Chapter 1

An overview of the financial crisis of 2007/8

Introduction

In presenting an overview of the crisis of 2007/8 it might seem logical to begin with a timeline of events in those two tumultuous years. Whilst we thought about beginning with just that approach, we felt that it would fail to do justice to the complicated story that preceded these two years. For the reality is that the foundations of the crisis were put in place in the years before its occurrence. With this background, we keep the timeline of relevant events in 2007 and in its aftermath until the end of this chapter.

The good times

The roots of the crisis were planted in the decade before 2007. In this ten-year period, real interest rates – arrived at by taking the actual quoted interest rate and deducting the actual achieved rate of inflation – were exceptionally low and public expenditure was growing rapidly. A quick look at Table 2.1 will show that real interest rates were actually negative in the USA in three of the first seven years of the 21st century – and in one other year the rate was zero. Low real rates were not just a feature of the US economy. This was an almost global phenomenon. It appeared that governments around the world were talking to each other to co-ordinate low real rates. Which is probably what occurred at all of those G6, G8 and G20 meetings at which nothing much seemed to be happening. They were bonding meetings to ensure that no single nation broke the coalition of low interest rates. And this fuelled boom times and a bubble in house prices in the USA, in the UK and elsewhere. Furthermore, banks, amongst others, were taking advantage of these low rates by increasing their debt levels as a proportion of total financing. Because debt was cheap, this could be viewed as an efficient move. But because debt interest ranks above dividends and because debt repayment ranks above shareholders’ capital on liquidation it is also a source of greater risk from the standpoint of shareholders. A post-war figure for banks’ debt to equity ratios of 10 to 1 moved nearer to 25 to 1, with some institutions having ratios of more than 33 to 1. At this latter figure, a drop in the worth of a bank’s assets by a mere 3 per cent would wipe out the balance sheet value attributable to the ordinary shareholders. This represents risk-taking of staggering proportions. Typical businesses reckon that one part debt versus two parts equity is reasonable – and some banks were running at 33 parts debt to one part equity. Sure, every kind of business is different and
every industry has different ratio standards. But our point is simple. Banks were taking on burgeoning debt. And too much debt equals too much financial risk.

Low interest rates fuelled a spend, spend, spend mentality on British high streets and on American main streets. Much of the US spending spree was on goods made in China. This had an effect on Chinese government policy. Its central bank was a buyer of US dollars from Chinese exporters. They were in receipt of US dollars from their exports to the USA. And the central bank of China recirculated these dollars by purchasing US government bonds. If the Chinese had sold the US dollars and bought their own currency, this would have weakened the dollar and strengthened the Chinese renminbi (also known as the Chinese yuan) and this would lessen, somewhat, China’s competitiveness. Since China was simply investing its dollars in US government bonds, no such disadvantage for exporters accrued.

But through being a purchaser of US Treasury bonds, China’s willingness to acquire trillions of dollars worth of US dollar government securities meant that the USA was getting its funds to balance its deficits more cheaply than might otherwise have been the case. All jolly convenient for the USA because it kept its interest rates low. All jolly convenient for the Chinese in terms of their trade position. All jolly convenient for the US citizen who continued to enjoy low interest rates and cheap products from China.

American and European governments were undoubtedly influenced by the pleas of lobby groups to keep the boom going. They were also a major force in hastening deregulation of the banking systems. Around the world governments were basking in the glory of booming economies with happy consumers (therefore happy voters), bingeing on borrowed money, buying properties that they could not afford and enjoying a wave of consumerism that, seemingly, would never end. Presidents and finance ministers had a new mantra – ‘We have conquered boom and bust’.

Cast your eyes forward to Figure 3.1 and look at the increase of household indebtedness as a percentage of disposable income. And Figure 3.2 shows total US household debt. Figures 3.3. and 3.4 graph the explosion in UK and US average house prices respectively. Look at Figure 3.5 showing average annual house price inflation in real terms (that is, with average country inflation taken out). Clearly a bubble was being inflated. In truth though, what began as a bubble was rapidly becoming a balloon.

■ New models of lending

Since the mid-nineties, the US government had been singing the virtues of wider homeownership and they had set up various agencies aiming to make this easier. This process was helped by the changing nature of bank lending. This involved a move away from the traditional model of originate-to-hold to the new model of originate-to-distribute. What does this mean? Under the traditional model, a mortgage bank would lend against the security of a home and the bank would hold the debt and receive interest and capital repayments. Under the originate-to-distribute model, things are different. The bank lends against the security of a home, but, instead of holding the debt, the bank sells on the
debt to another bank or to a specialist financial institution where a series of similar loans, bought from various mortgage banks, are parcelled together and sold on to others as a package called an MBS (mortgage backed security). Alternatively, the financial institution which has bought the mortgages may mix them up with other debts – such as motor car loans, credit card debt, corporate loans and others – and the bundle is sold on as a CDO (collateralised debt obligation). This process is called securitisation. It should be clear that where the bank holds the mortgage debt under the traditional originate-to-hold model for, perhaps, 20 or 25 years it will be likely to be careful about its customers’ abilities to repay and it will carry out a diligent appraisal in this area. However, under originate-to-distribute, one might expect that screening of borrowers to be at a lower level of care. And this was the case.

It wasn’t just mortgage banks that were selling debt to be repackaged. Commercial banks (those that take customers’ deposits and make lendings to their customers) were doing the same in respect of loans to companies and credit card debt. The consequence of all of this was that the exacting standards and procedures that banks had worked to in terms of credit analysis were being jettisoned. The disciplines that had been built up over generations were being dumped.

Mortgage loans were being sold on to third parties for securitisation and the model of lending had moved to originate-to-distribute. Given this background, mortgage lenders were more inclined to respond to government cajoling – and there was a lot of it, especially in the USA – to lend more to weak credit customers. After all, the banks were not holding these subprime loans on their own balance sheets but selling them on. The oil to grease the wheels of subprime lending was gushing from government goading and securitisation.

The lax nature of mortgage banks’ appraisal procedures under the new model of originate-to-distribute meant that dodgy deals developed. For example, there were scams in which mortgage brokers and builders – and sometimes lawyers too – would collude to receive monies from lenders in excess of market value. This frequently involved buy-to-let properties and often involved off-plan homes where the properties had not yet been let or sold respectively. Often, houses were described to lenders as having been sold off-plan without any such deal having been made – but with a fictitious purchaser invented as part of the scam. Another dirty trick involved borrowers indicating that they would occupy a property when, in reality, purchasing it as an investment to let or, more likely, to trade on – flipping. Also, mortgage brokers were aiding borrowers to falsify their employment history and/or income level by creating false documents – the liar loan. This might involve hiding critical information. And some lenders were even accepting self-certified income figures. That is, self-certified by the borrower. This facility was on offer from a vast percentage of the lenders in the market. What sort of diligence is this?

Mortgage lending criteria which had traditionally been on the basis of the lower of three times the borrower’s income or 90 to 95 per cent of the value of the property mortgaged were being stretched. Some lenders were offering loans of 100 per cent plus on homes. Northern Rock – a UK mortgage bank – was offering, via its ‘Together’ brand, a deal of 1.25
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per cent based on 95 per cent of the property value plus a 30 per cent top-up unsecured loan and a lending facility based on six times income.

The time bomb ticks

Add to all this, a new kid on the block – the credit default swap (CDS). Imagine a contract in which one party (A) makes a series of payments, rather like insurance premiums, to a counterparty (B) and, in exchange, B would pay to A a capital sum if the credit instrument to which the CDS relates defaults. This instrument could be a bond or a loan of company C. The credit default that triggers the payment from B to A would typically be non-payment of interest or failure to make a capital repayment by company C in respect of the bond or loan to which the CDS relates.

If there were no default by company C then A would pay to B the series of payments for the life of the CDS. Figure 6.1 will make matters easier to understand. There is a secondary market in which CDSs can be traded. A secondary market is one in which second-hand shares, or other financial securities, can be sold and bought – for example, a stock exchange. CDS contracts are very much like insurance. But there are differences. The need-to-know difference at this stage is as follows. Neither party to a CDS needs to own the underlying security (the bond or loan of company C in our example) to which the CDS relates. Neither the buyer nor the seller of the CDS has to suffer a loss from the default event. This is different to insurance. With insurance, the insured has to have an insurable interest under which they can demonstrate a potential loss should the default occur. As the reader can see, insurance is available to enable one to hedge risk. With a CDS, one can hedge risk (if A held the loan or bond in company C in our example) and one can gamble.

Credit default swaps may be available on a company’s debt, on a country’s bonds or on a package of mortgages (MBS) or on CDOs. The CDS also differs from insurance because there is no legal limit to the number of credit default swaps that can be entered into in respect of a particular risk. So company C may have debt of USD5 billion but there could be CDS outstanding on company C debt totalling USD100 billion, or even USD1 trillion.

Now for an amazing aspect of our story. MBS and CDO securities packed full of subprime mortgages suddenly transformed from what was really junk status (really low-grade debt, as subprime mortgages are) to triple A status (the highest grade debt). Not since the frog turned into a prince thanks (most people think) to the kiss of a princess has a greater metamorphosis occurred. Actually in the original Brothers Grimm story of The Frog Prince, the transformation was achieved by the king’s daughter throwing the frog with all her strength against the wall. We rather suspect that might have been a more appropriate fate for the MBSs, the CDOs and the CDSs. Anyway, the frog to prince transmutation was just a fairy story. Subprime mortgages to triple A was reality. How was this transmogrification achieved?

Two ways. By tranching the mortgage pool in an MBS – see Figure 5.1 – such that if the MBS produces losses, the first losses fall on the lowest tranche (maybe rated B), the next loss falls on the next lowest tranche (rated BB) and so on until the last tranche to suffer
The time bomb explodes

The loss would be the AAA-rated part of the MBS. For a quick review of what bond ratings imply, see Figure 5.3. The second part of the alchemy emanated from a well-reasoned and influential article written by David X Li – the details of which will have to wait until Chapter 6. Base metal was transformed to gold. That the flaws in the David X Li paper went unspotted for so long may have been helped by the fact that it fitted the ideology of Wall Street.

Credit default swaps were written on MBSs, CDOs and even bundled into debt packages. The blow-up in financial markets began with subprime debt but the major cause was the CDS. The subprime mortgage market had debt outstanding of USD1.3 trillion at its peak. The CDS market had USD60 trillion outstanding at its peak. If every subprime mortgage had defaulted, the overall loss could surely have been contained – with some pain, of course. But the CDS market was much bigger. And it has been estimated by the International Monetary Fund (IMF), in its Global Financial Stability Report of April 2010, that bailed out losses in this area may have totalled USD2.3 trillion, although it is too soon for us to be wholly certain of this amount. The fact is that it is big bucks. Compare it with the total income of America. The GDP of the USA was around USD14 trillion in 2009.

The transformation of frog to prince was reversed back to frog when defaults began. These had negative implications for many CDS positions. With no default or only a low probability of default, a CDS might have a positive value, say 100 based on the expected income from the stream of insurance-like premiums exceeding the expected pay-out under default. But with defaults looming and then actually happening, the worth of the CDS could alter and even move to a negative value as the chances of paying out to the protection purchaser (the insured) increased. What was an asset worth 100 in the example may become a liability worth minus 100 or minus 500. And this is what happened. It was a time bomb that exploded and wiped out Lehman Brothers and, but for government intervention, would have done the same to HBOS and RBS.

The time bomb explodes

The CDS market involves some banks and financial institutions as sellers and other banks and financial institutions as buyers. With so many CDSs written on MBSs and CDOs containing mortgage debt, declines in the housing market would have a massively magnified negative impact on values in the market for such securities and financial products. Remember that you could have securitised mortgages of USD10 billion with credit default swaps totalling USD500 billion or even more written on them. Hence the magnification. And this adverse effect would not be felt just in terms of values but it would impact market liquidity – which could quite easily dry up completely.

That is just what happened. The US Federal Reserve Funds rate was 1 per cent in 2005. By 2007, it had jumped to 5 per cent. When foreclosures on properties started to occur as the housing market began to head south, mortgage interest and capital repayments were not forthcoming and this was the income of the MBS and part of the income of the CDO and other similar instruments with housing debt mixed into them. Their market prices started
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to fall. First a trickle, then a cascade, then a storm – the metaphors gush. And they are no exaggeration. No one wanted this alphabet soup. Liquidity was at a standstill.

Over 2007, the drop in existing home sales was the steepest since 1989. In the first quarter of 2007, the S&P/Case-Shiller house price index for the USA recorded its first year-on-year fall in nationwide home prices since 1991. The subprime mortgage business was collapsing as interest rates peaked – see Figure 16.1 – and foreclosures accelerated.

In the economics textbooks, models nearly always assume that there is liquidity in markets – the price falls until buyers first nibble, then bite and this kickstarts (sorry, mixed metaphor) the upward trajectory. Reality in the latter half of 2007 was not like the textbooks.

With liquidity under pressure, it stalled when the players in the market started suspecting each other of having vast liabilities to pay out under credit default swaps – remember Figure 6.1. Banks had ceased dealing these instruments with one another. Worse, they stopped lending amongst themselves too. The inter-bank market was freezing over. This is normally an essential part of the banking business, enabling financial firms to square off positions arising from their daily cash in versus their daily cash out. Fear and panic were features of Wall Street, the City of London and elsewhere in the late summer of 2008. And, of course, stockmarkets were hit too.

Why, oh why, did no one see it coming?

Why didn’t banks foresee this? After all, interest rates in the USA had been heading northwards for some time. The answer to this question may lie in the risk management systems used by banks. Expectations of financial market fluctuations were substantially based upon movements in line with the normal distribution, or bell curve. The fact is that, whilst this may be almost true most of the time, it is an oversimplification because markets seem to behave according to fat tail models – see Figure 10.1 – and this means that extreme events, both positive and negative, occur more frequently than the bell curve model suggests. Bank risk management models are supposed to be augmented by ‘what if?’ simulation and scenario analysis. And, if one looks at Exhibit 16.1 harbingers of problems were there as interest rates climbed.

One of the remarkable things about markets is that their deviations from the bell curve are substantial. As we point out in Chapter 10, a leading pioneer in this area reported that had the Dow Jones index of industrial shares moved in accordance with the normal distribution it would have moved by 4.5 per cent or more on only six days in the period from 1996 to 2003. Whereas, in reality, it moved by at least this amount 366 times during the period.

Regulation of banks and financial institutions left something to be desired. This is an understatement. There are instances referred to in later chapters, for example, where the exploits of Bernard Madoff and his massive fraud were challenged by financial analysts but regulators failed to find anything untoward, where risk managers in banks discussed their worries with regulators who failed to react, and where the slow and possibly flawed reactions of accounting bodies who wished to maintain inflexibly their mark-to-market rules made matters worse. Regulators were widely guilty of groupthink and their common
thought was that the housing boom was set to continue as interest rates seemed likely to remain low. Bankers, governments and consumers were also sucked into this naïve groupthink frame of mind.

Meanwhile, the carrot of massive bank bonuses led dealers in financial institutions to chase credit default swaps and related instruments even when markets started to look dodgy – see Figure 16.1 and Figure 6.1. The credit default swap figure (6.1) shows that as a CDS seller the bank will go on getting cash in, year after year, but will have to pay out on an eventual default. Dealers were getting big buck bonuses for selling CDSs but were incurring massive risks for their banks. A lot of these ex-dealers have moved on nowadays and own mansions and estates in the country. Bonuses were calculated individually year by year with no deductions when the day of reckoning arrived. In fact, for most bonus-bloated bankers, the day of reckoning did not arrive.

**Escape**

The economists’ solution to banking crises is the mantra, ‘Throw money at the problem and mop it up afterwards’. Essentially this is what governments did in order to breathe life into a banking system which was stalked by fear that counterparties might be wiped out – as some were. Some banks were nationalised, others received massive government injections of money in return for majority ownership in some cases, minority ownership in others. Some received guarantees from governments. A few were allowed to go bankrupt. Governments put money into the economy, sometimes via cheap loans to banks to encourage them to lend or at least not to sit on their hands and do nothing. Some of the impact of the money to the economy was via cuts in value added tax. All of this averted the possibility of another Great Depression. But the mopping up of this input is creating harder times for some, austerity for others.

Our discussion so far in this chapter has homed in on the key issues of the financial crisis of 2007/8. These problems will be analysed in detail in the chapters that follow. Many of the issues discussed receive academic scrutiny in the text *Restoring Financial Stability*, edited by Acharya and Richardson¹, and there is a range of books which we refer to as we progress from topic to topic. Coverage aimed at the general reader is provided in books by Paul Mason² and Vince Cable³.

In Table 1.1, we present a summary of the key features of the financial crisis using just 16 bullet points. In Table 1.2, we list some of the key players who have been in office in Western countries, where the damage was done, during the build-up and in the aftermath of the crisis of 2007/8. Their office and tenure is shown. In reading the rest of this book, it may be useful to refer back to the names since some of them crop up regularly.

The timeline below presents milestones that summarise key events in the unfolding of the financial crisis. Of these events, the most critical are shown in bold.
Timeline of the financial crisis 2007/8

The prelude

- Low interest rates and housing boom in various countries, the USA and UK in particular.
- Various financial institutions take on large amounts of debt. Ratios of debt to equity rise to dangerously high levels.
- US government agencies successfully discriminate in favour of housing for the poor.
- US home ownership rising.
- Financial innovation embracing MBSs, CDOs and CDSs.

Leading US academics warn on the housing bubble, credit default swaps and their potential effect on the financial system. They include Robert Shiller, Raghuram Rajan and Nouriel Roubini. In the UK, housing bubble warnings were frequently made by economist Roger Bootle. They received too little attention by governments.
- Autumn 2006: US construction is down substantially versus previous year.

2007

- The year in general: US home sales fall; US house prices year-on-year decline for first time since 1991; subprime mortgage business collapses; foreclosures double versus 2006; rising interest rates.
- March 5: HSBC announces that one portfolio of purchased subprime mortgages displayed higher delinquency than rates built in to the pricing model of these products.
- March 6: US Federal Reserve Chairman, Ben Bernanke warns that the Government Sponsored Enterprises, Fannie Mae (Federal National Mortgage Association) and Freddie Mac (Federal Home Mortgage Corporation), were a source of systemic risk and suggests legislation to ward off a potential crisis.
- April 3: CNN reports that some 13 per cent of subprime loans are delinquent, over five times the rate for home loans to top credit borrowers.
- June 7: Bear Stearns announces that for two of its funds it is halting redemptions.
- July 19: The US Dow Jones share index closes above 14,000 for the first time in its history.
- August 9: European bank BNP Paribas suspends calculation of asset values for three money market funds exposed to subprime mortgages and halts redemptions.
- August 9: European Central Bank (ECB) injects EUR95 billion overnight to improve liquidity. Other central banks inject funds too.
- August 15: Countrywide Financial, the largest US mortgage lender, announces that delinquencies have risen to their highest levels since early 2002. Its share price falls 13 per cent.
Timeline of the financial crisis 2007/8 continued

• **August 16**: Countrywide Financial narrowly avoids bankruptcy, taking an emergency loan of USD11 billion from a group of banks.

• **August 17**: US Federal Reserve cuts the discount rate by half a per cent to 5.75 per cent from 6.25 per cent in an attempt to stabilise financial markets.

• **August 31**: Ameriquest, once the largest US subprime lender, goes out of business.

• **September 4**: Sterling LIBOR rises to 6.7975 per cent, its highest level since December 1998 and above the Bank of England base rate of 5.75 per cent.

• **September 10**: Victoria Mortgage Funding, the UK mortgage company, fails.

• **September 14**: Bank of England announces it has provided a liquidity support facility to Northern Rock.

• **September 17**: Following a retail deposit run, the UK Chancellor of the Exchequer announces a government guarantee for Northern Rock’s existing deposits.

• **September 18**: The Fed lowers interest rates by 0.5 per cent.

• **September 19**: Bank of England announces that it will undertake a series of three-month auctions against a broader range of collateral, including mortgage collateral.

• **October**: Citigroup, Merrill Lynch and UBS report big write-downs.

• **October 15–17**: A group of US banks backed by the US government announces a fund of USD100 billion to purchase mortgage-backed securities whose value plummeted in the subprime collapse. US Fed chairman, Ben Bernanke and US Treasury Secretary, Hank Paulson, express alarm about the dangers posed by the bursting housing bubble.

• **October 31**: Federal Reserve lowers the federal funds rate by 0.25 per cent to 4.5 per cent.

• **November 1**: Federal Reserve injects USD41 billion for banks to borrow at a low rate, the largest single expansion by the Fed since 2001.

• **November 20**: Freddie Mac announces 2007 third quarter losses, cuts dividend and raises new capital.

• **December 6**: President Bush announces a plan to freeze the mortgages of a limited number of mortgage debtors holding adjustable rate mortgages (ARM).

• **December 12**: Central banks the Federal Reserve, Bank of England, ECB, Swiss National Bank (SNB) and Bank of Canada announce measures designed to deal with pressures in short-term funding markets.

2008

• **January 2008**: Announcement of significant fourth quarter losses by Citigroup and Merrill Lynch.

• **January 11**: Bank of America confirms purchase of Countrywide, the failed subprime lender.

• **January 15**: Citigroup announces that it is to raise USD14.5 billion in new capital

• **February 11**: AIG announces that its auditors have found a material weakness in its internal controls over the valuation of a portfolio of credit default swaps.
Timeline of the financial crisis 2007/8 continued

- **February 17**: UK government announces temporary nationalisation of Northern Rock.
- **February 19**: Credit Suisse announces pricing errors by a small number of traders.
- **March 10**: Dow Jones Industrial Average at the lowest level since October 2006, falling more than 20 per cent from its peak just five months prior.
- **March 11**: Federal Reserve announces the introduction of a Term Securities Lending Facility and Bank of England announces it will maintain its expanded facility for high-quality collateral.
- **March 14**: J. P. Morgan Chase announces that is has agreed, in conjunction with the Federal Reserve Bank of New York, to provide secured funding to Bear Stearns for a period of up to 28 days.
- **March 16**: J. P. Morgan Chase agrees to purchase Bear Stearns. Federal Reserve provides USD30 billion of funding.
- **April 21**: Bank of England launches Special Liquidity Scheme (SLS) to allow banks to swap high-quality mortgage-backed securities and other securities for UK Treasury Bills.
- **April 22**: RBS announces GBP12 billion rights issue.
- **April 29**: HBOS announces GBP4 billion rights issue.
- **May 2**: US Federal Reserve, ECB and SNB announce further liquidity injections.
- **June 16**: Lehman Brothers confirms a net loss of USD2.8 billion in its second quarter.
- **June 18**: Morgan Stanley reports losses from mortgage trading and bad loans.
- **June 25**: Barclays announces plans to raise GBP4.5 billion in a share issue.
- **July 11**: US mortgage lender IndyMac is placed into receivership.
- **July 13**: US Treasury announces rescue plan for Fannie Mae and Freddie Mac.
- **September 7**: Fannie Mae and Freddie Mac taken into conservatorship (rather like receivership).
- **September 14**: Merrill Lynch sells out to Bank of America. Lehman Brothers collapses.
- **September 15**: Lehman Brothers files for bankruptcy.
- **September 16**: US Government provides emergency loan to AIG of USD85 billion and takes a 79.9 per cent stake and right of veto on dividend payments.
- **September 18**: US Treasury Secretary, Henry Paulson and Fed Chairman, Ben Bernanke, propose USD700 billion emergency bailout through the purchase of toxic assets.
- **September 18**: LloydsTSB/HBOS merger announced.
- **September 18**: Financial Services Authority (FSA) announces temporary regulations prohibiting short-selling of financial shares.
- **September 19**: US rescue plan is unveiled following a volatile week in stock markets.
- **September 19**: Securities and Exchange Commission (SEC) prohibits short-selling of financial companies’ shares.
Timeline of the financial crisis 2007/8 continued

- **September 20**: US Treasury announces draft proposals to purchase up to USD700 billion of troubled assets referred to as the Troubled Asset Relief Program (TARP)
- **September 25**: J. P. Morgan Chase buys the deposits, assets and certain liabilities of the failing Washington Mutual Bank.
- **September 29**: Bradford and Bingley, the UK mortgage bank, is nationalised by UK government. Santander, the Spanish mortgage bank, buys its branches and retail deposit book.
- **September 29**: Iceland government buys stake in Glitnir Bank as part of rescue.
- **September 29**: Belgian, Dutch and Luxembourg governments to invest EUR11.2 billion in Fortis.
- **September 29**: Announcement of Citigroup’s intention to acquire the banking operations of Wachovia. Transaction facilitated by the US Federal Deposit Insurance Corporation (FDIC), protecting all depositors.
- **September 30**: Irish government announces 100 per cent bank deposit guarantee. Other governments extend their deposit guarantees.
- **October 3**: US House of Representatives passes USD700 billion TARP having voted against an earlier version of the plan on 29 September 2008.
- **October 3**: Dutch government acquires Fortis Bank’s Netherlands business.
- **October 6–10**: Worst week for the stockmarket for 75 years. The Dow Jones Industrial Average loses 22.1 per cent, its worst week on record. Now down 40.3 per cent since reaching a record high of 14,164.53 on October 9, 2007.
- **October 6**: German government announces package to save Hypo Real Estate.
- **October 6**: BNP Paribas announces takeover of Fortis’ operations in Belgium and Luxembourg as well as the international banking division of Fortis.
- **October 6**: US Fed announces that it will provide US900 billion in short-term loans to banks.
- **October 7**: Iceland government takes control of Glitnir and Landsbanki, which owns Icesave.
- **October 7**: Fed make emergency move to lend USD1.3 trillion to companies outside the financial sector.
- **October 8**: Central banks in USA, UK, China, Canada, Sweden, Switzerland and the European Central Bank cut rates by 0.5 per cent in a co-ordinated effort to prevent collapse.
- **October 11**: The Dow Jones Industrial Average records its highest volatility day ever in its 112-year history.
- **October 13**: Eurozone announces measures to provide their banks with funding.
- **October 14**: US government announces Capital Purchase Program (CPP) of up to USD250 billion to take stakes in US banks.
- **October 19**: Dutch government injects EUR10 billion into ING.
Timeline of the financial crisis 2007/8 continued

- **October 21**: US Federal Reserve announces that it will spend USD540 billion to purchase short-term debt from money market mutual funds with the intention of unfreezing credit markets.
- **October 31**: Barclays announces plan to raise GBP7.3 billion of additional capital, including GBP5.8 billion from investors in Abu Dhabi and Qatar.
- **November 3**: UK Treasury announces that its shareholdings in banks will be managed on a commercial basis by a new arm’s-length company wholly owned by the UK government called UK Financial Investments Limited.
- **November 6**: Bank of England reduces bank rate by 1.5 per cent to 3 per cent.
- **November 6**: International Monetary Fund (IMF) approves USD15.7 billion stand-by loan for Hungary.
- **November 12**: US Treasury Secretary, Hank Paulson, abandons plan to buy toxic assets under the USD700 billion TARP. The remaining USD410 billion in the fund to be spent on recapitalising financial companies.
- **November 23**: Citigroup to issue preferred shares to the US Treasury and FDIC in exchange for protection against unusually large losses on a USD306 billion pool of loans and securities. The US Treasury will invest an additional USD20 billion in Citigroup from the TARP, taking its input to USD45 billion.
- **November 24**: UK government announces temporary cut in VAT from 17.5 per cent to 15 per cent.
- **November 25**: US Federal Reserve pledges USD800 billion more to help the financial system, USD600 billion to be used to buy mortgage bonds issued or guaranteed by Fannie Mae, Freddie Mac and Federal Home Loan Banks.
- **November 26**: Federal Reserve announces approval of the notice of Bank of America to acquire Merrill Lynch.
- **December 4**: Bank of England reduces bank rate by 1.0 per cent to 2.0 per cent.
- **December 16**: Federal Reserve establishes target range for the federal funds rate of 0 per cent to 0.25 per cent.
- **December 23**: IMF approves USD2.35 billion loan to Latvia.

**2009**

- **January 8**: Bank of England reduces bank rate by 0.5 per cent to 1.5 per cent.
- **January 15**: Irish government announces that Anglo Irish Bank is to be nationalised.
- **January 19**: UK government announces the Asset Protection Scheme (APS) to protect financial institutions against exposure to exceptional future credit losses on certain portfolios of assets.
- **January 19**: FSA issues statement indicating that banks are expected to maintain a minimum core Tier 1 capital ratio of 4 per cent and expressing preference to incorporate countercyclical measures.
- **February 5**: Bank of England reduces bank rate by 0.5 per cent to 1.0 per cent.
Timeline of the financial crisis 2007/8 continued

- **February 10**: US Treasury announces a Financial Stability Plan, involving stress tests for banks, the creation of a Public–Private Investment Fund to acquire troubled loans and other assets from financial institutions, expansion of some funds and other initiatives to counter foreclosures and aid small business lending.
- **February 26**: RBS announces loss of GBP24.1 billion. UK government announces details of the APS and an agreement in principle with RBS to participate in the APS.
- **February 27**: Lloyds Banking Group, resulting from the acquisition of HBOS by Lloyds TSB, announces results, including pre-tax loss of GBP10.8 billion for HBOS.
- **March 2**: US authorities announce a restructuring of their assistance to AIG. Under this programme AIG will receive up to USD30 billion of additional capital.
- **March 2**: HSBC announces plan to raise GBP12.5 billion in a rights issue.
- **March 5**: Bank of England reduces bank rate by 0.5 per cent to 0.5 per cent and announces GBP75 billion asset purchase programme.
- **March 7**: UK government announces an agreement in principle with Lloyds Banking Group to participate in the APS.
- **March 18**: US Federal Reserve maintains target range for the federal funds rate at 0 per cent to 0.25 per cent and announces an expansion of over USD1 trillion in its planned asset purchases in the year.
- **March 30**: Bank of England announces that key parts of Dunfermline Building Society, Scotland’s largest mortgage bank, have been transferred to Nationwide Building Society with the Bank of England assuming control of GBP1 billion of commercial lending and poorer quality mortgages.
- **April 7**: Irish government announces plans for National Asset Management Agency to manage the worst-performing land and development loans of Irish banks.
- **April 9**: German government begins the process to take over Hypo Real Estate.
- **April 22**: UK government launches Asset-backed Securities Guarantee Scheme, under which HM Treasury will provide credit guarantees and liquidity guarantees on residual mortgage-backed securities issued by UK banks.
- **May 6**: IMP approves a USD20.6 billion loan to Poland.
- **May 7**: Federal Reserve releases the results of the stress test of the 19 largest US bank holding companies. It finds that losses at the 19 firms during 2009 and 2010 could be USD600 billion and ten firms would need to add, in total, USD185 billion to their capital to maintain adequate buffers if the economy were to record the more adverse scenario considered.
- **May 7**: ECB announces it will lower its interest rate to 1.0 per cent after reducing it by 0.5 per cent in March and by 0.25 per cent in April.
Timeline of the financial crisis 2007/8 continued

More recently

• Following injections of funds by governments into banks, some of which has been repaid, major problems have focused upon the eurozone. Its single exchange rate has prevented countries which have suffered higher than average inflation within the eurozone from devaluing their currencies. Major problems reside with Greece, Spain and Portugal. A fund has been established to aid these countries but it is not clear, at the time of writing, whether the strains on the eurozone will enable the single currency to continue life in the long term. Undoubtedly this represents a major economic problem – which could be resolved, of course, by a return to national currencies. In the shorter term, input of more EU funds may be necessary to aid governments that need to help eurozone banks.

Table 1.1 Key features of the financial crisis 2007/8 and its prelude

Up to 2007

• Expansion of credit availability with household debt reaching very high levels
• Emergence of dangerous debt products – credit default swaps, CDOs, MBSs and others. Being on the wrong side of these products made banks more risky
• Credit default swap bubble
• Increasing ratios of debt in bank balance sheets making them more risky
• Very low interest rates sometimes negative in real terms
• Binge in high street consumption
• Public sector spending rising fast
• Rise in real incomes
• Strong rise in subprime mortgage lending, aided and abetted by government initiatives to win popularity and votes
• Housing market boom reaching bubble proportions
• Shock to the system – house prices go into reverse

From 2007

• Subprime housing market crashes
• Crash in CDS, CDO and MBS markets, causing bank balance sheets to show financial distress and worse
• Some banks fail. Others bailed out by governments
• Governments throw money at their economies to prevent depression
• Money supply loosened to ward off deflation, recession and depression
• Unemployment increases but not on crippling scale
### Table 1.2 Some key personnel in office in Western countries during the crisis, its build-up and its aftermath

<table>
<thead>
<tr>
<th>Heads of State</th>
<th>Bill Clinton</th>
<th>George W. Bush</th>
<th>Barack Obama</th>
<th>Tony Blair</th>
<th>Gordon Brown</th>
<th>David Cameron</th>
<th>Gerhard Schroder</th>
<th>Angela Merkel</th>
<th>Jacques Chirac</th>
<th>Nicolas Sarkozy</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Ministers of Finance</th>
<th>John W Snow</th>
<th>Henry (Hank) Paulson</th>
<th>Tim Geithner</th>
<th>Gordon Brown</th>
<th>Alistair Darling</th>
<th>George Osborne</th>
<th>Hans Eichel</th>
<th>Peer Steinbruck</th>
<th>Wolfgang Schauble</th>
</tr>
</thead>
<tbody>
<tr>
<td>Various</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Up to 2007</td>
<td>19 Jun 2007–</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Central bankers</th>
<th>Alan Greenspan</th>
<th>Ben Bernanke</th>
<th>Sir Edward George</th>
<th>Mervyn King</th>
<th>Wim Duisenberg</th>
<th>Jean-Claude Trichet</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Central Bank – President</td>
<td></td>
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</tbody>
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Chapter 2

Governments and the financial crisis

Introduction

In this chapter we show that governments were major contributors to the financial crisis of 2007/8. Their later role in extricating their economies from the colossal problem that followed is the subject of Chapter 16. We begin by discussing the legitimacy of government. This is followed by a brief discussion of externalities, regulation and intervention in the economy. We follow this with a brief overview of government deficits and demand management. Short sections on two of the major tools of government economic policy follow – monetary policy and fiscal policy. In truth, these topics could fill a whole book. Indeed, for interested readers, there is a host of texts on these topics. Necessarily, our coverage here is more focused. We end this chapter with a short section on lobbying.

A government is an organisation or agency through which a political unit exercises its authority, administers public policy and directs and controls the actions of its members or subjects. Generally, the term refers to a civil government or a state but governments may be local, national or international. The nature of government can range over a broad spectrum of styles from dictatorships, monarchies, constitutional republics, oligarchies and democracies through to totalitarian regimes and, even, anarchies.

The idea of legitimacy is central to the study of government. Various attempts have been made to formalise and justify government or state control. For example, the philosopher, Thomas Hobbes, viewed people as rational beings who saw submission to a government as preferable to anarchy. He suggested that people in a community create and submit to government for the purpose of establishing safety and public order for their own good. Social contract theorists, such as Hobbes and Jean-Jacques Rousseau, argued that governments reduce people’s freedoms and rights in exchange for protecting them, and maintaining order. Many question whether this is an actual exchange whereby people voluntarily give up their freedom or whether they conform as a response to potential force by the ruling group. Others reject social contract theory since consent is not involved in relationships between state and individual and offer angles on legitimacy based on pragmatism and usefulness. But this is not the central theme of our discussion. The wide literature on political philosophy is available to meet the needs of those whose curiosity takes them in this direction.

An increasing part of the world can be said to operate as a market economy, based upon division of labour and where the prices of goods and services are determined in a system
according to supply and demand. In reality, market economies do not exist in an utterly pure form, as governments regulate them to varying degrees rather than allowing unfettered market forces to rule supreme.

Different views are held as to how strong a role the government should play in guiding the market economy and in addressing the inequalities that the market may produce. There is no universal view on welfare nor on regulation.

Supporters of the market economy may, or may not, be economic liberalists. By and large, economic liberalism is the economic parallel of classical liberalism. It is an economic philosophy that supports and promotes laissez faire economics. Ideas of liberalism maintain that political freedom and social freedom are inseparable from economic freedom. Philosophical arguments are used to promote liberty and to justify economic liberalism and the free market. This view opposes government intervention in the free market and supports maximum free trade and competition. Whilst economic liberalism favours markets unfettered by the government, it still maintains that the state has a legitimate role in providing public goods. So what is a public good? As an example, it could be argued that the state has a role in providing roads, schools and bridges that may not be efficiently implemented by private entities. However, even these goods might be paid for proportionally to their use, for example by putting a toll on some of them – roads and bridges. But surely not schools. Children of poor parents would not receive an adequate education thus denying them the opportunity to progress, make the best of themselves, develop their talents and subsequently become socially mobile. In short, a pure market-based system of schooling would deny life chances to the poorest segment of society.

Under capitalism, the government has a substantial role in the economics of everyday life. It carries out a number of economic functions, like issuing money, supervising some industries, enforcing private contracts, ensuring that competition laws counter monopolies and prevent cartels from forming. In many countries, public utilities are allowed to operate as a monopoly under government regulation because they can achieve high economies of scale which might not be achieved because free enterprise may not provide sufficient capital to invest in such economies. Government agencies regulate the many industries, such as airlines, broadcasting and financial institutions.

### Externalities

Externalities may be defined as consequences for welfare arising from costs not fully accounted for in the price. Welfare may be defined as the state of well-being of an individual or a society. Externalities are a bit complicated, so consider an example. Take traffic congestion or pollution created by a manufacturing plant. These cause reductions in the welfare of people living near the factory and may increase costs to adjacent factories that need to purify water from a river bordering the plant. Because these third parties receive no compensation for these externalities, there are costs of production not accounted for in the price system. These kind of externalities are termed negative externalities or external diseconomies. Negative externalities, like those exemplified above, arise
in consumption (as well as production), for example where people eating take-away meals leave packaging on the pavement or cigarette smokers pollute the air.

But externalities can be positive too. They are termed external economies or positive externalities. External economies of consumption would include a well-kept garden at the front of a house that gives pleasure to passers-by as well as to the occupants and increases the value of adjoining properties. Defence and other public expenditure on research may stimulate the development of new technology that may become available to all. This is also called a spillover effect, an alternative term for an externality.

There are two ways of dealing with externalities. First, a structure of taxes or subsidies can be designed to account for the externalities and ensure that the full costs or benefits of production are reflected in the prices charged. For example, even if a factory causes pollution, it can carry on producing as long as it properly compensates society for the damage caused. Second, we might put restrictions on certain unsocial activities and/or make other beneficial activities compulsory. This is not usually as efficient as the tax or subsidy because one might restrict activity that, despite its negative external effects, still benefits the performer more than its restriction helps society. As an example of the second way of compensating for the costs of externality, consider the following. A property developer in the capital city may be required to include so many units of social housing, maybe for nurses, teachers and firefighters in return for planning permission being granted for a block of flats.

So, to summarise, a negative externality is an action that imposes a negative side effect on a third party – a social cost. Many negative externalities (aka external costs or external diseconomies) are related to the environmental consequences of production and use. Examples include the following:

- pollution by industry may poison the water, harming humans as well as animals and plants;
- when car owners use roads, they impose congestion costs on all other users;
- systemic risk of financial operations describes the risk to the overall economy arising from the risks which the banking system takes. The private costs of bank failure (for depositors) may be smaller than the social costs which impact us all (withdrawal of the service, less lending to business, potential collapse of other banks and businesses in general).

Examples of positive externalities (aka beneficial or positive externality, external benefit, external economy) include:

- a beekeeper keeps the bees for their honey. A side-effect associated with the activity is the pollination of surrounding crops by the bees. The value generated by the pollination may be more important than the value of the harvested honey;
- an individual with an attractive front garden may provide benefits to others living in the area, including financial benefits in the form of increased property values for all property owners in the road;
knowledge spillover of inventions and information. Once an invention or new information is made more easily accessible, other benefits may spread by exploiting the invention or information. Copyright, patents and intellectual property law are mechanisms to allow the inventor or creator to benefit from a temporary, state-protected monopoly in return for commercial production or sharing the information through publication or other means.

Clearly, if it is to be effective, pricing and policing of externalities is likely to be a governmental function.

Government regulation

Government regulation is said to involve the supervision and control of the economic activities of private enterprise by government in the interest of economic efficiency, fairness, health and safety. Regulation has a long history and takes many different forms. Externalities such as noise and pollution have made it necessary (among other reasons) to regulate road and air transport. The temptation for producers to collude or exploit monopoly (or oligopoly) power also requires intervention. Other forms of regulation include measures to safeguard the rights of employees, to regulate trade unions, the financial system, personal privacy (via the Data Protection Act), health and safety at work, the licensing of street traders and taxi-cabs. And the financial services are also widely regulated.

Regulation may be imposed simply by enacting laws and leaving their supervision to the normal processes of the law, by setting up special regulatory agencies, by encouraging self-regulation or delegating powers to voluntary bodies. Though regulation may be regarded as necessary to prevent the abuse of monopoly power, or to correct externalities or other instances of market failure, there may yet be a risk that the compliance costs and associated outgoings of regulation may exceed the social benefits. These associated outgoings include administration costs in government or regulatory agencies and are termed excess burdens. The growth of regulation has led to concern about its overall costs and has led to various calls for reform and even abolition of regulatory requirements, termed deregulation. Whether such calls emanate from lobbyist groups or unbiased sources is a moot point. But it is one that government has to question all of the time.

Economic intervention

Economic intervention is an action taken by a government in the economy – whether a market economy or a mixed economy – beyond the basic regulation of fraud and enforcement of contracts, in an effort to affect its own economy. Economic intervention may be aimed at a variety of political or economic objectives, such as promoting economic growth, increasing employment, raising wages, controlling prices, promoting equality, managing the money supply and interest rates, increasing profits, or addressing market failures. Advocates of free market and laissez-faire economics tend to see government intervention in the economy as harmful, due to the potential for regulatory growth, the law of unintended consequences, as well as ideological aversion.
Governments and the financial crisis

■ Government deficits

Observers of government will remind us that there is a tendency for the reach of governments to grow. This is reflected in the growth of its deficit financing. Governments seem to borrow more and more each year. In almost every year since World War II the US administration has recorded a budget deficit – this means that it has received less in tax revenues than it has spent, and has had to borrow to make up the difference. It is not alone. The UK has also recorded a series of budget deficits. This is a relatively new phenomenon. For most of their history, the US and UK governments kept their budgets balanced, moving into the red only in times of war and economic slump.

There are countries that consistently operate budget surpluses. For example, Norway (because of its oil reserves) and Australia (because of its metal resources). The era of persistent government deficits began when governments started to provide extensive social security systems. This involved spending sizeable amounts on health, unemployment insurance and education, all of which tended, deep in the past, to be handled by the private sector or by charities and trusts.

A quick look at the US Federal Budget for 2008 tells us that 21 per cent of outgoings are for social security (mainly payments to the elderly) and 21 per cent for defence (salaries of service personnel, and equipment from aircraft carriers to guns). Income security gets 13 per cent (payments to poor families), medicare and other health payments gets 22 per cent (government health spending for the elderly and the poor), and interest payments on the debt that the government has taken on in previous years gets 9 per cent. Remaining amounts include spending on federal institutions such as the courts system, support for farmers and veterans and others. Very broadly, this pattern of spend is replicated in Britain and most other Western countries.

The amount that the US government spent in 2008 exceeded the amount it raised in taxes, having to make up the balance with USD410 billion worth of borrowing. On top of this, because of the Federal structure of US government, each state also has its own budget (and tax-raising abilities), most of which is spent on education and local infrastructures such as highways. Congress representatives from particular states insert additions to Federal bills to help pay for expensive local projects. This is termed ‘pork barrel’ politics. President George W. Bush was extremely reluctant to use his right to veto the bills.

Recurring deficits may cause a variety of economic problems for a country. It may be the case that the borrowing nation is perceived as being prone to the temptation to extricate itself from excessive indebtedness via inflation (by creating more money). Inflation at higher levels than trading partners will tend, all other things being equal, to put downward pressure on the currency and, to compensate for this risk investors would demand a higher rate of return. This results in the government having to pay more on its debt, making it more costly to borrow in the future. Of course, if its indebtedness is in its own currency, the borrowing will now be easier to repay because of the depreciation in its currency.

Most important are the long-term consequences of borrowing too heavily. Effectively, government borrowing is deferred taxation from future years, since the extra borrowed
money has to be paid back at some time. This is not so much of a problem if the money is being used to enhance future growth and generations’ welfare, such as investing in good new schools, but it is a real cause for concern if the money is merely being used to satisfy the public sector’s voracious appetite for cash. In other words, the problem is containable if future outturns are enhanced. A recent picture of the US current account balances is shown in Figure 2.1. It indicates that the USA was importing a vastly greater amount than it was exporting and this imbalance was worsening. How could this continue for so long? It was being offset in part by China’s imbalance in the opposite direction.

As we shall see in the next chapter, the USA was experiencing low interest rates, a booming housing market and strong consumer spending, especially in the period from 2002 to 2005. Much of US consumers’ spending was on products made in China. From 2000 to 2005, Chinese exports to the US moved from 4 per cent to 11 per cent of non-automobile US retail sales. This impacted Chinese government policy. Its central bank was a buyer of US dollars gained by Chinese exporters. And it recirculated these US dollars by purchasing US Treasury bonds. The effect was that the exchange rate of the USD against the Chinese yuan was maintained with relatively little movement. In total, China accumulated trillions of dollars of US Treasury bonds in a remarkably short time. Because China was such a willing buyer of US bonds, this tended to keep US interest rates low. And this fed back to domestic US interest rates and helped keep US mortgage rates low.

To reiterate, the effect of all of this was to keep the exchange rate between the USD and the Chinese yuan relatively constant and to keep US interest rates low. It is worth noting that if the Chinese central bank had sold US dollars to buy yuan, rather than recirculating them into US Treasury bonds, the effect would have been a weakening of the USD and a rise in the Chinese currency. And this would, in theory, have made Chinese exports less competitive. It would also have meant that for the US to fund its imbalance, its borrowing would probably have been at a higher interest rate because China’s willingness to buy US Treasury bonds would not have been there.

Apart from the practicalities of public spending, economists have been concerned with the principles justifying it, the mechanism for allocating it and the authorities responsible for it. Public spending in most parts of the Western world is running at around 40 to 50 per cent of gross domestic product with the UK and most EU countries fairly high up the list and the US at the lower end of the range. About half represents transfers to the private sector in the form of subsidies and social security benefits.

The aftermath of a financial crisis increases government debt problems. Kindleberger⁴ tells us that economists think that they ‘know how to handle financial crises: throw money at them, and after the crisis is over, mop the money up’. Reinhart and Rogoff⁵ warn that, on the ‘basis of past international banking crises, they are followed by sovereign debt crises’. As we will see in Chapter 16, this time is no different.
Governments and the financial crisis

Demand management

In economics, demand management is concerned with government attempts to control economic demand and to create growth and avoid recessions. The central idea is that government uses tools like interest rates, taxation, public expenditure and taxation to change key economic decisions like consumption, investment, the balance of trade and public sector borrowing. Their aim in so-doing is to smooth the business cycle. We look at the business cycle in Chapter 9.

Traditionally, governments were advised to balance the budget – not every year but over the period of the business cycle as a whole. According to this wisdom, governments run a budget surplus in the good times, in order to damp down expansion. And they run a deficit in the downturn in order to counteract the slowdown.

This cycle-smoothing approach to government budgets, whilst traditional wisdom, succumbed to the political temptation to run what looks like a permanent deficit in the US – see Figure 2.1. Some observers argue that government efforts at demand management have failed to work – whether this reflects an ideological antipathy to government or is based upon good research is a moot point. In terms of adjusting aggregate demand in the economy, government has two major kinds of tool – one is termed monetary policy and the other is fiscal policy. We now turn to the former of these.

Figure 2.1 US current account GDP%
Source: Bureau of Economic Analysis.
Monetary policy embraces government strategy and tactics with regard to the quantity of money in the economy, the rate of interest and the exchange rate. Monetary policy has the effect of either expanding the economy or contracting it. Increases in the total supply of money in the economy are likely, all other things being equal, to expand it. Decreases in the total money supply are likely to contract the economy. Lowering and raising interest rates are likely, respectively, to expand or contract the economy. Expansionary policy may be used to combat unemployment in a recession while a policy of contraction might be used to combat inflation or rid the economy of boom conditions. Monetary policy is contrasted with fiscal policy, which refers to taxation and to government spending and borrowing.

Monetary policy is often described as accommodative, neutral or tightening. Accommodative policy describes situations where the interest rate is set by the central monetary authority to create economic growth. It is neutral when it is intended neither to create growth nor to combat inflation. It is termed tight if it is intended to reduce inflation or contract the money.

In most modern nations, institutions such as the Federal Reserve Bank in the USA, the Bank of England, the European Central Bank, the Bank of Japan and so on have the task of executing government monetary policy. In general, these institutions are called central banks and also have the responsibility of managing the smooth operation of the financial system in their countries. Central banks are often referred to as being independent. But to claim that the government has no influence on them would be utterly erroneous.

The primary tool of monetary policy is open market operations. This entails managing the quantity of money in circulation through buying and selling various financial instruments, such as Treasury bills, bonds and foreign currencies. All of these purchases and sales result in more or less money entering or leaving circulation.

The short-term aim of open market operations is, usually, to achieve a short-term interest rate target. In other instances, monetary policy might entail the targeting of a specific exchange rate relative to some foreign currency. In the USA, the Federal Reserve targets the federal funds rate, the rate at which member banks lend to one another overnight. Monetary policy in China aims to target the exchange rate between the Chinese renminbi and a basket of foreign currencies. Clearly monetary policy rests on the relationship between the rates of interest in an economy and the total supply of money.

Monetary policy may involve inflation targeting and monetary aggregate targeting. Under inflation targeting approaches, the aim is to keep inflation, under a particular definition such as the Consumer Price Index, within a prescribed range. The inflation target is achieved via periodic adjustments to the central bank interest rate. The interest rate used is usually the interbank rate at which banks lend overnight to each other. The interest rate target is maintained using open market operations and it is regularly reviewed on a monthly or quarterly basis by a policy committee. Changes to the interest rate are made to various market indicators.
Turning to monetary aggregates, this approach is based on a constant (or determined) growth in the money supply. So far, we have avoided defining the money supply. What do we mean by it? Unfortunately, it has a number of definitions – there is MO, MB, M1, M2, M3, M4 and some others too. All of these have meanings to them and all define money supply. We will keep it simple and just refer to MO and M4 here. And if you, the reader, wish to pursue the matter further there is a host of economics books to accommodate your intellectual curiosity. We use the UK as our example. MO is defined as notes and coins in circulation plus banks’ deposits at the Bank of England. M4 is much broader and embraces notes and coins plus the value of all sterling bank and building society accounts held by private citizens and companies.

We now return to monetary policy tools. These include adjustments to the monetary base, reserve requirements and discount window lending. Monetary policy may be implemented by altering the size of the monetary base. This directly changes the amount of money circulating in the economy. A central bank can use open market operations to change the monetary base. The central bank buys or sells bonds in exchange for money. If the central bank buys bonds it puts money into the economy. By a reverse token, if it sells bonds it takes money out of the economy.

The government exerts regulatory control over banks. Monetary policy may be observed by changing the proportion of assets that banks must deposit with the central bank. By changing the amount of total assets to be held as cash, the central bank changes the availability of loanable funds. This creates a change in the money supply. Typically, central banks do not change reserve requirements often.

Many central banks have the authority to lend funds to financial institutions within their country. By recalling existing loans or extending new loans, the monetary authority can directly lower money supply or increase it, respectively. This method of monetary policy is termed discount window lending.

We now introduce a brief and simplified overview of the quantity theory of money. This is the idea that money supply has a direct and positive relationship with the price level. Sorry about the equation, but the simplified version of the quantity theory of money is:

\[ M \cdot V = P \cdot T \]

where

- **M** is the average total amount of money in circulation in an economy during a specified period.
- **V** is the transactions’ velocity of money. This is the average frequency over all transactions which a unit of money is spent over a specified period. In other words, it measures how fast people turn over their money.
- **P** is the price level in the economy during the period.
- **T** is an index of the real (that is, net of inflation) value of aggregate transactions.

That’s simple enough, isn’t it? If V and T are constant, the inflation rate would exactly equal the growth rate of the money supply. However in booms and busts, the velocity...
of circulation and the value of transactions (national income) do change, meaning that changes in money supply cannot be said to immutably affect price levels. In truth, this is a fascinating area of study and we do less than scratch the surface of it here. Again, readers desiring a more detailed account have a vast literature from which to choose.

As we have stated, monetary policy may involve inflation targeting and monetary aggregate targeting. One of the most astonishing aspects of the past decade is that real interest rates, arrived at by extracting actual inflation after the event from the risk-free rate of interest quoted in the market place (Fed funds in the USA and Bank of England base rate in the UK), show extremely low rates, and in some cases negative rates – see Table 2.1. Of course this is only one way of determining real interest rates. The other is to look at index-linked government securities which guarantee a real rate of return. The statistic on this latter basis has been around 2 per cent over the last decade. This has been higher than the figures for almost all of the data shown in Table 2.1. In passing, it should be noted that there are various definitions of inflation which may give rise to slightly different figures in our exhibit compared to others.

The upshot of all of this is that, with real interest rates so low, compared with a benchmark figure of 2 to 3 per cent, it is not surprising that there has been a binge in high street consumption in the noughties and that this binge was reproduced in housing markets in the USA and in the UK and in many other countries too. Indeed with interest rates too low for too long and with easy credit available, it does not take long for a number of things to happen. These include:

- remortgaging, taking out higher mortgages, maybe via top-up mortgages or taking on higher mortgages for a bigger house;
- a consequent take-off in house prices;
- consumers deciding to go on a shopping spree using credit, which is cheap and available;
- consumer debt increases;
- corporate debt increases;
- with credit widely available the seeds of financial euphoria are sown.

### Table 2.1 Real interest rates in the USA and UK

<table>
<thead>
<tr>
<th>Year</th>
<th>USA (%)</th>
<th>UK (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1½</td>
<td>3.1</td>
</tr>
<tr>
<td>2001</td>
<td>3</td>
<td>3.2</td>
</tr>
<tr>
<td>2002</td>
<td>1½</td>
<td>2.3</td>
</tr>
<tr>
<td>2003</td>
<td>minus ½</td>
<td>0.7</td>
</tr>
<tr>
<td>2004</td>
<td>minus ¾</td>
<td>1.5</td>
</tr>
<tr>
<td>2005</td>
<td>minus 1</td>
<td>1.7</td>
</tr>
<tr>
<td>2006</td>
<td>0</td>
<td>1.5</td>
</tr>
<tr>
<td>2007</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>2008</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>2009</td>
<td>½</td>
<td>0.5</td>
</tr>
</tbody>
</table>
Chapter 2 Governments and the financial crisis

All of the bullet-pointed eventualities came to pass. And all would be attributed, in part, to a co-ordinated policy of real interest rates being too low for too long. All of those G6, G10, G20 meetings at which nothing seems to be resolved are, in reality, get-togethers at which all parties sing from the same hymn sheet. And the song is, keep real interest rates low – very low.

For the sake of completeness, Figures 2.2 and 2.3 show the average year-on-year growth in US earnings and average UK earnings from 1993 to 2007. These figures are in nominal terms, that is gross of any inflation.

We now turn to the second key category of government economic policy namely fiscal policy.

Fiscal policy

The two main instruments of fiscal policy are government expenditure and taxation. Fiscal policy may be neutral or it may be expansionary or it may result in contraction in the economy. A neutral stance on fiscal policy implies a balanced budget where government spending equals tax revenues or,

\[ G = T \]

Where \( G \) represents government spending and \( T \) represents sums raised from taxation. Here, government spending is funded wholly by tax revenue. The overall outcome is

![Figure 2.2 US average earnings (% change on previous year)](source: Bureau of Labour Statistics.)
likely to be a neutral effect on economic activity. By contrast, an expansionary fiscal policy involves a situation where government spending exceeds tax returns.

\[ \text{G} > \text{T} \]

Expansionary fiscal policy is usually associated with a budget deficit. Fiscal policy in which government spending falls short of tax revenues has a contracting effect on the economy. In these circumstances, fiscal policy is associated with a surplus.

Governments use fiscal policy to influence the level of aggregate demand in the economy, in an effort to achieve their objectives of price stability, full employment, and economic growth. To summarise, fiscal policy embraces decisions to lower taxation or to increase public expenditure in the interest of stimulating aggregate demand. These are referred to as loosening fiscal policy. One of the most remarkable features in the run-up to the financial crash of 2007/8 was a massive increase in public expenditure as a percentage of GDP. During the years 2000 to 2009 official statistics show an almost straight line increase in both the US and the UK from 32 per cent to 43 per cent in the former case and from 35 per cent to 45 per cent in the latter. With outgoing budget deficits, we would be surprised if the end result were anything other than an overheated boom in the economy.

**Lobbying**

Lobbying targets governments and local authorities. Lobbying in the USA aims to influence the US House of Representatives and state legislatures. In Britain, lobbyists aim to influence
members of the House of Commons and the House of Lords and, at a lower level, local authorities. Lobby groups may represent client organisations in dealings with central and local governments. In 2007 there were reported to be 17,000 federal lobbyists based in Washington DC and the total lobby expenditure by sector was topped by financial, insurance and real estate interests. Their total outlay, excluding campaign contributions, totalled over USD2.5 billion over the period from 1998 to 2006. Press cutting 2.1 updates these figures and provides interesting and relevant data.

The US banks have probably been the most adept in the world in this area of influence. Johnson makes the case that ‘the American financial industry gained political power by amassing a kind of cultural capital – a belief system. Once, perhaps, what was good for General Motors was good for the country. Over the past decade, the attitude took hold that what was good for Wall Street was good for the country. The banking-and-securities industry has become one of the top contributors to political campaigns, but at the peak of its influence, it did not have to buy favours … Instead, it benefited from the fact that Washington insiders already believed that large financial institutions and free-flowing capital markets were crucial to America’s position in the world.’ Johnson’s reference to the Wall Street–Washington corridor is exemplified when he observes that ‘one channel of influence was, of course, the flow of individuals between Wall Street and Washington; Robert Rubin, once the co-chairman of Goldman Sachs, served in Washington as Treasury

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**Press cutting 2.1**

Financial Times, 30 September 2009

**One congressman, five finance lobbyists**

Efforts by governments and regulators to improve investor protection by curbing what big banks and the like can do will run into resistance from a financial sector whose lobbying clout is strong.

Notably in the US, that power derives primarily from its deep pockets.

Between 1998 and 2008, Wall Street investment banks, commercial banks, hedge funds, real estate companies and insurance conglomerates paid an estimated $1.7bn in political contributions and spent a further $3.4bn on lobbyists. The figure comes from a report by Essential Information and The Consumer Education Foundation, two non-profit organisations. Their research shows that in 2007 the financial sector employed nearly 3,000 lobbyists, or five for each member of Congress, to influence policymaking.

Such purchasing of political influence is widely believed to have helped secure for Wall Street the repeal of the Glass-Steagall Act, which prohibited the merger of commercial and investment banks, and the blocking by Bill Clinton’s administration of a Commodity Futures Trading Commission initiative to regulate financial derivatives.

‘Over the past 30 years, this sector has benefited from a process of “cultural capture”, through which regulators, politicians and independent analysts became convinced this sector had great and stabilising technical expertise,’ says Simon Johnson, former chief economist at the International Monetary Fund. ‘Big banks are, amazingly, still presumed by officials to have the expertise necessary to manage their own risks, to prevent systematic failure and to guide public policy.’
secretary under Clinton, and later became chairman of Citigroup’s executive committee. Henry Paulson, CEO of Goldman Sachs during the long boom, became Treasury secretary under George W. Bush. John Snow, Paulson’s predecessor, left to become chairman of Cerberus Capital Management, a large private-equity firm that also counts Dan Quayle among its executives. Alan Greenspan, after leaving the Federal Reserve, became a consultant to Pimco, perhaps the biggest player in international bond markets. These personal connections were multiplied many times over at the lower levels of the past three presidential administrations, strengthening the ties between Washington and Wall Street.’

Johnson and Kwak⁷ argue that ‘Wall Street’s political power was its ability to place its people in key positions in Washington. As the big banks became richer, more of their executives became top-tier fund raisers who could be tapped for administration jobs. More important, as the world of finance became more complicated and more central to the economy, the federal government became more dependent on people with modern financial expertise – which meant people from the big banks and from their most cutting-edge businesses. This constant flow of people from Wall Street to Washington and back ensured that important decisions were made by officials who had absorbed the financial sector’s view of the world and its perspective on government policy, and who often saw their future careers on Wall Street, not in Washington.’

The argument is taken further in Johnson and Kwak⁸. These authors draw Wall Street as an oligarchy, a group dominated by a small number of individuals – a banking elite – that has gained political power because of its economical power and subsequently uses that political power for its own benefit. Unlike emerging economies’ oligarchies, Wall Street’s power group does not use bribery or blackmail. Its tools are subtler – campaign-finance contributions, the revolving door of government jobs and Wall Street directorships, and the creation of a culture that equates Wall Street’s gains with America’s gains. Suspicion of financial oligarchies is not a new theme in American history. Johnson⁹ argues that so successful has the banking lobby been in terms of ‘campaign finance, personal connections and ideology there [has] flowed, in just the past decade, a river of deregulatory policies that is, in hindsight, astonishing. It includes

- insistence on free movement of capital across borders;
- the repeal of Depression-era regulations separating commercial and investment banking;
- a congressional ban on the regulation of credit-default swaps;
- major increases in the amount of leverage allowed to investment banks;
- a light – (maybe) invisible – hand at the Securities and Exchange Commission in its regulatory enforcement;
- an international agreement to allow banks to measure their own riskiness;
- and an intentional failure to update regulations so as to keep up with the tremendous pace of financial innovation.

The mood that accompanied these measures in Washington seemed to swing between nonchalance and outright celebration: finance unleashed, it was thought, would continue to propel the economy to greater heights’. 
Johnson and Kwak contend that Wall Street successfully influenced governments in minimising regulations by its persuasive and pervasive partiality for classical economics and emphasis on Adam Smith’s preference for minimising government intervention – a view which was taken out of context and peddled by the banking élite. They also suggest that the same applies with respect to the osmotic spread of the efficient markets hypothesis with its focus upon unbiased market prices which can, again, be used as a thesis for non-involvement by regulators. After all, if the market arrives at fair prices, it might follow that regulation aimed to deflate bubbles is hardly necessary since prices are likely to be unbiased and approximately right anyway – at least, according to the efficient markets hypothesis. For more on efficient markets, see Chapter 10.

Indeed Johnson quotes Ben Bernanke, the Chairman of the US central bank, as saying, in 2006, that ‘the management of market risk and credit risk has become increasingly sophisticated … Banking organisations of all sizes have made substantial strides over the past two decades in their ability to measure and manage risks. Of course, this was mostly an illusion. Regulators, legislators, and academics almost all assumed that the managers of these banks knew what they were doing. In retrospect, they didn’t’.

Lest it be concluded that lobbying is a heinous art, it has to be said that were politicians not so prone to accepting the gifts borne by the lobbyists there would be less of it going on. The Wall Street–Washington revolving door turns because bankers and politicians are only too happy to see it turning. It takes two to tango.

### Summing up

Governments devolve some their decisions to regulators. We look at regulation in Chapter 8. Policy on interest rates is often delegated to the central bank – as is the case in the USA, the UK and the EU. Managing them to meet an inflation target set by the government is usually pursued. Regulation of financial markets is also devolved to various bodies which varies from country to country.

There is no doubt that the central government influences all of these issues even though central banks are often termed independent. However, final responsibility for factors such as inflation, interest rates and financial markets rests with government. If financial regulation fails, if inflation runs out of control, if interest rates are set at too low a level, if bubbles in markets occur, if public expenditure is too high, if economic growth is excessively high or excessively poor, the government is the ultimate culpable party. There is no denying this. The buck stops there.

Two major factors that emerge from this chapter are that real interest rates were truly low by every standard in the decade running up to the financial crisis and public expenditure was zooming northwards at a remarkable rate. These features fuelled a bubble in house prices in the USA, in the UK and in other places too. They were, to some extent, responsible for the deteriorating budget deficit versus GDP for each country. Both of these issues had a substantial impact on the problems of the financial crisis – as we shall see later on in this book. Governments in the USA, Britain and elsewhere were undoubtedly affected by
the pleas of lobby groups to deregulate and keep the boom going. Governments basked in the glory of an economy that was working so well that consumers were bingeing on borrowed money, purchasing properties that they couldn’t afford and enjoying a boom that, seemingly, wouldn’t end. And consumers were being told by those at the apex of the government’s finance function that ‘We have conquered boom and bust’. Responsible government? We think not.