

## **CHAPTER 5**

# **MONEY**

## **WHAT IT'S ALL ABOUT**

- ▶ **Why money exists and how we measure it**
- ▶ **What affects how much money people hold**
- ▶ **Where money comes from and how banks can 'create' it**
- ▶ **The relationship between money, activity and inflation**
- ▶ **Who is borrowing and who is saving money**
- ▶ **The importance of borrowing to the economy and the credit crunch**

## WHY DOES MONEY EXIST?

This might sound an odd question to begin with. Surely it's obvious what money is – it's the notes and coins we carry around in our back pockets to buy goods & services in the shops, as well as the money we keep in our bank accounts. While that's true, there happens to be a lot more to defining money.

It wasn't always like this, being able to whip out a £20 note or a credit or debit card to pay for what you wanted. Before money existed we used to trade with each other by a system of barter – offering something you have in return for someone else's belongings. The problem with this system was what was called the 'double coincidence of wants' – not only do you need to find a person who has what you want, but to get it he or she must want what you have to offer.

Thus, one of the four key functions of money is it operates as a 'medium of exchange'. The second purpose of money is that it is a 'unit of account', allowing us to judge the price of goods & services by the same standard – in other words, in terms of US dollars in the United States, pounds sterling in the UK and euros in Europe. Thirdly it is a 'store of value' – we can earn money now and keep it to spend at a later date. When an economy has high inflation it can undermine this function because money becomes worth less in terms of the goods & services it can buy over time. Finally, money is 'standard of deferred

payment', which simply means that we can settle future debts with it (which is a similar function to the store of value).

In the past money itself used to be actually worth something – the materials that were used to create coins were things like gold and silver which had intrinsic value. The problem with this was that people used to cheat the system by either 'clipping' (trimming the coins) or 'debasement' (recreating coins with a lower gold or silver content).

We've come a long way since then. One of the reasons that this system was replaced by paper money was that it was cumbersome to carry around heavy gold coins. So instead, people began depositing their heavy gold with banks, and in return received receipts which promised to repay the bearer that particular gold deposit in the future. These notes could then be used to pay

#### A gold receipt



for goods & service more practically than by using the gold itself.

There was one more crucial step on the way from this system becoming what we know today. The banks that held the gold deposits on behalf of their owners realised that it was a shame to have such a big stock of gold doing nothing, especially when very few of the owners cashed in their receipts at any given time. So what they began to do was issue more receipts than the gold they were looking after – in other words, they loaned the gold to people who wanted to borrow it. As long as people with receipts didn't all demand the gold back at the same time the system would work.

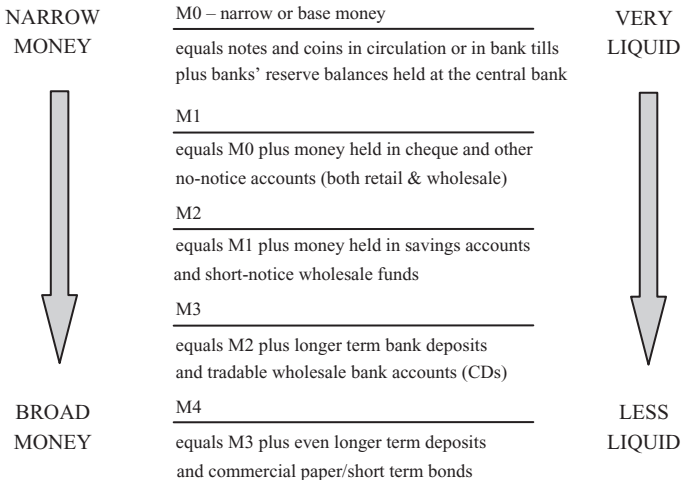
It wasn't that long ago since *countries* operated this system – the 'gold standard', whereby governments promised to exchange money for gold at a predefined rate (even though they didn't have enough gold to satisfy all of the notes they had issued), existed until the early 1970s.

What operates now is a system called 'fiat money'. The notes and coins in your pocket and the money balances in your bank accounts are intrinsically not worth anything, and can't be converted into gold at some predefined rate. Rather, people place their trust in the central bank that it will not issue excess amounts of money – otherwise it could become worthless in the future through higher prices. This is the reason that achieving low and stable inflation is so important.

## WHAT IS MONEY TODAY?

Most countries produce monthly figures on the amount of money in the economy. We can define what we call money in a number of ways, starting off from a very narrow measure of notes and coins to very broad measures which include various types of bank deposit. These various measures are labelled M0 all the way through to M4, as the graph below shows. These are not always exactly the same in each country – what we have done in the graph below is to look at what are the most common definitions used across the world.

### Definitions of money



The narrowest measure of money is what's called the 'monetary base', also referred to as M0. This is made up of all the notes and coins in circulation among the public, money in banks' tills, and the cash deposits (known as reserves) held by commercial banks with the central bank. People tend to hold notes and coins for everyday use when buying goods & services, but given the increased use of credit and debit cards the relative size (and relevance) of narrow money has fallen over recent years.

As a result, there is usually a lot more focus on the broader measures of money, such as M3 and M4, which include less liquid (in other words less easily accessible) deposits held in savings accounts. These are the sort of deposits we might have to give the bank some notice before they can be withdrawn. These measures also include things like certificates of deposit (or CDs), which are essentially bank balances traded in the financial (or wholesale) markets. M4 includes commercial paper and bonds, which are IOUs issued by firms (and, in the case of bonds, the government).

The speed with which money holdings in an economy grow is important because it can provide clues about the health of the economy. In turn, that could influence the rate of inflation so central banks – most of which try to control inflation – pay particularly close attention to money. Very few central banks publish the full array of money definitions as shown in the previous graph, with the European Central Bank (ECB) focusing most closely

on M3, the Bank of England on M4 and the US Federal Reserve on M1 and M2.

When people change their preferences for how long they want to tie their money up in bank accounts this can change the amount of money in each of the measures we've looked at above. For example, if people decided to move their money from low interest current accounts to higher paying notice accounts there would be no impact on broad money (because it includes both) but narrower money holdings should fall.

## **MONEY DEMAND – THE MOTIVES FOR HOLDING MONEY**

So, we've talked about the various different measures of money, but who holds all of this money and why? The main holders of money in the private sector are individuals, firms, and financial service providers such as banks. The government too holds money balances in the form of the tax revenues it generates, which are ultimately redistributed through the economy when it pays that money out – in benefits, for example.

There are three main motives for households to hold money – as originally identified by John Maynard Keynes back in the 1930s. First, there is the transactions motive. People keep cash in their wallets/purses and money in their bank accounts so that they can make everyday

purchases or save up for larger items. Second is the precautionary motive. This is the money people set aside just in case something unexpected crops up. And finally there is the speculative motive. You may want to hold your wealth in the form of money because you're worried about making a financial loss by holding other assets like a house or shares (both of which are less liquid than money – in other words, they take longer to turn into hard cash).

## MONEY SUPPLY AND CREDIT CREATION

That's the *demand* for money, but where does it come from? In other words, what about the *supply*? Well, the easy answer is that governments and central banks can increase the quantity of money in an economy if they wish by simply printing or minting more notes and coins – we'll learn more about that later in the book in the chapter on central banking. But that's only half the story.

The government/central bank is not the only source of money supply. Don't forget that when we looked at the various types of money earlier in the chapter we saw that it could be held either as physical notes or coins, or electronically in the form of bank accounts. And it turns out that the amount of money held in bank accounts can also be expanded – even if the central bank keeps the physical quantity of notes and coins the same. How is it



that banks can create money at the stroke of a pen or (these days) a push of a button?

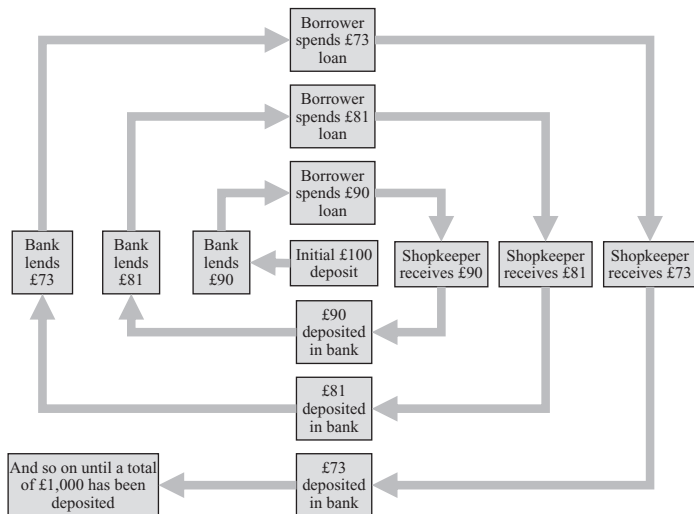
When banks take in deposits from people and firms in an economy they don't keep much of those deposits readily accessible. A bit like the banks we encountered at the start of this chapter that took in gold deposits, modern day banks have learnt that not everyone will want their money back at the same time. What they do, therefore, is to keep a very small portion of that deposited money – typically less than 5% – available to pay back if needed (this is called the bank's 'reserve ratio'), and lend out the rest of it. After all, what's the point of leaving all that money sitting around doing nothing when it could be lent out and earning interest?

For sake of simplicity assume that the bank keeps 10% of each depositor's money in its tills doing nothing and lends out the remaining 90%. A new customer depositing £100 with the bank would thus lead to an extra £90 of on-lending by the bank. But the money which is lent out by the bank is then spent by the borrower, perhaps at a shop. The shopkeeper then deposits his extra £90 of takings at the end of the day with his bank, which then does exactly the same – it keeps 10% of it (£9) and lends out the other 90% (£81).

This process keeps on going and going, and by the time it is complete there have been a total of £1000 of new deposits created, including the initial deposit (that is, £100 + £90 + £81 + £73 + £66 ...) – all generated from

one person going into his bank and depositing £100 to begin with. And the smaller is the reserve ratio, the larger the amount of money that banks can ‘create’ this way. Try it for yourself – instead of assuming the bank keeps 10% of its deposits try 5% and you should find that from an initial deposit of £100 money in the economy will expand to £2000 (including the initial £100). Because bank deposits are money, money has been created by the simple process of deposits being lent by the bank. The amount by which money increases relative to the size of the initial deposit (in these cases by factors of 10 and 20) is called the money multiplier.

**The money multiplier (10% reserve ratio)**



What money creation does is to expand the balance sheets of banks. The balance sheet just tells us how much the bank has taken in as deposits – its liabilities – and how much is owed to the bank in outstanding customer loans – its assets. In the example above, banks as a whole have taken in an extra £1000 of deposit liabilities, matched by increased assets of £900 lending and £100 cash in tills.

One point worth making here is that the multiplier can and does change significantly over time – it is not constant. For example, when banks scaled back on their lending during the credit crunch the multiplier collapsed.

## WHO SAID IT

“The process by which banks create money is so simple that the mind is repelled.”

– John Kenneth Galbraith

## HOW INTEREST RATES ARE DETERMINED

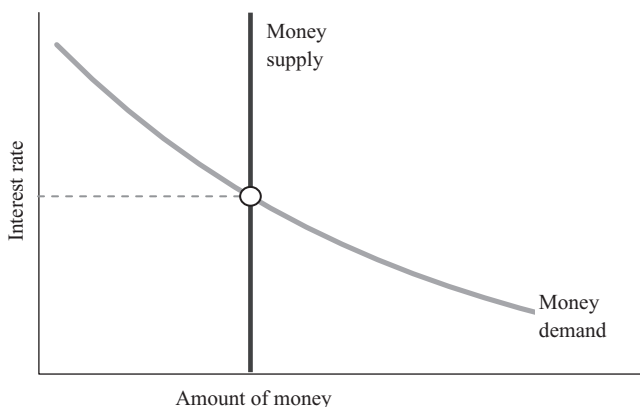
It turns out that money plays a key role in influencing the rate of interest in the economy. To understand how, we need to think of money separately from other assets like shares, bonds and houses. Consider a relatively narrow or liquid measure of money – cash holdings and money held in short-notice bank accounts – as this is what most people would describe as being money anyway. These typically pay either zero or close to zero interest because they are so liquid – i.e. available to be used at very short notice.

Now, imagine that interest rates in the economy as a whole are too high. In other words, government and corporate bonds (IOUs promising to repay lenders a certain amount at a fixed date in the future) are offering very good rates of return. Would you want to hold your money in a short-notice bank account? The answer of course is no – while you wouldn't actually be losing anything by leaving your money in a bank, you would be missing out on a better return somewhere else. This is a concept that economists refer to as 'opportunity cost'. The reverse is also true – if interest rates in the economy were too low, then you may prefer to keep your wealth in the form of cash because you're not losing out that much by doing so.

In reality, the demand for money will be dependent on lots of things, such as how much people earn and the

prices of goods & services – as both will influence the amount of money people hold in order to buy things. But when it comes to interest rates, people usually want to hold more money the lower is the rate of interest. This is shown by the downward sloping line in the graph below. The interest rate should settle at a level which makes people hold precisely the fixed amount of money that is available in the economy at any given time.

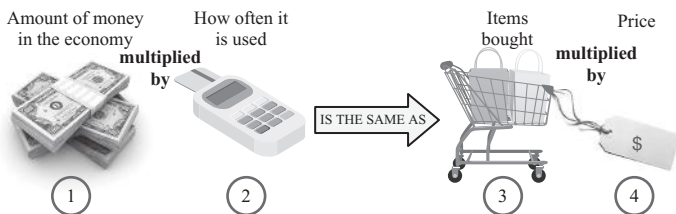
#### How interest rates are determined



## THE QUANTITY THEORY OF MONEY

How the amount of money in an economy changes can have an important bearing on the how quickly economic activity expands and how fast prices rise. The

## Quantity Theory



relationship between money and nominal GDP (in other words the value of spending) in an economy is called the Quantity Theory of Money. What it says is this: the amount of spending on goods & services in an economy each year must equal the amount of money there is in that economy multiplied by the average number of times it's used during the year. As an example, imagine a very small economy in which there was just one £20 note, and that this note was used twice during the year. It must be the case, then, that the value of goods & services bought during the year was £40. The number of times money is used – or the speed with which it moves around between people and firms (in the above example twice) – is rather aptly called the ‘velocity of circulation’.

We can show this pictorially in the diagram above, which is known as the ‘equation of exchange’. The reason that the Quantity Theory is so important is because it helps us understand what happens to an economy when the amount of money changes. Imagine the speed with which money is passed round the economy – or velocity (labelled 2 in the diagram above) – doesn't change. More money

(1) must then lead to a rise in the right hand side of our picture above – in other words the amount spent on goods & services in the economy (3 times 4). This higher spending must mean one of two things (or some combination of both):

1. A rise in the number of goods & services bought (3) but no change in prices (4)
2. No change in the number of goods & services bought (3) but a rise in prices (4)

## WHO YOU NEED TO KNOW

### *Irving Fisher*

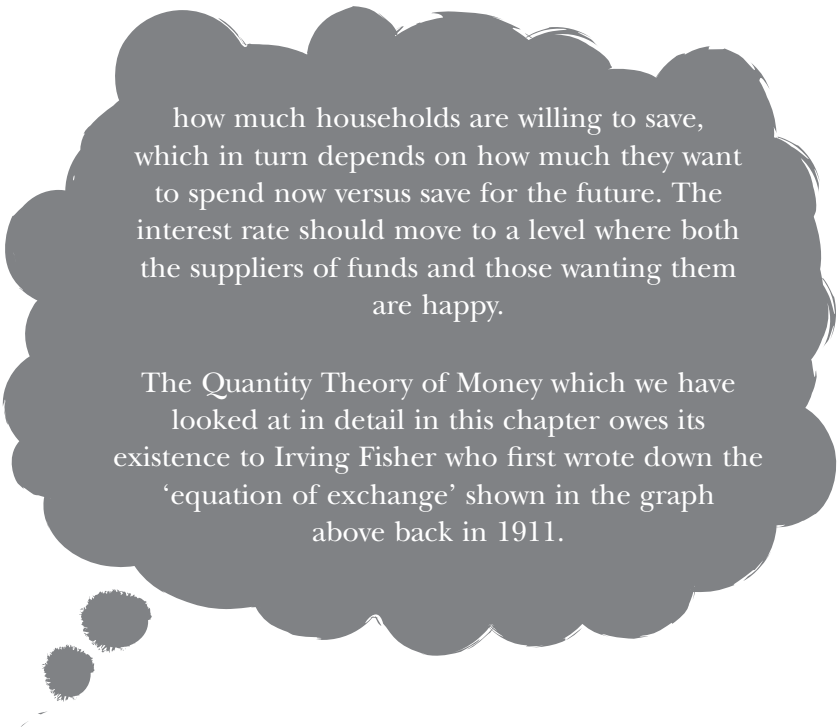
Irving Fisher is best known for his work on money, interest rates and their impact on the economy. He was the first economist to distinguish between *nominal* interest rates (the usual deposit and lending rates that you see advertised by banks and other financial institutions) and *real* interest rates. The real interest rate is the nominal rate after taking account of inflation in an economy. So,

if nominal deposit interest rates were 5% and inflation was 2%, then the real rate would be 3%. In this example we'd be able to buy 3% more goods & services if we saved up for a year. Fisher described the failure to take into consideration the rate of inflation when making economic decisions as 'money illusion'.

For him, money illusion was responsible for the cyclical ups and downs in the economy. A rise in both nominal interest rates and inflation by the same amount would leave real interest rates unchanged, so while it would be more costly for businesses to borrow for investment, they would at the same time get more money for their products they sell. But firms might not realise this, their money illusion leading to a reduction in the amount they borrow and the start of a downswing in the economy.

Fisher also thought about how the demand for and supply of funds would influence interest rates. The demand for funds will depend on productivity – the more productive are a firm's investments, the more they will want to borrow money to invest. The supply of funds depends on





how much households are willing to save, which in turn depends on how much they want to spend now versus save for the future. The interest rate should move to a level where both the suppliers of funds and those wanting them are happy.

The Quantity Theory of Money which we have looked at in detail in this chapter owes its existence to Irving Fisher who first wrote down the ‘equation of exchange’ shown in the graph above back in 1911.

Monetarist economists usually argue that increasing the amount of money in the economy affects neither the average number of times it is used (2) nor the number of goods & services bought (3), so that a rise in money must lead directly to a rise in prices in the economy (4). Another way of putting this is that allowing the quantity of money to expand will cause inflation. After all, if people are holding more money than they would like, one way to resolve this is to spend it – which has the effect

of driving prices higher. This is theory that is behind one of the most famous recent-day economists' – Milton Friedman's – view of the world.

### WHO SAID IT

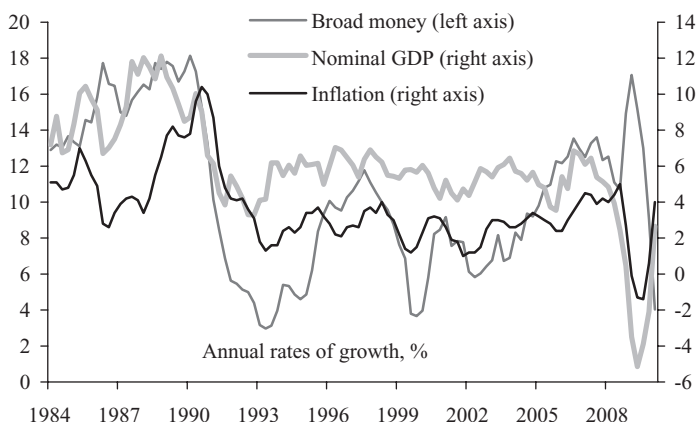
"Inflation is always and everywhere  
a monetary phenomenon."

– Milton Friedman

## THE IMPORTANCE OF MONEY IN PRACTICE

We've looked at the theory, now let's take a look at the relationship between money, activity and inflation in the real world. The graph below shows that broad money in the UK has generally tracked up and down reasonably closely with both inflation and nominal GDP over a long period of time. The relationships are not perfect, however

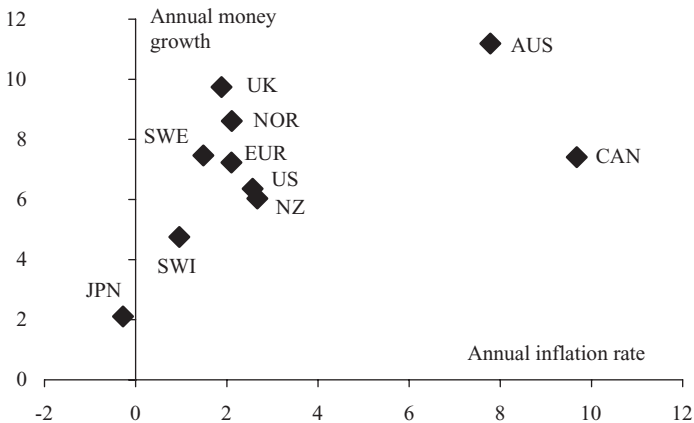
### Money, inflation and economic activity



– it is not always easy to tell how inflation will move as a result of a change in the money supply. To quote Milton Friedman once again, the time lags between changes in the money supply and inflation can be ‘long and variable’.

We’ve looked at the relationship between money and inflation over time, but what does it look like across countries? We’d expect that those countries with the highest rate of money growth are also the ones with the highest rates of inflation, based on what we’ve learnt so far in this chapter. It turns out that this is true – take a look at the scatter plot of the graph below, which shows that over a period of 10 years there is a clear positive relationship between money growth and inflation.

## Money and inflation in selected advanced economies over the past decade



So it's understandable that governments and central banks in the past have attempted to control the money supply in the hope that this would in turn limit inflation. Probably the best example of this was the UK 30 years ago. Back in 1980 the recently elected Thatcher government laid out what was called the Medium Term Financial Strategy – or MTFS for short. Targets for various measures of the money supply were set, which formed the basis for monetary policy decisions. In particular, the way the Bank of England (which at that point in time was not independent of the government, as it is now) attempted to control money growth was by raising interest rates. That would be expected to limit the demand for loans – as it would be more expensive to borrow – and therefore the rate at which banks create money.

This strategy was eventually dropped in 1986 because it was proving too difficult to achieve. Remember that central banks control directly only a portion of the money supply – that of base money, or M0, through its printing operations. Money creation by commercial banks was difficult to restrict – especially when the government was simultaneously trying to liberalise the banking system from the regulatory straightjacket that it had previously operated within.

Central banks these days generally no longer target the money supply, but instead the rate of inflation directly. That said, money remains a highly important indicator that policymakers monitor closely. During the recent recession interest rates were cut to such low levels in many countries that the only policy option left available to central banks was to directly increase base money in the hope that people would spend it, thereby stimulating economic activity. This was done by the European Central Bank, the Bank of England and US Federal Reserve among others. We will look more closely at this so called policy of ‘quantitative easing’ alongside the operation of monetary policy more generally in the chapter on central banks.

## **THE BORROWERS AND SAVERS OF MONEY**

So far we’ve learnt that financial intermediaries such as banks take in deposits from various sources – such as

households and firms – who have sufficient cash, and then lend it out to those who need to borrow. In fact, as we saw, they usually lend a lot more out than they have in hard cash.

In our money creation example above the banks themselves are just the intermediaries, or middlemen. They are neither *net* borrowers nor lenders, because their financial assets (the loans they have made along with the cash in their tills) are equal to their liabilities (the money they owe to the people who have deposited money with them). It is households who are *net borrowers* (they've borrowed money and used it to purchase goods & services) while the shops are *net savers* or *lenders* of money. Effectively, in our example it was the shopkeepers that financed households' borrowing, with the banks operating as the go-between.

Who is doing the borrowing and lending in the real world? After all, economies are made up of more than just the banks, shops and households that we looked at in the example above. To begin with, we can list the main groups or sectors within an economy which might be borrowing and lending money:

- ▶ Households
- ▶ Private non-financial firms
- ▶ Private financial firms (such as banks)
- ▶ The government
- ▶ The rest of the world

A sector as a whole is a net borrower if the total amount of money being borrowed by some in that sector is more than the total amount others have saved. Conversely, the sector is a net saver (or lender) of money if the amount of money saved is greater than the amount borrowed.

We can illustrate this by thinking about households. Some will be saving money, perhaps for a deposit on a house or because they've paid off their mortgage and have spare cash to put aside. Other households, however, will be borrowing money, perhaps because they don't have enough money of their own sitting around to buy a car or a house.

While any sector can be an overall borrower or saver, the amount of borrowing *in total* must be equal to the amount of saving. Put simply, borrowers must get their money from somewhere – for each extra pound borrowed there must be an extra pound saved somewhere in the world.

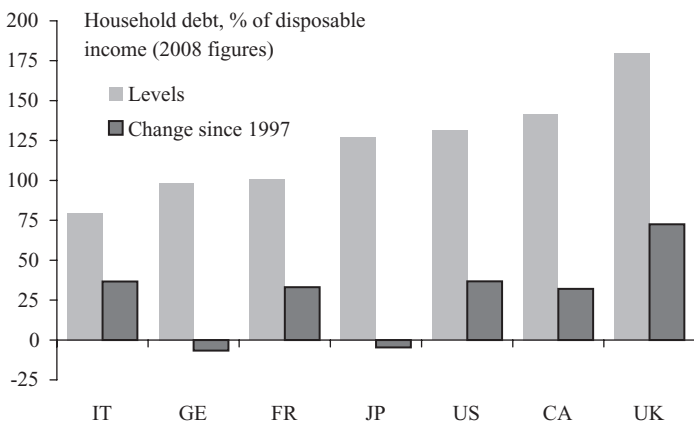
## HOUSEHOLD BORROWING AND DEBT

So far we have looked at the amount of borrowing and saving in an economy, and the sectors which are doing it. It is important, however, to distinguish between the amount of money that people borrow in any given period (say a year) and the total amount of debt that they

hold – that is, the cumulative amount of borrowings to date which have not yet been paid back.

Following the onset of the credit crisis in 2007, households in many developed economies either stopped borrowing or couldn't borrow money. That's not to say no households at all borrowed money; rather that more were paying down their debt than were taking on more debt. Even though *borrowing* came to a standstill, households in many countries had accumulated a vast amount of *debt* over the previous decade, largely the result of higher house prices and therefore mortgages. In fact, according to OECD figures, UK households owed more money relative to the amount of income they earned than households in any other G7 economy at the end of the first decade of the twenty-first century.

#### Household debt relative to incomes

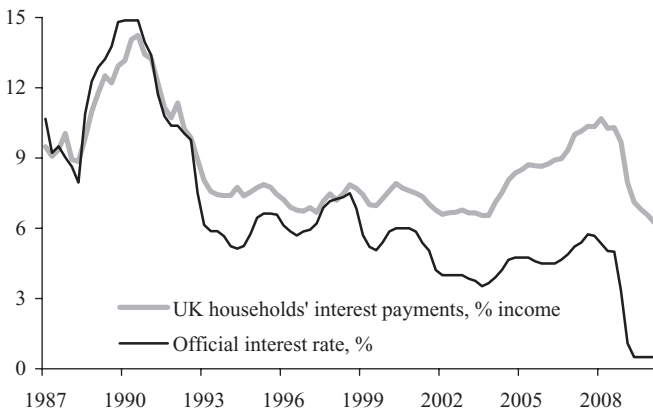




Just like any other debtors households must pay interest on their outstanding stock of debt. In many countries, by far the largest amount of debt racked up by households over recent years has been mortgages. In the UK, for example, mortgages account for about 85% of all household debt, with the remaining 15% being consumer credit (think car loans, credit cards, store cards and the like).

But the type of interest rate that households face varies significantly from country to country. In the UK, for example, while mortgage loans are paid back over a long period of time, the interest rate at which they are paid tends to change quite regularly. Households generally borrow money at either the standard variable rate (or SVR), which changes monthly with the Bank of England's official interest rate, or for a relatively short fixed period

**How debt repayments change with official interest rates**



– usually two to five years. In the US and much of Europe, however, people tend to borrow for longer periods of time (above 10 years and often up to 25–30 years) at fixed interest rates. Thus, while monthly debt repayments for UK households typically change regularly, those in the US and Europe tend to be much more stable over time.

## **BORROWING BY FIRMS**

When households borrow money it is usually done through the sort of financial intermediary that you would see on your local High Street. While specialist lenders do exist, by far the majority of loans are provided by banks and building societies.

When it comes to firms, however, the situation is a little different. For small and medium sized enterprises (or SMEs, as they are known), banks are typically the only source of funding. But when it comes to larger companies, bank funding is often not an option due to the sheer amount of money that needs to be raised. Rather, larger companies access the financial markets directly by issuing bonds and shares which are bought by investors. Some countries, such as the US, rely on so called capital market funding more than others.

A bond is nothing more than an IOU – a piece of paper that promises to pay the holder interest (known as the

‘coupon’) at regular intervals during the life of the loan. When the loan matures the company repays the initial loan provided by the investor. There are various types of bonds that companies can issue, typically categorised by how long the loan is for – or its ‘maturity’. Firms’ short term funding needs (usually for just a few months) are often satisfied by issuing what is called ‘commercial paper’, while corporate bonds are usually longer in maturity (years not months). The interest rate investors will require over and above the (usually) safer similar maturity bonds issued by the government will depend on the risk that the company defaults on its loan.

We can link all of this back to the amount of money in the economy. Remember from the start of the chapter that the broadest measures of money include not only the amount of cash we hold but also the money in our bank accounts and, in some cases, holdings of bonds. When governments and firms borrow money over short periods of time this can be classified as money supply. As we pointed out above – one person’s debt is another person’s monetary wealth.

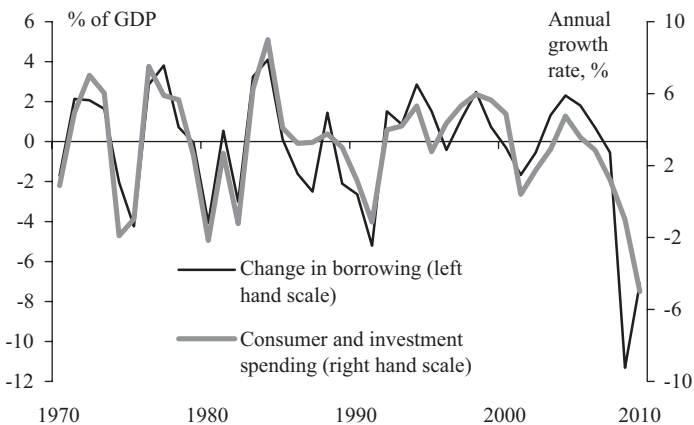
## **THE EFFECT OF BORROWING ON THE ECONOMY**

Just like changes in the amount of money in the economy, the amount of new borrowing being extended to households and firms is an important driver of economic

growth. The chart below shows this – look how closely changes in borrowing influence the rate of economic growth in the US. There are actually few years over almost the past century where borrowing and activity have not moved together.

Sometimes, weaker demand in the economy naturally leads to fewer people borrowing money. But that's not always the case: sometimes things happen the other way round. A good example here is the credit crisis that started in 2007, where initially banks sharply reduced their lending to households and firms, which then led to a global recession. Given its importance and to conclude this chapter we'll now take a brief look at how the credit crisis came about and what lessons we can take for the future.

**The relationship between US borrowing and activity**



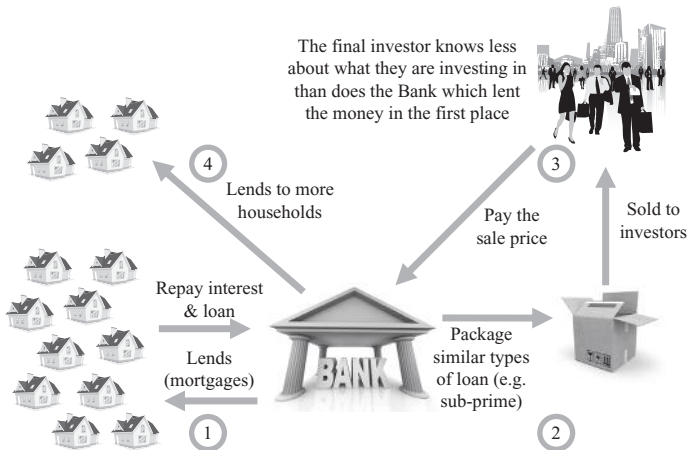
## THE 2007 CREDIT CRISIS – IN A NUTSHELL

The credit crisis may have first hit the headlines over the summer of 2007, but it has its roots much earlier than that. The crisis began in the sub-prime market. Mortgage loans made to US households – who were least able to pay the money back when interest rates increased, house prices fell and unemployment rose – started to turn sour. This didn't only affect US banks, but banks and investors worldwide that those loans had been sold on to.

This happened through a process known as securitisation, whereby banks initially making the mortgage loan to households packaged up similar loans together and sold them on as job lots. The following graph shows how it all worked. This process helped the initiating banks to clear their books and lend even more money to the wrong type of household: those who too often had No Income, No Job or Assets (earning them the acronym NINJAs!).

The packaged loans were called 'collateralised debt obligations' – quite a mouthful, but helpfully abbreviated to CDOs. The problem was that no one knew how much exposure banks and investors globally had to these CDOs – with the result that they simply weren't willing to lend to one another for fear that they would fail under the weight of these unknown bad debts.

### How securitisation works



Some banks did indeed fail, with Northern Rock in the UK and Lehman Brothers in the US two of the highest profile losers. RBS and Lloyds were in such dire straits that the British government ended up having to financially support them.

As we saw above, when banks aren't willing to lend the economy weakens. The scale of the recent credit crunch led not only to an economic downturn but to a global recession. This in turn placed great strain on governments whose spending had surged because of increased unemployment benefit payments, policy measures to kickstart the economy, and financial support for their ailing banking sectors.

## WHO YOU NEED TO KNOW

*Hyman P. Minsky*

There has been something of a revival in interest in Hyman Minsky over the past few years, partly as a result of the recent credit crunch. In his 1986 book *Stabilising an Unstable Economy* he laid out the anatomy of credit crises (something he had been developing for many years previously), arguing that long periods of apparently benign economic stability can end up generating financial crises.

He identified three key types of borrower: those that were 'hedged', where the income they received from their investments was enough to meet the interest payments on their debt; those he called 'speculative' who have to keep borrowing to repay their debts; and finally 'Ponzi' borrowers (after Charles Ponzi, the American financial conman) who are only solvent because of rising asset prices.

As a period of economic stability continues, an increasing number of people fall into the latter

category as bubbles in asset prices (such as shares and real estate) develop and debt rises to ever higher levels. At some point, people decide that enough is enough and try to sell their assets, the result being that the bubble bursts. The Ponzi investors are the first to default on their loans as their investments were only profitable as long as asset prices kept rising. In response banks hold back from lending, which in turn brings down the speculative borrower – who, remember, was reliant on bank finance. By the end of the process, even the previously solvent hedged investor can't get a loan, and the whole process culminates in recession.

Minsky called this gradual move from a stable economy to financial crisis the Financial Instability Hypothesis. Since then, the point at which investors try to get out at the top has been nicknamed the 'Minsky Moment'. He used his arguments to support the idea of government intervention in the financial sector and criticised the trend towards financial deregulation in the 1980s.



Governments and central banks have learned a lot from this crisis. They have had to react quickly by pumping massive amounts of money (or ‘liquidity’) into the banking sector to keep it ticking, keeping interest rates at very low levels for a long time to offset the otherwise high borrowing costs that the credit crisis caused, and provide substantial rescue packages to their beleaguered financial sectors. The cost of the global rescue proved so high for governments that investors even began to doubt the solvency of some states – in some cases, such as Greece, their doubts were well founded.

If there’s one thing we can take from the credit crisis it’s this: money really does make the world go round, and when it dries up so too does economic activity. Over the coming years governments worldwide are changing the way that economic policy and banking regulation is conducted to prevent a repeat of the credit crisis.

## WHAT YOU NEED TO READ

- ▶ For a history of money throughout the ages see Niall Ferguson, *The Ascent of Money*, Penguin, 2009.
- ▶ A generally good all round introductory economics text book – which has particularly accessible sections on money and monetary policy – is Michael Parkin, Melanie Powell, Kent Matthews, *Economics*, Addison Wesley, 2007.

- ▶ The Bank of England provides a clear discussion of money & credit (and more) in the Education section of its website, which can be found here: [www.bankofengland.co.uk/education/targettwopointzero/economy/money\\_financial\\_markets.htm](http://www.bankofengland.co.uk/education/targettwopointzero/economy/money_financial_markets.htm).
- ▶ A more detailed book which looks at some of the concepts in this chapter in more depth is by Keith Bank, *The Economics of Money, Banking and Finance: A European Text*, Financial Times/Prentice Hall, 2008.
- ▶ A very readable introduction to the credit crisis is Vince Cable, *The Storm*. Atlantic Books, 2010.

## IF YOU ONLY REMEMBER ONE THING

Money is more than just the notes and coins we carry around in our pockets. The amount of money in the economy can significantly affect interest rates, activity and inflation. When it dries up, as in the credit crunch, the consequences for an economy can be dire.