

7 Money, banking and international finance

Topics to be considered in this chapter:

- The functions, forms and qualities of money.
- Fractional reserve banking and the creation of credit.
- Central bank attempts to control money supplies.
- The globalisation of finance: causes and effects.
- The impact on government policies.

INTRODUCTION

Money is arguably mankind's single most important invention. It has enabled societies all over the world to exchange goods and services, to grow and prosper. Indeed, communities need money in order to function.

Shortly after the dissolution of the Soviet Union, in the winter of 1991/2, many people lost faith in the value of the Russian rouble. As a consequence the economy disintegrated, living standards collapsed and many people resorted to bartering their belongings in the streets in order to get sufficient food.

The usefulness of money is easily demonstrated, therefore. Without it, people cannot agree to do business and cannot support standards of living much above subsistence level. With money, however, trade can be facilitated and very sophisticated lifestyles may develop. Far from being the root of all evil, money is the foundation stone of trade, economic growth and the development of civilisation. It is certainly worthy of serious study.

THE FUNCTIONS, FORMS AND QUALITIES OF MONEY

The prime *function* of money is to act as a *medium* of exchange, and any commodity which is held for this purpose – rather than for its own intrinsic value – can be defined as money. Money in addition acts to set a *price* on all goods and services traded, and this includes putting a value on time – the rate of interest on riskless investment indicates how much people are prepared to accept in future compensation for going without their money now. Money

should also function as a *store* of wealth: ‘hard’ currencies are distinguished from ‘soft’ ones in that they keep their exchange value for longer – the latter, in other words, are less acceptable as money.

Money at first took many *forms* in the course of its early evolution – salt, corn, seashells, etc. – in the many isolated communities where it arose. In all cases, however, in order to function properly as described above any form of money must possess certain *qualities*, such as: portability, divisibility, scarcity, durability and, most of all, *acceptability*.

In the last resort, *anything* which is acceptable in exchange is money. It is this unique characteristic of money that makes it so different from any other commodity in the global economy – it does not matter what is used, so long as it enables exchange to take place. Hence the old saying: ‘Money is as money does.’ And of course it is this property which makes it so difficult to control by any central authority: as soon as one form of money becomes restricted in its use, another form will immediately evolve. We can call this the phenomenon of *endogenous money supply*. That is, the supply of money circulating in an economy cannot be directly controlled by the state for any long period; it is determined by the popular institutions and practices of the society itself. We shall return to this important principle again and again.

The earliest, most acceptable forms of money that crossed the world were precious metals. Gold, in particular, had all the right qualities except that it was too scarce. As trade grew, the supply of gold could not keep up. The amount of gold thus had an inherently restrictive effect on trade (causing gold prices to rise) which created the demand for substitute metals such as silver and thus the discovery of Gresham’s law (named after the Elizabethan financier): that ‘bad money drives out good’. (If the official exchange rate between two currencies differs from that which is publicly recognised, traders will hoard the preferred currency and offload the other on market exchanges. The ‘bad’ money thus changes hands whilst the ‘good’ disappears into pockets.) In the case of silver, it wasn’t such a bad currency. The development of European empires and the rapid opening up of trade in the Age of Discoveries was financed by increased supplies of South American silver on to markets and, despite periods of excess supply and unstable prices, it eventually superseded gold as an acceptable currency. Hence the evolution of a pound of sterling silver in the United Kingdom as the unit of account – the *pound sterling*. Equally, in the Spanish empire, the weight of silver passed into the language of money – as the *peso* and *plata*.

In time, of course, silver suffered the same problem as gold and, indeed, all forms of commodity money. Its supply could not perfectly match the rate of growth of world trade. Accordingly a new form of money evolved: paper promises.

A promise to pay – *provided the recipient believes it* – is ‘as good as gold’. Better, in fact, since promises are far less costly to produce than precious metals, and so the supply of banknotes (‘I promise to pay the bearer on demand the sum of . . .’) could more closely match the rate of growth of trade.

The catch, of course, is to ensure acceptability. Many banks from the earliest times have therefore had to promote an air of respectability, solidity, stability and all those other qualities that are embodied in their architecture and the comportment of their managers. How else would they win the confidence of a community and be entrusted with its savings? How else to inspire traders to accept their promises to pay? As Groucho Marx used to say: ‘Integrity? If you can fake that you’ve got it made . . .’

THE MODERN BUSINESS OF BANKING

Modern *fractional reserve banking* demonstrates the importance (and profitability) of generating confidence. So long as confidence holds, banks can issue many more promises to pay (liabilities) than they have liquid funds to cover. It does not matter how little in total a bank holds in its reserves, provided it has just enough to satisfy the next claimant who walks through the door. And, of course, the more respectable the institution the less likely anyone is to challenge its promises. All the more room, then, for the bank to keep creating loans that it will call in at some future date to be repaid with interest. (It profits the banks to increase the indebtedness of the public.)

The only limit to the money supply now is the bankers’ sense of self-discipline. In fact history shows they have little. Competitive forces drive commercial bankers to create more and more credit in pursuit of more and more profits. But confidence in banks can evaporate as their liabilities expand too fast, outstripping reserve assets. How can so much credit ever be supported? Empires are being built on sand, and a slight shift somewhere in the system can bring everything crashing down. If all claimants simultaneously run to the bank to withdraw their deposits, there is little there to pay them. Only promises. And if they are not believed, there is nothing.

The history of money and banking is thus a history of boom and slump – of the overexpansion of credit, of increasing indebtedness and of bank crashes – recent problems being no different from earlier ones, though perhaps they have been bigger and more spectacular. Many people around the world, indeed entire nations, have got badly into debt and are now paying the consequences in terms of greatly reduced circumstances. Some lost fortunes in the collapse of savings-and-loan institutions in North America. Similarly, hundreds of millions of innocent Asians suffered in the late 1990s when bad loans and nervous creditors brought down a succession of banks in Japan, Thailand, South Korea and prompted crisis and collapse in Indonesia. All affected have naturally asked, ‘Why? What did *I* do wrong?’ And ‘Isn’t there someone responsible for protecting us?’

TRYING TO CONTROL WHAT GOES ON

In each country it is the role of the state-run *central bank* to control national money supplies, to regulate commercial financial operations and to prevent

abuses of the system. It is to the Federal Reserve Bank in the United States, the Bank of England and the European Central Bank that hard-hit people in those countries turn to complain. The problem is that world financial practices have evolved too quickly for nationally confined authorities to keep up with them. And successful government moves to improve competition and efficiency in financial markets – making it easier/less costly for dealers to move money from one world centre to another – have inevitably made it more difficult for central banks to control what goes on.

Recent experience in the United Kingdom, the United States and Germany in administering monetary policy has demonstrated that it is extremely hard to directly control the quantity of money circulating in an open, rapidly evolving, modern market economy. This is because any central government attempt to regulate bank activity according to one target or definition of money simply drives the market to use other forms of money (as predicted by the argument of endogenous money supplies, described earlier). In this case, multinational corporations and others expanded their operations in those markets where the big national banks were restricted. Such *disintermediation* is the result of the institutional and technological changes in financial centres: many more foreign banks and domestic near-banks have set up in London and New York and have participated in new offshore and onshore money markets with sophisticated telecommunications technology linked worldwide.

Faced with embarrassing, partly self-inflicted impotence in controlling their own backyards, monetary authorities in Europe and North America have turned more and more to increases in interest rates (the price of money) in order to rein in consumer demand, thereby indirectly restricting the supply of credit from the banks. This of course means more pain for everyone as borrowing costs more, spending falls, businesses suffer and unemployment rises. Clobbering the customer in order to get at his supplier seems neither equitable nor efficient. It is, however, the measure most commonly resorted to in the attempt to control that most slippery of concepts: modern money.

As different countries lurch from boom to bust there are those who argue that national economies should disconnect themselves from destabilising world developments by unlinking their currency and their monetary affairs from any fixed international exchange rate system. In contrast, there are others who argue for exactly the opposite course of action – that greater monetary discipline is necessary, requiring stable exchange rates, supra-national regulation and, in the extreme, monetary union.

These are issues that are complex and need careful analysis. The economics of banking, recent changes and their impact on money supplies – both nationally and internationally – are considered in more detail below. The particular arguments for and against monetary union in Europe are examined in the next chapter and the issues relating to international financial crises – which affected many developing countries in the 1980s and 1990s and still impedes their progress today – follow later on.

THE ECONOMICS OF BANKING: A SIMPLE MODEL

To understand more clearly how the financial world operates, how it is changing and how it affects the lives and livelihood of ordinary people like you and me we need to simplify the analysis of banking with the use of an elementary model, introducing more complex and realistic qualifications later on, once the basics are understood.

Control of the money supply within a country (assuming for the time being the country can be isolated from international events) lies within the relationship which develops between the state authorities and private financial markets. This relationship is never stable in any society – it is in a continual state of evolution – but at its simplest level we can begin the analysis by assuming that there are only two forms of money: cash and credit (transferred by cheque).

The institutions of a banking system

Financial markets are places where people and institutions buy and sell money – that is, they loan and borrow funds – and in the process determine rates of interest (the price of money) and the money supply (the quantity of funds circulating). Assume that the only traders in this market place are the central bank, several competing commercial banks and numerous private individuals and businesses.

The central bank holds the bank account of the government (it loans and borrows money for the government, among others); acts as a banker to all the commercial banks (they all keep their own accounts at the central bank); is responsible for setting the rules and regulations in all financial trade; and is charged with conducting the government's monetary policy within the economy (and internationally).

Commercial banks are *financial intermediaries*, that is, they specialise in the business of mediating between those who have surplus money and those who have insufficient. More simply, they accept people's savings and then lend them on to others who wish to invest. In the process they make money: creating more or less credit as society demands, subject to the effectiveness of central bank intervention.

Private individuals and businesses of all sizes are customers in these financial markets – they are the many people who save and the not-quite-so-many who invest.

The central bank directly controls the issue of cash (coins and banknotes) within the country. Cash is held in the hands and homes of private individuals, is deposited in commercial bank reserves and is also kept by these institutions in their cash balances at the central bank.

The creation of money

A country's *cash base* (defined as M0) is at the heart of its money supply. Commercial banks issue more or less credit to customers (as we shall see) as their cash reserves grow or decline. We can consider how this process takes place first of all in the case of a stable, conservative community where people have no reason to doubt the trustworthiness of their bankers. (Such communities cannot be built quickly – they are the product of lifetimes of responsible financial conduct, where people grow to respect those who hold their money.)

All customers who deposit cash in the banks may come to use cheques as a safe and easy substitute in transferring funds – especially for large purchases. Most people will not cash their cheques in order to withdraw funds and then transfer the money to someone else. Cheques are handed over instead, and the banks involved subtract the cash involved from one person's account and add it on to another's. The cash, therefore, never sees the light of day: it stays in the hands of bankers.

The more trustworthy the community, the fewer cash transactions will be necessary, the more acceptable will cheques be. Thus *the form of money changes*: commercial bank promises to pay (cheques) take the place of central bank promises (official banknotes).

Suppose that for every \$1 transaction that takes place in the form of cash in a community there are ten times that number of cheques accepted. This means that commercial banks can expand the money supply by ten times the value of the cash base. For every \$1 cash deposited by a customer in a bank, therefore, credit can be extended by \$10 (by issuing cheques to people asking for loans). The banks are confident that at any one time only one in ten customers will ever come in and demand cash in exchange for their cheques – so cash reserves are sufficient if they only back 10 per cent of all loans created.

The size of the *credit multiplier* (ten, in this example) is a function of the stability and spending habits of the community involved. For politically unstable or economically underdeveloped societies the credit multiplier may be as low as 1 – that is, every \$1 loan is backed by \$1 cash, ready to be withdrawn at a moment's notice. Highly sophisticated financial communities, on the other hand, may have very little need for cash. Billions and billions of transactions may change hands daily with an infinitesimally small fraction ever being converted into cash. It is in these circumstances that numerous financial intermediaries have grown up borrowing and lending credit over varying time periods, and – quite clearly – the direct influence of the central bank as the controller of the cash base is greatly diminished.

Control of the money supply

Theoretically the central bank can control the money supplies of the commercial banks by varying the economy's cash base through *open-market*

operations. That is, the central bank borrows money from the public by means of selling *bonds* and *bills of exchange* in the open market place. This means they sell paper (promises to repay loans at some future date) to private individuals and businesses in exchange for cheques. By cashing in the cheques the central bank reduces the commercial bank cash reserves. For every \$1 reduction in cash reserves, banks must call in \$10 worth of loans (assuming the economy maintains a stable 10 per cent reserves/assets ratio). Conversely, by buying back bonds and bills the central bank increases the flow of cash into the commercial banks, which then can increase lending tenfold.

There are other means by which central banks can attempt to control money supplies. Different countries can use one method, or a combination of methods, depending on what suits their practices and institutions best. For example, instead of operating indirectly through the open market, central banks can directly reduce commercial bank reserves by seizing or freezing a fraction of their deposits – such cash cannot therefore be used to support credit and, again, loans must be called in to a multiplied extent.

Alternatively, central banks can demand a certain reserve ratio by law, and then *increase* this ratio at times when they wish to restrict money supplies. Thus if banks maintain a 10 per cent ratio of cash to loans and the central bank insists on a 12.5 per cent ratio, it implies that instead of every \$1 cash supporting \$10 loans, now it can cover only \$8 worth. Twenty per cent of credit circulating in the economy must be cut back.

Either by reducing banks' cash reserves or by increasing cash ratios, if central banks are successful in curtailing money supplies they will drive up interest rates on the open market. They may, in fact, decide to operate the other way round: by charging higher base rates on central bank loans (which underpin the money markets) they may drive all interest rates upward and thus choke off demand (and thereby supply) for credit.

All these measures have been used to a greater or lesser extent over the years as central banks have struggled to assert their authority and thus regulate monetary policy. (Monetary policy is important because it is one instrument used by governments to manage the macroeconomy. Actually, much controversy has burned between economists as to precisely how important this policy instrument is, relative to other controls. The general consensus now is that money supplies and interest rates *do* affect such phenomena as rates of inflation and investment, but the relationship is not as close or as predictable as some have argued.)

The difficulty, however, is that an accelerating number of changes have impacted upon banking practices and – as indicated in the introduction to this chapter – central bank authority and control have for the most part been overtaken by events. Many of the old certainties in this market place have now disappeared.

THE GLOBALISATION OF FINANCE

Central banks are no longer monopolists of the money supply in their own isolated economies. Thanks to increasing competition and innovation in the banking industry, the widespread application of telecommunications technology and follow-my-leader deregulation of markets in all the world's major financial centres, enormous sums of money can now flow around the world, in and out of different countries, at the press of a button. The Bank of England estimated that, in 1992, the world's daily volume of foreign exchange dealing was valued at \$1,000,000,000,000 (\$1 trillion). That was *each day* in 1992; it is even greater now!

By this estimate, international money flows are *over 100 times greater* than all world movements of real goods and services. The buying and selling that these enormous funds are exchanged for, therefore, is in paper promises: all sorts of bonds, bills, securities and derivative financial instruments that private money makers have invented. The forms of credit are so numerous today that what counts as money – and what does not – is almost a matter of individual preference.

Causes

What has driven this globalisation of finance and what have been its effects?

Trade

The first major impetus to international banking occurred during the Cold War years of the 1960s when foreign (especially Soviet) trade surpluses denominated in US dollars were looking for a place of deposit, free from the restrictions of the US monetary authorities. The *Euro-dollar* (later Euro-currency) *market* grew up, therefore, with banks of various nationalities operating in London free from the reserve asset requirements and interest rate ceilings demanded either by the Bank of England (because they were not dealing in pounds sterling) or by the Federal Reserve in the United States. Being an 'offshore' market, the banks involved were also outside the exchange controls designed to support the (then) world fixed exchange rate system. Their customers were large private and public enterprises with international interests which dealt in large sums of money (e.g. a minimum transaction of US\$1 million). By operating wholesale and free from any restrictions, Euro-market banks had lower costs than their US counterparts and so could offer their clients better rates of interest and could profit on small percentage differences. The first lesson of this new industry was thus well learnt: a large turnover, small margins and fleet-footed avoidance of rigid regulation was the secret of success.

The internationalisation of finance gained pace in the 1970s, when global recycling of petro-dollars became the major preoccupation of bankers (see

chapters 9 and 10, below). Massive balance of payments deficits of Western oil-consuming countries had to be matched by opposite movements of large sums of capital financed through the banks. The reverse side of this same coin was that oil-rich OPEC states with small populations and a limited capacity to quickly spend these fortunes needed international banks to place the funds in interest-bearing deposits. Trade imbalances of any kind require financing – these imbalances were the largest the world had ever seen and the opportunities for expansion of international finance were a major boost to the industry.

Deregulation

At the end of the 1970s the stagflationary effects of the oil shocks on Western economies heralded the ascendancy of conservative economics as espoused by Britain's Margaret Thatcher and Ronald Reagan of the United States. After decades of interventionism, subsidies and controls in all manner of industries, governments in the 1980s seemed to rediscover the dynamism of free markets. Deregulation, privatisation and the liberation of prices became the new orthodoxy. Restrictions on international capital movements were lifted in one country after another.

Note that increasing international competition drove deregulation more than anything else. As 'offshore' and foreign banks in London dealt increasingly profitably with large international accounts free of Bank of England controls, UK domestic banks lobbied the government to allow them unrestricted access to this market also. As the amount of business grew in London so the same political pressures built up in New York, Tokyo and Frankfurt: central authorities must lighten the load of their controls or risk the loss of business avoiding their shores. Deregulation rapidly became the dominant political economy, even in countries with allegedly socialist or interventionist administrations such as France and Japan.

Innovation

We have met this notion before: any system of heavyhanded regulation drives private profit seekers to innovate and avoid paying the associated costs. In banking, with such a slippery commodity as money, the volume of dealing simply changes its form and keeps on growing. If governments resist the tendency to deregulatory financial policies they will attempt to exert more and more restrictions on their particular money markets. This will drive interest rates up and make it even more profitable for international dealers to try and avoid regulations and move money around. The opportunities for financial innovation and profitable *arbitrage* increase. Controls cannot succeed in such an international environment – the political movement towards deregulation becomes unstoppable.

Technology

Advances in computing and telecommunications provided the means to accelerate these changes worldwide. Round-the-clock, twenty-four-hour trading in a global financial market place is possible with the three largest financial centres of London, New York and Tokyo all linked together. As Tokyo goes to bed London is waking up and so New York switches from one set of traders to another. And, with computers programmed to gather and analyse masses of business data, the *transaction costs* of seeing and acting upon subtle changes in financial information have become greatly reduced. (This fact alone explains why such a lot of international trading occurs: assume 500 dealers each operating in Japan, the United States and the United Kingdom. The cost of contacting each one increasingly diminishes as technology improves – banks thus have no economic incentive to restrict the number of contacts. The addition of *one* extra dealer to this network, therefore, will increase the number of trades possible by 1,500. That is why daily transactions in international money are measured in trillions of dollars.)

The US economist Robert Solomon quotes the cost of a three-minute transatlantic phone call between New York and London as falling by 90 per cent between 1970 and 1990, while the average price of computers fell by 95 per cent. 'Distance has become virtually irrelevant in business and financial decisions,' he says. Meanwhile US international trade in bonds and equities rose from 9 per cent of GDP in 1980 to 89 per cent in 1990 to 164 per cent by 1996.

The significance of information and transaction costs falling is that the *barriers to entry* to the industry have all but disappeared. Specialist knowledge which used to characterise each segment of financial markets is now widely available to any firm that can tap into the relevant global telecommunication network. Highly efficient and accessible technology has brought increased competition from enterprises formerly unrelated to the industry and, as a result, has been responsible for much *disintermediation* – the direct matching of buyers and sellers outside the money markets by businesses 'doing it themselves' without the brokerage service of official banks or finance houses.

Risk

Each change mentioned above drives others. Anti-inflationary, conservative governments drive up interest rates rather than expand money supplies. With no restrictions on capital movements, 'hot money' flows in to take advantage of higher rates of return. Domestic currency is in demand, therefore, and the exchange rate must rise. This causes businesses to recalculate their costs and profits in international trade: exports become more expensive and imports cheaper as the price of currency appreciates. (All these events occurred in the early 1980s in Europe and the United States. The business recession created was sharp, painful and costly in terms of business failure and unemployment.)

Businesses are at risk in a world of volatile interest and exchange rates, and risk encourages banks to offer innovative financial packages to help them weather the storms. The growth of clever ways to hedge against various types of financial risk has led to an explosive increase in options, futures and all sorts of trading in *derivatives* (and, more insultingly, *junk bonds*), each new financial product being rapidly copied by other banks and centres as soon as it hits the market. Thus dealing in three-month Euro-dollar futures totalled US\$670 billion at the end of 1989, rising to US\$1.1 trillion by late 1991.

Diversification

The appropriate response to a world of increasing risk is for businesses to diversify their assets. As currencies, interest rates and commodity prices have become more volatile, so institutional investors whose profits depend on these prices have increasingly widened their portfolios and purchased assets in a number of different centres. Pension funds, insurance companies and unit trusts have taken a more and more active part in international trading, therefore. For example, in the 1980s decade UK pension funds increased their holdings of foreign securities from 7 per cent to 18 per cent of their portfolios; US funds widened their spread from 1 per cent to 4 per cent and the Japanese from 1 per cent to 16 per cent.

Effects

The implication of all these changes for individual countries is that now it is extremely difficult for governments to use monetary policy to control their economies as they wish. Any changes they may want to introduce can have unpredictable repercussions, thanks to the volatile and interdependent world we all live in, and so the idea of fine-tuning an economy through regulating the quantity of money or the structure of interest rates is hopelessly unpractical.

Multi-asset markets

How can central banks control the money supply when money itself can no longer be closely defined? In today's financial markets, dealers work with a whole spread of assets of varying liquidity and security, from cash through Treasury and commercial bills of exchange to all manner of different bonds, securities, certificates of deposit, equities and longer-term advances and mortgages.

Liquidity is the ease with which any of these assets can be converted into cash. Very short-term loans are highly liquid, since they will be repaid quickly. Reliable long-term assets can be very liquid also, since they may have a high resale value or *secondary market*. (Government securities of, say, one year to run can be resold immediately to any one of a number of interested

buyers.) Less reputable commercial bonds and longer-term assets may be more difficult to place a present value upon – they are less liquid – but they carry a higher rate of interest as a result.

With so many different financial institutions holding varied portfolios of income-earning financial assets, which particular ones do you include in the money supply? If the central bank restricts the circulation of such assets as it has directly under its own control, it will simply prompt the expansion of other financial instruments to take their place. If interest rates on government bills and bonds rise, then a whole chain of substitutions may take place as dealers adjust their holdings of these as opposed to other assets. Prices and interest rates on a host of near and distant alternatives will all shuffle up or down accordingly.

As a result of such diversity, central banks have identified an ever-increasing array of monetary aggregates as the money supply – M1, M2, M3, M3c, M4, etc. – each in turn being used for control purposes, only to be just as quickly abandoned as the authorities found that it did not behave quite as it should have done. Experience has produced *Goodhart's law*: whichever measure seems best to represent the money supply will cease to function as such as soon as the central bank tries to regulate it.

Institutional changes

In addition to the vast, innovative spread of assets held by banks, what actually constitutes a bank now is becoming irrelevant. Once upon a time, financial markets were segmented and specialised: commercial or retail banks offered deposit and (relatively short-term) loan facilities to the public; merchant banks, acceptance houses or investment banks underwrote share issues for businesses; building societies and mortgage institutions funnelled many small savings into long-term house loans; discount houses and money market brokers bought and sold very short-term government and commercial debt. All these and more traded in specialised financial products and set their own prices in their own secure worlds.

Now domestic and international competition is rife. The barriers between different financial sectors have come down – so that retail banks have become building societies and similarly they offer wholesale banking services to big business. With cross-border restrictions falling, subsidiaries of foreign, international banks have meanwhile poured into every small financial centre around the world; and, most important of all, many large national and multinational companies have entered into the competition as well. As late as the 1970s US banks controlled about half the long-term loans made to business in that country. By the mid-1990s the figure was down to around 20 per cent as other institutions entered the market and, especially, firms sold their own commercial paper.

Dozens of international mergers and acquisitions have occurred over the last three decades between banks, securities firms and brokerage houses in

Europe, the United States and Japan. As a result, which finance house is operating where, dealing in what business, is no longer the cosy, predictable affair it used to be. In 1990 the international reach of the world's 100 largest banks amounted to over 4,600 offices in different locations – it is certainly far greater today. This remarkable globalisation and opening up of the banking industry is important because it has made the rapid mobilisation of funds from one centre to another all the more easy and, by the same token, has made the monitoring and control of domestic financial operations by national authorities virtually impossible.

Exchange rate effects

With financial sectors operating increasingly beyond the reach of central banks, government attempts to change money supplies and interest rates within the domestic economy may have little short-term effect on real economic variables such as consumption, investment and employment, but they may have an unpredictable and immediate impact on the exchange rate.

Suppose, for example, that the central bank intends to restrict the money supply, push up interest rates and restrain inflationary expenditure. These efforts may have little impact on the real economy if business activity and expectations are operating in a contrary direction. If official bank lending is tight then, as already explained, large corporations can raise funds by borrowing internationally through a process of issuing their own bonds or securities (though they have to take on the risk of unanticipated exchange rate movements).

High domestic interest rates will anyway attract foreign savers to move their funds into the country, so through a combination of this effect, plus local businesses pulling in cheaper foreign loans, there will be a flow of funds on to the foreign exchange markets and therefore increased demand for the domestic currency.

Given that the central bank is consistent in wishing to curtail the money supply, the only outcome of increased foreign demand for the currency must be a rise in the exchange rate. Thus the effect of the authorities attempting a credit squeeze is not necessarily to dampen aggregate investment and consumption spending, but to drive up the price of exports and to reduce the price of imports. The country's trade balance will worsen, and industries producing exports and import substitutes will suffer.

All countries have therefore found out that they can have either an exchange rate policy, or a monetary policy, but not both. The domestic interest rate appropriate to one cannot be simultaneously used to control the other. If governments are unhappy that their exchange rate is too high, making exports too expensive and uncompetitive in world markets, they must reduce interest rates and/or sell more currency to bring its price down. Either way they lose control of the money supply. Alternatively, if they stick rigidly to a monetarist prescription of expanding money supplies according to a prearranged target,

they cannot then control interest rates and exchange rates as they so wish, but must leave them to be determined by the free market.

CONCLUSION

In a multi-asset financial world the clear-cut distinction between a community's base of cash reserves and its total money supply disappears. There is no simple 1 : 10 credit multiplier relationship; reserve assets are not easily identifiable, nor are they completely within the control of the authorities; and – thanks to institutional changes – official banks subject to central bank regulation now represent a diminishing fraction of financial operators.

All the measures referred to above by which central authorities are supposed to influence monetary aggregates – increasing or decreasing commercial bank reserves through open-market operations, direct intervention or changing minimum asset requirements – are now to be found only in outdated economics textbooks. These measures cannot work in open, deregulated markets, since other highly liquid assets can be quickly substituted for those reserves the central bank calls in, and many non-bank financial operators are out of reach anyway.

In effect, most developed countries since the mid-1980s have opted to pursue an exchange rate policy rather than take any overt monetary stance apart from deregulation. For all the reasons given above, monetary policy is too blunt and unpredictable an instrument to serve the needs of governments.

The impact of all these changes on the world economy cannot easily be summarised – we are still in the process of living with them. What is clear is that international financial markets react faster today than ever before and can move such volumes of money that even those central banks with the deepest pockets cannot buy them off. Governments in Mexico and East Asia found this out to their cost.

At such times, when private markets force changes upon public authorities, the criticism typically surfaces that democratically elected administrations are being held hostage by faceless speculators, profit-hungry conspirators or 'global capital'. (For example, Malaysian Prime Minister Mahathir Mohamed blamed Westerners in general when the ringgit depreciated by 35 per cent in the latter half of December 1997.) Beware of such politically loaded complaints!

It is true that, in interdependent and volatile financial markets, if government policies in one country are not considered trustworthy then both national and international wealth holders will quickly desert those shores and look for safer havens. In such circumstances it is probable that local capitalists, and not faceless international speculators, will be the quickest to move – they are likely to know local conditions best and have most to lose. For example, domestic and not US and other foreign investors were the first to jump ship in the 1994/5 Mexican crisis. (The same was true in the economic turmoil that accompanied the end of the Allende government and preceded the Pinochet

dictatorship in Chile in 1973. Although international monetary movements were much more restricted then, that did not prevent much of the blame being heaped on foreign – and especially US – interests.)

This does not mean that governments have much less power these days – it is just that they cannot fool people for so long any more. The penalty for implementing unsustainable economic policies is now a financial crisis sooner rather than later. One implication here is wholly positive: governments cannot pull the wool over the eyes of their electorates and so they must make a better job of communicating what it is they want to do and how they intend to pay for it. Any attempt to fudge the issues will be penalised.

The better the quality of information fed to financial markets the more efficiently – and less harmfully – they will react. The problem is that we live in a media age now where we are almost drowned in information and it is not always easy to discriminate objective quality from conjecture. There is no doubt that – in times of global crisis – reputable (as well as disreputable) enterprises and practices have suffered from the sudden withdrawal of funds. Disentangling cause and effect, apportioning blame and reforming faulty market structures is not easy.

And one major worry still remains. Are the interests of money market dealers the same as those of the people in whose country they operate? Are their priorities shared by simple farmers, industrial labourers and the average person in the street? Maybe elected governments with a social conscience (especially left-wing ones) that want to build more public hospitals or housing and implement more redistributive incomes policies will be subject to far more demanding financial terms by distrustful, right-wing capitalists?

This is an understandable and recurrent concern. The answer is twofold. First, the large sums of money that move across international markets are not, in the main, those of individual speculators, they more often feature pension and savings funds that are protecting the interests of millions of ordinary workers and people in the street. And, secondly, professional fund managers are less interested in the politics of governments than in their financial credibility. No matter if socialist administrations want to build public hospitals and tax the rich – if they borrow the hard-earned pennies of countless ordinary citizens, will they pay back on time?

Financial markets, therefore, operate similarly to all others. The more competition and the more quality information they act with the better they will function. But they *are* subject to collective failure – as is examined in more detail in chapter 10 – because their limitations are no more nor less than those of the market economic system in general. And the more globalised they become, the more markets will link the fortunes of one side of the world with those of the other. They are just one dimension of our interdependent, international economy.

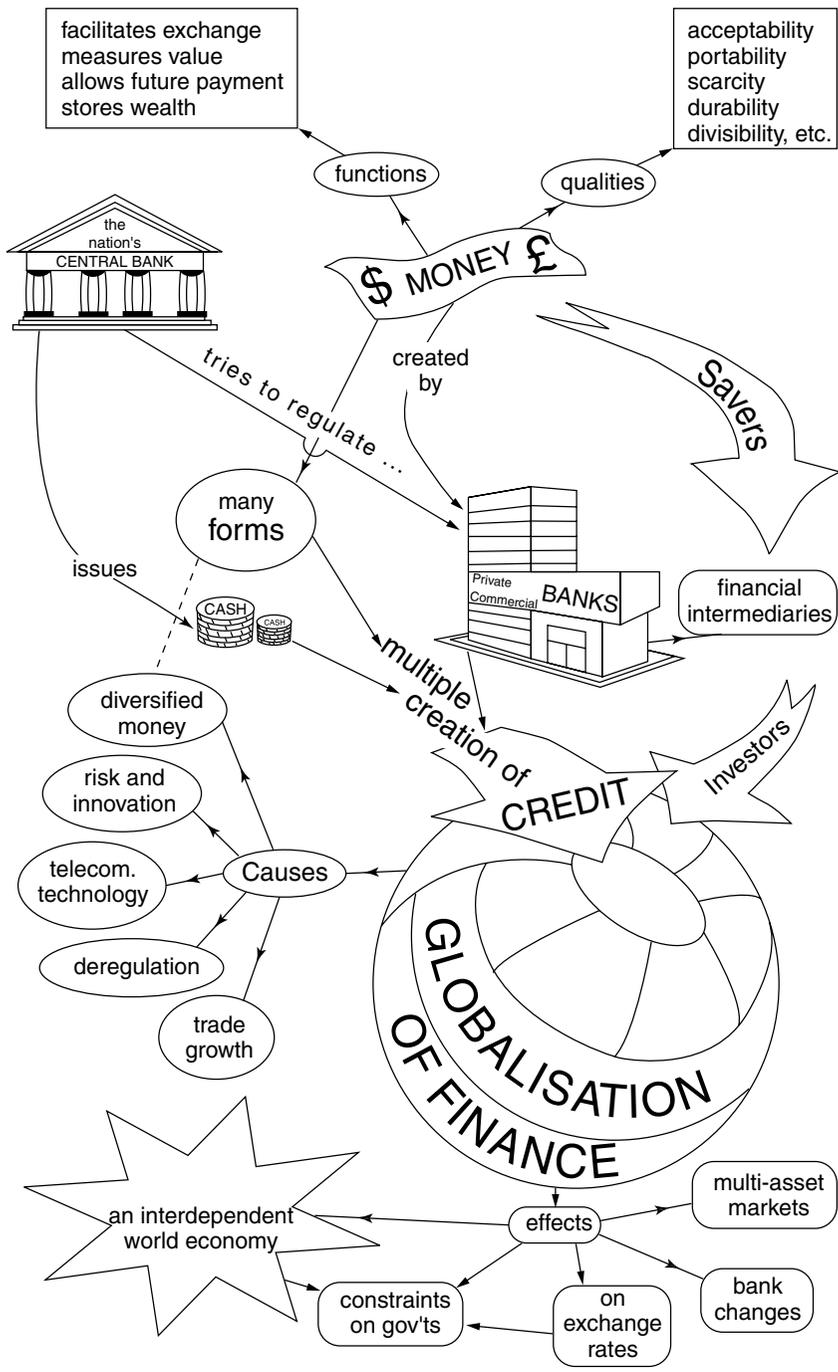


Figure 7.1 The themes of chapter 7

KEY WORDS

Arbitrage The exploitation of marginal differences in the prices of financial assets between different markets. If the price of a given currency, commodity or bond in Frankfurt or New York is higher than in London then it pays to buy in the cheaper market and sell in the other. The smallest price differentials can yield significant profits if large volumes are traded. Risks are low, since arbitrage implies simultaneous transactions at known prices. Its economic effect is to secure price equivalence between rival centres.

Barriers to entry The restrictions imposed on any new enterprise wishing to start up business in a given field. Such barriers may be legal, bureaucratic, financial or economic. Governments may restrict foreign firms from buying domestic industrial assets by law; the process of acquiring all the necessary licences may be exhausting; the costs of insurance or borrowing local funds may be excessive, or the capital equipment necessary to start business may be highly expensive.

Bills of exchange These originated centuries ago as three-month trade deals: you give me capital on the understanding that it takes me three months to equip a ship, sail out to the South Seas, buy lots of exotic goodies, come back and sell them off at a profit and then pay you back the agreed amount. A bill of exchange is now a promise to pay a given sum in three months' time. The cheaper you buy such a bill, therefore, the more you stand to gain. Note that if a private bill, or bond, is guaranteed by a reputable third party (e.g. a well-known bank or business) you have little risk of loss – the price of this sort of paper is likely to be higher. Such is the case also with Treasury bills, which are issued by the government. The riskier the dealer, however, the cheaper he will have to sell his paper – the more profit he has to offer to attract a buyer. (See junk bonds.)

Bond Old English for 'promise'. A bond is a written promise, a legal contract – usually a promise to pay a fixed rate of interest on a given loan. For example: you pay me \$1 million and I will promise to pay you 10 per cent for as long as you have my 'bond'. My bond may be returned to me and cashed in at an agreed date; or you may decide to sell it to someone else (at whatever price you can get) in a 'secondary market'.

Central bank The government's bank, charged with the responsibility of running monetary policy, which includes making loans to and accepting deposits from private commercial banks and thereby determining the rate of interest on government debt. *Open-market operations* is the term used to refer to the central bank's dealings with free-market banks and credit institutions – especially when it attempts to influence the quantity of money they hold.

Credit multiplier Most private commercial banks will hold a given proportion of their total assets in the form of a reserve – liquid funds that they can use to meet customer demands. A 10 per cent reserve implies that for every \$1 in the till they have \$10 in longer-term loans circulating. A given increase, say \$100, in the reserve base of such a financial community can thus lead to a tenfold increase in longer-term loans – up to \$1,000 in this case. Total credit is thus a multiple (e.g. ten times) of bank reserves.

Derivatives Any tradable paper which derives its market value from that of some underlying asset is a derivative. This would include a promise to buy a certain security at an agreed price at a given date in the future ('futures'); or the option to buy certain shares at a given price within a certain time period ('options'). The enterprise which buys a derivative from a financial institution is in effect paying the seller to take on the risk of a change in economic conditions and prices over the lifetime of the business. For example, a plantation company may be unsure of the income it will earn from the sale of a future harvest and thus be unable to make requisite investments today. An

astute bank will offer to sell derivatives on the company's behalf, guaranteeing capital to the plantation, taking on the risk of a commodity price collapse but making a nice profit if it calculates correctly.

Disintermediation Commercial banks act as intermediaries between savers and investors. Increasingly, however, buyers and sellers of money meet each other outside banks' doors. Big businesses can sell their own paper promises in financial market places to whoever is willing to accept them. This is *disintermediation*: the matching up of funds that does not feature on the balance sheets of recognised financial institutions.

Endogenous money supply This is where the supply of money in a country is not created and directly controlled by the central authorities but is determined by the actions of private individuals, businesses and banks. The form of money and the nature of credit-creating institutions can change where state attempts to restrict commercial banking activities bite hard – thus leading to an endogenous money supply.

Fractional reserve banking Commercial banks traditionally keep a relatively small sum of liquid funds in reserve in order to meet customer demands for withdrawals. That is, if a bank possesses \$5 million in cash deposits from savers it may decide to create \$50 million in credit to loan out to needy investors. The bank's reserves : assets ratio is thus 1 : 10. That is, it figures that out of the \$50 million of its cheques circulating no more than one tenth will be cashed in.

Goodhart's law Charles Goodhart, who went from the Bank of England to the London School of Economics, claimed that any observed statistical correlation between two variables would break down as soon as public authorities attempted to use it for policy-making purposes. This comment is as relevant to central bank attempts to control the money supply by restricting trade in certain reserve assets as it is for relying on a Phillips curve relationship to control unemployment by opting for a bit more inflation. Goodhart's law recognises the fundamental uncertainty of social science.

Junk bonds These are commercial bonds *not* guaranteed by first-class banks or acceptance houses and they thus carry a lower price and higher risk factor than other market instruments – though they may turn out to be perfectly reputable, despite their name.

Liquidity Forms of wealth that can be quickly turned into cash without loss of value. Banknotes and coins are 100 per cent liquid. Some bonds and short-term loans can quickly be sold off in the markets and thus converted into cash without much loss of face value. If you own a vintage car, some old paintings, certain shares or longer-term commercial loans, however, you may have difficulty in finding buyers unless you sell at a discount – these are illiquid assets.

Secondary markets No one would buy a very long-term promise to pay if it meant that they could not get their money back in an emergency. Ploughing millions into buying shares, bills or bonds would not occur if there were no market place where you could sell them off second-hand to other willing customers.

Transaction costs This is how much it costs to make a certain trade. If it requires time and effort to find out about asset prices in a neighbouring market; if governments restrict access to foreign currencies or charge a tax on the value of trades, then the cost of doing business may be prohibitively high. Why invest in country X if the transaction cost involved is higher than in country Y?

QUESTIONS

- 1 How and why have the forms of money changed through history? What difficulties has this presented to central authorities trying to control the money supply?
 - 2 Commercial banks hold only a fraction of their assets in reserve. Explain the reasons for this and its relevance to their ability to create money. How has financial innovation affected this ability?
 - 3 How can central banks attempt to control the money supply in their domestic economies? What are the costs involved in so doing?
 - 4 Why does so much money move around the world?
 - 5 'The more globalised they become, the more markets will link the fortunes of one side of the world with those of the other.' Consider the implications of this statement.
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FURTHER READING

Hallwood, C. Paul and MacDonald, Ronald. *International Money and Finance*. Third edition. Blackwell, 2000.

Solomon, R. *Money on the Move: The Revolution in International Finance since 1980*. Princeton University Press, 1999.

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