Evidence of cycles in European commercial real estate markets – and some hypotheses

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1. Introduction

Economists are forced to forecast in the knowledge that they will be criticised by the users of their forecasts for the inevitable inaccuracies they will contain. Historians, on the other hand, look at economists with envy. The perceived repeatability of economic and property cycles, for example, suggests a degree of usefulness which historians would be keen to associate with their own profession.

> *The only chronological predictions I know which command some confidence are those based on some regular periodicity behind which we suspect an explicable mechanism, even when we don't understand it. Economists are the greatest searchers for such periodicities…*
>
> Eric Hobsbawm (1997)

But, perversely, not all economists are believers in the cycle. The concept is embedded in psychology, but not necessarily in the higher reaches of academic – and real estate - economics.

> *Even though it may not be enough to convince the statistical purist, we believe the historical record supports a cyclical view of property markets. On that score, the property cycle is akin to the economic cycle, which a hard-core of economists refuse to believe in, but remains a central feature of how people perceive and experience economic events. The final test is, perhaps, linguistic rather than statistical: it is hard to imagine describing the course of property history without recourse to the term 'cycle'.*
>
> IPD (1999)

If the issue is 'linguistic', how can we usefully define cycle in this context? Most modern commentators simply avoid the question. Burns and Mitchell suggested in 1941:

> *Cycles consist of expansions occurring at about the same time in many activities, followed by similarly general recessions, contractions and revivals.*

More useful is the following (Parker and Beade, 1988):

> *Business cycles are recurrent but non-periodic fluctuations in aggregate economic activity as measured by fluctuations of real GDP about its trend.*

Or: (Begg, Fischer and Dornbusch, 1987)

> *The business cycle is the tendency for output and employment to fluctuate around their long-term trends.*

Adopting this now-standard definition of the business cycle gives us the following (Investment Property Databank (1999)):

> *Property cycles are recurrent but irregular fluctuations on the rate of all-property total return, which are also apparent in many other indicators of property activity, but with varying leads and lags against the all-property cycle.*
>
> Or, a personal simplification:
>
> *The property cycle means the tendency for property demand, supply, prices and returns to fluctuate around their long term trends or averages.*

Whether a universal definition can be suggested or not, the concept of cycles is firmly embedded in European real estate. The sine wave representation of the property cycle and the clock format are equally ubiquitous, suggesting not only highly simple and symmetrical patterns of property market behaviour, but also perfect predictability. It is also noticeable that there is a common omission of any definition of what the patterns describe. This common variable may be development, it may be rental values, it may be capital values, it may be returns: it may be an amalgam of any of these.

In our attempt to be a little better focused in this paper, we seek to achieve four objectives. First, we provide some contextual material concerning the performance of the UK real estate market relative to stocks and bonds over a long period. Second, we provide UK – and some non-UK European - evidence of the tendency for property demand, supply, prices and returns to fluctuate around their long term trends or averages. Third, we briefly examine some hypotheses which suggest institutional contributions to property cycles in European markets. Fourth, we suggest some reasons why the future may not be as cyclical as the past.

2. The performance of UK commercial property investment, 1971-1998

The Investment Property Databank, based in London, provides excellent property data for several countries, the best of which is derived from the UK. Combining this factor with the status of London as a global financial centre, the UK provides an excellent laboratory for a study of the relative performance of real estate, stocks and bonds.

Over the period 1971 to 1998, equities, real estate and government bonds delivered nominal returns of 17, 12.5 and 12% respectively (real returns of 10, 5.5 and 5%). Volatilities were 34, 16 and 11%. The assets were not quite mean-variance efficient over

this period. Property and gilts were negatively correlated (-5%), while property and equities were positively correlated (20%) and gilts and equities were strongly positively correlated (67%).

Property's performance characteristics are clearly different from those of stocks and bonds (figure 1). There are several reasons for this. UK property is a combination of stock and bond: long leases (15-25 years) with upward-only rent reviews provide long term minimum fixed incomes, while the 5-yearly rent reviews allow owners to benefit from economic and locational growth. However, this is too simplistic a view of the asset class. Property has characteristics which are not common to stocks or bonds. Quite apart from the unique characteristics imposed by the lease contract, it is highly illiquid and lumpy; it depreciates physically, technologically and aesthetically; the supply side is highly regulated by national and local government; valuations, not transactions, dominate performance estimates; and there is no centralised, regulated market. These factors all contribute to the shape of commercial property performance in the UK.

It would be a mistake, however, to think that there is a single European property market or that there is likely to be convergence of performance across European markets. The very factors which distinguish property from stocks and bonds vary sufficiently between European markets to mean that even if European economies were in harmony European property markets need not be. In particular, lease contracts vary from the UK model at one extreme to the shorter (3, 6 and 9 year) indexed lease common in France, and the supply side is very loose in some markets and very tight in others.

Bearing this in mind, what is the evidence of cyclicality in European property markets?

3. Evidence of cycles in European commercial real estate markets

The UK

It has been suggested (MacGregor, 1994) that three UK cycles can be demonstrated. Different cycles are apparent in the development, occupier (rent) and investment markets. Later, MacGregor and Schwann (1999) produced strong evidence for common cycles across different regions and sectors within one national property market. This suggests that regional and sectoral real estate returns are dominated by national occupier, investment and development cycles.

<u>Development</u>

MacGregor *et al* concluded that a 4-5 year cycle in property development is apparent, but this is not coincident with the rent cycle. Current development profits have been a good explanatory variable of development activity

Barras (1994) identified four types of real estate development or construction cycles, each of different length. These were: short cycles (4-5 years, the classic business cycle operating on occupier demand), long cycles (9-10 years, creating a tendency for severe

over-supply which by-passes every second demand cycle), long swings (20 years, associated with major speculative building booms) and long waves (50 years, technologically-driven).

In conclusion, UK property development has been highly pro-cyclical with GDP growth and property values, but exhibits sharper rises and falls. The evidence suggests adaptive behaviour. A period of excessive optimism is followed by a period of excessive pessimism. Adaptive behaviour can explain much of the late 1980s supply. As prices rise, prices are more likely to be expected to continue to rise; development profits are a function of continued price rises; hence price rises lead to ever-increasing supply levels, which create the conditions for lower prices (disaster myopia). The time lag involved creates an inevitable supply cycle.

Rents

MacGregor et al suggested that the demand side is pro-cyclical with economic indicators, but inelasticity of supply means that even highly regular demand cycles can generate irregular rental cycles.

Nonetheless, a simple demand/supply regression model can achieve a very strong explanation of national rental movements over a 30-year period. Typical R-squared results are in the range 90% to 97%; typical variables are rent n–1, rent n–2, consumer expenditure/GDP/manufacturing output, floorspace stock and construction orders.

Barras also concluded that rents have clearly been strongly pro-cyclical with GDP. The % deviation from the 1971-1992 trend in rental growth and GDP growth are very strongly correlated. Barras (1994) shows how growth in GDP above the long term trend growth is mirrored in growth in rents above long term trend growth (figure 2).

Tsolacos and McGough (1995) confirm the strong relationship between macro-economic variables and rental data. They found a strong relationship between office development and changes in rents, suggesting a degree of adaptive behaviour among lenders, investors and developers.

Investment: returns, capitalisation rates and capital values

Tsolacos and McGough suggested that the linkages between the investment market and financial variables were unclear. MacGregor *et al* also found investment performance, expressed as rates of total return or changes in capital values or even capitalisation rates, harder to model. Nonetheless, they identified a 4-5 year cycle in the rate of all-property return.

There is no clear relationship between yields (capitalisation rates) on UK property and other asset and money market yields and rates. Figure 3 shows the flat performance of

UK property yields related to a continued decline in gilt yields. There appears to be no evidence of cyclicality.

The flatness of yields results in an extremely strong relationship between rental growth and capital value growth, both strongly pro-cyclical.

There is some relationship between returns and the business cycle, but this is less strong than the relationship between changes in capital values and economic growth simply because income returns have been reasonably invariant from period to period.

Recent work by IPD (RICS, 1999) provides the fullest picture of long term UK performance yet available. Data assembled from various sources covering the period 1921 to 1998 shows 16 'fairly distinct' peaks and troughs describing total returns delivered in the market. IPD identify six completed cycles, with peaks in 1925-28, 1935, 1950, 1954, 1960-64, 1973, 1979-81, and 1989. They suggest that those cycles have ranged in length from 4 to 12 years, with an average of 8 years; upswings have run from 2 to 7 years, and downswings from 2 to 9 years.

> *These 'recurrent but irregular' patterns are not necessarily the result of a single cyclical process. They could be the product of overlapping cycles of different lengths (5 and 9 years). It is tempting to see a shorter cycle as demand driven, linked to the business cycle in the economy, and a longer one as supply driven, linked to slower fluctuations in new development.*
>
> *The property cycle is linked to the economic cycle, but the precise nature of the relationship varies from one cycle to another.*

Continental Europe

Evidence for non-UK markets in Europe is more elusive. Figure 4 shows evidence of rents in 5 city markets, including London West End. There is some evidence of common cyclical movement, with an apparent lag for the non-UK markets.

Laposa, Barkham, Ashton and Gilbertson (1999) examine supply, demand, vacancy, rents, capitalisation rates and investor behaviour as the six significant indicators of the real estate cycle. They applied this US-based classification to 8 continental (non-UK) European city office markets, concluding broadly that real estate markets in Europe tend to move together although with different lags in the contraction and recovery phases of the cycle. They also suggest that the expected relationship between aggregate vacancy rates and rental rises may not always hold because of splits in sub-markets for different quality of space. This may question any generalised analysis of 'the' real estate cycle, even within a single city/sector.

4. Hypotheses

Bank lending and cycles

> *There is a costly and understated dynamic relationship between property crises and banking crises.*
>
> *Renaud, 1998*

The relationship between property crises and banking crises is described by Renaud, 1998 and by the same author in another chapter in this book. Despite powerful evidence of this relationship, Thomas, 1998, demonstrated the reluctance of the UK's central bank to regulate the commercial property market.

Beardsley (1995) discussed the adaptive behaviour of lenders which, coupled with the adaptive behaviour of investors, led to an inevitably exaggerated cycle of UK (and French) real estate performance in the late 1980s and early 1990s. The following quotation states the hypothesis very concisely.

> *Property booms occur in times of rising economic activity with increases in rentals feeding rapidly into increases in collateral value. Both adaptive behaviour and herd behaviour are powerful forces at work as bankers anticipate further rental increases and further increases in capital values…banking officers are motivated…by means of incentive payments based…on the amount of loan business achieved.*
>
> *…Managerial ambitions to grow firms are accommodated by surges in property lending at critical times in the economic and competitive cycles.*
>
> *(from Baum, Beardsley and Ward, 1999)*

In his PhD work, Beardsley (1997) found much evidence to support this hypothesis.

Cycles: the result of market inefficiency?

Prices in all markets go up and down. Inefficiency in real estate markets makes these up and down movements look like a repeatable, cyclical, pattern. We have bull and bear periods in stock markets, but cycles are less often talked about. In property, auto-correlation, valuation smoothing and sticky prices elongate the ups and downs.

Bjorklund and Soderburg (1997) suggested that auto-correlation affects real estate returns to the point that a speculative bubble can be proven to have formed. Antwi and Henneberry (1995) identified what they called habit-persistent (another term might be adaptive) behaviour by lenders and by developers (see above).

In efficient space markets, rent differentials across different locations are quickly eradicated through substitution or a rapid supply response in an extremely efficient market for space (Hendershott, 1995). However, neither substitution nor a price-elastic supply response is likely across European real estate markets. Planning permission scan be slow to obtain; equally significantly, the time delays involved can vary significantly across markets, which are not therefore efficient enough for price adjustment to take place. It may take three months to obtain permission to build a London office building; it may take 2 years in Frankfurt. Both the resulting lack of substitutability across markets and the long supply response within particular markets can act to elongate and exaggerate cycles in space markets.

Grenadier (1995) examined the way owners of space will restrict supply in an upswing. Letting space at a market rent on a five-year lease involves the giving up of a five year American option. In an auto-correlated occupier/rental market, it is easy to see how letting at market rents may appear to be a sub-optimal financial decision, especially when the supply side is slow to respond to demand and price. Withholding space in this way exaggerates the supply shortage and the cyclical upswing.

Renaud (1998) also suggested that endogenous causes of real estate cycles include the inertia (auto-correlation) of rents in a changing environment.

These concepts – auto-correlation and adaptive behaviour – are related, as they indicate inefficiency or irrationality in real estate investment decision-making. They affect the way space is developed, the way rents are agreed for space and the way prices are paid for real estate investments. They exaggerate and elongate upturns and downturns, and create the appearance of definable cycles in real estate markets. Sticky prices affect occupier, investor and developer markets, elongating and exaggerating real estate cycles.

Rates of change in rental values and vacancy rates are slow, due to the actions of intermediaries or agents and the costs of re-locating. Development cycles are slow to reverse due to the commitment created by the large amounts of sunk (human and physical) capital required to complete a project.

Rates of return are also auto-correlated, due to valuation smoothing. Many commentators (for example Barkham and Geltner (1995)) demonstrate the lower volatility which results from the replacement of transactions by valuations as the basis of return measurement. De-smoothing the UK price series produces less cyclical returns on UK property over the period 1981-1997. This challenges conventional views of the volatility of real estate returns, the correlation of the main asset markets, and the cyclicality of real estate rents, values and returns which may be partly the creation of intermediaries and real estate service providers.

5. The future for European real estate cycles

Cycles in UK and European real estate can clearly be demonstrated, especially in the construction/development and rental markets. Possible explanations include the inefficiencies introduced into these markets by lenders and other intermediaries and service providers. But times are changing. Will European property markets become more efficient, and cycles less prolonged and pronounced, in the new Europe?

Direct reasons for change would include changes in property financing away from bank debt, and a reduced role for intermediaries such as appraisers and brokers. Some of these changes are underway, created by changes in the way property investment is undertaken and in particular by the globalisation of investment activity and the increasingly securitised property market.

In a recent paper (Baum, 1999), the author sets out to describe changing styles of real estate investment. In doing so, the paper draws on a personal view of the global economic forces which have been unleashed as part of the latest industrial revolution, and examines reasons for increased levels of securitisation.

Globalisation

The historic self-containment of domestic property markets is unlikely to continue. The growth of multi-national companies, increased cross-border trade and communication, the dominance of international stock markets and the increasing importance of cross-border benchmarks will all have an impact on the way real estate is leased, bought and sold.

A case study: the City of London

Recent research carried out at Reading University in the UK (Baum and Lizieri, 1999) has shown that foreign ownership of the City of London office market has grown from 5% to 22% in 10 years. In 1972, over 94% of the floor space in the City database was owned by UK firms. Just less than 3% of space was owned by Middle Eastern interests and around 2% was European owned. None of the sample properties was owned by German, Japanese or USA firms. By 1997, 21.9% of the sample buildings were in overseas ownership. 7% of the properties were in Japanese hands, 5% were German owned, 4% were owned by US firms and just under 3% was, as in 1972, in Middle Eastern ownership.

This growth was supported by mid-1980s de-regulation. In 1975 the New York Stock Exchange abolished minimum commission rates: 35 broking firms went out of business but turnover exploded. In 1979, UK exchange controls were abolished, allowing capital to move freely around international markets - a move paralleled in other developed economies. By 1986 ('Big Bang') the implementation of the Parkinson-Goodison accord and financial deregulation meant that merchant banks, jobbers and brokers could combine to become full capacity investment banks, and overseas players could join in. Financial business had become global.

Over the period 1991-96, market globalization intensified, so that the overseas ownership of UK equities increased from 12% to nearly 17% over the five years from the end of 1991 to the end of 1996. The overseas acquisition of UK operations, culminating in 1994-7 in the purchases of Warburgs, Morgan Grenfell, Barings, Kleinworts, Smith New Court, BZW and Mercury by Swiss, Dutch, German, French and American banks, is explained by the need of the City economy to access wider markets.

At the same time, savings-based liquidity in Japan, the relaxing of Swedish and German cross-border investment restrictions and changes in German tax policy pushed funds out from these savings-oriented countries, much into UK property. DTZ estimated that overseas investment in UK commercial property rose from £0.2bn in 1987 to £1.9bn in 1988, £3.1bn in 1989, and £3.3bn in 1990, remaining well above £1bn every year thereafter. According to DTZ overseas owners accounted for around 12.5% of all UK commercial property transactions over the period 1988-1995: clearly, the City has taken a larger than average proportion of this investment. In tune with this change, the overseas ownership of City office property has increased in line with levels of foreign equity ownership.

The single European currency

London offers a wonderful case study; so does the wider geo-political structure of Europe. European Monetary Union (EMU) is another process of radical change which has been gathering momentum since the Maastricht Treaty made 1992 and the completion of the Single European Market a significant date in European history. The movement towards a single European currency appears determined to establish the 1999 introduction of the Euro as a second major economic event.

If the UK and other EC countries currently outside the Euro block eventually take part, currency risk will disappear for Euroland investors and will become much simplified for non-Europeans. Regulation and taxation rules will slowly begin to converge. Investment benchmarks will become pan-Eurobloc. This will create a significant change in investor behaviour: from a position where any exposure to overseas assets is a risk against a domestic benchmark, growing recognition of a wider non-domestic benchmark would lead to a need to invest overseas to *reduce* risk relative to the competition.

As the global pension industry grows and international trading is positively encouraged, international property is likely to become a major asset class. In addition, owner-occupiers are likely to fuel growth in cross-border property investment. This is highly likely to change the nature of property cycles.

Securitisation

In an unpublished survey carried out for Henderson Investors in 1996, European institutional investors suggested that the greatest deterrent to real estate investment was illiquidity. The best solution for illiquidity was thought to be a public market quotation. Other surveys suggest similar desires among global investors, and the natural demand for securitised real estate product appears to be enormous. The growth in global securitised

property investment appears to be inhibited only by a lack of supply, largely created by taxation and regulatory problems in markets outside a small number of markets including the USA and Australia.

In the US, the REIT market has grown from tiny market capitalisations to more than $180bn in 8 years, much of it held by overseas investors. In Sweden, from what approximated to a standing start in 1995, there are now more than 30 listed property companies with an active international shareholder base. In Australia, rapid growth in the listed property trust market over a 10 year period since 1989 has resulted in $26bn of market capitalisation at March 1999, representing around 25% of the institutional real estate market.

Growth in the universe of securitised property has been rapid. Nonetheless, the total market capitalisation of the 400 companies in the Salomon Smith Barney index, worth $US250bn, represents around eighth of expected net new pension fund investment over the period 1997-2002.

The potential for development of this market is particularly great in Europe. Germany, France, Italy and Spain (all relatively immature institutional property markets, but all part of a single currency area which has been recently and rapidly projected onto the global screen) have less securitised product per unit of GDP than any other country. The relatively mature markets of the USA, Australia, UK and Hong Kong have more. The correlation is powerful, and suggests potential rapid growth in European securitisations.

A securitised market reduces the power and influence of the intermediary. The appraiser/valuer is largely replaced by market pricing, so valuation smoothing has much less impact. The cycle and its strength will, consequently, become less easy to discern.

Property as private equity/venture capital

A second new style of international real estate investment vehicle has emerged over the 1990s decade. This is the transfer of much real estate investment into venture capital or private equity format. The type of investment vehicle now common to this format (closed end, limited life co-mingled private funds) was commonly used for domestic investment in the US in the 1980s – and largely since discredited.
However, this is now seen as an acceptable form of international property investment, largely because the returns advertised are high, usually in excess of 15% on equity. Gearing is common, at levels as high at 60-80%; the fund manager often has an investment alongside clients, and includes a performance element in the fee charged. This vehicle explains much of the 1990s investment in Poland, Thailand and China. It may be a flawed investment format, but it accesses the diversification potential of private real estate.

Conclusions

Cycles in UK and European real estate can clearly be demonstrated, especially in the construction/development and rental markets. Possible explanations include the inefficiencies introduced into these markets by lenders and other intermediaries and service providers. But changes are underway. Direct reasons for change would include changes in property financing away from bank debt, and a reduced role for intermediaries such as appraisers and brokers. These very changes are now being created by the twin forces of globalistion and changes in the sources of property capital.

It is possible that the broadening of the base for real estate investment, from traditional pension fund diversification into a mix of private equity, listed product and good old-fashioned private real estate portfolios will broaden the sources of capital to the point where the capital value cycle becomes much less easy to observe.

The sources of capital will broaden both internationally and by type. As a result, we may begin to observe a smoother cycle, with cyclicality expressed more in changes over time in the natural suppliers of capital rather than in changes in price determined by single-source floods of capital into and out of the market.

Globalisation will open up both the suppliers of capital and the markets in which they invest, to the point where more efficient capital flows, implying a less pronounced cycle, can be anticipated.

The global property market which awaits us is likely to be more efficient than the national markets we are familiar with. A highly efficient European property market – or even a single market - is not something we should take for granted, and the cycle may well re-appear in many sub-markets. Nonetheless, the real estate analyst may find it harder in future to produce models of market behaviour with the level of explanatory power which, thanks to the extreme cyclicality of the past, now lies at his/her disposal.

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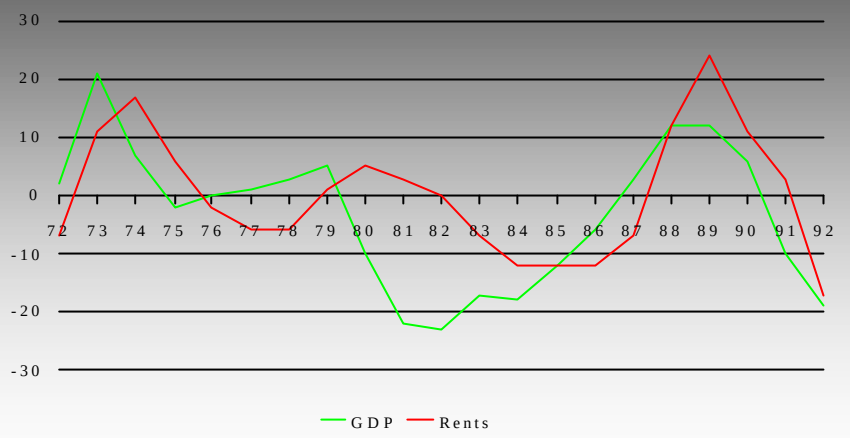
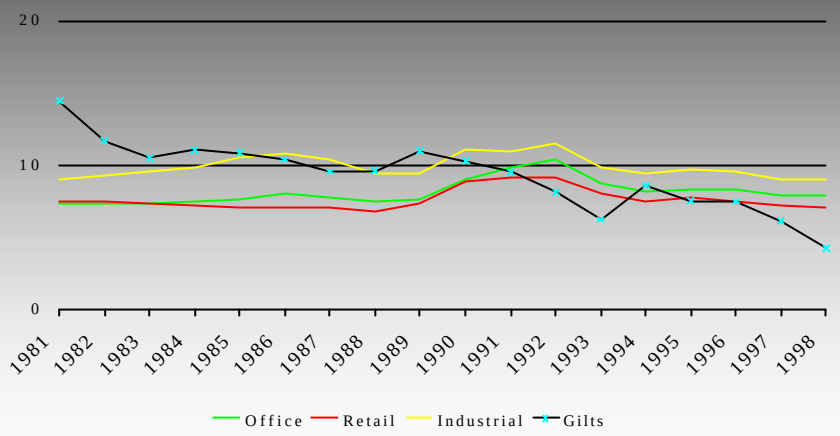
Change in GDP and rents, 1971-1992

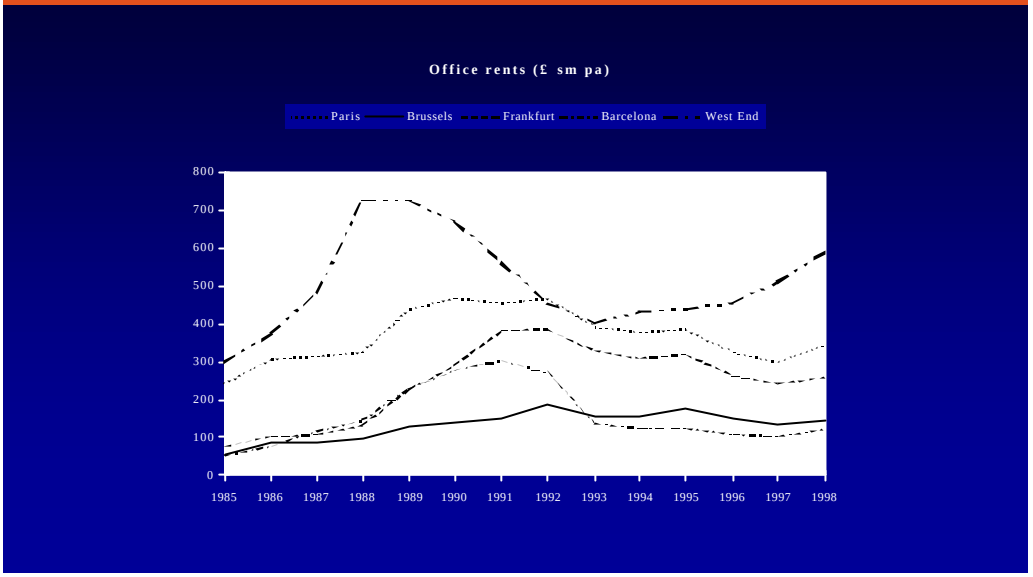


% variation from 1971-92 trend

Yields, 1981 -1998



Rent cycles in European real estate markets



Returns on UK property, equities and gilts