Introduction

A remarkable decade for real estate

The decade from 2000 to 2010 was the most exciting, remarkable and ultimately disastrous period for real estate since the end of the Second World War. Those dramatic ten years witnessed the world’s first coordinated real estate boom and slump. Real estate cycles are a common feature of free market economic development and, from time to time, they badly destabilise individual economies. In the years before 2007, real estate values were driven to peak levels across the greater part of the developed world. When prices collapsed in 2008, by up to 60% in some countries, the global financial system was almost destroyed and a new Great Depression ushered in. At the time of writing (mid-2011), the aftershocks of the great financial crisis (GFC) linger on, in the sovereign debt crisis of Southern Europe and in the moribund housing market of the USA. Unemployment in the developed world, the social cost of the crisis, remains very high.

For real estate, the 2000s started rather unpromisingly amidst the global recession created by the bursting of the ‘dot-com’ bubble. Between 1996 and the end of 1999, on the back of easy money, buoyant global growth and widespread optimism about the potential of the Internet, global stock markets rose by 24%. Between 2000 and 2003, all of these gains were reversed, as world markets fell by 30%. The swings in value were much
greater in the stock markets of the USA and the UK. Investment fell and unemployment rose. Contraction in the corporate sector led to a fall in demand for business and commercial space and a steep drop in rents. The real estate recession of the early 2000s was particularly severe in the office sector, because demand for offices depends directly on the state of the financial markets.

It is worth reflecting on the ‘wreckage’ of the dot-com slump, because it is here that the real estate story of the 2000s begins. Since the early 1990s, OECD central banks have been haunted by the spectre of Japan. Between 1950 and 1989, Japan was one of the world’s fastest-growing and most dynamic economies. Towards the end of its long expansion, its stock market and land market dramatically boomed and slumped. Since then, Japan has been unable to shrug off slow growth, deflation and a chronic inability to create jobs. The reasons for Japan’s 20-year deflation are complex, but most agree that monetary policy was too tight in the post-bubble period. This is a mistake that OECD central banks do not wish to repeat. So, in the wake of the stock market crash of 2000, interest rates were cut aggressively to support asset values, boost confidence and revive business and consumer spending. Figure 1.1 shows OECD real interest rates over the period: it is the key to understanding the events of the 2000s and the GFC.

It is often said that using interest rates to stimulate an economy is like dragging a brick with an elastic band: nothing happens for a while and then the brick jumps up and hits you on the back of the head. This is how it played out in the real estate sector. The period 2001 to 2003 saw depression

![Figure 1.1: OECD real interest rates](image-url)

Source: IHS Global Insight
in most asset markets; confidence was weak as the global economy worked its way through the aftermath of the tech-crash. Suddenly, in 2003 a ‘wall of money’ hit the real estate sector. Investors, nervous of the stock market, were not prepared to tolerate the low returns on cash and bonds that resulted from super-loose monetary policy. The ‘search for yield’ was on and real estate was suddenly the most favoured asset class. The long, globally coordinated boom in real estate values had begun. Figure 1.2 shows a global composite yield for the retail sector and the office sector. The period from 2003 to 2008 saw a rapid and continuous appreciation of prices driven entirely by investment demand.

The first wave of investment was primarily driven by ‘equity’ investors; those for whom easy access to bank finance was not a key issue. These included pension funds and insurance companies, high net worth individuals, private equity funds and, increasingly, newly created sovereign wealth funds. Even small investors, through the medium of open-ended funds or other ‘retail’ vehicles, were clamorous for real estate. REITs (Real Estate Investment Trusts) were prominent investors; the ten years to 2007 had seen REITs or REIT-type vehicles approved in over eight jurisdictions (figure 1.3). The period also saw the very rapid growth in unlisted real estate funds (figure 1.4). These tax transparent vehicles provided a convenient means for professional investors to deploy capital in diversified pools of real estate assets run by professional real estate managers.
Figure 1.3: Growth of REITs
‘Behind the scenes’, it was low interest rates that were fuelling the boom. Low interest rates (or expansionary monetary policy) have a ‘double impact’ on the attractiveness of real estate as an investment. First, they lower the cost of holding the asset. Second, by boosting the cash flow of occupiers, they improve the security of real estate operating income. At the time, the link between booming real estate values and super-loose monetary policy was not widely appreciated. Indeed, many market participants preferred to think about the ‘golden age of real estate’. Real estate, with its long duration and stable cash flows and increasingly good data provision, was the institutional asset of choice.

By 2005, the initial impetus to real estate values from ‘equity’ investors had been replaced by debt-driven buyers; namely, buyers with very high levels of leverage. Such ‘players’ are a feature of any rising real estate market, often originating in markets with low or negative real interest rates (where interest rates are lower than domestic inflation). In the mid-2000s, debt-driven investors from Ireland, Iceland, Spain, the USA and Israel flooded into the marketplace. Figure 1.5 shows money flows into real estate over the period, by type and destination.

Banks generally find real estate an attractive asset, but particularly when interest rates are low and economic growth is strong. Unlike businesses, real estate assets are relatively easy to appraise and assess for creditworthiness. Moreover, the market is large, and at times of rising values it can create additional lending opportunities very quickly. For instance, we
estimate that the total value of real estate in the US is $7.7tn, so a 10% increase in values creates $770bn of additional ‘lending opportunities’. No other sector gives banks the ability to increase their loan books as quickly as real estate. Compounding this, as we now appreciate, banks in the OECD can operate on the assumption that they will not have to bear the full consequences of risky lending decisions. In any case, in the mid-2000s, it
became quite clear that the major lending banks had replaced carefully considered lending with market share as their main objective function. Real estate was the sector of choice.

Two further factors facilitated the flow of debt into the real estate sector in the mid-2000s. One factor related to globalisation was the long-term growth in the usage by banks, in all regions, of the money markets for funding. Since the 1960s, customer deposits have fallen as a share of banks’ liabilities and certificates of deposit, repurchase agreements and commercial paper have increased. As long as the money markets were open, the banks could expand lending way beyond the level that would be supported by their own domestic deposit base. During the 2000s, at least until 2007, it was very easy for banks in countries such as Spain, Portugal and the UK to tap the money markets in order to expand lending to real estate. Moreover, on the supply side, ‘excess savings’ in other parts of Europe and Asia saw the money markets awash with liquidity. This process, which might be called the globalisation of banking, is one of the key mechanisms by which real estate markets which are local in character can be swamped by international money flows. In the lead-up to 2007, banks in high savings areas invested in banks in low savings areas, allowing the latter aggressively to expand lending (Figure 1.6).

Alongside the globalisation of banking was the growth of loan securitisation. Securitisation is the process by which pools of loans, for instance

![Figure 1.6: Net credit position of Greece, Ireland, Portugal and Spain banks with banks in the rest of the world](image-url)

*Source: BIS*
real estate mortgages, are ‘bundled’ together and the rights to receive the cash flows from these loans are sold to investors. The bank that sells this collection of loans receives cash (asset), which in due course it can recycle into additional lending and it deletes the loans (assets) from its balance sheet. In principle, there is nothing wrong with this; it has been a feature of the US mortgage industry for many years. Non-bank investors get access to stable investments with a good cash yield and banks get cash to help them engage in their primary task to provide loans to those that need them. However, there are two potential flaws in securitisation. First, in the circumstances of lax supervision and extreme monetary stimulation that characterised the early and the mid-2000s, it created an incentive for banks to originate loans for the sake of creating investment products, rather than supporting commercially sensible business transactions. Second, it facilitates the ‘unseen’ build-up in leverage within a market – in this case the real estate market – because the loans are ‘off-balance sheet’. Loan securitisation was a major part of the ‘shadow banking sector’, which ballooned in the five years prior to the GFC. Figure 1.7 shows the growth of securitised real estate.

The worst excesses in real estate loan securitisation took place in the US housing market in the six years to 2007. Here, mortgage lending to the general public became aggressive to the point of being fraudulent. To create loans that could be securitised and sold to investors as quickly as possible,

![Figure 1.7: Growth of securitised real estate debt (CMBS)](source: CRE Financial Council)

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originators devised mortgage products that eliminated the need for lenders and borrowers to consider in any way, shape or form the ability of the latter to repay their debts. For instance, ‘the stated income loan’ or, as it is more notoriously known, ‘the liar loan’ allowed mortgage finance to be advanced to house buyers in extremely marginal occupations.\textsuperscript{2} Not surprisingly, US house prices, which had in any case been rising strongly since the mid-1990s due to strong job growth, surged. At the same time, the capital markets, concerned as they were to secure ‘yielding investments’, received an enhanced flow of just the sort of product they were after: mortgage-backed securities. Figure 1.8 shows the rise and fall of US house prices.

The economic factors that drive the price of houses are: the cost of mortgages (interest rates); the rate of job creation (consumer incomes); expectations of future price rises (investment motivation); and the rate of construction of new premises (supply). In late 2006 rising interest rates, falling job growth and surging new construction hit the US housing market and sent prices, albeit slowly at first, into decline for the first time in the postwar period. The impact of the fall in US house prices on global capital markets took some time to emerge, but it was profound when it did. As it turned out, numerous financial institutions, including some of the world’s

\textsuperscript{2} When a ‘stated income loan’ is advanced, the lender takes the borrower’s declared income ‘on trust’ and makes no attempt to verify it by recourse to pay slips (stubs), income tax returns, company records, utility bills or any other source.

\textbf{Figure 1.8:} Long term growth of US house prices  
\textit{Source: Global Property Guide}
best-known banks, had invested in mortgage-backed securities in general and US residential mortgage-backed securities in particular. The scale of this investment and the fact that the banks themselves had historically high levels of leverage meant that the global financial system was under serious threat. In addition, certain key insurance companies were in jeopardy, because they had insured mortgage-backed products. Capital had poured into the US housing sector and driven it to the point of implosion; globalisation ensured the rapid and widespread transmission of the shockwaves.

From a narrow real estate perspective, the interesting fact is that the boom in US house prices was far from the most extreme in the OECD. The long and relatively consistent run of GDP growth (and job creation) that took place in much of the OECD in the period after 1992 provided the housing markets of the developed world with a significant growth impetus. The decline in inflation and consequent fall in long-term interest rates over the period made mortgages more affordable in many countries. In some areas, such as the USA, boosting the rate of home ownership was a key government objective, which was manifested in the tax-deductibility of mortgage interest payments. For all of these reasons, housing markets in most of the OECD ‘did well’ in the 1990s [see figure 1.9]. In fact, by the end of that decade house-price-to-income ratios were at an all-time high.

The relatively mild recession that ensued in the wake of the tech-crash of 2001 had two effects on global housing markets. Initially, because of the rise in unemployment and the fall in confidence, there was a period of stagnation. By 2003 however, interest rate cuts had begun to revive the

![Figure 1.9: Long term growth of OECD house prices](image)

Source: BIS, ABS, National sources, Global Property Guide
market and, shortly afterwards, growth resumed. Britain, Spain, Ireland and Australia experienced a particularly strong period of house-price appreciation, which led to a fall in underwriting standards and a generalised reduction in risk premiums. In 2008, as interest rates peaked, these and other housing markets in the OECD came to a juddering halt. At the time of writing, Spain and Ireland are still struggling to recapitalise commercial banks that are having, as a result, to write down huge quantities of real estate loans.

In September 2008, Lehman Brothers, an important US investment bank, filed for Chapter 11 bankruptcy protection. This event neither initiated the GFC nor signalled the bottom of the market. However, in the demise of Lehman Brothers due to high gearing and over-exposure to the US housing market, the world began to see the full extent of the banking and real estate crisis that it was facing. Two remarkably destructive negative feedback loops, both driven by sentiment, were initiated. The first was in the manufacturing sector. Companies, fearing a collapse in demand, immediately cut stocks and fixed capital investment, which produced a steep fall in global output. Companies and consumers, fearing a generalised collapse in the banking sector, withdrew their savings, further undermining the banking system. Economic confidence collapsed, as did stock and real estate values (Figure 1.10). By the end of 2008 it seemed as if the developed world was on the verge of a 1930s-style Great Depression.

As momentous and fearful as the events of 2007 and 2008 were, the more remarkable event was the scale and rapidity of the bounce-back. By the end of March 2009, it was becoming clear that a disaster had been averted and

![Figure 1.10: Collapse in real estate values](source: IPD)
that some sort of recovery was under way. The situation was stabilised by the bank rescue packages put in place in 2008. The US government initially flirted with the idea that companies – even banks – should bear the economic consequences of their own actions, but in the end a full-scale bail-out was offered to the sector, as it was in the case of the UK and the Euro zone. In order to revive growth OECD governments collectively mounted the biggest fiscal stimulus in history. In order to revive asset markets and prevent deflation taking hold, central banks cut interest rates to zero and initiated the policy, developed by Japan in its long battle with deflation, of quantitative easing. The policy worked: in the first quarter of 2009 asset markets, including real estate, staged a surprising rebound. Shortly afterwards, economic growth resumed and by mid-2010 inflation was trending back to its target level in the OECD.

Based on a flawed global economic model

Real estate markets are always driven by economic growth. If the period 2000 to 2010 was remarkable, it was because the underlying global economic situation was, too. The great coordinated boom in real estate values, which peaked in 2007, reflected a global economy which was growing more strongly than ever but was increasingly prone to instability in asset prices. The GFC, which was due to excessive real estate lending, was the direct linear descendant of the dot-com boom and slump and the Asian currency crisis in 1998, which preceded it. These highly unstable economic conditions are still in play today and will substantively impact the real-estate research agenda for the next 10 years.

One of the dominant themes of the 2000s was the robust and increasingly self-sustaining growth of Brazil, Russia, India and China (collectively known as the BRICs). When demand in the OECD collapsed in the wake of the GFC, the BRICs quickly adjusted their economic policy settings and continued to grow. Without the BRICs’ contribution to global demand, the recession of 2008 would have been much worse than it turned out to be. Figure 1.11 shows the growing contribution of the BRICs to global demand.

In seeking to understand the instability of OECD asset markets over the last 10 years and the next 10, we should focus on one BRIC in particular: China. China’s free market reforms date back to the early 1990s, but in 2001 it was admitted to the World Trade Organisation, giving it greater access to world markets. Cheap and abundant labour has attracted investment by multinational manufacturing companies from the OECD, particularly America and Japan.\(^3\) China’s competitive advantage in world markets

\(^3\) Approximately 30% of Chinese exports are transfers within American multinationals.
is assisted by a degree of currency manipulation on the part of the Chinese government. Although China’s trading partners – for instance the USA – make a fuss about this, it suits the interests of their consumers to have access to cheap manufactured products and the interests of their politicians to have downward pressure on inflation.

In order to hold the value of its currency down, China provides an unlimited quantity of RMB to world markets and, as a result, accumulates foreign currency reserves (figure 1.12). The dollars that China accumulates in vast quantities are used to buy US Treasury stocks. In small and balanced measures, these international capital flows are not problematic. However, the scale of Chinese investment in US bonds over the last 10 years has been sufficient to substantially reduce the cost of capital to US consumers and US businesses. The rise of China is directly linked to the build-up of debt in the US economy and the emergence of a large, persistent trade deficit. China, by contrast, runs a large current account surplus.

China is not the only Asian nation that supplies funds to the USA and the rest of the OECD. The Japanese economy is also characterised by export dependence and weak domestic demand. Japan, like China, has a high savings rate due to the lack of a universal social welfare and pension system. Globalisation allows Japanese savings to flow into OECD asset markets, helping to maintain the value of currencies that should be weaker and depress the overall cost of capital within the OECD, particularly in the United States.
More technically, the period saw a fall in the standard deviation of quarterly GDP growth rates.

**Figure 1.12:** Build up of Chinese foreign currency
*Source: IHS Global Insight*

In some ways, the flow of Asian savings into the USA is a very rational response to the risk-adjusted returns on offer. Within the OECD, the USA has the highest growth rate of the mature western economies, because of the rapidity with which it adopts new technology and its willingness to accept high rates of immigration. Moreover, US economic and military dominance means that the dollar has unchallenged status as the world’s reserve currency. US bonds are regarded as the safest interest-bearing securities in the world, even in times of substantial economic turbulence in the US financial system. Low interest rates have been a mixed blessing: they have aided innovation and growth, but have also allowed a huge build-up in consumer and government debt.

The rise of China has had a destabilising effect on the economies of the West which is even more subtle. The years between 1992 and 2007 were ones of unparalleled economic success. This success was assumed to be due to the macro-economic policy mix that emerged from the Thatcher/Reagan reforms of the 1980s. The key elements of this were: (1) the successful control of inflation with short-term interest rates; (2) state provision broadly limited to public goods; (3) flexible labour markets because of reduced union power; and (4) a pragmatic approach to public finances within the constraints of a maximum debt-to-GDP ratio. The period became know as the ‘great moderation’, because of the decline in the rate of inflation throughout the OECD, combined with steady GDP growth and employment creation.

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4 More technically, the period saw a fall in the standard deviation of quarterly GDP growth rates.
Figure 1.13 shows OECD inflation over the last two decades. The importance of this fall in inflation cannot be overstated. Not only did it lead to a long period of falling interest rates, leading to a long boom in government bonds, but it gave policy makers a sense that they were fully in control of economic events. Real estate, being for the most part a bond type investment also experienced a long period of stable high returns. The problem was that the decline of inflation was not only due to macro-policy success but also to the flow of cheap manufactured goods from China.

The European response to the economic success of North America and Asia was to consolidate and, to a certain extent, protect the European economic region by the creation of a single currency. The creation of a single currency, it was argued, would allow the single market to allocate resources more efficiently and, in particular, to allow the development of large enterprises, which could compete with American multinationals in using cheap Asian labour.

As it has turned out, the creation of the Euro zone has had a devastating impact on many of the countries that adopted the single currency. The interest rate that was suitable for the northern European countries, such as Germany, with low rates of inflation and relatively sound public finances, was simply too low for those on the periphery: Ireland, Spain, Portugal and Greece. Falling interest rates precipitated a long boom in real estate prices, which stimulated growth in the volatile construction sector and, of course, the build-up of debt. Gains in competitiveness, which were the original aim of the single currency, have not materialised. In fact, it has been the
banking sector that has made most use of the opportunities created by the single currency to consolidate and internationalise. Unfortunately, European banks used their increased access to world money markets to lend into an unsustainable real estate boom.

The crisis in the southern European economies arising from excessive real estate and consumer debt is compounded by a profound fiscal crisis. The governments of the Peripheral-4, with the possible exception of Spain, have fiscal deficits that are so large that they threaten the ability of these countries to borrow in the international capital markets. This situation is only partly the result of the structural flaws within the Euro zone, namely: (1) no mechanism or will to impose fiscal discipline on members of the single currency; (2) implicit guarantee of bail-out, leading to moral hazard, because of a history of fiscal transfers between core and peripheral countries; and (3) over-reliance on real estate markets to drive tax revenues. Something more fundamental is at work: governments, like banks and consumers, have over the last 10 years been seduced by the ready availability of cheap capital. Instead of developing policies to counter the economic challenge of Asia, governments have preferred to maintain the living standards of their electorates by borrowing from it.

In summary, there are three strands to the argument that the ‘architecture’ of the global economy is fundamentally flawed. First, currency manipulation by the Chinese is seeing the OECD rapidly lose its share of world manufacturing markets. Second, the combination of rapid economic growth in Asia, particularly China, combined with high savings rates in the region, is flooding the global economy with cheap capital, depressing long-term interest rates in the OECD⁵. Third, the era of cheap capital, as it has been described, has encouraged the build-up of personal, corporate and government debt in the OECD, making this region highly vulnerable to asset price movements in response to the interest rate cycle. So, when the OECD economy weakens, as in 1998, 2001 and 2007, in response to a collapse in asset prices, the first choice of policy markers is to cut interest rates to refl ate asset markets. Low levels of inflation, in part due to the rapid expansion of production in Asia, make, in the short and medium term at least, constant monetary stimulation a viable, if short-sighted strategy. These three strands can be summarised as: high growth, excess savings and low interest rates. When combined with weak regulation of the highly dynamic and rapidly globalising banking sector, then it is quite obvious

⁵ In due course, the growth of consumption in China will provide a powerful stimulus to the global economy that will offset the current negative trade shock. However, the full benefits of Chinese consumer spending growth will not be felt until its currency rises and broad social welfare provision reduces the impetus to save.
what caused the Great Financial Crisis. The problem is that, apart from some heavy-handed reform of the global banking sector, since 2007 none of these conditions have changed. OECD policy-makers are relying on low interest rates to restart economic growth and, as night follows day, are creating the conditions for the next boom and slump in the global economy.

The real estate research agenda

The purpose of this book is to review a remarkable decade in the history of real estate. If there is a conclusion or a ‘message’, it is that real estate research needs to be more aware of the big issues in the global economy, such as the ‘rise of China’ and the impact in the West of the Asian ‘savings glut’. Perhaps the message is even more radical; real estate research is only likely to produce accurate forecasts when it is fully cognisant of the influence of geopolitics on asset market performance. As globalisation proceeds, real estate outcomes at the city or even neighbourhood level are ever more influenced by politics and economics on the other side of the world. Real estate research that does not imaginatively and creatively deal with these themes runs the risk of being irrelevant.

Academic real estate research, although it provides many carefully analysed case studies and useful theoretical insights, has seemed to be pursuing an ever narrower micro-economic and finance-driven agenda in recent years. So, whilst it is able to provide us with a better appreciation of, for instance, the complex times series processes that describe the evolution of real estate prices; the relationship between real estate traded in the public and private markets; the impact of mature trees on nearby house prices; it was not able to forecast the over-valuation of real estate markets that created the Great Financial Crisis. Nor has there been a great deal of useful retrospective analysis.

So one of the key lessons for real estate research from the events of the last 10 years is that it needs to be far more intelligently informed about the key underlying drivers of the global economy. This is not merely a matter of taking macro-economic forecasts and plugging them into rental models. There may well be a fairly robust statistical relationship between retail sales and retail rental value growth. If, however, retail sales are being driven by ‘super-loose monetary policy’ in an era of cheap capital, then the broader ‘forces acting’ need to be understood. Real estate outcomes are substantially impacted by savings rates, money supply growth, the output gap, labour markets’ flexibility, taxation and fiscal policy. These macro-economic
Real estate and globalisation

concepts need to be fully understood by real estate researchers and applied to real estate market data.

Such a research agenda is not easy: the pace of globalisation is rendering many traditional macro-economic relationships unclear, or, at least, capable of misinterpretation. For instance, in the period leading up to the GFC it was common to hear talk of the ‘great moderation’. Some politicians even referred to having overcome the economic cycle. After the fact, it is easier to see that inflation was partly held in check by widespread migration (keeping wages down); and the penetration of OECD markets by goods manufactured in low-cost China. Meanwhile, surplus savings in Asia were recycled, via the bond and money markets, into a vast build-up of debt: corporate, government and consumer. Many of these trends were evident prior to the crisis, as many of the articles in this book show, but they were never quite organised into a coherent critical analysis. In any case, these trends will continue to have the most powerful effect on real estate markets. Globalisation is rapidly altering the basics of the world we live in and it needs to be fully part of the real estate research agenda.

A more controversial point, perhaps, is that real estate research needs to be informed by, and interested in, geopolitics. Although it never features in textbooks, macro-economic outcomes are profoundly affected by geopolitical developments. For instance, any hint of waning US military power or its precursor, waning economic power, will affect the value of the dollar, the equilibrium level of US interest rates and, therefore, US real estate prices. The fall of communism, including its abandonment by China, is another example. As it was seen at the time, the chief benefit was lower defence spending and greater resources for social purposes. The more important effect by far was the incorporation into the global trading system of nearly 1.5bn additional workers, allowing a long period of low inflation growth and asset price inflation. A final example is the formation of the Euro zone. Despite the rhetoric about economic efficiency, there is no doubt that ancient concerns about the balance of power in Europe were at the heart of that project. One interest rate for all Euro zone countries has had profound macro-economic and real estate consequences. Geopolitics tends to render economic models irrelevant, so it is a legitimate part of the broader real estate research agenda.

Background to this book

Over the last 10 years, Grosvenor Research has produced an article a month on some aspect of real estate economics. Although the topics covered and the research methods deployed have been very varied, the aim of the series has always been to assess the ‘forces acting’ on global real estate markets,
whether local, national or geopolitical. The articles, almost always written in a rush, are on topics that appeared at the time to be of interest to Grosvenor, its partners and investors. Quite often, we hit on some of the decade’s most important issues, but did not fully predict the full implications of these. Collectively the articles describe and analyse the ongoing impact of globalisation on real estate markets. Each chapter contains an introduction which sets the individual articles in a broader context. The articles appear in the order they are referred to in the text.