returns. This informs the types and level of risk they should tolerate. Typically this should be aligned domestically and abroad. For each style of risk an appropriate level of return is required. We look at this in equilibrium as compared to the long-term cash rate, which over the past 20 years has averaged 4.2% per annum (p.a.) in the UK, 3.3% p.a. in the US, 3.0% p.a. in the eurozone, and 0.5% p.a. in Japan, owing to the varying rates of potential economic growth and inflationary pressures over long investment horizons.

In the long term, each risk style should deliver a return in excess of the cash rate though this is not guaranteed and highly dependent on economic growth, credit conditions, and entry points (Figure 3). For global core real estate investment, in the long term we would expect to see a total return of around 4.0% to 7.0% p.a., a premium of 100-300 basis points (bps) over the long-term cash rate. For value-added opportunities a premium of 500-800 bps p.a. should be expected and a minimum of 1,000 bps would be required for opportunistic development in developed markets. A higher premium may be needed in emerging markets where there are additional market risks.

This dynamic has changed since the 2008 downturn. Since 2009, cash rates have averaged two-thirds less than their pre-2008 levels: 1.3% in the UK and 1.0% in the US and the eurozone, but still 0.5% in Japan. In a historical sense, one should expect returns relative to government bonds in line with Figure 3. But, all else being equal, lower for longer interest rates should have an impact on return expectations, and we would expect a lower range of core real estate investment returns.

3. Incorporating risk in global portfolio strategies



Source: UBS Asset Management, Global Real Estate
Notes: Schematic diagram for illustrative purposes only.

[1] Office and retail, though in some markets this can include residential and industrial.

Going global – the benefits

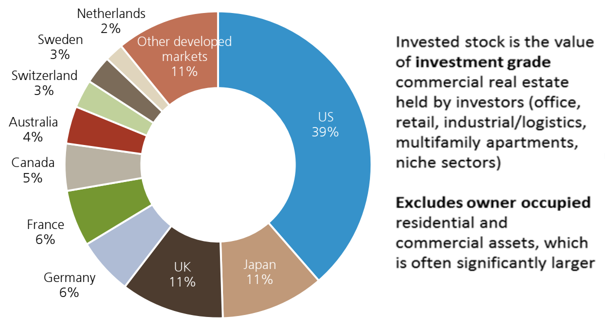
Global real estate investment opens up a set of opportunities at three key levels.

1. Opportunity set

Looking globally can dramatically increase the scale of the potential investable market. This is particularly true for investors from comparatively small real estate markets, such as Canada, Taiwan, and the Netherlands. But even for a relatively large domestic real estate market such as the UK, a global allocation can provide exposure to markets at different stages of maturity or the economic or property market cycle, as well as niche sectors, which might not be as developed in the domestic market.

MSCI Real Estate estimates the size of the UK market at around 11% of the total invested stock in developed economies (Figure 4). If non-core assets and emerging markets are included, the UK represents just 6% of global stock. This places it fourth after the US (30%) and China (20%) but only slightly behind Japan (7.5%) and ahead of France and Germany (around 5% each). Broadening the investment horizon for real estate can open up a wide set of opportunities, even for a relatively large domestic real estate market like the UK.

4. Developed real estate markets by invested stock



Source: IPD Multinational Digest 2015

2. Diversification potential

Beyond widening the opportunity set, global investment can provide powerful diversification benefits (Figure 5). In contrast, the correlations between sectors within a single market are often relatively high. This implies that the diversification benefits within a single market are limited compared to cross-country exposure.

Although it is possible that the relatively low levels of some inter-market correlations are enhanced by the use of domestic valuation indices, the correlations remain relatively low even after adjusting the data. This suggests that global real estate exposure can indeed reduce volatility and boost risk-adjusted returns.

5. Real estate correlations 2003-2015
(annual total returns, unleveraged, local currency)

	UK	Australia	Canada	France	Ireland	Italy	Japan	Netherlands	Spain	US
UK	1.00	0.55	0.41	0.48	0.77	0.29	0.45	0.31	0.58	0.61
Australia		1.00	0.83	0.94	0.79	0.68	0.92	0.83	0.90	0.88
Canada			1.00	0.85	0.50	0.48	0.76	0.62	0.63	0.84
France				1.00	0.63	0.70	0.85	0.88	0.84	0.75
Ireland					1.00	0.36	0.82	0.53	0.81	0.74
Italy						1.00	0.54	0.84	0.70	0.49
Japan							1.00	0.80	0.90	0.78
Netherlands								1.00	0.90	0.57
Spain									1.00	0.76
US										1.00

Source: IPD, NCREIF, UBS Asset Management, Global Real Estate Research & Strategy

Some of the results are surprising, e.g. the UK's relatively low correlation with the Netherlands (0.3). However, as the correlation between the British real estate market and other markets is less than one, there is likely to be a decrease in volatility by combining global ex-UK exposure with a domestic portfolio. This assumes that the foreign exposure has the same level of risk and leverage as the domestic portfolio. For instance, adding high leverage positions may lower overall risk by diversification but the benefits may be eroded by introducing a higher level of volatility. This sums up the historical experience many investors will have had by expanding beyond their domestic markets and taking on risks which have wiped out the benefit of country diversification.

3. Enhancing returns

For investors seeking to enhance returns beyond those available in their domestic market, there is a wide range of possibilities when returns are reviewed in a global context. The range between highest and lowest performers was nearly fifty percentage points at the peak of the financial crisis in 2008 before narrowing as credit markets and global growth stabilised. Over the past 15 years the range has averaged about twenty five percentage points, which suggests there are plenty of opportunities for investors to implement return-enhancing strategies.

While it is not possible to perfectly pick those regional, country, and sector combinations that will outperform in the future, tactical allocations to certain markets and regions can help to maximize the probability of delivering higher returns, particularly after accounting for volatility.

Going global – the challenges

As with any investment, there are risks as well as opportunities in going global. These are enumerated below, as are some partial mitigation strategies.

Currency
This relates to all asset classes when investment is made non-domestically, outside a currency zone, or outside a fixed exchange rate regime. Achieving a pure real estate return is more complicated when capital raised in one currency is invested in markets denominated in another.

There are numerous mitigation strategies. Borrowing in local currency is a partial hedge, while long-term direct investors have flexibility in their exit timing. Formal hedging is also feasible, and is most likely for a fund-of-funds approach. In real estate, the tendency to hedge appears greater than for equities, but less than for bonds. This relates to the proportion of total risk that is attributable to currency risk, which for real estate is relatively high given its longer holding period and limited liquidity.

Any international investment must consider currency risk, and the cost of managing that risk, explicitly. High expected returns in the foreign market may be eroded by adverse exchange rate movements. The cost of hedging this currency risk drives a wedge between the gross and net return to the investors over and above the transaction fees, management fees, and taxes.

Tax leakage
It is important to look at returns delivered net of tax when thinking about allocating globally to real estate. Some countries will have less onerous taxation than others, while others employ punitive taxes directed at foreign investors. So, while overall tax leakage of some kind will be experienced, the selection of particular styles of investment (income vs. capital growth), sectors, or countries may help to lessen any potential leakages. In addition, investment vehicle structuring can be used to mitigate tax leakage, though this should be done with the appropriate detailed tax advice.

Valuation / appraisal
Valuation and appraisal processes vary significantly across the globe and can have a major impact on the accuracy of a fund's published net asset value (NAV). While the goal of appraisers across the globe may be similar, some major differences exist depending upon the valuation regime, especially in domestically-dominated markets with few transactions. It is important to understand how different valuation practices can impact performance and liquidity. Notably, international standard valuations are increasingly available in many jurisdictions. Those carried out in accord with Royal Institute of Chartered Surveyors (RICS) standards are dubbed "Red Book Valuations".

Benchmarking performance
Benchmarking performance in some markets has a long history (particularly in the US, UK, and Australia), but there are still issues with regional and global real estate indices. Most of the benchmark indices rely on valuations to estimate capital growth. However, differences in valuation procedures may mean that indices are not comparable across countries.

Furthermore, there are compatibility problems that relate to differences in terminology, ownership, lease contract terms, and taxation. Such differences need to be accounted for in order to make a direct comparison of returns meaningful. Even in those markets where there is a long history of benchmarking, underlying fund performance can diverge significantly from the benchmark because of the lumpiness or specific risk associated with individual assets. This tracking error can be an additional risk factor for investors.

To an extent, the challenges are being met by the growth and development of the asset class. Gradual improvement is being driven by MSCI Real Estate (previously IPD), its partners and alliances with other national benchmark providers, and by NCREIF in the US. The IPD Global Annual Property Index measures the combined performance of real estate in the 25 most mature markets world-wide. Fund-level benchmarking (performance after management fees, running costs and leverage) is also more common, e.g. MSCI's Pan-European Property Funds Index (pEPFI) which tracks the performance of pan-European open-ended funds. At the global level, two fund indices have been developed independently by, on the one hand, the Asian Association for Investors in Non-listed Real Estate Vehicles (ANREV), INREV and NCREIF (the Global Real Estate Fund Index, GREFI) and MSCI on the other (the IPD Global Quarterly Property Fund Index).

Despite the infancy of these regional and global benchmarks, investors need to measure performance in some manner. It is important to pick a benchmark suitable for the investor's risk tolerance and investment goals. Some other commonly used indicators for benchmarking include cash-on-cash returns and internal rates of return. These returns are typically benchmarked against cash plus inflation or a risk-free rate.

Country strategies in the next cycle

The UK real estate market suffered significant capital value declines in the wake of the 2008 crisis. However, by the end of 2015 commercial real estate values had recovered nearly all of their lost ground. Moreover, in an international context the UK market has performed well, with values showing a stronger recovery than that of other European markets, and being significantly outpaced only by Canada (Figure 6).

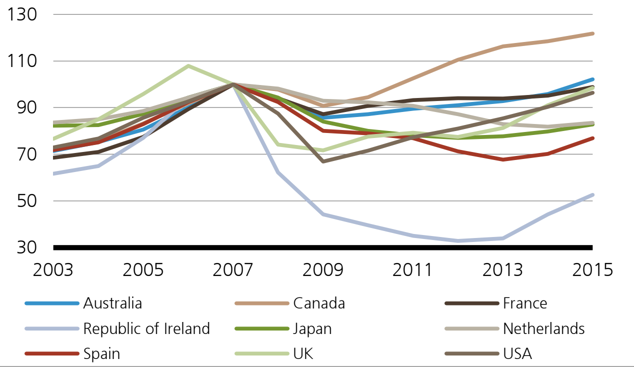
Long-term interest rates have been ultra-low, with the UK's policy rate on hold at 0.5% since 2009. This has made the relative pricing of real estate attractive, generating significant investor interest. However, performance has differed across the UK, with London offices attracting abundant foreign capital and showing bigger rises in values. By contrast, regional markets and secondary grade property, particularly retail, have yet to experience a full recovery.

Significant uncertainty abounds and monetary policy looks set to diverge globally. The US is likely to continue its cautious policy tightening, while the other major central banks look set to ease. In the UK, Brexit will lead to stimulus by the Bank of England, while the ECB will probably extend its QE asset purchase program beyond March 2017.

The outcomes for property markets around the world will vary. In general, property offers investors an income return in the range of 4.5% to 7.0%. This has been remarkably stable over time, which is a boon to pension funds. Income performance will be a differentiator, with varying economic results filtering through to occupier demand for real estate and rental growth. Since the financial crisis there has been a significant difference in returns between markets (Figure 7). The ability to balance these differences going forward and take tactical tilts will benefit relative performance, as opposed to being limited to a single country's prospects.

6. Country strategies matter

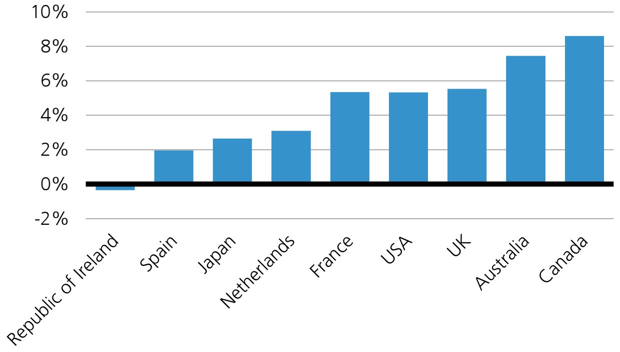
(capital values, all property, unleveraged, local currency, Dec07=100)



Note: Japan's 2015 result is based on the year-to-November monthly indices
Sources: IPD, NCREIF, UBS Asset Management, Global Real Estate Research & Strategy, as at July 2016

7. Huge variation in returns

(total returns, all property, 2008-15, % p.a.)



Sources: MSCI, UBS Asset Management, Global Real Estate Research & Strategy, as at July 2016

UK economic and real estate outlook

The UK's vote to leave the EU in the referendum on June 23 means that the economy is set for a period of extended uncertainty. In the run-up to the vote, despite some uncertainty-induced slowing, the economy was in good shape and unemployment had fallen to around 5%. However, the "leave" vote is expected to see growth slow in the near term as businesses stall decision-making, hold back from investment, and place hiring on hold. Indeed, a bad outturn could even see a recession. The process of leaving the EU is likely to be long winded and the longer term impact will depend on what type of deal the UK negotiates with the EU and how long it takes to do this.

The impact on real estate will take longer to emerge than for more liquid asset classes. We expect subdued investment and occupational demand as decisions are delayed. However, in contrast to 2007, the UK real estate sector is not highly leveraged and we do not expect any collapse in investor or occupational markets. Cash-flows will be supported and we do not expect to see a large volume of forced sales, which would potentially lead to a very severe correction in pricing.

Heightened uncertainty is expected to lead to a slowdown in occupier activity as companies delay decisions until the outlook is clearer. Against this backdrop we think that rents will be flat in 2017 at best, but may fall up to 5%. The absence of new demand may place pressure on some landlords to reduce rental levels to try and stimulate new demand, and it is likely tenants will also attempt to negotiate rental discounts at lease breaks/events to take advantage of what are likely to be challenging market conditions. Central London is likely to experience the most severe short-term impact due to the vast number of international firms which are based in the City. While we would expect some of the large corporates to reconsider their European strategy in light of the exit vote, which could result in the transfer of some specific functions to alternative locations within the EU, we are not expecting any kind of mass exodus from London.
On the investment side of the market short- and long-term

interest rates look set to fall, improving the relative pricing of real estate. However, increased risk and uncertainty is likely to push UK property risk premia higher. Overall, we think that yields will be broadly flat in 2017 and 2018, though a sharper downturn in the economy or recession would precipitate a sharper upwards move in risk premiums and property yields. As such we think that values will show a modest decline, but could drop by up to 10% under an adverse scenario.

With prospects for the UK economy and property market so uncertain, diversification overseas is an attractive option for UK-based investors at the current juncture. Although the entry point will be more expensive following sterling sinking to 30 year lows against the dollar, diversification can help in terms of risk management. Moreover, any further weakening of sterling in the future would flatter sterling returns when monies are repatriated.

A global ex-UK allocation to real estate

If investors are already committed to global bond and equity portfolios, what would be a suitable allocation to global real estate? There are many ways to tackle this question; here we look at just two.

The first way is relatively straightforward. Given that 70% of core real estate's performance is generated through relatively stable income returns (similar to high grade corporate bonds and sovereign government debt) and 30% via capital growth linked to the balance between demand and supply of real estate (equity-like characteristics) we can make a simple comparison to investors' behavior when looking at bond and equity markets. If we consider that real estate's potential return and risk lies between bonds and equities then a 70%-30% split between bond- and equity-like characteristics would be a possible starting point for the proportion of a real estate portfolio invested outside of the UK.

According to the Investment Association Annual Survey, the allocation of UK pension funds to non-domestic equities is circa 27% versus 6% for bonds. Given the characteristics laid out in the previous paragraph, this suggests an allocation of roughly 12.5% of a real estate portfolio to outside of the UK.

However, this is very simplistic and does not take into account the specific needs of each British investor. To add a little more flavor to the answer, two other factors should be introduced:

- The correlation between real estate markets is lower compared to the correlation between equity and bond markets, which are often driven by global growth and monetary settings over local market conditions. That is, the power of international diversification within real estate is greater than that within equities and bonds; the global portfolio of real estate has proportionately lower risk when compared to local real estate than is the case for equities. This would bias upwards our starting point for a global ex-UK allocation.
- The returns that are available to domestic investors in a market are not necessarily those that would be experienced by a British investor. Critically, returns will be delivered net of tax and so it is important that any decision to invest outside of the UK into global real estate looks at a net of tax position. This is likely to bias downwards our starting point for an ex-UK allocation.

The second way of looking at this question is to consider the potential long-term risks and returns of British and global ex-UK real estate investment. We have a series of equilibrium assumptions which we assume will hold in the long term. Based on these assumptions we can run various allocation strategies through our proprietary model and optimize the expected outcome in terms of return per unit of risk. However, this is purely a theoretical exercise and we need to be cognizant of where pension funds are starting from. In particular we need to acknowledge the natural home-bias of property investors.

There is no definitively right answer. Furthermore, we must acknowledge that currency and uncertainty make the present a challenging time to consider ex-UK investment in an illiquid asset class. Nevertheless, our modelling shows beneficial risk-adjusted return enhancements to a property portfolio by adding various increments of foreign property, while maintaining risk (i.e. leverage) levels the same as would be undertaken at home. The exact percentage is the result of many different factors related to the individual investor, and strategies should be individually tailored in each case.

Real Estate Research & Strategy

Paul Guest, Lead Real Estate Strategist
Fergus Hicks, Real Estate Market Strategist

For more information please contact

UBS Asset Management
Global Real Estate Research
21 Lombard Street, London, EC3V 9AH
Tel. +44 (0)20 7901 5302
paul.guest@ubs.com

www.ubs.com/realestate

This publication is not to be construed as a solicitation of an offer to buy or sell any securities or other financial instruments relating to UBS AG or its affiliates in Switzerland, the United States or any other jurisdiction. UBS specifically prohibits the redistribution or reproduction of this material in whole or in part without the prior written permission of UBS and UBS accepts no liability whatsoever for the actions of third parties in this respect. The information and opinions contained in this document have been compiled or arrived at based upon information obtained from sources believed to be reliable and in good faith but no responsibility is accepted for any errors or omissions. All such information and opinions are subject to change without notice. Please note that past performance is not a guide to the future. With investment in real estate (via direct investment, closed- or open-end funds) the underlying assets are illiquid, and valuation is a matter of judgment by a valuer. The value of investments and the income from them may go down as well as up and investors may not get back the original amount invested. Any market or investment views expressed are not intended to be investment research. **The document has not been prepared in line with the requirements of any jurisdiction designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.** The information contained in this document does not constitute a distribution, nor should it be considered a recommendation to purchase or sell any particular security or fund. A number of the comments in this document are considered forward-looking statements. Actual future results, however, may vary materially. The opinions expressed are a reflection of UBS Asset Management's best judgment at the time this document is compiled and any obligation to update or alter forward-looking statements as a result of new information, future events, or otherwise is disclaimed. Furthermore, these views are not intended to predict or guarantee the future performance of any individual security, asset class, markets generally, nor are they intended to predict the future performance of any UBS Asset Management account, portfolio or fund. Source for all data/charts, if not stated otherwise: UBS Asset Management, Global Real Estate. The views expressed are as of February 2016 and are a general guide to the views of UBS Asset Management, Global Real Estate. All information as at February, 2016 unless stated otherwise. Published August 2016. **Approved for global use.**

© UBS 2016 The key symbol and UBS are among the registered and unregistered trademarks of UBS. Other marks may be trademarks of their respective owners. All rights reserved.

UBS