

# EUROPEAN COMMERCIAL PROPERTY FOCUS

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## Forecasting European Commercial Property - Our Approach

- **For clients of our new European Commercial Property service, this note provides a guide to our philosophy and forecast methodology. In short, our approach to analysing and forecasting commercial property is top-down.** It is an approach that has served us well in forecasting UK commercial property returns and one that reflects our expertise as macro-economists.
- **In essence, we believe that commercial property yield shifts can be anticipated by analysing the yield on property relative to other assets such as bonds or equities.** In addition, the outlook for shorter term finance rates and inflation expectations will also influence investor demand and thus yields, as will a market's size and liquidity, as well as local tax and legal considerations.
- **Data covering almost 90 years suggests that, in the UK, a reasonable starting point is to assume that on average commercial property yields should be 150 basis points above 10-year bond yields. In the rest of Europe, the limited data available to us suggest that the property bond yield spreads should be higher, perhaps 50 basis points. In other words, property might need to deliver a spread of 200 basis points over bonds.**
- One explanation for higher yield spreads in Europe over the past decade could be cyclical. The property boom took-off later in Europe than in the UK. But, on the other hand, higher spreads would also be consistent with the fact that European property markets, on the whole, remain smaller and less liquid than the UK. We have settled on the higher figures as our benchmark yield spread.
- **Turning to occupier markets, our experience in the UK shows that fluctuations in macro-economic variables such as consumer spending, employment and GDP can be a good guide to the demand for commercial space.** Combining our macro economic forecasts with data on the commercial property development cycle allows us to draw conclusions about the outlook for rental value growth.
- **Unless otherwise stated, our main forecasts will all be presented in local currency terms, since these will most closely reflect local macro-economic conditions.** However, we will also present our forecasts for all markets in Euro, US dollar and UK pounds sterling terms.
- This is not our final word on forecasting methodology. Over time we expect to improve and refine our approach and assumptions. **Moreover, we are well aware that, as in any form of forecasting, the slavish application of simple, stylised models will not generate satisfactory results. So, while the framework and principles summarised above inform our thinking, our forecasts also rely heavily on judgement – arguably a forecaster's most valuable tool.**

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## Forecasting European Commercial Property - Our Approach

This *Focus* is intended as a reference guide for clients of our new European Commercial Property Service. It outlines our philosophy and approach to forecasting property markets. It also sets out the key assumptions that influence our forecasts.

As far as possible, our methodology for Europe replicates our approach to forecasting commercial property in the UK. That approach reflects our expertise as macro-economists and is, therefore, predominantly top-down. This approach has served us well in the UK.

In essence, we believe that property returns are determined by the interaction between four factors. First, there are the drivers of occupier demand, such as the rate of economic growth and employment in the various sectors. Of course, occupier demand interacts with our second factor, the availability of commercial property which, in turn, is directly related to the property development cycle. Together, these two factors determine changes in rental values and thus income returns.

Third, we believe that changes in commercial property yields can be anticipated by forecasting the yield on alternative assets such as bonds or, perhaps, equities. These forecasts can then be combined with a view on the likely spread between property yields and the yields on other assets. Shorter-term finance rates and inflation expectations are also of relevance here as both will affect the level of investor demand.

Finally, commercial property yields will also be affected by factors such as a market's size, liquidity, tax and legal framework. All of these factors will affect actual or perceived risk and will therefore affect the spread between property yields and the yields on other assets.

### Investment markets

The first step in our methodology is to form a view on commercial property valuations. We do this by comparing the yields on property with those

available on alternative assets such as bonds and equities. The higher the return on property relative to alternative assets, the stronger the property investment market is likely to be and the more likely it is that yields will fall.

For a given level of bond yields what is the right level for property yields? One way of answering that question is to draw on the experience of the UK where there is a well-developed, relatively liquid commercial property investment market with a long history of data for guidance.

### Real versus nominal yields

Before we take a look at that evidence, however, it may be worth briefly addressing the issue of whether we should compare property to real or nominal bond yields.

It is sometimes argued that property yields are best viewed as real. In the UK, although rents are normally fixed in nominal terms for an initial period (typically five years) thereafter they are reset and, in principle, will rise to reflect past price rises in the wider economy, and the anticipation of future price rises. In Europe, meanwhile, property rents are frequently indexed to some measure of inflation. These arrangements contrast with government bonds where the income stream is fixed in nominal terms over the whole life of the bond. Thus, in normal conditions, of positive inflation, the real return is *bound* to fall over time.

In order to reach a conclusion about whether we should regard property as a real or nominal yield, it might be helpful to imagine a spectrum. At one extreme, property rents are fixed in nominal term for ever. In this case property is clearly analogous to a government bond – the only exception being that the property investor also faces a default risk. The important point, however, is that in this case property is clearly a nominal asset.

At the other end of the spectrum is a case where property rents are updated continuously, daily if necessary. In such a situation, property is clearly a

real asset, as the income stream is constant in real (inflation-adjusted) terms.

In practice, of course, property comes somewhere in between these two extremes. Rents are typically only reviewed periodically, with the frequency of those reviews and the degree of formal indexation varying across countries. In much of Europe, however, where indexation of rental values is much more common, it is probably fair to regard property as being closer to a real asset than it is in the UK. Thus, in an ideal world, comparisons with real rather than nominal bond yields might be more appropriate for Europe.

However, there are practical objections to using real bond yields as our risk-free rate. Typically, real bond yields are unobservable. And where index-linked bond yields do exist, for example, in the US, UK and France, the markets are small, have short histories of data and may not always be a reliable guide to “true” real yields. For example, at times index-linked yields may carry a considerable safe-haven premium.

In addition, consider the standard approach of building up a picture of fair value by taking the risk-free rate, adding a risk premium to reflect liquidity, transaction costs and depreciation and then subtracting rental value growth to capture expected capital value growth. In such calculations, the risk premium is a *real* concept. But, if we start from a *nominal* bond yield, expected rental value growth should also be *nominal*. Equally, if we start with a *real* bond yield we should base our calculations on expected *real* rental value growth.

However, if inflation expectations determine the difference between both real and nominal bond yields as well as real and nominal rental value growth, then most of the time an estimate of fair value yields derived from real bond yields should be the same as that derived from nominal yields. After all, the only two things that are changing are both being adjusted by the same factor.

On occasions when the difference between real and nominal bond yields is higher (or lower) than a medium term view on inflation expectations might suggest, that is probably telling us about changing risk perceptions among investors, and arguably we should be making corresponding adjustments in other components of the property risk premium.

For these reasons, our analysis compares property yields to nominal bond yields although, as a cross-check on our conclusions, we also compare property yields to real bond yields wherever possible.

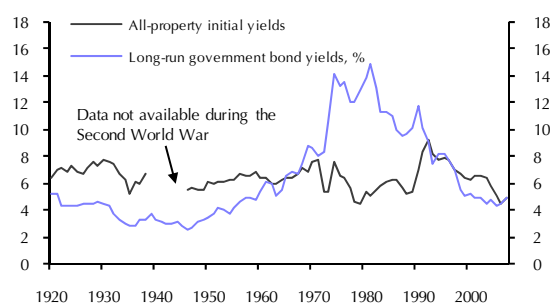
### Comparative yields – the UK evidence

#### *Property v bonds*

What do data from the UK tell us about the appropriate property/bond yield spread? Using annual data, it is possible to compare initial yields on UK commercial property to those available on government bonds as far back as 1920. Over that period, the average initial yield on commercial property was 6.45%, 30 basis points *below* the average yield on long-term government debt which was 6.75%

Long-run yield comparisons are compromised, however, by the high and largely unanticipated inflation that plagued the UK economy in the 1970s and 1980s. To see that, consider Chart 1, which compares initial property yields to long run government bond yields between 1920 and 2007.

**CHART 1: ALL-PROPERTY INITIAL YIELDS AND LONG RUN GOVERNMENT BOND YIELDS, %, 1920 - 2007**



Sources – IPD, Thomson Datastream

Property is a higher risk asset than government bonds, since the income stream is neither guaranteed, nor constant over time. We should, therefore, expect investors to demand a higher return for investing in property rather than bonds.

As Chart 1 shows, between 1920 and the mid-1960s, the yields on commercial property were consistently higher than those available on bonds; on average, 220 basis points higher. Over that time, UK commercial property leases typically ran for 40 years or more with no provision for rent reviews. So, with rents effectively fixed in nominal terms, property was priced by taking the bond yield and adding a risk premium.

In the 1970s and 1980s, however, inflation in the UK took off. The surge in inflation rapidly eroded the real value of commercial property rents and Upward Only Rent Reviews were introduced in response, effectively inflation-proofing commercial property rental values over long periods of time.

However, commercial property investors not only expected growth in rental values to keep pace with inflation, but to exceed it. Thus, while nominal bond yields rose sharply, property yields did not. Investors were happy to continue to pay high prices in the expectation of strong rental income growth in the future. In the event, expectations of steady growth in real commercial property rental values proved overly optimistic. Between 1975 and 1985, real rental values fell, virtually without a break. It is now widely accepted that property was fundamentally mispriced for most of the 1970s and 1980s.

If we exclude this period of mispricing from our long run calculations, we find that the average spread between property and government bond yields was 150 basis points.

That historic average spread of 150 basis points also tallies more or less exactly with the conclusions of our work on calculating bottom-up estimates of fair value yields in the UK. (See *UK*

*Commercial Property Focus*, “Is commercial property now fairly valued”, 9<sup>th</sup> October 2008.)

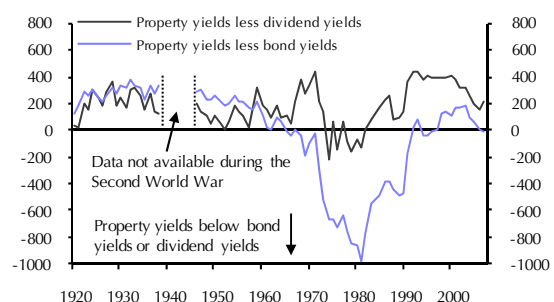
In that *Focus*, we took 10-year bond yields as a proxy for the risk-free rate and factored in allowances for liquidity, depreciation, transaction costs, as well as expected rental value growth. Our conclusion was that, on a central estimate, commercial property initial yields should be 150 basis points higher than 10-year government bond yields.

#### *Property v equities*

How do things look relative to equities? If we look at the average property/equity dividend yield spread between 1920 and 2007, property delivered a yield that was roughly 190 basis points higher than the equity dividend yield of 4.6%.

If we exclude the period of property mispricing in the 1970s and 1980s from our long run calculations, then the average spread between property and equity dividend yields rises from 190 to 220 basis points. That is around 50 basis points higher than our bottom-up estimates of the fair value spread for property relative to equities, which we put at roughly 170 basis points.

**CHART 2: ALL-PROPERTY INITIAL YIELDS AND LONG RUN GOVERNMENT BOND YIELDS, %, 1920 - 2007**



Sources – IPD, Thomson Datastream

Yet, as Chart 2 shows, the extent to which property was mispriced relative to equities during the 1970s and 1980s was less marked than it was relative to bonds. And the 1990s recession resulted in the

property/equity dividend yield spread widening out to almost unprecedented levels. Excluding a period where property yields were demonstrably too low, but not one in which they were (with hindsight) too high, may give misleading results.

In addition, our bottom-up estimate of the fair value property/dividend yield spread of 170 basis points is very close to the long run average spread calculated between 1920 and 2007. So, on balance, we have decided to stick to the long run average figure (i.e. 190 basis points) as the best guide to the appropriate property/equity dividend spread.

#### Applying the UK experience abroad

**To recap, therefore, the balance of evidence from the UK is that, on average, commercial property should deliver a yield that is 150 basis points higher than a 10-year government bond yield.**

**As an additional cross-check, we might also look at the spread between property yields and equity dividend yields, where 190 basis points might be regarded as normal.**

One obvious question, however, must be, how relevant is the experience in the UK for other European property markets? In other words, is it misleading simply to assume that the appropriate spread between property yields and the yields on alternative assets is the same across all countries?

In principle, the answer to such a question must be “yes”. Risk, transactions costs and liquidity will all vary across different markets. And variations in each of these factors should affect the size of the appropriate yield spread between property and other assets.

Unfortunately, data limitations mean that it is not possible to conduct such long-run comparisons between the yields on property and other assets across the rest of Europe. In many cases, data on property yields goes back less than 5 years. But, in Sweden, Germany, France, the Netherlands and

Ireland, we have IPD data on property yields over the past 10-12 years.

Table 1 compares property yields in each country with national bond yields and equity dividend yields since 1998. For comparison we have also included the equivalent data for the UK. In the case of both the UK and Ireland, however, we have excluded data for 2006 and 2007 from the calculations. During this period, in both countries, commercial property yields first converged to and then dropped below 10-year bond yields. As these patterns were not observed in the remaining countries in our sample, we feel that including this data would distort the cross-country comparisons.

**TABLE 1: COMMERCIAL PROPERTY YIELDS, 10-YEAR GOVERNMENT BOND YIELDS AND EQUITY DIVIDEND YIELDS, ANNUAL AVERAGES, %, 1998-2007**

End year	Commercial Property	10-yr bonds	Equity dividends	Property less	
	%	%	%	Bonds bps	Equities bps
Germany	6.05	4.24	1.91	181	415
France	6.18	4.30	2.69	188	349
Ireland <sup>1</sup>	5.79	4.34	2.08	145	372
Netherlands	6.68	4.30	2.64	238	404
Sweden	6.52	4.47	2.20	205	432
UK <sup>1</sup>	6.23	4.71	3.07	152	315

Sources: IPD, Thomson Datastream

<sup>1</sup> Data for Ireland and the UK cover the period 1998-2005 since commercial property was clearly overvalued in 2006 and 2007.

In the UK and Ireland, the average property/bond yield spreads over this period were 152 and 145 basis points respectively, in line with our fair value estimate of 150 basis points for the UK. But the spread between property and bond yields was 30-40 basis points higher than the UK in both France and Germany and between 50-80 basis points higher in the Netherlands and Sweden.

Of course, these higher property/bond yield spreads could reflect structural factors such as higher risk and transaction costs, or lower levels of liquidity than in the UK. But they could also reflect cyclical factors.

For example, higher property/bond yield spreads could simply be evidence that most European

property markets remained undervalued for longer than was the case in the UK and Ireland. That would be consistent with the more subdued economic performance of Continental European economies around the turn of the decade following the collapse of the dot-com bubble.

This is an area that needs further investigation. In particular, since cross-border investment has been growing so rapidly, this raises the possibility that UK-based property funds would be able to raise their returns by investing in higher-yielding markets. If so, then surely increased investor demand would mean that such higher yields are likely to be competed away over time?

However, for now, we think that a sensible working assumption is to assume that the spread between property and bond yields in Europe should be somewhat higher than in the UK, perhaps 50 basis points. **So, as a starting point we assume that for European markets, a commercial property yield that is less than 200 basis points above bond yields may be a sign of overvaluation.**

For property/equity yield spreads the same big picture emerges. Over our sample period, spreads are well above our 190 basis point benchmark, even in the UK. This reflects the fact that equity dividend yields have typically been well below their long run average during this time. In the UK, for example, dividend yields averaged 3.15% between 1998 and 2005, 1.1 percentage points below their 35-year average of 4.26%. And similar patterns can be seen in many other European equity markets.

But even once we abstract from the generally high level of property/equity dividend yields spreads, the spreads in Europe have been far higher than in the UK. At one end of the spectrum, spreads have been 34 basis points higher in France. At the other end, they have been almost 120 basis points higher in Sweden. **So for Europe, we will also assume that a normal property/equity dividend yield is 50 basis points higher than in the UK. In other words,**

**a spread of less than 240 basis points may be a sign that property markets are overvalued.**

#### **The sector implications**

Although the above data have been drawn from IPD, our forecasts for European commercial property markets are based on agency data for rental values and yields. IPD data are not available for all the countries that we cover and even where they are, the data are typically only available annually.

However, agency data is not generally produced at the all-property level. While such an aggregate can be estimated, we therefore think it is better to assess the relative value between commercial property and other asset classes at the sector level, not the all-property level as we typically do in the UK.

That raises the question of whether it is appropriate to apply the same property/bond yield spread (or property/equity dividend yield) spread across retail, office and industrial property. Experience from the UK suggests that it is not.

In the UK, since 1998, on average, retail yields have been around 70 basis points below office yields and around 140 basis points lower than industrial property yields. Longer-run comparisons would do little to change these results.

How do the comparable data for Europe look? Property yields by sector in our five European countries show similar, though not identical, patterns. In particular, it is not always the case that retail yields are lower than office yields in Europe. Germany and France are two notable exceptions. But industrial yields are generally at least 150 basis points higher than a simple average of retail and office yields. (See Table 2.)

Given the variations across countries we think it might be best to apply the same simple rules of thumb to retail and office markets. **In other words, we might consider a retail or office yield that is less than 200 basis points higher than bond yields**

or 240 basis points higher than equity dividend yields to be a potential signal of overvaluation. But for industrial property, the data in Table 2 suggest that we need to raise our benchmarks by at least 150 basis points. **For industrial property we consider that yields need to be 350 basis points higher than bonds and 390 basis points higher than equities.**

**TABLE 2: COMMERCIAL PROPERTY YIELDS, BY SECTOR, ANNUAL AVERAGES, %, 1998-2007**

	Retail yields	Office yields	Industrial Yields
	%	%	%
Germany	6.63	5.90	7.84
France	6.53	6.38	8.91
Ireland <sup>1</sup>	4.72	5.66	6.88
Netherlands	7.34	7.93	8.74
Sweden	6.60	6.62	8.48
UK <sup>1</sup>	5.47	6.18	6.87

Sources: IPD, Thomson Datastream

<sup>1</sup> Data for Ireland and the UK cover the period 1998-2005 since commercial property was clearly overvalued in 2006 and 2007.

### Other considerations for investment markets

In terms of the outlook for investment markets, the outlook for short-term interest rates is also important. The majority of cross-border investment is financed using local currency loans as a hedge against exchange rate movements. So, for both a UK and a French investor investing in Spain the cost of finance will be influenced by ECB policy rates. Meanwhile, international investors in Sweden will be similarly affected by changes in official Swedish interest rates.

Of course, much property investment is financed at fixed interest rates. So once the funds are in place, these investors will not be affected by changes in short term interest rates – at least until they need to roll over that finance. But new investment flows are not similarly immune. For a given level of valuation, new investment flows will tend to ease if interest rates are expected to rise and increase if interest rates are expected to fall.

### Occupier markets

Our experience in analysing UK commercial property markets confirms that variations in macro-economic variables can be a good guide to fluctuations in the demand for commercial property floor-space.

However, absolute growth rates are not the only consideration. Trend, or sustainable, growth rates vary enormously across countries. A 2.5% rate of real GDP growth in Germany is impressive, but lacklustre by Irish or Greek standards. What matters, therefore, is whether activity levels are at, above, or below an estimate of trend and whether growth rates are slowing or accelerating.

Admittedly, while sub-trend economic growth, as opposed to an outright contraction in GDP, might result in a build-up of spare capacity in the economy, in absolute terms, economic output will still be rising. So sub-trend growth will not result in weaker occupier demand, just a slowdown in the rate of demand growth.

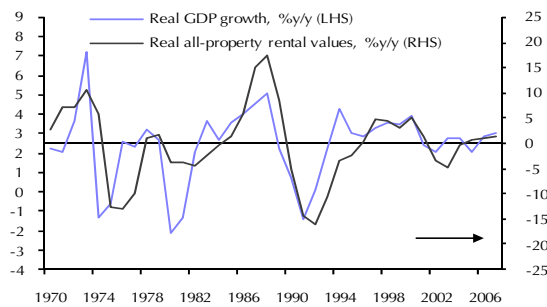
However, periods of sub-trend economic demand tend to have been preceded by periods of above-trend expansion. Given the lags in the property development cycle, a sharp drop in economic growth increases the chances of a supply overhang, even if occupier demand does not contract outright. This will tend to depress rental value growth, perhaps leading to outright falls.

In the UK for example, a simple chart of real GDP growth and real all-property rental value growth makes the point. What it shows is that, historically, real rental values have fallen whenever GDP growth has slowed below 2.5% y/y, a figure that is roughly in line with estimates of trend GDP growth. (See Chart 3.)

Again our experience in the UK has shown that the rate of consumer spending growth, employment growth and overall GDP growth, although arguably only crude proxies for occupier demand, are fairly closely correlated to the rate of rental value growth in the retail, office and industrial

markets respectively. Our forecasts assume that these variables provide equally valid insights into the outlook for European commercial property rental values.

**CHART 3: ALL-PROPERTY REAL RENTAL VALUES AND REAL GDP GROWTH, % Y/Y, 1971 TO 2007**



Sources – IPD, Thomson Datastream

Of course, rental value growth is determined by the interaction of demand and supply, not demand alone. That said, over short periods, the commercial property stock is effectively fixed, so that variations in demand are likely to be the more important factor.

The strength of construction output relative to overall economic activity, however, can be used as an indicator of the state of supply pipelines, and will thus also have a bearing on the likely strength and direction of rental value growth. In addition we draw on agency data for current vacancy rates and development pipelines to inform our forecasts of rental value growth in each market.

### Data sources and assumptions

#### *Yields and rental values*

Our data for yields and rental values are taken from agents' reports. However, even in relatively mature markets, estimates of yields and rental values vary. So, wherever possible, we have used data averaged across two or even three sources. In all cases, the yield and rental value data refer to prime property.

For retail property, data limitations mean that we concentrate exclusively on high street shops. For industrial property, the available data relate to a mix of traditional manufacturing and logistics (or distribution) property.

The exception is the United Kingdom where we use data provided by IPD. In this case, both past and forecast data relate to the all-office, all-retail and all-industrial sectors.

Unfortunately, data are not strictly comparable across countries. This should be borne in mind when making international comparisons.

#### *Bond yields and dividend yields*

For euro-zone countries we make the simplifying assumption that the alternative asset is represented by German 10-year bund yields rather than national bond yields. For countries that are not members of the euro-zone, however, we use national bond yields as the comparison as these are likely to be a better reflection of the risk factors in each local market.

In terms of equity dividend yields, for the euro-zone economies we again compare commercial property yields in each country to the Dow Jones EuroStoxx index. But in non-euro-zone economies we use dividend yields derived from national equity market indices.

#### *Currencies*

Unless otherwise stated, data and forecasts are all presented in national currency. In addition, however, where appropriate we convert national currency forecasts in to forecasts in euro, sterling and US dollar terms. The exchange rates used to convert from data national currency into euro and to convert euro-denominated returns into sterling and US dollar terms relate to average quarterly exchange rates. Looking forward, we use forecast exchange rates in December of each year. These forecast exchanges rates will be shown in the main forecast tables of our publication "*Economic Drivers of European Commercial Property*".

## **Aggregation and weights**

### *Cities v countries*

Our European commercial property forecasts relate to countries – not individual cities. The reason for this is that while our top-down, macro-economic approach allows us to form views on relative valuations across countries, it is not a good basis for making detailed forecasts of occupier or indeed investment markets at the city level.

In other words, by highlighting the differences in the economic outlook between Germany and Spain, we can offer some useful insights into the relative attractions of Munich compared to say, Madrid. And by thinking about the composition of growth within France, e.g. consumer or investment-led, job-rich or productivity-driven growth, we can present an informed picture of the relative attractions of retail, office and industrial markets in France.

However, even though our experience forecasting the UK market suggests that macro-economic forces can overwhelm local supply and demand factors, our approach cannot offer clear views on the rental value prospects, for example, of retail markets in Milan and Rome.

Finally, to derive national data, we use weighted averages of the relevant city data with the weights determined by each city's population (e.g. Italian figures are population-weighted averages of the data for Rome and Milan).

### *All-property figures*

Where available, we use IPD estimates of the sector shares of the commercial property stock in each country to weight the office, retail and industrial data into an all-property aggregate. In other cases, we assume a weight of 50% for offices, 40% for retail and 10% for industrial. These figures are an average of the IPD sector weights in countries where data are available.

## **Conclusions**

This *Focus* has outlined our approach to forecasting European Commercial Property. But it is not our last word on the subject. We are aware that there are limitations to our approach – in particular the implicit assumption that the appropriate property/bond or property/dividend yield spread is the same in Russia as in Spain. And we intend to address these issues in more depth in due course. The results of our findings will allow us to develop and enhance our methodology.

But, as with any forecast, the slavish application of simple, stylised models is unlikely to deliver satisfactory results. Our forecasts, therefore, while informed by our analysis of comparative yields and our benchmark yield spreads also rely heavily on judgement – arguably a forecaster's most valuable tool.