



Economics for Business

If a monetary policy authority is fooled by the time lag between its interest rate adjustments and their effect on inflation, the consequences could be devastating.

To understand the difficulties of conducting monetary policy, consider the following imaginary experiment. First, place a brick on one side of a table and then sit on the opposite side with your face at table level. Next, try to pull the brick across the table using a rubber band looped around it. For a long time nothing happens, but then...

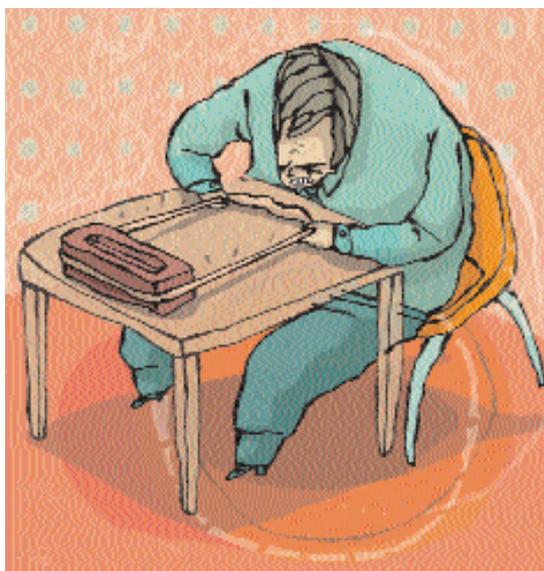
This experiment, which you shouldn't try at home, illustrates two key problems with the application of monetary policy in a market economy. It suggests that the economy can be slow to respond to changes in policy, which means that policy-makers must allow for lags of varying periods before their decisions have any effect. But, above all, it shows that the effects can be extremely serious if the policies are wrong. Moreover, there are many other problems associated with monetary policy that might make us wonder why governments should attach such importance to it.

The consistent and effective management of a modern market economy by the government presupposes three things:

- A set of objectives.
- A set of economic policy instruments.
- An economic theory explaining how economies work.

A set of objectives is necessary – a government's economic policy would be aimless otherwise. Over the years a consensus has developed that full employment, price stability, economic growth and external stability are all reasonable and desirable aims of economic management. The relative importance placed on each factor may change over time. In the UK, for example, the objective of price stability (ie, the avoidance of excessive inflation) has become a high priority. Because inflation is largely – entirely, according to monetarist economists – a monetary phenomenon, monetary policy is likely to be an important part of a government's economic management toolkit.

The second requirement is a set of economic instruments by which a government can influence the behaviour of the economy. These might be policy instruments designed to exert a direct effect on particular parts of the economy – for example, taxes intended to alter the price of particular goods – or policies



designed to affect the economy as a whole. The two main instruments here are fiscal policy and monetary policy. Both are used to change the behaviour and performance of the economy by influencing the level of aggregate monetary demand (AMD).

How does using fiscal or monetary policy to influence the level of AMD in an economy help a government to achieve its objectives of full employment, price stability and so on? This is the role of economic theory, because it provides explanations for inflation, unemployment etc. Without a theory, governments wouldn't know how to use fiscal and monetary policy to influence the economy. At the very least, a government would have a problem of assignment. If it had two main objectives – eg, price stability and full employment – and it had two policy instruments – eg, fiscal policy and monetary policy – which instrument should it assign to which objective?

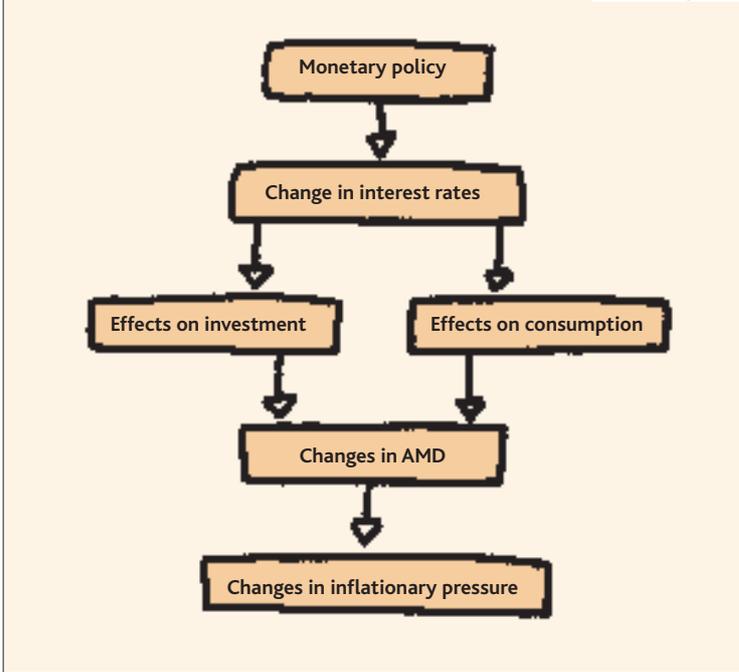
Of course, if the theory is wrong, a government can end up making mistakes in the conduct of economic policy. But, if there were no theory at all, the development of an economic policy would be a complete guessing game at best.

Economic theory indicates that the use of monetary policy is appropriate for controlling inflation. Monetary policy is designed to change the level of AMD in the economy by influencing the monetary environment. This raises two questions: why is it important to influence the level of AMD in the economy, and how can monetary policy do this?

The level of AMD is important because most economic theorists see this as the main determinant of the rate of inflation. They believe that inflation is in effect a demand phenomenon: excessive AMD in the economy will exert upward pressure on prices. Consider both the total demand for goods and services in the economy (aggregate demand) and the ability and willingness to supply goods and services (aggregate supply). If the aggregate demand exceeds the aggregate supply, the general price level may rise in response. Although imports might meet some of the extra demand and mitigate the price increase, excess aggregate demand is likely to lead to demand-pull



THE OPERATION OF MONETARY POLICY



inflation. This possibility is illustrated in the Phillips curve model and also in the expectations-augmented Phillips curve.

A government's ability to control this process depends on the extent to which it can influence the AMD. It can do this by using fiscal policy – ie, altering the balance of taxation and government spending – or by using monetary policy to change the monetary environment within which individuals and organisations function. The monetary authorities, such as the Bank of England in the UK or the European Central Bank in the eurozone countries, can do this by affecting either the amount of money in the economy (money supply) or by changing its price via interest rate alterations.

Experience has taught the monetary authorities that having a strict money-supply target raises the following problems:

- Which measure of money supply should be targeted? There are many measures, which often indicate different things about how the money supply is growing. The overall choice is between a measure of narrow money, which focuses on cash and current accounts, and a measure of broad money, which includes a much wider range of financial assets.
- How can the source of growth in the supply of money be identified? In order to control this growth, the monetary authorities need to know where it's occurring. Which factor is more significant: excessive government borrowing that injects liquid assets into the financial system, or the ability of banks to create credit on the basis of the system's existing liquid assets?
- What happens to interest rates? It's clear from the simple analysis of supply and demand that a supplier can determine the amount of material supplied or its price, but not both at the same time. So, if monetary policy focuses on controlling the supply of money, it cannot control the price of money (interest rates). In the early eighties, when the UK government tried to impose strict controls on the supply of money, the interest rate soared to 17 per cent. This contributed to a large increase in the exchange rate for sterling, a loss of international competitiveness and the country's deepest recession since World War II.

As a result of these problems, the emphasis in monetary policy has shifted to the control of interest rates. It's argued that a change in interest rates will have direct and indirect effects on the AMD and hence on the rate of inflation.

The UK government handed over the control of interest rates to the Bank of England in 1997. The bank has an inflation target – currently 2 per cent as measured by the harmonised index of consumer prices – and it must adjust interest rates to keep the actual rate of inflation within a band either side of the target rate. The role of interest rates in influencing the rate of inflation centres on the total demand for goods and services in the economy – ie, the AMD. If the AMD exceeds the ability of the economy to meet this demand, prices tend to rise.

The AMD is made up of the following four components:

- Consumer demand from households.
- Investment demand from businesses.
- Government expenditure on goods and services.
- Net exports (exports minus imports).

There are two main mechanisms by which an increase in interest rates will depress consumer demand (and vice versa). A rate rise will make credit more expensive, directly affecting the demand for those goods and services that are typically purchased on credit. In the past these were typically durable goods such as cars, household appliances and, of course, houses. Now, given the widespread use of short-term credit via credit cards, many more goods and services are being bought on credit. The rapid rise in outstanding consumer credit in the UK in 2003 and 2004 led the Bank of England to believe that consumer demand was rising too rapidly, so it raised interest rates.

The second key mechanism concerns the impact of interest rate changes on disposable income. Disposable income here means net income after taxation and unavoidable charges such as interest payments on debts. A rate rise will increase the cost of servicing existing debt – especially mortgages, since most mortgages in the UK are based on variable rates of interest. As interest rates rise, people's incomes after tax and mortgage payments decrease, which serves to reduce consumer spending.

Because there must be a creditor for every debtor, you might assume that interest rate increases would simply redistribute



income from net debtors to net creditors, leaving the total disposable income in the economy unchanged. But the typical net creditor has a higher marginal propensity to save than the typical net debtor, which shifts income away from people who are more likely to spend it towards those who are less likely to spend it. In this way the AMD is reduced.

For businesses, an increase in interest rates will raise the cost of financing an investment and so reduce the net rate of return on that investment. In a simple investment appraisal model, the application of a higher rate of interest will reduce the net present value of an investment project, so some investment that would have been made will not now be risked. This process will occur even if a business's investment project was to be self-financed, since the rate of interest still represents the opportunity cost of the internally generated funds. What is not clear is how much a given change in interest rate will affect the level of investment. This elasticity of investment demand with respect to the rate of interest may vary. For example, if business confidence is high, the fall in investment resulting from a rate rise might be quite small. If business confidence is fragile, the same rise might induce a much larger fall in investment.

The other two elements of AMD are only indirectly affected by changes in interest rates. In the case of public expenditure, an increase in interest rates will raise the cost of servicing the national debt. If there are economic or political constraints on the total level of public spending, this increase in debt servicing will limit the ability of the government to increase its expenditure on goods and services.

The effect on net export demand is similarly indirect. A rate rise might be expected to attract a short-term capital inflow. Under a regime of flexible exchange rates this inflow, representing a demand for the currency, will tend to raise the exchange rate for the currency. This exchange rate increase could reduce inflation in two ways. First, the appreciating exchange rate will reduce the price of imports in terms of the domestic currency. For a country with a high trade ratio – the UK, for example – this will mean a fall in the price of a large proportion of the goods and services bought and sold in the economy. Second, the exchange rate increase will decrease the competitiveness of domestic producers compared with those in other countries. Imports will tend to rise and exports will tend to fall, thereby reducing the AMD.

Where does the housing market fit into the role of monetary policy in controlling inflation? House prices are an important determinant of consumer demand in the UK. Note what happens when they rise rapidly. First, many people find that the market value of their property greatly exceeds their mortgage debt. They have, therefore, a large amount of equity in their property, which makes them feel more wealthy – which, indeed, they are. Consumer spending is mainly determined by incomes, but consumers will tend to spend more if they feel richer, because they feel less of a need to save. Moreover, householders

can use their equity to finance more spending by remortgaging their property and using the funds released to buy more goods and services. In addition, when house prices are rising the market gets busier as householders try to move up the property ladder before prices rise any more. When people buy new houses, they often also increase their spending on associated goods such as furniture and appliances. Only when house prices are falling do potential purchasers tend to postpone buying new properties.

The Bank of England regards rapidly rising house prices partly as a predictor of inflation in the short to medium term – up to 18 months ahead, say – and also as a source of future inflationary pressure. A period of rapidly rising house prices will almost certainly lead to some tightening of monetary policy through an interest rate increase.

The central bank has a further reason to do this: the fear of an asset price bubble. This is where the prices of assets such as

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houses and shares reach unsustainably high levels. When the market correction comes, it produces a very large fall in these prices. This can turn the inflationary process into reverse: falling asset values reduce individual and corporate wealth to such an extent that there is a large reduction in consumer and investment expenditure and the economy plunges into recession. This was a significant problem for Japan throughout the nineties.

The central bank will, therefore, try to prevent an asset price bubble from developing in the first place. In the UK last year the average price of a house rose to twice the level of the average family income. Some people would see this as clear evidence of an asset price bubble. The previous time that house prices peaked in this way was in 1989 – at around one-and-a-half times the average family income. This was followed by a steep fall in prices and the severe recession of the early nineties.

As illustrated in our imaginary brick experiment, the problem for the monetary authorities in conducting interest rate policy is the existence of time lags – ie, the period between a change in policy and its ultimate effect on inflation. An interest rate change will not affect AMD immediately, as consumers and businesses adjust their behaviour to the changed monetary environment. Similarly, a change in AMD will not affect the rate of inflation immediately as businesses adjust their behaviour to the change in demand for goods and services.

The Bank of England recognises that its actions will affect the rate of inflation only after a year or more. Initially, any change in interest rates will not move the metaphorical brick. The danger is



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that it may change interest rates by too much, partly because the alterations seem to have no effect and partly because it may overestimate the inflationary pressures that might exist in 18 months' time. If the interest rate is raised too far, asset prices might fall rapidly, damaging consumer and business confidence and leading to a decrease in the AMD – ie, the brick shoots across the table. Of course, it's not the monetary authorities that feel the force of the flying brick; it's the economy as a whole, as it's plunged into a recession.

So how can this problem be avoided? There are two tricks of the monetary policy trade. One is to develop a range of leading indicators that together will give the central bank an accurate predictor of future inflationary pressure. The Bank of England uses house prices, business investment intentions, indicators of consumer confidence, factory gate prices, wages and earnings indicators and a whole range of other measures to help it predict future inflationary pressure. The other is to conduct monetary policy slowly: interest rate changes are small (0.25 per cent at any one time) and the effects are observed before further changes are made. In this way the central bank might be able to change interest rates just enough to shift the brick from one part of the table to another.

If the bank gets it wrong, however, there's not much chance to duck before the brick flies across the table. Monetary policy can be a dangerous business. **FM**

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C4 Recommended reading

S Adams and P Periton, *Economics for Business Study System*, fifth edition, CIMA Publishing, 2004.

B Atkinson and R Millar, *Business Economics*, FT/Prentice Hall, 1999.

A Dunnett, *The Macroeconomic Environment*, FT/Prentice Hall, 1997.

A Dunnett, *Understanding the Market: An Introduction to Microeconomics*, third edition (except for chapter 17), FT/Prentice Hall, 1998.

A Griffiths and S Wall, *Applied Economics: An Introductory Course*, ninth edition, FT/Prentice Hall, 2001.

■ May 2005 exam results

If you wish to receive your May 2005 results via e-mail in the last week of July, you will need to select this option by logging in via www.cimaglobal.com to "My Cima" and accessing the "My personal details", "My communication preferences" section before July.

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Write to us, with supporting medical evidence or a certificate, as soon as possible after the exams and no later than June 30.

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Visit the "Study resources" area on the website at www.cimaglobal.com/cps/rde/xchg/SID-0AAAC544-F7A6A76E/live/root.xsl/1377.htm to download the May 2005 exam questions.

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For more information about the service and how to apply for a review, visit www.cimaglobal.com/cps/rde/xchg/SID-0AAAC544-F7A6A76E/live/root.xsl/1346.htm.

■ Computer-based assessments at certificate level

For full information about entering for a certificate level computer-based assessment, visit www.cimaglobal.com/cps/rde/xchg/SID-0AAAC544-F7A6A76E/live/root.xsl/1360.htm.

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Further information on this, along with the full syllabus and sample questions, can be downloaded from the CIMA website at www.cimaglobal.com/cps/rde/xchg/SID-0AAAC544-F7A6A76E/live/root.xsl/2786.htm.

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