STYLE INVESTING FOR REAL ESTATE : AN INTRODUCTION

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Real Estate for a changing world

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FOREWORD

One of the motives that led us to research the application of style (or factor)[1] investing to the real estate sector descends from our desire to describe real estate investment to investment generalist or specialists of other asset classes. It is well known that direct real estate investments is more illiquid than other major asset classes such as bonds and equity. Moreover, real estate jargon is very technical.

The combination of these dynamics has resulted in some investors believing that real estate is fundamentally different from other major asset classes. However, all asset classes can actually be explained in terms of risk and performance. This is exactly what we like about style investing, as we can use it as a tool to create a link between the 'classical' asset management and the real estate worlds.

Style investing in the stock market has been studied since the 1970s. Nowadays, this approach has become very popular and is increasingly gaining media exposure. Why? Because style investing methodology is intuitive, albeit rigorous and data-driven, and can be applied to the reality of day-to-day investment. In short, the beauty of this methodology is that it creates the link between behavioural finance and quantitative analysis. Through the adoption of style investing, investors can spell out their preferences in terms of risk and reward while the manager, on the other side, can create tailor-made solutions that cater to their precise needs. In short, style investing brings a quantitative discipline element to the choices active managers make.

While most of the research on the subject has been performed for the stock market, styles seem to be relevant for other asset classes such as bond, currencies and commodities. As a result, there is no real reason why we should not be able to apply the methodology to real estate investment. The features of the stock and the private real estate market are not easily comparable but the principles that regulate performance and risk are nonetheless universal. Specifically, the challenge is to adapt these principles to the specificities of real estate.

Real estate portfolio allocation theory has not significantly evolved over the last two decades. Optimisation-based allocation models have shown limits, partly as a result of data availability and quality issues. Even nowadays, although a lot of data is now available, these methodologies are still opaque in nature and ineffective to some extent.

Style investing is a powerful tool for successfully advising investors. Our ultimate aim is to provide our investors with cutting-edge, tailor-made investment strategies at a reasonable cost.

In this primer report, we provide an overview of style investing as a framework that incorporates factor-exposure decision-making into the construction process of a real estate portfolio. The following paper will look into the practical implications of this methodology.

1- We will use the two terms interchangeably in this paper.

EXECUTIVE SUMMARY

- At its heart, the idea behind style investing is not to impose to investors what is best in theory but to provide them with the information that they need to choose what is right for themselves. This style-based approach stresses the central role of the investor and it enables the manager to create 'tailor-made' solutions that cater to the specificities of each investor or, more broadly, investor type
- The allocation process is not explained in terms of markets or sectors but rather in the form of style factors, which are related to specific performance and risk metrics. The execution of a strategy based on the explicit use and combination of style factors adds another layer of robustness to investment analysis, by making the process of portfolio allocation more transparent, quantitative and rigorous
- Our analysis has highlighted six style factors that are relevant for real estate investment. These style factors are: growth, yield, low volatility, liquidity, quality and value. Each of these factors is characterised by a specific investment rationale. We have scored more than 140 European market-sectors for each of the six style factors. The variables retained can be of different types, including a) real estate-based and b) other indicators related to demographics, economics and other relevant indicators
- The analysis is performed by using both historic data and forecasts. Publicly available and external providers' data are supplemented by our extensive databank and in-house proprietary forecasts. Our forecasts provide both 5 and 10 years estimates for rental growth, yield shift and total returns for all the markets we analyse. We look at all sectors, namely offices, retail (high street, shopping centres and retail warehouses), industrial, residential and alternative real estate
- Our methodology is aimed at ranking all markets according to each of the six factors. This ranking is then used to facilitate the task of portfolio allocation according to investor preferences in terms of risk and performance. The choice of specific investment criteria increases the chance of maximising returns and mitigating risk
- The diversification rationale of portfolio theory can be also applied to style investing. Rankings generated by factor analysis tend to be largely uncorrelated. As a result, different investors or investor types have a high chance to come up with different portfolio allocations. Improved portfolio diversification is one of the key reasons for adopting style-based strategies
- Style-based investing is an effective hybrid between passive and active strategies. However, while we are quite favourable about style investing, we should nonetheless reiterate that manager skills explain a large part of the performance and the choice of a capable and experienced manager remains fundamental

THE BACKGROUND

Style investing is an analytical framework that incorporates factor-exposure allocations into the process of constructing an investor portfolio. Specifically, it provides the investor with the prerogative to select the markets that are more likely to approximate the exposures to specific objectives. The logical structure of style investing is transparent, therefore the investor can control its performance and risk exposures.

Even in a less refined fashion, examples of style investing are countless in the stock market. For example, value investing as a way to exploit attractive absolute or relative valuations has been investigated in the mid-1930s. Indices designed to target specific factors resulted in performances and risks that were different from those of the market.

Academic and practitioner research on style investing is extensive in the stock market. The evidence for other asset classes is not so overwhelming but is growing and, overall, there is a consensus on the existence of a link between performance and factor exposures across assets classes. Recognising factors and what drives them enables investors to transfer the emphasis of allocation decisions from market to factor exposures. Moreover, this shift has an important impact on performance. In a few instances, different market allocations result in very small differences and produce relatively tight return dispersions. For example, a fund targeting the euro zone might carry very similar results to another fund targeting the whole of Europe. On the other hand, factor definitions can be quite diverse and may result into relatively large return dispersions across different factors.

Investment strategies can be usually defined as active and passive. Active management generally focuses on outperforming a specific market benchmark, while passive management wishes to simulate the performance of a specific index. A passive strategy will try to replicate market performance by the creation of a portfolio that approximates the cap-weighted allocations of the market. In the real estate world, this is clearly difficult to replicate given the difficulty to estimate the real size of the market. Moreover, even assuming that a sort of market portfolio (global or European) can be created, the size of this vehicle would be enormous[2].

In reality, large real estate funds try to create a proxy of the market, by assigning larger allocations to the deepest and/or most liquid countries and sectors and allocating smaller portions, if any at all, to the thinnest and/or least liquid countries and sectors. This approach aims at mitigating idiosyncratic risk but can be quite deceptive as it tends to underestimate the dynamic features of the market. Moreover, the same sectors and market that are overwhelmingly targeted by investors, are prone to overcrowding and trade at artificially inflated prices, thereby exposing investors to the risk of seriously damaging performance in the long term.

At the other side of the available strategies range we have pure alpha-seeking investing, i.e. the search of high-performance via riskier strategies and active stock-picking. Active management of this sort is a zero-sum game, as if a manager produces positive alpha, another manager must produce negative alpha. Consistently attaining alpha over time is a daring task. However, it is worth trying. Due to the power of compounding just a 1% in return difference over a long period of time can make a huge difference for investors. Indeed, it is no surprise that in the US active management accounts for more than 75% of open-ended funds[3]. Real estate does not make exception as a large part of performance is explained by stock picking.

While style-based investing is to some extent a hybrid between passive-type and active-type allocations, it features specific characteristics that define its own identity. Indeed, this strategy targets specific singularities of assets that are called style factors, which provide us with a framework to contextualise returns and risk from an investment. How factors are constructed will be explained in detail in the following paragraph.

Exhibit 1 summarises the strategies described above and their application to real estate.

Exhibit 1: Strategies spectrum

ALLOCATION	ACTIVE /PASSIVE	CONTROL POINT	OBJECTIVE	EXAMPLES - REAL ESTATE
Market-size weighting allocation	P	Macro (none)	Reproducing a cap-weighted market	Hard to implement – needs huge size and flexibility
'Custom' allocation	A/P	Sector/Market	Approximating the market by focusing on the deepest/most liquid sector/markets	A large number of real estate funds
Style/factor allocation	A	Factors	Rewarding the driving factors of performance and risk	A fund explicitly targeting high returns and/or low volatility
Alpha-seeking allocation	A	Asset	Exclusively concentrating on asset-picking	Opportunistic strategies aimed at exploiting specific asset features

2- MSCI has just published a paper saying that to replicate just one market's performance, an investor would need to own 5 to 6 buildings in that market. That is because the performance of individual buildings varies so much. On this basis, it would be very difficult to create, say, a European fully-diversified portfolio, based on a country's specific market capitalisation.

3- Source: Morningstar. This statistics is about all assets and excludes money market and fund of funds.

THE STYLE FACTORS: METHODOLOGY

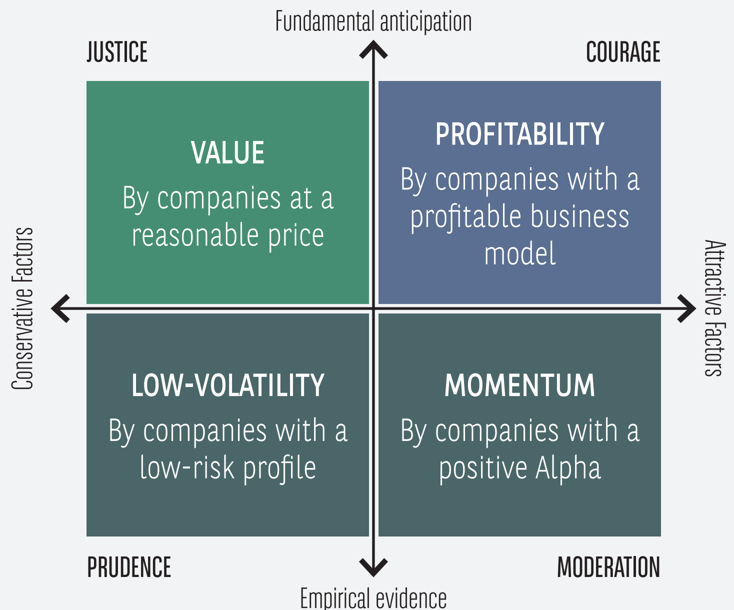
At its heart, the idea behind style investing is not to impose to investors what is best in theory but to provide them with the information that they need to choose what is right for themselves.

The style-based approach focuses on the fundamental role of the investor and it enables the manager to create 'tailor-made' solutions that cater to the individuality of an investor or investor type. The dialogue between investors and managers therefore allows careful evaluation and choice of the combination of style factors that approximate the long-run targets of the former. The major difference is that, within this context, the allocation process is not illustrated in terms of markets or sectors. Indeed, these targets are usually best described by a time-varying combination of some specific performance and risk metrics.

There is no conclusive list of style factors. MSCI describes factors across three main categories: macroeconomic, statistical, and fundamental. Arguably, the mostly largely used factors are of the fundamental type[4].

A fascinating metaphor to present style factors is to relate quantitative management to findings of behavioural finance in exploiting market imperfections, or diverging points of view between different market participants. A visual and self-explanatory way to describe this link is shown in Exhibit 2 where four style factors in the stock market are related to the four cardinal virtues acknowledged by Plato in his writings[5].

Exhibit 2: Plato's cardinal virtues applied to investment



It is important to highlight that the same style factors that work for the stock market might not work for real estate. In other instances, the same style factors will need to be redefined to reflect the specific features of real estate as an asset class.

Some sort of factor-driven allocation is already implicit in some strategies. For example, when an investor favours markets that are expected to convey higher rental growth over the next 5 years, he is already taking a decision based on some sort of 'growth' factor. When portfolio allocations privilege gateway cities such as London, Paris and Frankfurt, there is an emphasis on some sort of 'liquidity' factor. However, the execution of a strategy based on the explicit use and combination of style factors adds another layer of robustness to investment analysis, by making the process of portfolio allocation more transparent, quantitative and rigorous.

Investors who are familiar with the stock market can easily relate to style factors. However, our approach is partially different. For example, while investing in stock allows the investor to trade on a daily basis, real estate is generally held for longer periods. As a result, some style factors such as short-term momentum are not relevant to our purpose.

After undertaking some in-depth analysis, we have come up with a list of what we reckon are the most important style factors in real estate investment. These are graphically shown in Exhibit 3:

Exhibit 3: Style factors for real estate

4- See MSCI "Foundations of factor investing", 2013. Macroeconomic factors include measures such as surprises in inflation, surprises in GDP, surprises in the yield curve, and other macro indicators. Statistical factor models identify factors using statistical techniques such as principal components analysis, where the factors are not pre-specified in advance.

5- Source: BNP Paribas Asset Management.

Essentially, each of these style factors describes the ability to obtain some exposure to a specific combination of risk and return. Exhibit 4 describes what each of the chosen style factors is about and provides a detailed explanation of the rationale behind the choice[6].

Exhibit 4: Selected investment factors

FACTOR	DESCRIPTION	RATIONALE
Growth	Maximisation of medium-term expected total returns	Markets featuring strong demand-supply fundamentals tend to show relatively stronger rental growth and higher yield resilience in the medium run
Yield	Maximisation of cash-flow levels	Higher yield markets might support performance in late-cycle markets
Low volatility	Minimisation of volatility risk	Relatively stable markets have higher chances to deliver higher risk-adjusted returns, especially in less favourable phases of the cycle. They can also act as diversifiers
Quality	Maximisation of long-term, sustainable returns	Sustainable, high-efficient and high-productive markets have higher chances to out-perform in the long run
Liquidity	Maximisation of the ability to sell in a relatively orderly and timely fashion	Larger, deeper and liquid markets make the process of disposal quicker and less costly and tend to do well in up-cycles
Value	Maximisation of the chance of capturing mispricing and/or income upside in the short-term	Under-rented, fast-growing markets tend to do well in the short-to-medium run. These markets are particularly suited for value-added strategies

The strength of each style factor is measured for each and every market-sector we already invest or we aim to invest in Europe for a total in excess of 140 market-sectors[7]. This exercise is performed by creating scores for a number of several variables and aggregating them to produce a unique score for each specific factor we measure. The variables adopted can be of different types. They include both real estate indicators and other variables related to demography, economics and other relevant factors. The analysis is performed by using both historic data and forecasts. Publicly available and external providers' data are supplemented by our extensive databank and in-house proprietary forecasts. Our forecasts provide both 5 and 10 years estimates for rental growth, yield shift and total returns for all the markets we analyse. We look at all sectors, namely offices, retail (high street, shopping centres and retail warehouses), industrial, residential and alternative real estate[8].

Different investment styles are expected to show diverse reactions to the exposure to each of these style factors. Exhibit 5 tries to describe sensitivities to different style factor strategies.

Exhibit 5: Factor sensitivities

	GROWTH	YIELD	LOW VOLATILITY	QUALITY	LIQUIDITY	VALUE
Core	High	Medium	Medium	High	Medium	Low
Core+	High	High	Medium	High	Medium	Medium
Value-added	Medium	Low	Low	Low	High	High
Opportunistic	Medium	Low	Low	NA	High	High

6- For a detailed description of the methodology please contact the authors.

7- Market-sectors combine the two parameters of geography and function. Examples include Berlin offices, Milan high street, Lyon logistics, etc.

8- Specifically, at local level we look at: around 45 office markets, 30 high street markets, 35 logistics markets. At national level, we have 10 markets each for shopping centres, retail warehouses and residential respectively. Finally, we analyse a few hotel, healthcare and senior housing markets.

As a real estate manager aiming at creating value for our investor, we are particularly interested in understanding which market and sectors we should concentrate on, to maximise the chances of success. We have therefore developed a formal, in-house, methodology aimed at ranking markets and facilitate the task of selecting the markets we should prioritise according to the preferred combination of factors. The choice of relatively precise investment criteria increases the chance of maximising returns and mitigating risk.

As already explained, our methodology allows us to rank each of our market-sectors for each of the six factors. The scores range between 1 (least positive) to 10 (most positive). An example of the typical output for a limited number of European office markets is displayed in Exhibit 6[9].

Exhibit 6: Example of market scoring – office market only

	GROWTH	YIELD	LOW VOLATILITY	LIQUIDITY	VALUE	QUALITY
Vienna	4	5	10	6	6	8
La Défense	3	6	2	6	9	7
Berlin	10	1	5	9	10	10
Rotterdam	7	9	10	4	7	4
City of London	3	6	2	10	2	8

These results clearly show that each market has relative points of strength and weakness. For example, Berlin scores quite well on most indicators except yield, which is not a surprise as this market features the lowest office yields in Europe. On the other hand, the City of London does quite well on liquidity (again, this is one of the most liquid markets in the world) and quality but not so well on growth and volatility. It is important to highlight that these scores are not absolute numbers but indicators of relative strength. In other words, the scores only display the position of a market relative to the other ones, in terms of a specific factor and at a specific point in time. Factors and scores are indeed revised every six months as relativities are expected to change.

However, the speed of change in these relativities is clearly not comparable to the equivalent in the more volatile stock market. Finally, some factors relativities move quicker than others.

The diversification rationale of portfolio theory can be also applied to style factors. As a result, when constructing a portfolio it proves to be useful to combine style factors that are relatively uncorrelated. Exhibit 7 shows that the ranking of the different markets for each of these six style factors are quite different.

	GROWTH	YIELD	LOW VOLATILITY	QUALITY	LIQUIDITY	VALUE
Growth	1,0					
Yield	0,4	1,0				
Low volatility	0,2	0,2	1,0			
Liquidity	-0,3	-0,6	-0,1	1,0		
Value	0,0	-0,2	-0,4	0,0	1,0	
Quality	0,5	-0,3	-0,0	0,3	0,1	1,0

9- The reader will forgive us for not showing the entireness of the results, as this is proprietary research. Our investors, however, have a much exposure to both analysis and results.

As a result, different investors or investor types have a high chance to come up with different portfolio allocations. Exhibit 8 shows the best market selection for two different portfolios based on a combination of different style factors. The only common market to the two strategies is Copenhagen, while the others are different. Improved portfolio diversification is one of the key reasons for adopting style-driven strategies.

Style-based investing is an effective hybrid between "classical" passive and active strategies. It has characteristics that are similar to passive strategies such as transparency. However, as active strategies, it has an active return. In the traditional CAPM model, assets have only two main drivers: systematic risk (β) and idiosyncratic risk (α)[10]. Modern theories such as style investing attribute part of the asset performance to factors, i.e. the characteristics related to the asset that explain a large part of its performance and risk. While we are favourable about style investing, manager skills explain a large part of the performance and the choice of a capable and experienced manager remains fundamental.

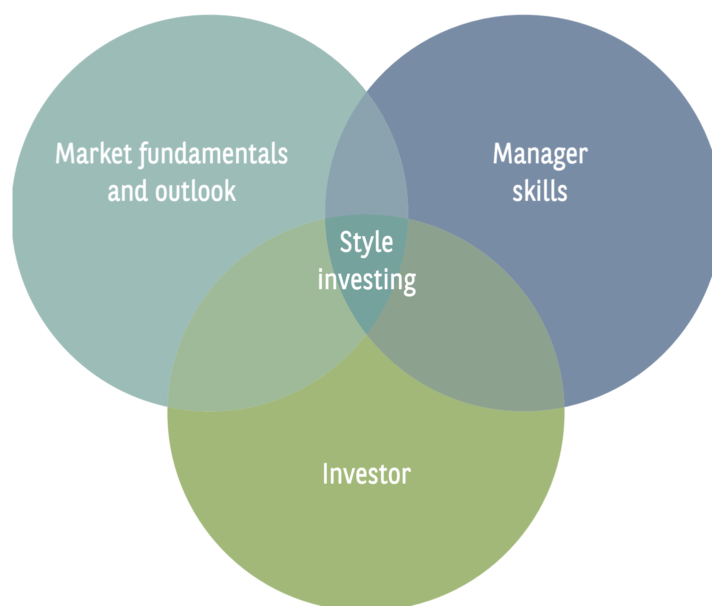
The evolution of portfolio theory according to style investing is shown in Exhibit 9.

While some existing strategies already offer 'implicit' single-style exposure, e.g. funds invested only in large, very liquid countries (e.g. France and Germany), multi-style strategies can effectively match better investor preferences and increase the chance of outperforming the market in a sustainable form. This will be the subject of our next research paper on this matter.

Exhibit 8: Comparison of two hypothetic portfolios targeting a different combination of style factors – office market only

50% GROWTH / 50% LIQUIDITY	50% YIELD / 50% LOW VOLATILITY
Copenhagen	Brussels
Helsinki	Copenhagen
La Défense	Lille
Berlin	Lyon
Dusseldorf	Marseille
Frankfurt	Rome
Hamburg	Rotterdam
Munich	Lisbon
Amsterdam	Birmingham
Stockholm	Glasgow

Exhibit 9: Explaining portfolio performance



10- Systematic risk (β) arises from exposure to the market and is captured by the sensitivity of an asset's return to the market. Since systematic risk cannot be diversified away, investors are compensated with returns for bearing this risk. Idiosyncratic risk (α) is used as a measure of performance, indicating when a strategy or portfolio manager has achieved to beat the market return. This may be positive or negative and is the result of active investing. The reader will forgive us for not showing the entireness of the results, as this is proprietary research. Our investors, however, have a much exposure to both analysis and results.