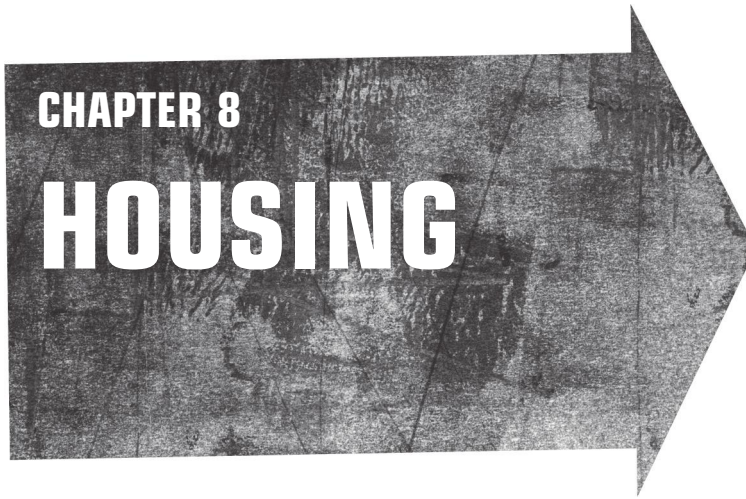


CHAPTER 8
HOUSING

WHAT IT'S ALL ABOUT

- Types of property and how we measure house prices
- What factors influence the price of housing
- How we judge whether houses are affordable
- Why an investor might buy housing
- What impact housing has on the wider economy
- Why house price bubbles might occur

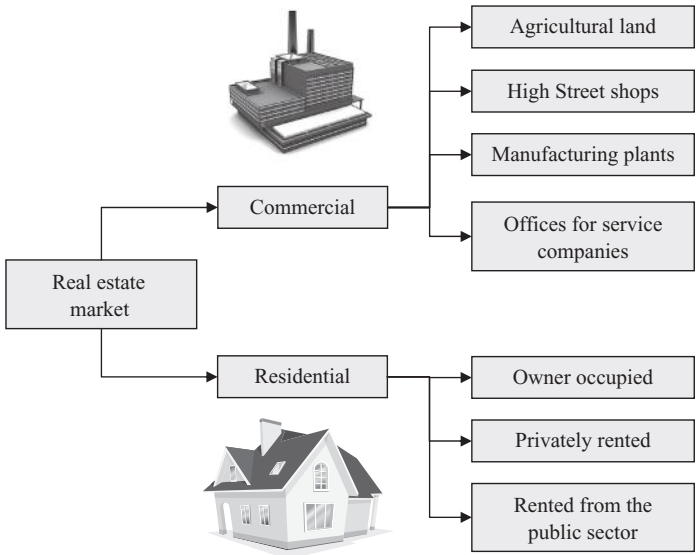
THE MARKET FOR HOUSING

Standard economics textbooks don't often contain a chapter about housing. However, the housing market can have such a substantial impact on the wider economy (and the other way round, for that matter) that it is an essential topic to cover. After all, booms and busts in the housing market have been associated with expansions and recessions in the economy as a whole on many occasions in the past. And, more recently, it was the bust in the US housing market from 2006 onwards that led to the sub-prime crisis, which went on to develop into the biggest financial meltdown for a generation.

Before we get into the nitty gritty of how the housing market works, let's explore a few basic facts about property – or real estate as it is sometimes called. We can break the market down into two major types. First, commercial properties are those that retailers or producers require as a base to sell or produce their goods & services. Think of a High Street store, a manufacturing plant, or an office which houses a call centre.

Second there is the market for residential properties, which will be the focus of this chapter. These are the flats and houses that we see for sale or rent in estate agents' windows and on their websites. They can be freehold, where the land on which the property stands is owned, or leasehold where the land is effectively rented by

The market for real estate



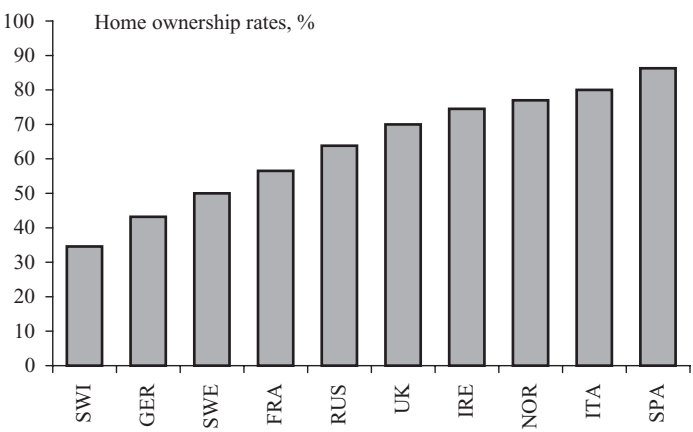
the property owner. Just as with commercial properties, residential real estate can be purchased outright or with a loan – or mortgage. The owner of the property can live in it themselves (known as 'owner occupation'), or alternatively the owner might be a landlord who lets his property out to someone who wants to rent it.

Landlords need not just be private individuals – tenants often rent their homes from private property companies or sometimes from the public sector. Whether a home is owner occupied or rented out is called the 'tenure'

of the property. The chart below shows how rates of owner occupation can vary significantly across different countries.

In this chapter we'll be looking mainly at the owner occupied market, as large fluctuations in house prices have in the past impacted significantly on the performance of the economy as a whole. There are many different sub-markets within owner occupation – the sort of people who demand detached country properties will, for example, be very different from those who demand penthouse flats in the city. But to keep it simple we'll focus on the overall market for property more generally. We'll also get a flavour of how the rental market works as well when we take a closer look at buying-to-let.

Owner occupation rates in Europe



WHO SAID IT

"It's tangible, it's solid, it's beautiful. It's artistic, from my standpoint, and I just love real estate."
– Donald Trump

Housing is an asset in the same way that money is. While it may be more illiquid than money (it is more difficult to convert into a medium of exchange) it is a store of value and it can be used as an investment, as we will see later in the chapter. From this point on we'll refer to 'house prices' as the price of residential property in general – covering all types of owner occupied dwelling (flats and houses alike).

HOW WE MEASURE HOUSE PRICES

In developed economies there tends to be much focus on house prices. It is the topic of many a dinner conversation: everyone seems to have a view on how house prices might or might not move in the future. In some

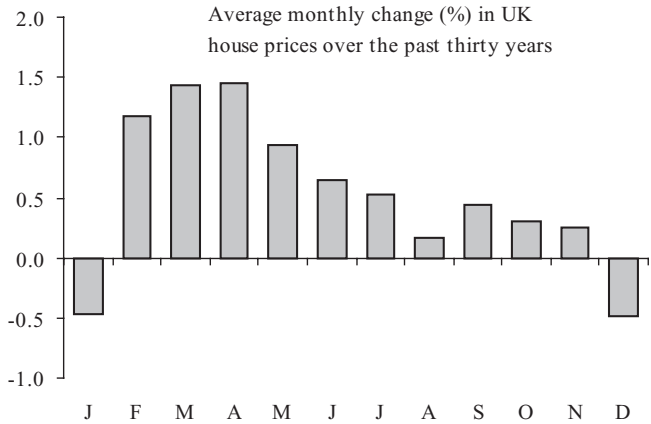
countries the fascination is greater than in others. Take the UK for example. Here's an amazing statistic – on average, two measures of house prices are published every week of the year. That's how much people like to focus on how the price of their most valuable asset – the property they own – changes.

Usually house prices are published on a monthly basis, sometimes in value terms (for example the average price of a house in pounds sterling in the UK, US dollars in America, or euros in continental Europe) and sometimes as an index (prices being set to 100 in some base year). But this is not typically what you'll hear quoted in the media – the biggest focus is how much house prices have changed either over the past month or the past year, normally expressed as a percentage rise or fall.

Just like economic activity, we usually adjust house prices for the ups and downs caused by the time of the year. After all, we wouldn't want to misinterpret a decline in prices during a typically quite month as an *underlying* fall in property prices. For example, house prices might typically rise by more in the first half of the year, and often fall in the second half – which is why it's important to seasonally adjust to smooth out these monthly variations.

A bigger issue relates to the mix of properties sold in any one period. Imagine, for example, that in one month there are lots of small flats sold, but in the next month sales are dominated by large detached houses. Of course,

The importance of adjusting house prices for the time of year



prices will go up because the type of house being sold in the second month is larger than in the first. But what we really want to know is whether *the same type of houses or flats* are going up in price – we don't want our house price indicators to be influenced by the sort of properties being sold.

That is why most measures of house prices try to take account of the changing type of house being bought and sold in each period. There are two main ways to do this. The first is by using a statistical adjustment procedure known as 'mix adjustment'. This is where we adjust the price for the size of house being traded, as well as other factors like the location it's in and the facilities that it has. In short, we are trying to make the houses traded in

one period comparable with those traded in the next. This is the way that two of the most popular measures of house prices in the UK are calculated – those of the Nationwide building society and the Halifax.

The second way to make sure we are isolating only underlying moves in house prices is to survey the *same house* every time it comes up for sale. This is called the 'repeat sales' method, but it is complicated by the fact that the same house doesn't often come up for sale. This is the methodology of the most popular house price measure in the US – the Case-Shiller index, named after its developers Karl Case and Robert Shiller.

House price measures don't always tell the same story. Sometimes, they can move in different directions from one another, one rising and another falling *in the same month*. There are a few reasons that this can happen. First, some measures may be biased towards certain regions or towards different types of property (for example cheap flats versus expensive detached houses), which may rise and fall at different rates. Some measures even exclude certain transactions if they are for too high a price, as they may end up distorting the index.

Second, and perhaps more importantly, prices can be measured at *different points in the transaction*. For example, some indicators are designed to measure asking prices – the prices that properties are put on the market for (which, after a good deal of haggling, need not be the same price for which they are finally sold). That's clearly

quite early on in the sales process. A little further down the line are prices measured at the time the buyer gets a mortgage approved on the property they intend to buy – at which point they have probably broadly agreed the price at which the property will eventually be sold. And further along the sales process still we can measure prices at the time the house is finally transacted and the keys exchanged.

Whatever stage in the process, when you hear about house prices on the news or in the papers they will almost always be referring to the cash (or what is called the 'nominal') price. But it is often a good idea to adjust this for inflation in the economy. So, if house prices were rising at 10% and inflation was 4%, for example, then 'real' house prices (the rise over and above the rate of inflation) would be 6%. This gives us a better idea of how house prices are changing compared to the underlying rate of prices generally in the economy.

WHAT DRIVES THE PRICE OF HOUSES?

If you've already read the rest of this book then this should come as no surprise: the price of housing is generally determined by the interaction of the demand for and supply of properties. When demand is high sellers know they can get a good price for their property and will often hold out until a buyer comes along who is willing to pay more. Likewise, when there are a lot of new properties

coming on to the market it may be more difficult to find buyers for them all, and discounts may be needed to entice potential buyers to part with their money.

In reality when we see house prices changing it's not always clear whether it's the price of the land that's changing or rather the price of the bricks and mortar standing on that land. In most cases the two are usually inseparable. But because building materials don't typically change in price as much as houses do we can probably safely assume that house price movements are more to do with the land that properties occupy than the properties themselves.

To begin with let's have a think about the sort of factors that influence the *demand* for housing:

- *Mortgage rates.* Most people need a mortgage loan to buy a house, and the higher the cost of borrowing that money (that is, the interest rate) the fewer the number of potential house buyers there are likely to be.
- *Credit availability.* It is not just the cost of borrowing money that will be important but its availability too. If banks are strapped for cash and are finding it difficult to lend – as was the case in the recent credit crisis – then this could in turn limit the demand for housing.
- *Household incomes.* A house or flat is often the biggest purchase that a household will make in their lifetime. The size of house they can afford

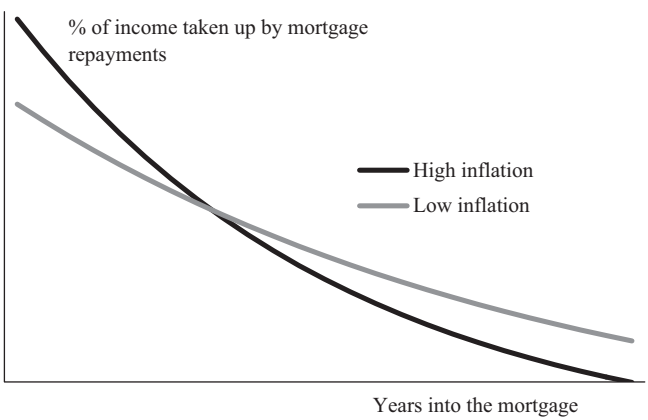
to buy will depend on their earnings – both now and in the future. Across the economy as a whole household earnings will depend on the total number of people in employment.

- *Demographics.* Growth in the population and changes in its composition – in particular the number of people who are in prime 'house buying' age groups – will be important in affecting the total demand for property in an economy. An ageing population in many developed countries over the coming decades may limit the demand for housing in the future, but inward migration in some countries and increased longevity could support housing demand.
- *Expectations and confidence.* A person may be less inclined to buy a house when they think prices might fall in the future, but more likely to buy when they believe prices will rise. This is why up and down cycles in housing can so often be self-reinforcing.
- *Taxation.* Some tax systems encourage the purchase of housing, others do not. Changes in the tax regime can be important especially for those considering buying a property as an investment as second homes usually attract capital gains tax when they are sold.
- *The currency.* If the currency is weak it may encourage buyers from abroad into the market because it will make house prices in that country look cheaper.

- *The rate of inflation.* The rate of general price inflation can have an important effect on housing demand. Higher inflation not only tends to push up interest rates, but it also raises in the early years of the mortgage loan the amount that a house buyer must repay relative to their income. This is called the 'front-loading' or 'tilt' effect, and is shown in the chart below. As you can imagine, higher inflation makes it more difficult for a household reliant on borrowing money to buy a house to get on to the housing ladder.

The price of housing too will influence the demand for housing – as the downward sloping line in the graph

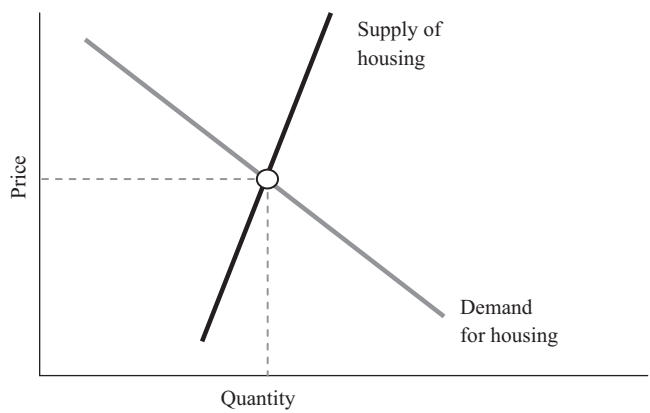
The effect of inflation on mortgage payments



below shows, the higher house prices are, the fewer of them people typically want to buy.

What about the supply of houses? Over short periods of time supply depends on how many people want to sell their houses. But in the long run it will depend on how many houses there are in the country. And, as you can imagine, it's not easy to change this quickly – the stock of owner occupied houses and new house building therefore cannot move around that much in response to changes in house prices. This is why we've drawn a steep line to represent housing supply in the graph below. Developers will be encouraged to build more houses to sell when the price of them rises, but planning regulations and the physical availability of land might prevent them from doing so that easily. We describe supply as

The demand for and supply of houses



being relatively 'inelastic' when it comes to how it responds to price changes.

The point at which the buyers and sellers are both happy and willing to transact is shown where the demand and supply lines cross in the graph above. Bubbles often develop in the prices of assets such as housing (as they do in other assets like shares and currencies) as people get carried away and begin to believe that prices should be higher than is actually justifiable. Expectations of future capital gains push the demand curve ever higher.

WHO YOU NEED TO KNOW

David Hendry

David Hendry is a British economist who specialises in using statistics to explain economic relationships – an area called econometrics. He was an early user of such techniques to explain how demand and supply in the housing market interact to determine house prices. Almost 30 years ago he wrote a key paper which is still cited by economists forecasting the housing market today (entitled *Econometric modelling of house prices in the United Kingdom*).

Econometrics plays an important role in the lives of economists, allowing us to quantify how important the link is between one economic variable and others. For example, imagine we wanted to establish the impact that household incomes versus interest rates had in influencing house prices. We could do this by using an econometric technique called 'regression analysis', which could tell us both how strong the relationships are and how much we could rely on incomes and interest rates (in this case) to forecast house prices in the future.

We can use econometric techniques to look at house prices across regions (cross section analysis) or over time (time series) – Professor Hendry specialises in time series econometrics. This is a complicated area, not least because lots of economic variables go up over time, raising the risk that when we find a relationship between two or more indicators it may be spurious (for example, house prices and global temperatures may both rise over time, but that does not mean one leads to the other).

And because the supply response can be relatively static, it tends to be shifts in demand like this that cause house prices to move.

AFFORDABILITY

One way in which economists like to judge whether the markets have got it right – that is, whether the price of housing is appropriate or not, or whether we're in bubble territory – is to look at measures of housing affordability. The concept is relatively straightforward – for a typical buyer how financially comfortable would it be for them to buy a property with house prices where they are right now? There is no one 'right' measure of affordability, so let's take a look at two of the most commonly used measures along with their advantages and pitfalls.

Firstly, we can look at the average house price and compare it to the income that a typical household brings home after tax. This gives us our first measure of affordability – the **house price-to-income ratio**. Another way of understanding this is that it is the number of years' take home pay that a household needs to earn in order to buy a house. Imagine this ratio was 4, for example – this would mean that a household would have to save every penny of their take home pay for the next four years in order to buy a house outright at current prices.

The reason this is such a closely watched measure of affordability is that banks often restrict the size of mort-

gage they are willing to lend to households by looking at their incomes. So, the higher are house prices relative to incomes, the more difficult it will be to get a mortgage. Banks also specify the maximum mortgage they are willing to lend as a percentage of the value of the house. So, for example, a bank may not allow people to borrow more than 75% of the value of the house – or another way of putting it is that the bank requires the house buyer to stump up a 25% deposit.

Why do banks limit loans relative to incomes? Well, because the interest payments on the loan will be made out of household income, banks need to be sure the household is earning enough to be able to pay it back – along with the original loan itself. As for limiting the size of the loan relative to the value of the house, this is done to guard against something economists call 'moral hazard' remember we came across this concept in Chapter 6 on central banking. By putting up a decent deposit it ensures that the house buyer has a vested interest in the house – and in repaying the mortgage loan to the bank. Mortgages which are high relative to either incomes or the value of the property are inherently more risky for the bank to lend, so they tend to attract a higher rate of interest for the borrower.

There is a problem with looking at house prices relative to income when trying to judge affordability. While it is helpful in telling us how high house prices look to a potential buyer, it does not tell us what they can afford to pay in mortgage interest payments on an ongoing basis. The reason is that the house price-to-income

The recapitalisation effect

	First period	Second period
House price	£200,000	£400,000
Income	£50,000	£50,000
House price-to-income ratio	**4.0**	**8.0**
Mortgage	£150,000	£300,000
Deposit	£50,000	£100,000
Interest rate	5.0%	2.5%
Interest-only repayment	£7,500	£7,500
Repayment-to-income ratio	**15.0%**	**15.0%**

ratio takes no account of the level of interest rates. What might look a reasonable multiple at one rate of interest may look highly unaffordable when interest rates rise. So another measure of affordability is the 'mortgage repayment-to-income ratio'.

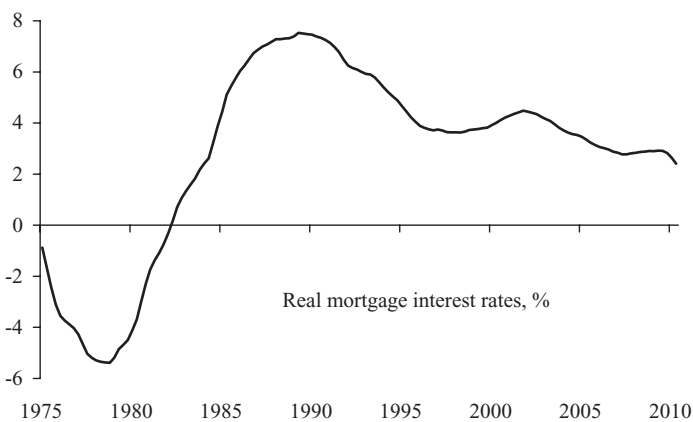
Interest rates have changed a lot over the past few decades. In real terms (in other words, after we adjust for the rate of general price inflation) mortgage interest rates have been falling in developed economies over the past 20 years, making it easier for people to afford more expensive houses relative to their income. In other words, the sustainable or equilibrium house price-to-income ratio should be higher when interest rates fall to permanently lower levels.

Let's illustrate this with an example. Take a look at the chart above. Here we've assumed that in the first period a household with an income of £50,000 per year buys a house worth £200,000 with a 75% mortgage

(and therefore a 25% deposit). That means the house price-to-income multiple is 4 (£200,000 divided by £50,000). In the first period we've set interest rates to 5% – which means that the household would be paying £7,500 per year in interest to the bank (that is, 5% of the £150,000 mortgage). The mortgage repayment-to-income ratio would be 15%.

Now imagine that interest rates suddenly halve, from 5% to 2.5%. This makes housing much more affordable for mortgage borrowers. One question we can ask is this – how much could house prices go up in the lower interest rate environment of the second period so that the repayment-to-income multiple remains the same? It turns out that when interest rates halve house prices (and the price-to-income ratio) can double without leading to any worsening in affordability on the repayment-to-income ratio.

Falling UK real mortgage rates over the past 20 years



And this is what actually happened to many housing markets during the 1990s and 2000s. Real interest rates fell (see the previous graph) which then pushed up the sustainable level of house prices relative to incomes. This phenomenon – the impact of lower interest rates being felt through higher house prices – has been termed the 'recapitalisation effect'. Of course, if it turns out that lower real interest rates are not here to stay and they rise sharply in the future, then the recapitalisation effect could work in reverse – higher rates would mean the sustainable level of house prices should be lower.

HOUSING AS AN INVESTMENT

Not everyone buys a property to live in. Some people buy houses as an investment, in the hope that the rise in the value of the house along with the rent they receive from the tenants will together more than pay the interest on the mortgage taken out to buy the property. The purchase of a house in order to let it out is known as 'buy-to-let'. Not all property owners who let out their houses are landlords by choice. Some are what have become known as 'accidental landlords' – they have decided to move house but have not been able to sell their own, and instead opted to let it out.

The UK provides an interesting example here, with buy-to-let schemes heavily promoted from the late-1990s/

early-2000s. Banks and other finance providers offered budding landlords special buy-to-let mortgages, which were plentiful during this period of financial excess. Reflecting the fact they were operating as a business and the higher risks involved, these loans were generally at a higher interest rate and had more stringent terms than if the loan was for an owner-occupier buying a property. But the scheme generally led to lower interest rates than would have been the case otherwise.

The point of the scheme originally was to support the private rental market which had been in long-term decline. But it also led to a surge in demand for private properties, which were taken out of the owner occupied market and offered for rent by buy-to-let landlords. The dramatic rise in property prices in the UK between the mid-1990s and the onset of the credit crisis in 2007 was undoubtedly supported by this scheme. This happened as part of a more general phenomenon globally, as investors faced with low returns elsewhere (shares and interest rates) looked for new opportunities to invest their money. This was dubbed the 'search for yield', with investors often taking on additional risk in order to generate better returns in a period of generally low interest rates.

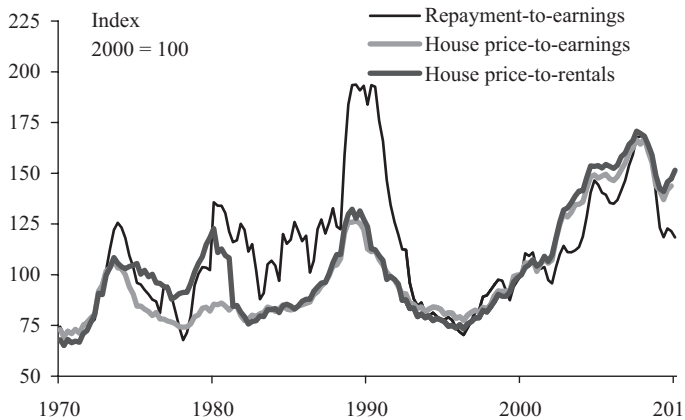
This brings us on to a third measure of affordability, one which is particularly useful for investors when deciding if it's a good idea to buy and let a property. That is the **rental yield –** how much rent the property generates per year compared to the price the investor has to pay for it.

Take a flat which costs £200,000 – if the investor can get an annual rent of £10,000 for it, then his or her rental yield would be 5%.

But that's in *gross* terms – in other words, it's the percentage return that an investor would receive if there were no deductions. In reality, however, there are estate agents' fees, service charges, taxes, the cost of keeping things in order for the tenant and fallow periods – times when it is not possible to find someone to rent the property. After accounting for all of these costs the return the landlord gets will be lower – we call this the *net* return (as it is net of all the costs). Along with expectations of how much house prices will rise in the future, it is this that the landlord must compare with the cost of owning the flat – either the mortgage rate on the loan taken out to buy it, or the alternative return that could have been earned by investing money elsewhere (remember from Chapter 5 that this is called the opportunity cost). If the combined expected capital and rental return is sufficiently greater – to compensate for the risks involved – than the cost of financing the property then it makes sense to buy-to-let.

This way of assessing affordability has its roots in asset pricing theory. Think about when you buy a share in a company – what influences how much you are willing to pay for it is how much of a dividend will be paid to you each year for holding the share, and also how much you think the share will rise in value in the future. A housing market investor thinks of the price of property in the

Measures of housing affordability – the UK as an example



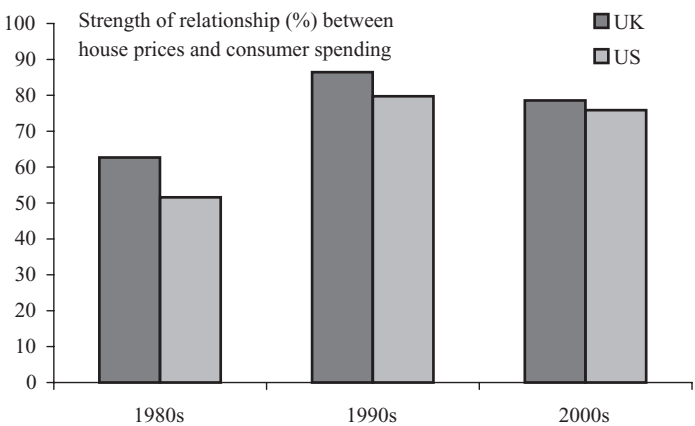
same way as a stock market investor thinks about the price of shares, viewing the rental payments in the same way as dividends.

THE IMPORTANCE OF HOUSING TO THE WIDER ECONOMY

One of the reasons economists spend so much time analysing the housing market is because of the impact that it can have on the wider economy. Developments in the housing market can affect the rate at which the economy grows, the rate of inflation in the economy and, as a result, the rate of interest that the central bank sets.

The first point to make is that the relationship between the housing market and the economy generally can vary substantially both across countries and over time. Take a look at the chart below. This shows, for the US and the UK, the relationship between house price growth and the growth rate of household spending in the economy (both adjusted for inflation) over a long period of time – 100% indicates a perfect positive relationship between the two (in other words both go up and down at the same time) whereas zero would suggest there is no relationship. As you can see, spending and house prices tend to move strongly in the same direction as each other.

The relationship between house prices and consumer spending



Why is there such a strong relationship between house prices and spending (and thereby economic) growth, and is it reasonable to conclude that it is the housing market that drives the economy or is it the other way round?

The theory that housing influences the economy usually relies on a phenomenon called 'wealth effects'. When house prices rise, people who own property feel wealthier since the price of their most valuable asset has gone up. People may feel more confident about the state of the economy and job prospects, which in turn encourages them to go out and spend. Moreover, housing is usually an important part of one's savings – it is an asset that can be liquidated in retirement, perhaps by downscaling to a smaller house and using the proceeds to spend. If house prices rise, therefore, there is less of a need to save now for retirement. And, for any given amount of income you earn, the less you save the more you spend.

There are also more direct links between house prices and spending in the economy than wealth effects. If a household needs money to spend but would prefer not to have to pay the high rates associated with a personal loan, one option would be to borrow against the equity in their house – or 'equity withdrawal' as it is known. Secured borrowing (such as mortgage loans, where failure to repay can mean losing the house) is usually done at much lower interest rates than unsecured borrowing (where there is no asset for the bank to take in

the event of a default). When house prices rise, there is more opportunity to borrow against the equity that has built up in the asset.

Let's go back to the example we looked at earlier, where a person owns a house worth £200,000 but also has a mortgage of £150,000. Banks these days don't usually like offering loans worth more than 75% of the value of the house, so if the house price stays at £200,000 the owner would find it difficult to borrow any more against their house. But imagine if the house price were to jump to £250,000. If the bank were to lend up to its 75% limit that would mean the owner could borrow an extra £37,500 – 75% of the increase in the value of the property. They could then use that to spend, which would raise the rate of economic growth. In other words, higher house prices make it easier for homeowners to access credit from the bank.

Another reason to think that higher housing transactions (and in turn higher house prices) should raise the rate of consumer spending is that when people move they tend to spend money on consumer durable goods – such as kitchen equipment, carpets, curtains and televisions. However, it could be that these purchases are simply being brought forward to be timed to coincide with the house purchase, so greater spending on household goods now could mean less spending in the future.

But, there are also some arguments to suggest that developments in the housing market do not *cause* but are

simply *associated with* changes in the state of the economy. We've already seen that consumer spending and house prices are closely related, but it could be that both housing and spending are influenced by movements in the same things – in particular, household incomes and interest rates. A rise in incomes or a fall in interest rates, for example, would support consumer spending and housing demand at the same time without one *leading to* changes in the other.

Another reason to question the relationship between house prices and consumption is that when house prices go up, if you move house then you will only have to pay an equivalently higher price for another house. And think of the people who will be out of pocket who are buying housing for the first time – surely their spending will go down as prices increase? After all, they will need to take on a larger mortgage to buy property when prices rise, which also means increased interest costs. That could eat into their disposable income and reduce how much they have left to spend on other things.

Higher house prices are simply a transfer of wealth from those who don't own property to those who do. Rising prices should not be considered to be productive in any sense, therefore, apart from the increased provision of estate agent and legal services that are typically associated with more housing transactions and thereby higher house prices.

BUBBLE TROUBLE AND THE SUB-PRIME CRISIS

Because of the importance of the housing market when things go wrong there are typically significant negative knock-on effects throughout the rest of the economy. In an upswing house prices can be driven higher by expectations of future capital gains, but they can end up going too far – just like they did in the run up to the sub-prime crisis. We learnt about the sub-prime crisis in Chapter 3 – people who weren't in a financial position to be owner occupiers nonetheless borrowed money and bought houses.

The concept of fair value or the equilibrium price simply got lost in the hubris as buyers jumped on the bandwagon of ever rising prices. But eventually the laws of economics suggest that prices will eventually head back to where the fundamental drivers of demand and supply tell us they should be. And that is exactly what happened during the crisis – house prices in America began to fall from late 2006.

Recessions and house price corrections often go hand in hand, which can be bad news for home owners – especially if they borrowed too much to buy their house in the first place. When a buyer has a large mortgage relative to the price of the house, it does not take much of a decline in house prices before how much they owe becomes larger than the value of the house – so called

WHO YOU NEED TO KNOW

Robert Shiller

Robert Shiller has spent much of his academic life studying bubbles – or unsustainable booms – in asset prices, in particular stocks & shares and house prices. He is responsible, along with Karl Case, for developing the most widely watched house price index in America – the Case-Shiller index, which measures house price inflation by looking at repeat sales of the same houses.

Perhaps his best known book is *Irrational Exuberance*, named after a phrase originally coined by Alan Greenspan in 1996, then Chairman of the Board of Governors at the Federal Reserve (America's central bank) to describe excessive stock market valuations at the time. When the book was first published markets were gripped by the dot.com boom – the surge in the price of shares in internet companies that was eventually to reverse, helping bring about the 2001 recession in the US and noticeable slowdowns in most developed economies.

The field of economics within which Shiller works is called 'behavioural' economics or finance – an investigation of how households, investors and firms make decisions and what their impact is on the economy. While that might seem to be what most economists do anyway, the important difference is that it questions the assumption of 'rationality' in economics – the idea that individuals will always operate to maximise their own self-interest (a bit like Adam Smith's invisible hand story). It is a direct challenge to the Efficient Markets Hypothesis, which says that in the markets for finance and assets (such as shares and houses) prices are always at the right level because they reflect all information that is known to affect the price. The volatility of asset prices – especially associated with the credit crisis – has increased the level of interest in behavioural economics over recent years.

'negative equity'. And this became a problem for home owners in America in the late 2000s when the recession associated with the credit crisis left many sub-prime borrowers jobless, at which point they could no longer afford to repay the interest on their mortgages.

WHO SAID IT

"As house prices fall, a huge amount of financial folly is being exposed. You only learn who has been swimming naked when the tide goes out."

– Warren Buffet

In such situations in the first instance some households might go into arrears, falling behind on their monthly repayments to the bank. Banks usually allow a period of grace before taking action, but if they believe a household will not be able to repay their debt they might move to repossess the property. This means forcing the owners to sell, using the proceeds to pay off the mortgage. With negative equity, of course, this may not be possible.

In most European countries, if the sale price of a house is insufficient to cover the mortgage then the home-owner owes the remainder to their bank. However, in some states of America mortgages are what are known as 'non-recourse' – in the event of a fall in property prices and a forced sale, the homeowner is only liable to pay back the current value of the property, and not the mortgage. The sub-prime crisis saw home-owners posting their keys back to the bank, as they were unwilling to continue paying interest on a larger mortgage than the declining value of their property.

The big problem with forced sales is that they can end up reinforcing the downturn, as the supply of houses coming on to the market is increased, depressing prices further. And, as we learnt above, the further prices fall the less wealthy people feel – spending in the economy slows, unemployment rises, and the whole process continues. Such a situation often requires outside intervention – support from either the government (perhaps a cut in housing taxes) or the central bank (lower interest rates) to stabilise conditions.

The scale of the recent sub-prime crisis was so large that its effects will continue to be felt for many years to come. Only the intervention of policymakers on a grand scale has thus far prevented a repeat of the 1930s Great Depression. The power of the housing market to make and break an economy is truly remarkable.

WHAT YOU NEED TO READ

- An excellent article examining the relationship between economic growth and the housing market can be found on the Bank of England's website. See Andrew Benito, Jamie Thompson, Matt Waldron and Rob Wood's article, 'House prices and consumer spending': *www.bankofengland.co.uk/publications/quarterlybulletin/qb060201.pdf*.

- A website which posts interesting articles about the UK housing market (and whether house prices are sustainable) is rather aptly called House Price Crash and can be found here: *www.housepricecrash.co.uk/*.

- Robert Shiller has written two particularly popular books. In *Irrational Exuberance*, Princeton University Press, 2000 & 2005, he looks at destabilising asset price booms, while in *Animal Spirits* (2009, with George Akerlof) he examines how human psychology can explain the problems of housing market excesses.

- A very accessible book which looks at bubbles in financial and asset markets is *The Origin of Financial Crises* by George Cooper, Harriman House, 2008.

- Finally, the tutor2u website has a good section on how the housing market works, explaining in particular how the housing market interacts with the wider economy and the importance of demand and supply: *www.tutor2u.net/economics/housingmarket.htm.*

IF YOU ONLY REMEMBER ONE THING

House prices, just like the prices of everyday goods & services, are determined by the interaction of demand and supply. There's more than one way to judge whether house prices are affordable, but prices can – and often do – move a long way from these measures of fair value. House prices can have a serious destabilising effect on economies, both in the upswing and the subsequent downswing.