CHAPTER 2

INFLATION

WHAT IT'S ALL ABOUT

- What inflation is and how it is measured
- How prices are determined by demand and supply
- How inflation can be caused by higher spending or rising costs
- Why both inflation and deflation can be bad for an economy
- The extremes of deflation and hyperinflation
- Why inflation expectations are important

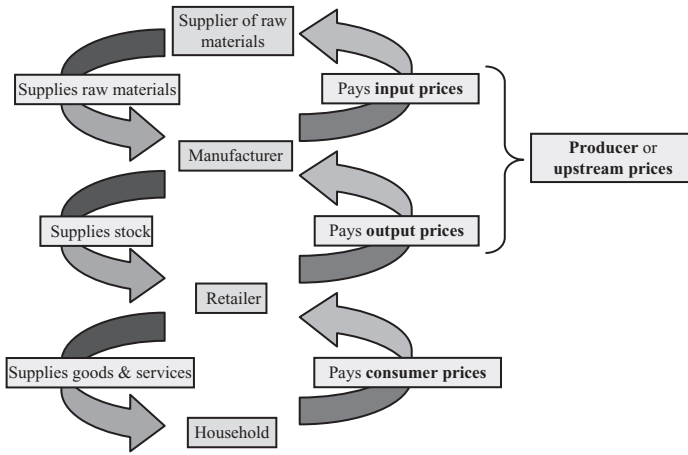
WHAT IS INFLATION?

Pick up almost any economics textbook and you will find this definition of inflation: it is a rise in the general level of prices in an economy sustained over time. There are two words that are particularly important here – *general* and *sustained*. We use the word *general* to get across that we are not talking about a rise in the price of a single good or service, but of goods & services across the economy. Of course, some prices will inevitably go up and some down during a period of inflation. Movements in the prices of individual goods & services are referred to as changes in *relative* prices, but a period of inflation is when the trend in *general* prices is up. *Sustained* means that inflation is not a one off rise in the general price level, but a more persistent increase in prices.

Normally, when we talk about inflation, we are referring to the annual rate of increase in the prices that households face when buying goods & services in the shops or online. These are measured by the consumer price index (CPI) or the retail price index (RPI) in the UK. These are simply two different measures of inflation, with the biggest difference between them being that RPI includes housing costs and mortgage interest payments. CPI is the one the Bank of England looks at when targeting inflation.

Not only do households face inflation but so too do retailers themselves. They buy goods from manufacturers which they then sell on to households. The prices of the

Prices at different stages of the production and consumption process



goods which the manufacturer sells to retailers are called 'output' prices. In turn, manufacturing firms must pay for the raw materials required to produce the products they sell to retailers. The prices of these goods are called 'input' prices or costs. Both input and output prices are collectively known as 'producer' (or 'upstream') prices, because they are the prices charged by producers.

The relationship between input prices, output prices and consumer prices is shown in the diagram above. The difference between output and input prices tells us something about manufacturers' margins or profits, while the difference between consumer and output prices reflects

the retailer's margin. Although in both cases we mustn't forget to take into consideration other costs, like wages and overheads, when thinking about firms' profits.

Generally, when we talk about inflation in this and subsequent chapters we will be referring to the rate of growth of consumer prices, unless otherwise mentioned. But what sorts of thing are included in consumer prices?

To calculate inflation, the statistics office sends its researchers around the country each month to gather the prices of a 'basket' of goods & services that are intended to represent the purchases of a typical family. This basket is usually made up of twelve different components: food & drink, alcohol & tobacco, clothing & footwear, housing & energy, furniture & household goods, health, transport, communication, recreation, education, restaurants & hotels and miscellaneous items (the latter including the cost of financial services, such as insurance, and personal effects like jewellery).

While the components may be generally the same, the *importance* of each in the basket will be different across countries and will also change over time, reflecting the portion of an average household's spending that is devoted to those particular goods & services. For example, in the euro area the price of recreational goods & services in the CPI is worth around 10% of the total basket, while in the UK it is worth much more at 15%. Of course any given household in any given month will inevitably not buy the same goods & services that are in the basket,

The relative importance of the shopping basket: UK vs. Europe

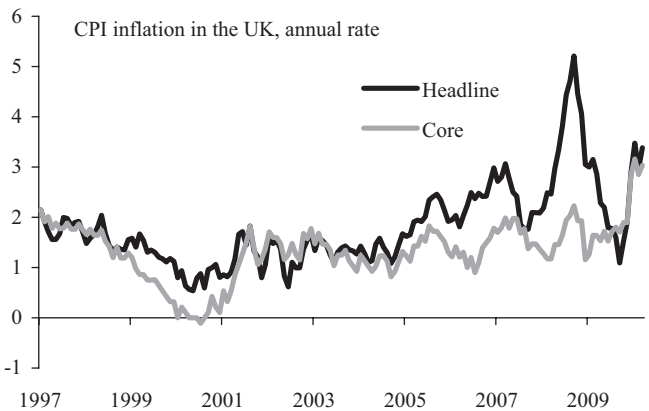
	UK	Euro
Transport	16.4%	15.3%
Recreation & culture	15.0%	9.7%
Housing & energy	12.9%	15.4%
Restaurants & hotels	12.6%	9.3%
Food & drink	10.8%	15.3%
Miscellaneous	9.7%	8.7%
Household goods	6.4%	7.1%
Clothing & footwear	5.6%	6.7%
Alcohol & tobacco	4.0%	3.8%
Telephones & post	2.5%	3.3%
Health	2.2%	4.3%
Education	1.9%	1.1%

as it is designed to reflect the average family's purchases in an average month.

Sometimes when economists look at the rate of CPI inflation they strip some components out, creating a measure which is referred to as 'core' or 'underlying' inflation. Food, alcohol, tobacco & petrol are typically removed either because they often move up and down sharply, or because they are influenced by the government. Food prices, for example, can be highly dependent on the (sometimes fickle) weather. Petrol prices can move around sharply with the variable cost of oil, while both petrol and tobacco prices are affected by how much duty/tax the government chooses to levy. By removing these items we can often get a better idea of the underlying inflation picture in an economy.

The graph below compares overall (or 'headline') CPI inflation to core, or underlying, inflation for the UK. The surge in oil and petrol prices in 2008 and 2009 can be seen clearly as headline inflation rises sharply but core inflation does not.

Headline and core inflation in the UK



HOW PRICES ARE DETERMINED

Given that inflation is the rate of change in general prices, to explain inflation we need to understand how prices are determined. A bit of very basic economic theory will help here.

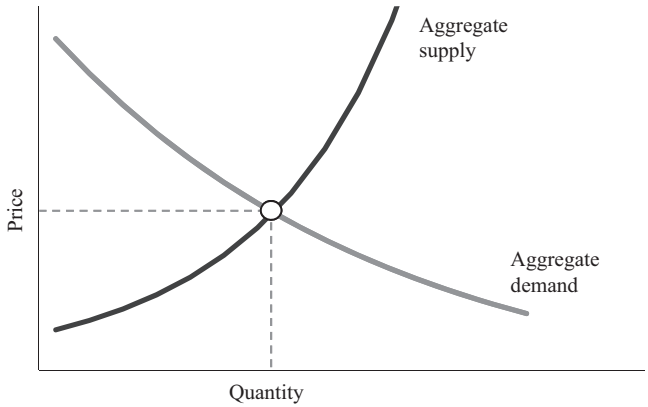
The most important lesson of economics is that the price of something depends on the demand for it compared with how much can be supplied. This applies not just to the price of the goods & services we buy but also to the cost of borrowing money – the interest rate – and the wages people receive in return for working.

For the time being, however, let's focus on the general price of goods & services. The amount of goods & services in the economy that households would like to buy (something we call 'aggregate demand') will depend on a whole host of things, including peoples' incomes, the cost of borrowing, how confident we are about the future, and – perhaps most importantly of all – the price at which those goods & services are being sold.

Imagine all of the influences on the amount of goods & services we want to buy stay the same – apart from prices. How then might our demand change when prices move up and down? It seems reasonable to think that we would want to buy more goods & services when they are cheaper, and less when they are more expensive. This inverse relationship between price and quantity demanded is shown by the downward sloping 'aggregate demand' line in the graph overleaf.

Now let's think about supply. How does the quantity of goods & services that retailers are willing to supply change with price? Again, let's assume all of the other factors influencing their decision, other than prices, stay the same. Retailers would probably be willing to offer more

How demand and supply interact to determine prices



goods & services for sale when the price is higher, and less when it is lower. This relationship is opposite to that of demand, and is shown by the upward sloping line in the graph above (we've labelled this 'aggregate supply').

The point at which the demand and supply curves are the same – i.e. where the lines cross in the graph above – shows some kind of balance, or 'equilibrium'. Here, the price has been determined that will clear the market. At this price, the amount of goods & services that households demand will be exactly the same as that which firms are willing to supply.

This simple theory helps explain the two main causes of inflation that economists distinguish between: demand-pull and cost-push inflation. Let's take a look at these now.

WHO YOU NEED TO KNOW

Alfred Marshall

The charts you see in this chapter illustrating how the interaction of demand and supply leads to prices being formed were first envisaged by Alfred Marshall in his seminal 1890 book, *Principles of Economics*. This analysis has stood the test of time – it remains the way that basic economics is taught in schools and universities today.

He described the lines in these figures as the *laws of supply and demand* – that firms are willing to supply more while people will demand less as the price of goods & services rise, and vice versa. Associated with these laws was something he called 'elasticity': *how much* demand and supply changes in response to a change in price. As an example, households' demand for food tends to be *inelastic* – in other words, people do not usually reduce the amount of food they eat that much when prices go up. After all, we still need to eat, whatever the price. In contrast, demand for items that might be considered luxuries – such as

a new handbag, for example – may fall sharply when prices go up (demand is said to be *elastic*).

Marshall also had something to say about currencies. He argued that the exchange rate between two countries should reflect the relative prices of goods & services in those countries. In other words if, say, the price of an iPod was £150 in the UK but $300 in the US, then a floating exchange rate should move towards $2 per £1.

What Alfred Marshall will be remembered for more than anything else, however, was his ability to visualise economics in relatively simple – but revolutionary at the time – charts. That economics has become a formal academic and scientific discipline is the result of his work.

CAUSES OF INFLATION: DEMAND-PULL VERSUS COST-PUSH

So, we now know how the general level of prices is determined in an economy. But what causes these 'equilibrium' prices to rise? In other words, what causes inflation?

Economists like to distinguish between two types of inflation, depending on what triggers the rise in prices: 'demand-pull' and 'cost-push'. Demand-pull, as its name suggests, is inflation that results from higher demand for goods & services. Cost-push inflation, on the other hand, occurs when firms face a rise in costs which are then passed on to their customers in the form of higher prices. Let's have a look at these two types of inflation in more detail.

1. Demand-Pull

Perhaps the best way to describe this type of inflation is a quote from Milton Friedman, the monetary economist, who said that inflation is caused by, 'too much money chasing too few goods'.

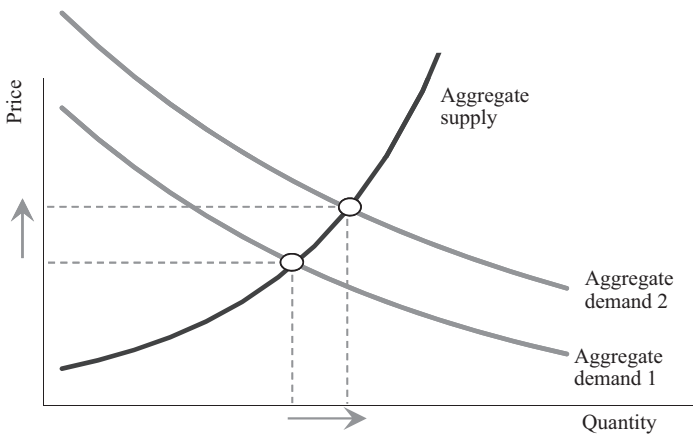
To explain, imagine that everyone in the country either had more money – perhaps due to a rise in their take-home pay – or simply wanted to spend a larger portion

of their existing income (i.e. by saving less). This might happen for a number of reasons: higher take home pay may be due to a tax cut (which raises people's available income), while spending more may be the result of increased confidence about the future (encouraging people to save less, perhaps because they are less fearful about becoming unemployed).

At any given price, people now want to buy more goods & services than they did before, because of their improved circumstances. In other words, the whole demand curve from the graph on page 46 will move to the right – as is shown in the graph below.

Now, if firms know there's more demand for their product, they will reasonably want to raise their price.

Demand-pull inflation



If they didn't increase prices, then households would want to buy too much relative to what firms would be willing to supply. In the end, households buy more from firms at higher prices, as the previous graph shows. This new equilibrium is the only point at which both firms and households are simultaneously happy about the amount (and price) of what they are selling/buying.

Demand-pull inflation is the sort of inflation we get when we are in the boom phase of the business cycle, and economic output is running above its trend or potential level. Remember that we looked at this in the first chapter – it's when we have a positive output gap (point Y in the graph on page 21). It should be clear now why we described this difference between output and its trend level as being an *inflationary* or *deflationary* gap – because the strength or weakness of the economy can cause prices to rise or fall.

As demand for goods & services becomes higher and higher, it might become increasingly difficult for firms to expand capacity to meet that demand. This is why the supply line in the graph above becomes steeper at the top – at this point, a rise in demand would result more in price rises than in rising quantities traded.

The way that the authorities usually address the problem of rising inflation caused by too much demand is to raise interest rates, which encourages saving and discourages borrowing. This in turn reduces the desire of households

to spend money and firms to invest, thus limiting peoples' demand for goods & services. We will look in more detail later in the book at how central banks, such as the Bank of England in the UK, the Federal Reserve in the US and the European Central Bank in Europe, use interest rates to control inflation.

2. Cost-Push

So, to recap, demand-pull inflation happens when the desire of households to buy goods & services puts too much pressure on the ability of firms to supply it. But what about cost-push inflation?

Cost-push inflation happens when it becomes more expensive for firms to supply their goods & services. Let's have a think about the ways in which this might occur by going back to our handbag producer from the first chapter. An important raw material that our producer needs to make handbags is leather. Imagine now that the price of leather on world commodity markets rises.

Another way that producers' costs might rise is through a fall in the value of the currency. In that case, even if the price of leather in, say, US dollars on global commodity markets remains the same, because the domestic currency cannot buy as many dollars it will cost more for our handbag producer to import.

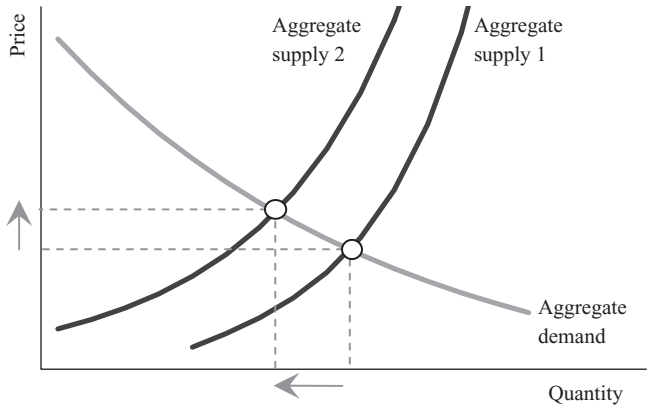
Whatever the reason, in economics terminology the producer's input prices have risen (remember this from the diagram on page 41). In order to compensate for this and maintain its profit margins, the producer then raises the price at which it sells the final product (the handbag) to retailers – the output price. And in turn, the retailer then attempts to pass this price rise on to the final consumer (by raising consumer prices).

Two of the most significant periods of cost-push inflation occurred in the 1970s, and were caused by the disruption to global oil supplies. In 1973/74 and 1978/79 oil prices soared, raising producers' costs and then inflation significantly – especially in those economies that were heavily dependent on oil. In the UK, for example, inflation reached a peak of 24% in 1975 and, after a brief period of respite, rose back up to 18% in 1980.

How can we show cost-push inflation on our demand/supply figure? This time it is the supply (rather than the demand) curve that moves. Because of the rise in their costs, firms will now only be willing to supply goods or services at a higher price – if they didn't raise their prices then profits would go down. This means that supply curve has moved to the left, as shown in the following graph.

In this case, the end result is that prices go up (i.e. we get inflation) but activity falls – people want to buy

Cost-push inflation



less because prices have gone up. In the extreme what can happen is that higher costs – which get passed on through the economy from producers to retailers and then consumers – cause something called 'stagflation'. This is a combination of *stag*nation (or even worse a fall) in activity but at the same time high in*flation*. The 1970s oil price rises were examples of this – the sharp rise in inflation proved to be a significant brake on economic activity.

In reality, it can be difficult to distinguish between demand-pull and cost-push inflation, as rising demand can cause higher commodity prices and wages (both of which are costs to firms). The two types of inflation can (and often do), therefore, happen simultaneously.

WHO YOU NEED TO KNOW

Milton Friedman

Milton Friedman was a free-market 'monetarist' economist, arguing (against Keynes) that government intervention in the economy was inappropriate. In the 1950s and 1960s when he undertook his most important work, for which he later won a Nobel Prize in Economics, this was an opposite conclusion to the interventionist approach of governments worldwide.

His first key work looked at consumer spending. While Keynes argued that household spending should depend on *current* earnings, Friedman believed it was one's expected lifetime (or 'permanent') earnings that would be more important. This gave him a basis to argue against government intervention – tax cuts, for example, would be seen by people as being temporary so they wouldn't spend so much of their extra disposable income (they would save it instead, which would do little to support economic activity).

In the early 1960s Friedman turned his attention to the money supply. He was a firm believer in the 'Quantity Theory of Money', which says that money can have a strong influence on prices. The early years of Thatcherism in the UK were based on Friedman's work – the Bank of England was given the task of targeting the money supply as that was seen as the key to controlling inflation. In the event, not only did it prove difficult to achieve the monetary targets set by the government, but the policy fell foul of Friedman's warning that the effect of money on inflation would be subject to 'long and variable lags'.

Towards the end of the 1960s Friedman came up with a theory for which he is perhaps best known. He argued there exists in all economies a natural – or equilibrium – rate of unemployment. If a government attempted to intervene to reduce the rate below this level then it would simply end up resulting in inflation and no improvement in either unemployment or economic activity. The 1970s period of 'stagflation' – a weak economy combined with high inflation – proved him right.

THE IMPORTANCE OF INFLATION

So far we have described what inflation is and looked at two ways it can be generated – by rising demand or costs. But why do economists care so much about inflation? The answer is that high and unpredictable inflation can be bad for an economy.

WHO SAID IT

"Inflation is as violent as a mugger, as frightening as an armed robber and as deadly as a hit man."
– Ronald Reagan

The most important problems and side-effects associated with inflation are as follows:

- *It's bad for savers.* Imagine you've locked your money away in a bank for five years at a fixed rate of 3% per year. As long as prices grow at a slower rate then you'd be able to buy more

goods & services with your money when you come to take it out. But what if there was an unexpected surge in inflation, with prices rising by more than the interest you make on your money? By the end of your investment your money would buy you less than when you started. It's not just savers who lose out, but all people who receive a fixed income. Pensioners, for example, may be out of pocket if their pensions do not rise at least as quickly as the rate of inflation. Inflation thus causes a loss of purchasing power and a reduction in living standards for some people, and may discourage saving.

- *It's good for borrowers.* While it's bad for savers, a bout of inflation can be good for borrowers. Higher than expected inflation means that a bank lending money to a borrower may have set the interest rate it charges on the loan too low to account for the rise in the cost of living. The borrower then benefits by paying less interest than the bank would have demanded had it known that inflation was going to be high. Note that it is only *unexpected* inflation which causes these problems, as if it were expected it would have been built into higher interest rates in the first place.
- *It can cause higher interest rates.* Particularly when inflation is caused by higher spending, the authorities may raise interest rates to cool

demand in the economy. But that raises the risk of causing too sharp a downturn in the economy, or even a recession.

- *It can influence when you buy.* If prices are falling you may be tempted to wait before buying that flat screen television you've had your eye on. But if prices are rising quickly, then you may want to bring forward your purchases before prices get too high.
- *It's bad for investment.* Firms like certainty when planning their business ventures. If they are unsure about what the inflation rate is going to be then they may demand a higher return on their investment to compensate for the possibility that their costs rise more sharply. By raising the hurdle, fewer investments may be made. Another way that inflation is bad for investment is that, as we saw above, it discourages savings in the economy. And if banks receive fewer funds from savers then they can't lend as much out to businesses for investment. Instead, rather than saving in a bank, high inflation may encourage people to put their money assets like houses or gold, which are less productive than the money being lent out for investment.
- *It causes 'shoe leather' costs.* When inflation is high it encourages people to search out the best prices as there may be significant differences across retailers. Shoe leather costs refer to the increased cost of search in terms of one's time

and effort (in literal terms it wears out the soles of your shoes!).

- *It increases 'menu costs'.* When inflation is high it means firms need to change the prices of their goods & services more often – which can be costly. Think of a restaurant that has to continually reprint its menus because the price is changing so quickly. Technology has helped reduce these costs (online retailers, for example, can change their prices at the touch of a button) but High Street retailers will incur the cost of having to change their prices on the shelves more regularly when inflation is higher.
- *It can generate a wage-price spiral.* A problem with rising prices is that they encourage workers to bargain for higher pay to compensate. But, as we learned when we looked at both demand-pull and cost-push inflation, if wages are higher that may lead to higher prices. In turn, workers then ask for higher wages and the upward spiral continues. Moreover, if wages rise by more than tax thresholds do, then workers will eventually move into higher tax brackets because of this spiral – something that economists call 'fiscal drag'.
- *It's bad for competitiveness.* If price rises are not followed by a fall in the currency, then the price of that country's goods & services may begin to look uncompetitive to overseas importers who will demand fewer goods & services from that country.

As a result of these costs, over the past 20 years central banks have been focusing their attention on targeting inflation – trying to keep it stable and at a low pre-announced level in order to provide an environment that is conducive to strong economic growth.

So, ideally, we would like inflation to be low, stable and predictable. But history has shown this isn't always easy to achieve. Let's now turn our attention to two extremes – first, when prices actually fall rather than rise (deflation) and second, at the opposite end of the spectrum, when prices rise at an excessively fast rate (hyperinflation).

Extreme 1: Deflation

Let's start with deflation. Deflation is precisely the opposite of inflation – it is when we see a sustained decline in the general level of prices or, in other words, when the rate of inflation falls below zero. It is important to distinguish this from a period of *dis-inflation*, which is when the rate of inflation (as opposed to the level of prices) is falling.

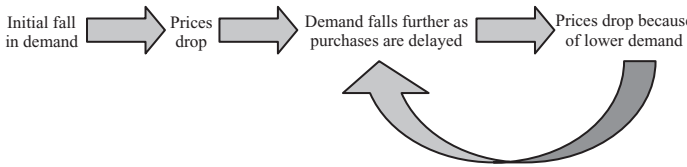
Just as inflation can be caused by a rise in demand for goods & services, deflation is typically caused by weaker demand. In the graph on page 50 weaker demand can be shown by moving the demand to the left – imagine starting with Aggregate Demand 2 and moving to

Aggregate Demand 1. In this case, weaker demand causes both prices and the amount of goods & services demanded to fall. This is demand-pull inflation in reverse.

It is not only weaker demand that can cause deflation. Imagine if all suppliers were able to now produce at lower cost – perhaps, for example, because of some technological innovation. They would then be able to supply those goods & services to the retailer at a lower price, who in turn could pass on the savings to households. This is cost-push inflation in reverse. In the graph on page 54 we can show this by starting from Aggregate Supply 2 and moving to Aggregate Supply 1. This is a much better type of deflation than that caused by a shortage of demand, because it tends to increase activity in the economy and does not necessarily cause the problems that deflation led by lower demand does.

So, what *is* so bad about demand-led deflation? Well, once deflation has started it can be exceptionally difficult for a country to get out of. Let's say an initial fall in peoples' demand for goods & services causes a fall in prices. People may then expect prices to continue falling in the future – in which case they would delay making their purchases. After all, in a year's time the price may be lower, so they would get more for their money. But by postponing their purchases they are causing a further drop in demand now, which leads to higher unemployment, lower incomes, and a further fall in prices – perpetuating the downward spiral. This deflation trap is shown in the following diagram. Deflation may also cause

The deflationary spiral



businesses to invest less and employ fewer people (just as they might in a high inflation environment) because lower prices mean lower profits, reducing the incentive to produce.

Deflation can be even worse when levels of debt in an economy are high. Just as high inflation can help borrowers of money, they lose out in periods of deflation. With deflation, prices and wages fall, making it more difficult for households to service their existing debts – the value of which doesn't fall, of course. In other words, deflation causes the real (or inflation-adjusted) amount of people's debt to rise.

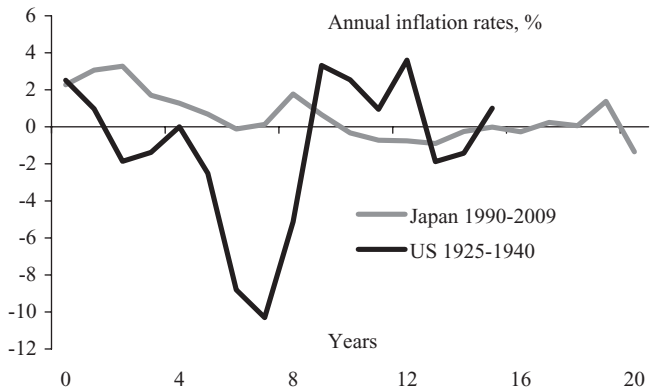
This encourages people to pay off their debts – but to do so they must sell the assets against which the loans were made (houses, for example). But the selling of assets leads to a fall in their price, a weaker economy and thus a further fall in general prices – and so the cycle continues. This theory of 'debt-deflation' was originally proposed by the US economist Irving Fisher during the Great Depression of the early 1930s.

The two cases that come to mind when we think about deflation are Japan over the past 20 years, and the US during the 1930s Great Depression. In Japan, deflation began in the early 1990s after the collapse of the housing and stock market bubbles that had built up during the previous decade. Loans that had been made by banks in the good times began to turn sour, causing a financial crisis when borrowers failed to repay. Banks were unwilling (or unable) to lend money, causing the economy to weaken and prices to fall, generating an ongoing deflationary spiral.

In the early 1930s, during a period of sharply lower economic activity, the US experienced a period during which prices were falling by up to 10% per year. As in Japan, the Great Depression was preceded by sharp rises in share prices during the 1920s, the collapse of which led to a drying up of credit availability. The situation was made worse by the Federal Reserve – America's central bank – initially failing to stop the money supply from shrinking. President Roosevelt's 'New Deal' policies announced in 1933 finally helped the US economy out of recession and deflation.

One of the reasons that central banks try to keep inflation at a positive, but low, rate is that if they were to aim for zero there would be too great a risk of prices falling and a deflationary cycle becoming entrenched.

Deflation in Japan (1990s/2000s) and the US (1930s)



Extreme 2: Hyperinflation

The polar opposite of deflation is hyperinflation. There is no agreed definition of what level of inflation constitutes hyperinflation but some have classified it as being when inflation approaches 50% *per month* (you know that inflation is out of control when you begin to talk about it in monthly rather than annual rates!). Generally speaking, however, it is when inflation is so high that it becomes completely uncontrollable and leads to an exceptionally quick decline in the value of money.

In the past, the most serious hyperinflations have been caused when central banks have printed too much money in order to fund government borrowing – often in the aftermath of war. Hyperinflation can be seen as a particularly extreme version of the demand-pull inflation we looked at above. In Germany, for example, between 1922 and 1923 inflation ran at an average rate of over 300% per month (a doubling in prices every three weeks), while in Hungary after the Second World War inflation ran at a staggering average rate of 20 000% per month between 1945 and 1946 (a doubling in prices every five days – and, at its peak, every half day). More recent examples include Yugoslavia in 1994 and Zimbabwe at the end of the last decade.

When prices are rising so quickly the whole monetary system breaks down. In past instances of hyperinflation workers have had to be paid daily, paid with huge volumes of bank notes – so large, in fact, that rather than carrying their day's pay home in their wallet they had to resort to wheelbarrows! Confidence in money evaporates, and people want to rid themselves of it as quickly as possible before its value goes down – in turn leading to hoarding of goods.

Remedies for hyperinflation vary from using a foreign currency as the means of exchange to completely overhauling the country's existing currency. But, to have any chance of success, these policies would have to co-exist with the government slashing the amount it borrows, and

the central bank maintaining far tighter control over the money supply.

Fortunately governments and central banking globally have learned the lessons of excessive money printing. While the authorities do still create additional money during economic downturns (so called 'quantitative easing', which we will look at in more depth in the chapter on central banks), these policies are generally designed to support demand and prevent inflation from falling too much, rather than being used irresponsibly as a tool to fund government borrowing.

A Yugoslavian 500 billion dinar note

WHO SAID IT

"By a continuing process of inflation, government can confiscate, secretly and unobserved, an important part of the wealth of their citizens."

– John Maynard Keynes

EXPECTATIONS

Inflation expectations can play an important role in economic decision making. To see why, consider some of the costs of inflation we looked at earlier. The cost to savers of inflation, for example, is higher when the fixed interest rate they receive does not take into account an unexpected rise in inflation in the future. Firms planning to invest may not do so if they can't make a reasonable guess about where inflation will be going forward. People may delay or accelerate their purchases of goods & services depending on what they think is going to happen to prices. And workers may bid for higher wages if they think prices are going to rise more quickly, in turn risking a wage-price spiral (whereby higher inflation expectations become a self-fulfilling prophecy).

So, as you can see, inflation expectations can have an important effect not only on economic activity but also on actual future inflation. A central bank that can keep inflation expectations under wraps, or 'anchored' as it is termed, will have a much better chance at keeping actual inflation low too. The way that central banks can achieve this is to earn people's trust – to prove that they actually mean it when they say they will set interest rates to ensure that inflation remains low and stable. In economists' language, the central bank must be 'credible'.

How do people form their expectations of future inflation? There are two main theories: 'adaptive' and 'rational' expectations. Adaptive expectations means that people base their view of *future* inflation on where inflation was in *the past* (an example of this might be the view that if inflation is high now, then it will remain so in the future). Rational expectations, on the other hand, are when individuals think about all the factors that might influence inflation in the future and make their best judgment based on that. As with many things in economics, what people actually do is probably some combination of the two.

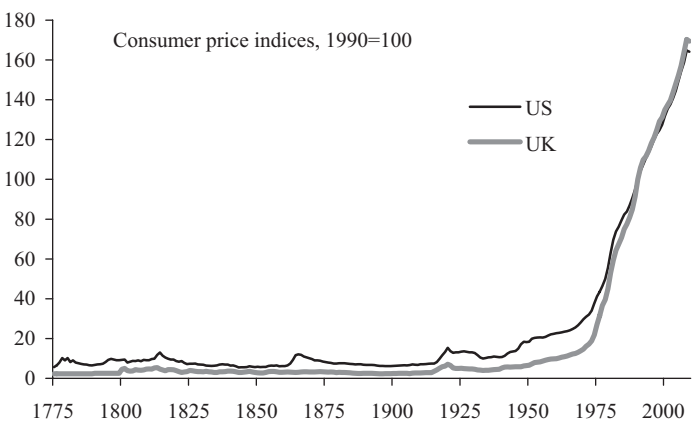
If we can anticipate future inflation with some certainty, then we can account for it in what we decide to do today – which ensures we make more informed decisions and reduces the costs we might incur from inflation. A believable central bank can go a long way to making this happen.

A HISTORY OF INFLATION

We are fortunate to have inflation figures going back over a very long time – to the eleventh century in the UK and the fifteenth century in the US, for example. While inflation is now based on a cross section of prices in a typical person's shopping basket, hundreds of years ago the collection of statistical data was not as advanced – we have to judge the rate of inflation back then by looking at grain prices.

Inflation in the UK and US and a number of other developed economies (Germany in the 1920s being a notable exception) was dormant before the 1970s, at

Inflation is a relatively recent phenomenon for some countries



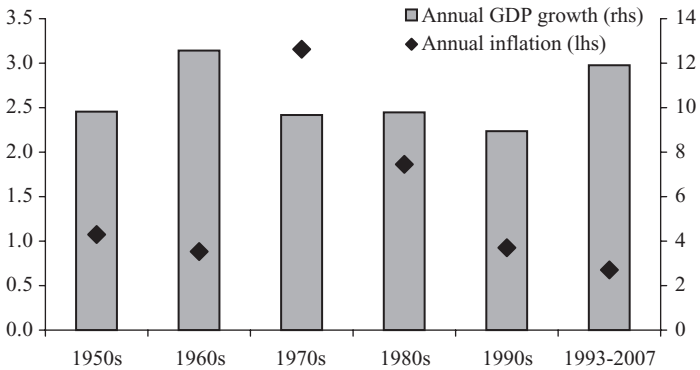
which point stagflation reared its ugly head (as the previous graph shows). Governments have learned some of the lessons from this episode, and since the early 1990s inflation has generally been kept under much tighter control.

There are a number of reasons that inflation has performed better over recent years, including:

- the move towards targeting inflation – New Zealand's central bank started the trend in 1990 – helping reduce inflation expectations;
- the increase in competition that globalisation has brought – remember, the greater the supply of anything (in this case goods & services and jobs from abroad) the lower its price will be
- the reduction in costs due to the technological revolution and the associated boost to productivity (in particular the arrival of the internet in the early 1990s); and
- in the UK the strength of the exchange rate from the middle of the 1990s to around the time the credit crunch began, cutting the cost of imports.

Indeed, because of these factors the economy was able to perform better than in previous decades without causing inflation – a situation which has been described as the 'Great Moderation' or, in the words of Bank of England governor Mervyn King, the 'NICE' (Non-Inflationary Consistently Expansionary!) decade. Some

The 'Great Moderation' or NICE decade in the UK



of these beneficial changes may prove more lasting than others, but it seems unlikely that we will see quite as good a trade-off between strong economic growth and low inflation over the coming decades as we have in the past.

WHAT YOU NEED TO READ

- The Bank of England has an excellent web page which explains the importance of inflation in the context of setting interest rates: *www.bankofengland.co.uk/education/targettwopointzero/inflation*. In particular, a pamphlet that explains the importance of keeping inflation low and stable is highly recommended reading: *www.bankofengland.co.uk/publications/other/monetary/lowinflation.pdf*.

- An entertaining eight-minute cartoon explaining demand-pull and cost-push inflation, the costs of inflation, how central banks attempt to control inflation, and deflation – featuring the '*Inflation Monster*'! – can be found on the European Central Bank's website: *www.ecb.int/ecb/educational*.

- To read more about the thoughts of the economists mentioned in this chapter (such as John Maynard Keynes, Milton Friedman and Alfred Marshall) and others see Steven Pressman, *Fifty Major Economists*. Routledge, 2006 (2nd edition).

- To understand some of the reasons behind the fall in inflation relative to the 1970s and 1980s see Roger Bootle, *The Death of Inflation*. Nicholas Brealey, 1997 (2nd edition).

IF YOU ONLY REMEMBER ONE THING

The price of anything is determined by demand and supply, and changes in either can cause inflation. Low and stable inflation is desirable, and we should be fearful of the extremes: deflation on the one hand, hyperinflation on the other.