

Chapter 12: Financial markets and monetary policy

Application of economics in the real world

Application of economics in the real world 12.1: The development of modern money

- 1 Barter is the exchange of one good or service for another good or service. Successful barter requires a double coincidence of wants, namely a situation in which the good or service that one trader desires to obtain is the same as that which another desires to give up, and an item that the second trader wishes to acquire is the same as that which the first trader desires to surrender. With barter there will be less specialisation because of the difficulty of overcoming the coincidence of wants. If you cannot find someone to trade with, you will have to produce it yourself.

Less specialisation means less output and more scarcity.

- 2 The notes and coins which make up cash earn zero interest, and they are vulnerable to theft and burglary. However, they provide instant liquidity, except that nowadays shops and public transport are increasingly refusing to accept cash as a form of payment and requiring instead the use of credit cards.
- 3 The economy we live in is a monetary economy in which most of the goods and services produced are traded or exchanged via the intermediary of money, rather than through barter (i.e. swapping goods). Whenever money is used to pay for goods or services, or for the purpose of settling transactions and the payment of debts, it functions as a medium of exchange.

In contrast to money, barter is inefficient because the time and energy spent searching the market to establish the double coincidence of wants results in unnecessary search costs, shoe-leather costs and transaction costs. These, in turn, promote a much greater inefficiency: namely, preventing the development of specialisation, division of labour and large-scale production. All of these contribute to the productive efficiency and range of consumer choice available in modern and sophisticated monetary economies.

Historically, communities that relied on barter were restricted to very small geographical areas in which only a very small number of goods and services were produced and traded against each other. The use of money as a medium of exchange or means of payments vastly expands the number of transactions that can be paid for. One person can buy cornflakes from a supermarket, paying in money, which the supermarket company uses to pay for other goods it wishes to sell, such as chocolate. In turn, the chocolate wholesaler uses the money to pay its electricity bills, and so on. Such transactions would not be possible if barter were the only medium of exchange.

- 4 As money evolved, gold and silver gradually replaced other forms of commodity money because they possessed, to a greater degree, the desirable characteristics necessary for a commodity to function as money: relative scarcity, uniformity, durability, portability and divisibility. All of these helped to create confidence in money, which is necessary for its acceptability. Nevertheless, gold and silver are vulnerable to theft and are difficult to store safely. Eventually, wealthy individuals deposited the precious metals they owned with goldsmiths for safekeeping. The goldsmiths developed into banks and the precious metals deposited with them were used as reserve assets to back up the bank deposits, which then became the main form of money in modern economies.

Application of economics in the real world 12.2: Positive and negative equity

- 1 Consumer durable goods such as automobiles and the money held in a household's bank account.
- 2 Positive equity is all the assets that a person or household *owns*. Negative equity is what they *owe*. For example, if all the assets a family owns are worth £60,000, but they have debts of £10,000, their net positive equity is £50,000.
- 3 In contrast to the end of the previous answer, people who are caught in a negative equity trap own goods, such as houses, which are worth less than the loans they took out to finance the initial purchase of these houses. When house prices fall, but rates of interest do not, householders cannot then get out of the trap they have inadvertently entered.
- 4 During the 2008–09 recession, falling house prices meant that fairly recent house purchasers entered the negative equity trap when what they owed (their mortgages) became greater than the falling values of their houses. Their situation became even more dire if they then went on to lose their jobs, which were the source of family income.

Application of economics in the real world 12.3: The inquiry into QE

- 1 Quantitative easing (QE) is an aspect of expansionary monetary policy that involves increasing the liquidity of the financial sector. This in turn should lead to more lending by banks, more borrowing by businesses and an expansion of *AD*. Quantitative tightening is the opposite. It would be used when it was felt that contractionary monetary policy was more appropriate. If there is then a slowdown in economic growth, there will be reduced need for contractionary monetary policy (and quantitative tightening).
- 2 Continued use of QE might give the impression that the government is using it to finance the government's debt. This might be perceived as a subtle way of implementing expansionary fiscal policy without appearing to do so. In this case, it might appear to be inflationary, which would reduce the credibility of the government's economic policy making.
- 3 It could do this but that would lead to a severe loss in the government's credibility. It would also create a temptation for the government to engage in expansionary policies, which might seem like a good idea but are more likely to lead to increased inflation. As a result, future buyers of government bonds might require significantly increased interest rates on the bonds to compensate them for a greater inflationary risk.

Application of economics in the real world 12.4: Macroprudential policy at the Bank of England

- 1 Macroprudential regulation is concerned with identifying, monitoring and acting to remove risks that affect the stability of the financial system as a whole. Microprudential regulation focuses on ensuring the stability of individual banks and other financial institutions; it involves identifying, monitoring and managing risks that relate to individual firms.
- 2 The Monetary Policy Committee (MPC) is the part of the Bank of England which implements UK monetary policy. The UK government sets the monetary policy objectives or targets, currently a 2% CPI inflation rate target, with the MPC then implementing monetary policy to try to 'hit' the target(s).

The Financial Policy Committee (FPC) is an official committee of the Bank of England, modelled on the already well-established Monetary Policy Committee. It was announced in 2010 as a new body responsible for monitoring the UK economy. Focusing on the macroeconomic and financial issues that may threaten long-term growth prospects, the

committee's first meeting was held in June 2011. The committee, headed by the governor of the Bank (currently Andrew Bailey), passes on its concerns about any risks it identifies to a new Prudential Regulation Authority (PRA).

- 3 An event which might reduce the financial stability of the United Kingdom is an announcement by a leading UK bank that it has run out of money and is unable to pay its debts.
- 4 Systemic risk is the risk of a major failure of a financial system, whereby a crisis occurs when providers of capital (i.e. depositors, investors and capital markets) lose trust in the users of capital (i.e. banks, borrowers, leveraged investors etc.) or in a given medium of exchange (US dollar, Japanese yen, gold etc.). It is inherent in a market system and hence unavoidable.

The most important feature of systemic risk is that the risk spreads from unhealthy institutions to relatively healthy institutions through a transmission mechanism.

Systemic risk was a major contributor to the financial crisis of 2008. Companies considered to be a systemic risk are called 'too big to fail'. These institutions are large relative to their respective industries or make up a significant part of the overall economy. In the USA, the collapse of the investment bank Lehmann Brothers exposed the US banking system to wider failure.

End-of-chapter questions

- 1 Money is best defined by the two principal functions it performs: namely, as a medium of exchange and as a store of wealth. Both these functions are possessed by cash, which is largely issued by governments, or rather by governments' central banks such as the Bank of England, but sometimes also, as in the case of Scottish banknotes, by privately owned banks.

However, besides issuing cash, the Bank of England also creates money through quantitative easing (see the answer to question 3 below for an explanation).

These days, privately owned banks such as NatWest create money through the process of deposit creation. When a person goes to a bank and asks for a loan, all the bank does is to credit the person's account with a deposit equal to the size of the loan that the person asked for. The person treats the loan as new money which can be spent. The bank has created money!

- 2 Bank Rate is a rate of interest set by the Bank of England. When the Bank of England increases Bank Rate, it signals to privately owned banks such as Barclays that the Bank wants the banks to increase rates of interest that the banks charge their customers when lending to them. Similarly, a cut in Bank Rate is followed by commercial or privately owned banks cutting their own interest rates.

An increase in interest rates encourages saving and therefore reduces consumption, and by raising the cost of borrowing, it also reduces business investment. Consumption and investment are two of the components of aggregate demand. Therefore, an increase in interest rates leads to a fall in aggregate demand, which deflates the economy, increasing unemployment but also reducing inflation. A cut in Bank Rate would have the opposite effect of stimulating aggregate demand.

- 3 According to researchers at the University of Bath, quantitative easing (QE) has been used by central banks to stimulate economies when standard monetary policy becomes ineffective. The Bank of England has implemented QE by buying financial assets from commercial banks and other private institutions, using money it has simply created out of thin air — increasing the money supply.

QE was introduced in the UK in March 2009, initially as a means of supporting the financial system, but increasingly with the aim of boosting aggregate demand. It initially cost £375 billion, about 20% of GDP.

QE does not seem to be an effective policy tool for bringing major economies out of stagnation. The Bath University research found that QE does reduce interest rates on government bonds, especially those of longer duration, but the effect may be temporary and limited if bond rates are already low. QE helped to stabilise the financial system in late 2008 and 2009, preventing even larger declines in output than were experienced. But there is little evidence that QE has encouraged economic growth.

This suggests that, while QE has produced a limited but temporary gain for the financial sector, it has been of practically no help to the wider business community or individuals and families struggling against inflation and unemployment. Despite the affection investors may have for it as a financial lever, QE looks unlikely to be the answer to present-day economic problems.

- 4 The answer to this question is largely indicated by the answer to the previous question on QE. UK monetary policy has been based on a combination of the unconventional policy of QE and the conventional policy of low interest rates used to stimulate aggregate demand in the economy. The latter policy has been constrained by the zero lower bound problem: namely, that as interest rates approach zero, they become less and less effective in stimulating aggregate demand.

In combination both policies have led, at best, to slow economic growth, but not at the rate that was usual before the 2008/09 recession. At best, UK monetary policy has been *partially* effective, but not *highly* effective.

Some blame the Bank of England for not controlling the high inflation of 2022 and 2023. However, most accept that as this inflation is cost-push in nature, it cannot be easily controlled using monetary policy.

- 5 The function of money markets is to supply both private-sector commercial firms and the government with a source of short-term finance. For a firm, bill finance is an alternative to a conventional bank loan. Bills are short-dated financial assets or securities, which mature within a year (and often within 3 months) of their date of issue. There are two main types of bill, or bills of exchange as they are known: commercial bills and Treasury bills.

In contrast to money markets, capital markets, which include the London Stock Exchange, provide the mechanism through which public limited companies (PLCs), which are arguably the most important form of business organisation in the UK, can raise the funds to finance their long-term growth. The growth of PLCs is financed through the firms selling ownership in themselves by new issues of shares and by borrowing through the sale of new corporate bonds.

In addition, the bond market performs a critical role in government finance: for example, by enabling a government to finance a budget deficit through the sale of government bonds.

Test yourself answers

TEST YOURSELF 12.1

For the owner of a house, the property she owns is a personal asset, though the mortgage taken out to finance the purchase of the house is a liability. Likewise, the car she owns is an asset, but the money borrowed to finance the purchase is a liability.

TEST YOURSELF 12.2

A Bank of England £10 note usually has no intrinsic value. People desire to hold it because they are confident that other people will accept it in payment of a debt. Very occasionally, however, a

£10 note may be valued in itself — for example, when there is a printing flaw in the note which turns it into a collectors' piece.

TEST YOURSELF 12.3

The correct answer is C, because £25,000 is a measure of the value placed on the vehicle by its owner who wishes to sell the asset he owns.

TEST YOURSELF 12.4

Inflation means that average prices rise. This means that consumers hold larger money balances to finance their planned purchases. Hence the correct answer to the question is A.

TEST YOURSELF 12.5

Narrow money is the part of the money supply that includes all physical money, such as coins and currency, demand deposits and other liquid assets held by the central bank. However, broad money, which includes interest-earning bank deposits, is a better indicator of people's overall ability to draw on their total store of value in order to finance their planned purchases.

TEST YOURSELF 12.6

Liquid assets can quickly be converted into cash without incurring costs. Cash itself is the most liquid of all assets. A limited market for resale reduces liquidity, so statement A is wrong. Inability to sell an asset on a market renders the asset illiquid, so statement B is wrong. Statement C defines liquidity, so provides the correct answer. High transaction costs reduce liquidity, so statement D is incorrect.

TEST YOURSELF 12.7

A person suffers from negative equity when what they owe exceeds what they own. Loss of income in a recession caused by loss of a job means that people have to borrow. This increases negative equity. Continued loss of income means that people become trapped in this situation.

TEST YOURSELF 12.8

The main difference between a financial market and a market for a good, such as a car, is that goods have an intrinsic value and can be consumed, whereas financial markets, such as a stock exchange, are markets in financial claims against other people.

TEST YOURSELF 12.9

Both are ways for a company to raise money needed to fund its activities. If the general public buy shares issued by a company, they become part-owners of the company. If they buy the company's bonds, then they become lenders to the company. Shares are undated (they never mature), whereas bonds are usually long dated (they mature several years after they are first issued). Shareholders receive dividends each year, but their value is not guaranteed; bond holders by contrast receive a guaranteed rate of interest.

TEST YOURSELF 12.10

A capital gain is the profit earned on the sale of an asset like stocks, bonds or real estate. It is the difference between the selling price (higher) and the cost price (lower) of the asset. Capital loss arises when the cost price is higher than the selling price. For example, if a householder who bought a house for £1 million has to sell the house in a recession for £600,000, she suffers a capital loss of £400,000.

TEST YOURSELF 12.11

If the £100 bond were to sell at its issue price of £100, it would earn £10 each year, which would be a yield of 10%. Since this is higher than the long-term interest rate of 6%, the bond's current market price would have to rise until its yield is 6%.

We can calculate the bond's current market price by using the formula:

$$\begin{aligned} \text{current market price} &= \frac{\text{annual coupon payment}}{\text{long-term interest rate}} \\ \text{current market price} &= \frac{\pounds 10}{6\%} \end{aligned}$$

which is £166.66 recurring, which means that E provides the best approximation to the bond's current market price.

TEST YOURSELF 12.12

A capital market is where shares and bonds are issued to raise medium- to long-term financing. A foreign exchange market is a market for the trading of currencies.

TEST YOURSELF 12.13

A retail bank is a high-street commercial bank whose main customers are members of the general public. A central bank is a national bank that provides financial and banking services for its country's government and banking system, as well as implementing the government's monetary policy.

TEST YOURSELF 12.14

Systemic risk is the possibility that an event at the company level could trigger severe instability or collapse an entire industry or the economy. Systemic risk was a major contributor to the financial crisis of 2008. Companies considered to be a systemic risk were called 'too big to fail'. These institutions were large relative to the US financial system and made up a significant part of the overall economy. Lehman Brothers' size and integration into the US economy made it a source of systemic risk. When the firm collapsed in 2008, it created problems throughout the financial system and the US economy. Capital markets froze up, while businesses and consumers could not get loans, or could only get loans if they were extremely creditworthy, posing minimal risk to the lender.

TEST YOURSELF 12.15

As stated earlier, anything we own is our asset; anything we owe is our liability.

TEST YOURSELF 12.16

It is important not to confuse credit with bank deposits. While the two terms are linked, they are not exactly the same thing. When a bank makes a loan, it gives the customer an 'advance', which is shown as an asset on the bank's balance sheet. It is an asset to the bank because the bank has a call on its client to repay the loan. But the loan is also shown as a deposit on the liabilities side of the bank's balance sheet. The loan extended to its customers creates both an asset and a liability. Deposits, which are the bank's liabilities because the bank must honour any cash withdrawals or payments from a deposit, are the most important part of the money supply. The essential point to note is that, whenever a bank gives a loan, it simultaneously creates an equivalent bank deposit. Credit creation and deposit creation both occur.

TEST YOURSELF 12.17

We have reproduced below Table 12.3 from page 439 in the textbook.

Table 12.3 The structure of a retail bank's balance sheet

Assets	Liabilities
Cash (notes and coins)	Share capital
Balances at the Bank of England	Reserves (retained profit)
Money at short and call notice (money lent to other banks via the interbank market)	Long-term borrowing (e.g. bonds issued by the bank)
Bills (commercial bills and Treasury bills)	Short-term borrowing from money markets
Investments (e.g. holdings of government bonds (gilts) and corporate bonds)	Customers' deposits (sight deposits and time deposits)
Advances (e.g. credit or loans and mortgages extended to the bank's customers)	
Fixed assets (e.g. bank buildings and other premises)	

The first four items in the left-hand column are all reserve assets. These are all highly liquid assets which are either cash, or can be quickly turned into cash, if the bank has to meet a sudden demand by its customers for cash. They are held in reserve to meet such a sudden demand by customers for cash.

TEST YOURSELF 12.18

As we explain on page 439 of the textbook, if a bank kept all its assets in the form of cash, it would not really be a bank at all, but a safe-deposit institution. The bank's profits, if it earned any, would come solely from the fees it charged customers for guarding their valuables. The bank's cash would be completely liquid, but not very profitable.

To make a profit, a bank has to make its cash go to work — in other words, be a monetary base upon which advances to customers are launched. Imprudent or greedy banks could be tempted to create far too many profitable advances — imprudent in the sense that the banks possess insufficient cash to meet customers' possible cash withdrawals. These banks would be operating on too low a ratio of cash and other liquid assets to the advances they have created. If a run on the banks occurred, the banks would crash, which happened to the Northern Rock bank in the UK in 2007.

TEST YOURSELF 12.19

A central bank, such as the Bank of England in the UK and the Federal Reserve Bank in the USA, is owned by the state. It supervises and oversees the banking system, and implements the country's monetary policy. An investment bank, such as Morgan Stanley, provides specialised banking services and advice to other financial institutions, including retail banks such as the TSB.

TEST YOURSELF 12.20

A policy objective is a target or goal of economic policy, such as controlling inflation. A policy instrument, such as raising or lowering interest rates, is a tool used to try to achieve a target.

TEST YOURSELF 12.21

At the time of writing the Bank Rate is 3.5%, its highest level since 2009. It is likely to rise more in 2023, though it is thought that the Bank Rate will peak in 2023.

TEST YOURSELF 12.22

Expansionary monetary policy operates through cuts in Bank Rate and through quantitative easing (QE), which shift the *AD* curve rightward. Contractionary monetary policy does the opposite, through increasing Bank Rate and reining in QE, which shift the *AD* curve leftward.

TEST YOURSELF 12.23

A monetary policy transmission mechanism maps out the route through which an initial change in a policy instrument feeds through to eventually affect a monetary policy objective: for example, a change in Bank Rate or a change in QE feeding through to eventually change the rate of inflation.

TEST YOURSELF 12.24

Bank Rate's transmission mechanism is illustrated and explained on page 447 of the textbook.

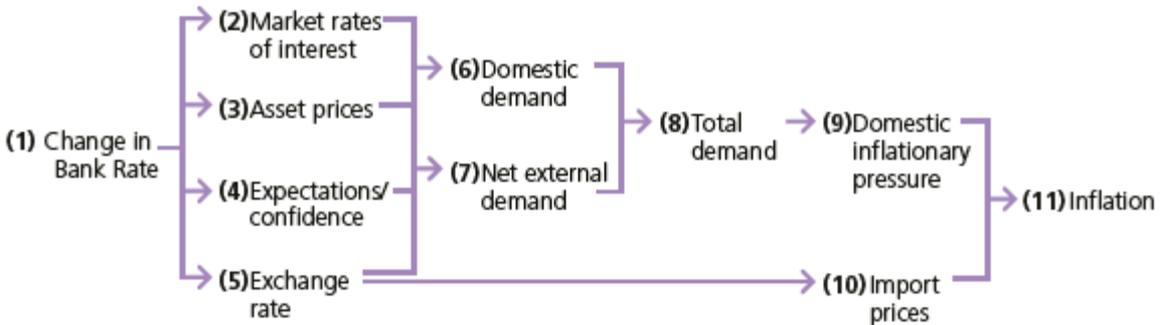
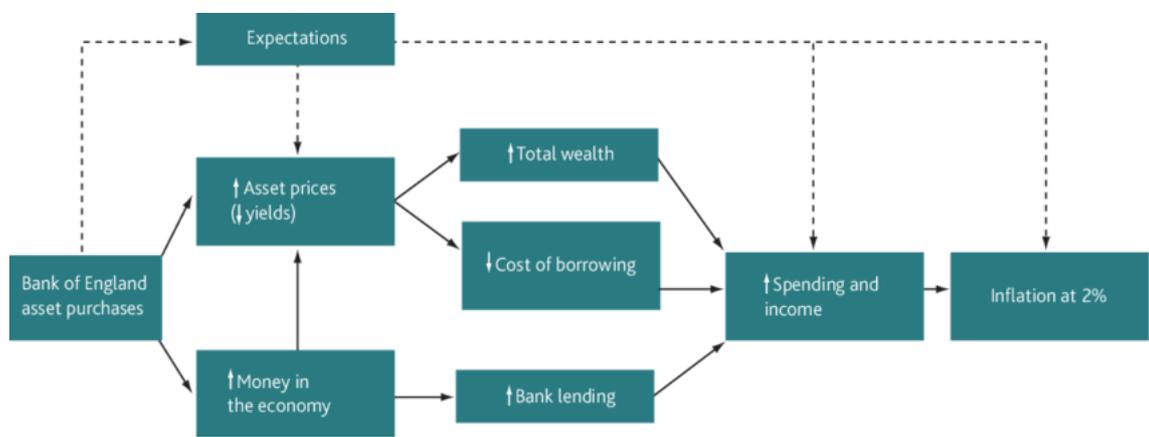


Figure 12.8 The transmission mechanism of interest rate policy

Likewise, QE's transmission mechanism is illustrated and explained on page 450 of the textbook, though a rather simpler illustration is shown below:



TEST YOURSELF 12.25

The real rate of interest = the nominal rate of interest – the rate of inflation.

In the example in the question, the real rate of interest = 6% – 4%, which is 2%.

TEST YOURSELF 12.26

Economic regulation involves the imposition of rules, controls and constraints which restrict freedom of economic action in the marketplace. Deregulation involves the removal of any previously imposed regulations that have adversely restricted competition and freedom of market activity.

TEST YOURSELF 12.27

A bank's liquidity ratio is the ratio of its cash and other liquid assets to its deposits. By contrast, a bank's capital ratio is the amount of capital on its balance sheet as a proportion of its loans.