Part I

What Happened?

Chapter 1

A Short History of the Crisis

With the financial crisis still bubbling as we write in late 2009, we will first consider its roots and its potential impact in order to set a context for the later chapters.[3] We show that some of the factors leading to the events of 2006–9 were anomalous, others will continue, but that the effects will be felt well into the next decade. Governments and consumers in the West will be particularly constrained as they tackle paying off their debt. In the meantime, the newly industrialising economies enjoy many advantages: their savings are high, their labour cheap and skilful, their access to technology is rapidly approaching that of the Western economies and many have large internal markets. All of this presents a competitive threat to established industrial powers.

The roots of the financial crisis

The financial crisis that began in 2006–7 with defaults on 'subprime' mortgages in some parts of the USA serves as a decisive punctuation mark. It marked the end of a period of 'fake' stability, one in which all the indicators seemed to support a mode of operation and a set of assumptions that we now have to question. We

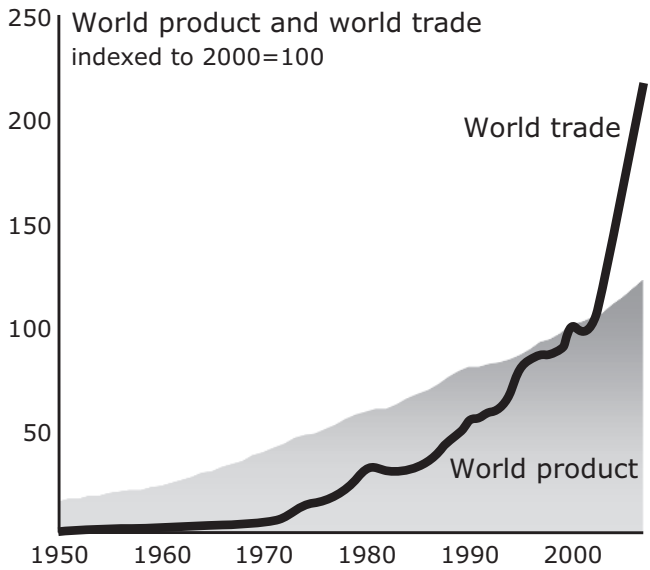

Figure 1.1 World product and world trade

begin this chapter with a review of the roots of the crisis, in the view that to fully understand where we're going, we need first to mark where we are.

We have been through a period of asset price inflation. Figure 1.1 shows a simple plot of world trade against world product, both in money of the day, from 1950 to the present.[4] There is a lengthy period in which the two maintained a 1:1 relationship[5]. The relationship began to change in the early 1980s, with world trade increasing at a much faster rate than world product. The Asian crisis, the dot.com collapse and the massive failure of financial management in 2006 provided a series of challenges which initially appeared to be accommodated without disrupting the growth of world trade.

The growth of world trade was a symptom; the cause was a mixture of real, external factors and a belief which persisted for a

generation and beyond in the financial industries that credit was uncapped. The key drivers included the following eight factors:

1. Steady or falling (in real terms) commodity and energy prices which drove up consumption.
2. The doubling of the global work force, and the much more than doubling of their intellectual capacity through education and training, which led in its turn to mobility of labour to where it could be used effectively.
3. Near universal productivity growth was based on the use of increasingly cheap information technology. Between 1960 and 1999, manufacturing's share in US GDP and total employment both halved, to about 15%. Over the same period, its physical output increased 2–3 times and prices decreased in real terms by 75%.[6]
4. Labour costs for low-skilled workers in the industrial world were nearly static in real terms.
5. Connectivity and new institutions offered access to the global work force and to world savings.
6. The end of the Cold War led to the apparent supremacy of the Western model of governance. There was near universal and immediate economic response to a standard economic model that comprised sound finance, unimpeded market forces, rational and predictable regulation and taxation, open borders to trade in manufactured goods, all making up the so-called International Monetary Fund (IMF) model.
7. There was a wave of privatisation and deregulation in the industrial world. This spread to the former Comecon countries in Eastern Europe, and in China and India.
8. Finally, financial deregulation had a series of important impacts, as discussed below.

The immediate responses to this growth of world trade were the extension of consumerism in the West and the beginnings

of fast growth and liberalisation in the developing economies, most notably in Asia and the ex-Comecon countries in Eastern Europe.

The response of the financial sector was that the world had found a way to manage complexity – through bottom-up choice in markets and democracy, all integrated by sound governance – and that things would find their own equilibrium through benign neglect.

This model has much to commend it. However, 'benign' is a word laden with values: whose benignity? For whose advantage? In the short term it suited US and other political leaders to allow central banks to maintain historically low real interest rates, to permit a housing boom that went off the scale, with consumers taking on a vast burden of debt.

Asian savings funded some of this expansion, while demographics in the wealthy world meant that many had accumulated savings and pension funds that needed to be invested. A glut of capital forced down price/earnings ratios on securities. Increasing shareholder activism was driven by this and other factors, such as the boom in mergers and hostile acquisitions, and consumerism applied to securities markets expanded by low trading costs. Companies could not compete with the high returns from the financial sector and were squeezed for cash for organic investment. Boards were ejected by shareholders if they were not content with the company's performance.

The role of the financial sector

The financial sector had been hugely important in the early twentieth-century stock markets, but had since declined to a small share of the market. Retail banking was famously parodied in *Liar's Poker* as 3/6/3: borrow at 3%, lend at 6%, be on the golf course at 3pm. Merchant banks did esoteric things on a small scale and

had no great significance. Few banks engaged in asset trading, in the sense of playing zero-sum games with other people's money.

Changing regulation

In the early 1990s, banks discovered the joys of corporate finance and expanded rapidly into new areas. This was accelerated by the repeal of the depression-era US Glass-Steagall Act in 1999. This had separated commercial from investment banking, and its repeal opened the door to new monolithic firms.

All manner of new products were on offer. Mergers and acquisitions were studied and actively promoted to corporate chieftains with ready finance. Methods of borrowing to please shareholders with a short time horizon – such as to buy back shares, or to pay dividends – were parts of the package. The chief offer that had unambiguous positive sum value associated with it was, however, the wide range of packages that claimed to manage risk exposure.

Hedging of risk

Portfolios that are constructed from many unrelated risks that are small in comparison to the total are proportionately less exposed to volatility than the constituent components. That is how insurance works: if your house burns down, that is a catastrophe for you, but it is not such a proportional disaster for an insurance company that holds tens of thousands of such risks. You are, therefore, happy to pay a small sum to remove the financial – if not practical – risk; and the company can accept it knowing that the likelihood of all of the houses that it insures burning down in the same time period is very low.

It is, however, a crucial caveat for insurance that the risks must be 'uncorrelated', must not respond to a common precipitating factor, such as war.

Offers claiming to manage risk exposure allowed companies to 'hedge' risk; buying what was sold as insurance against currency

movements, inflation, commodity price changes and supply chain defaults. This was a powerful gain and the corporate treasury function became closely linked to – or outsourced to – banks.

Borrowing

This closeness also encouraged borrowing on a vast scale, often for financial transactions – such as acquisitions – rather than for investment in plant and equipment. The new monoliths sent teams of people to visit corporate CEOs in order to suggest projects that they would then finance: acquire this, strip out that – it seemed that you could create hundreds of millions of dollars out of absolutely nothing.

Figure 1.2 shows the mergers and acquisitions value in the USA as a percentage of the GDP.[7] It emphasises the amazingly large peaks of activity in the decade 2000–2008.

Own-account trading by banks and CDOs

Banks found another interesting area: own-account trading. That is, they could use their current assets to borrow, and use that

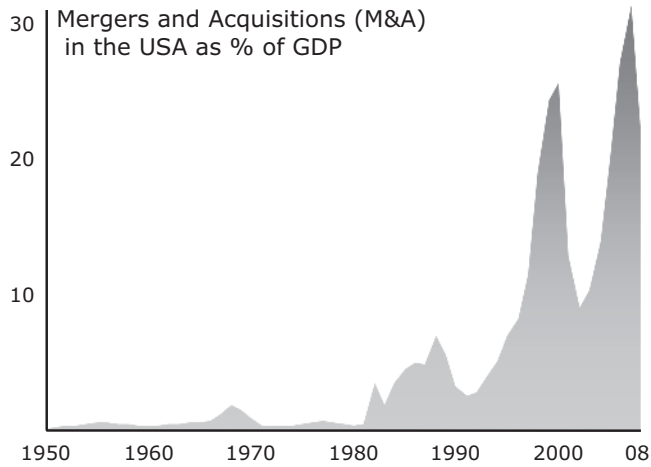

Figure 1.2 Mergers and acquisitions as a percentage of US GDP

money to speculate in markets. At first controlled by regulatory limits, this soon went 'off the balance sheet', being handled by entities to which the regulatory control did not apply. More and more complex instruments were devised, including the now-notorious collateralised debt obligations, or CDOs. As they illustrate the abstract nature of what was being done, these are worth a general description.

A bank creates a new legal entity, usually called an SPE or special purpose entity. It places a collection of assets into this, which are divided into various classes of risk exposure, here meaning chiefly proneness to volatility. Each CDO or group of assets has a class.

Ratings agencies validated these structures, and had to compete against each other for the privilege. Over-strict assessors were less likely to be selected, all things being equal.

CDOs were purchased by other institutions. The high-risk ones offered a high return, and low-risk ones provided supposedly quality assets against which further money could be borrowed, so repeating the cycle. This is called 'securitisation', and allowed banks to take on dizzy levels of debt that was certified to be triple-A. As we have now seen, they in practice often contained toxic assets or assets which all moved in the same direction when times got hard.

Some figures may serve to put this in context:[8]

Table 1.1 World values

World added value, 2007 approximately	$35 trillion
World value of equities, 2007	$40 trillion
World value of derivatives, inc. CDOs	$1000 trillion
World values of credit default swaps	$70–90 trillion

Boom and bust in financial services

The upshot was that the banking sector boomed, paid out very high salaries and bonuses, and lost control of its fundamentals. Senior staff had very little idea what their subordinates were doing, as the instruments were technical and changed very rapidly. Accounting structures that worked on a mark-to-market basis – that is, booked (marked) assets at what they were worth 'in the market' at the moment of booking – had to work within an extremely ill-defined framework: what, ultimately, was the market value of a derivative built on a dozen CDOs that were themselves spires above huge, mixed bunches of assets that included the now notorious sub-prime property portfolio?

Banks also found one more area in which to expand their activities. This was the churning of assets. Brokerage fees are charged when a trade is made, but not otherwise. Thus, portfolios that are extremely active – perhaps through automated ('quant') trading or solely through the 'need' to access ever-more complex instruments – were portfolios that made money for traders.

Once again, some figures put matters in perspective. Brokers' fees in 2007 were assessed as being around $500bn, which is 1½% of gross world product. The typical costs of such management fees are 2% of a portfolio's worth per annum, which accumulates to half of what a pension fund is worth over 25 years.[9]

The consequence of all this is that financial services represented about 10% of world profit in 1965 and 35% in 2005.[10] Huge fortunes were made and high salaries paid to people who did not understand – and were not in control of – their organisations. They were cruising on the success of the underlying structural features. As long as expansion continued, the bubble would continue to grow.

The bursting of the bubble placed pressure on states to bail out the banks, which in many cases they did. Figure 1.3[11] shows the scale of the US commitment set against other major projects from history. Some of the money spent will be recuperated by the state

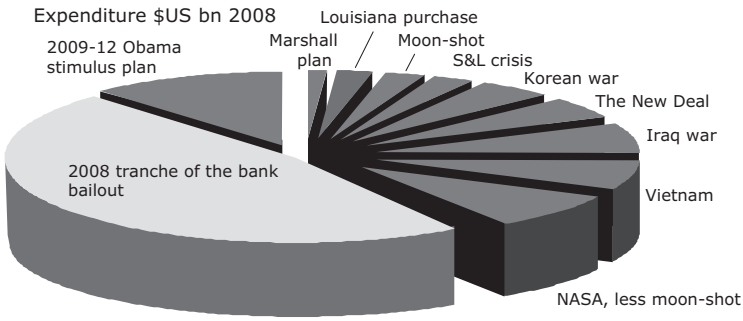

Figure 1.3 The scale of the US bank bailout

– ultimately from shareholders and consumers, of course – and this implies a long, slow process during which government expenditure will be severely constrained.

Personal, corporate and government debt

The unprecedented scale of personal and corporate debt in the USA from 1952 to 2009 is shown in Figure 1.4.[12] During this time, the Western economies have changed from being mostly saving economies to being mostly debt-ridden economies. At its peak in 2009, the personal debt averaged 139% of income (versus, say, 62% in 1960 or 101% in 2000). Debt services took an all-time high of 14.4% of personal disposable income in 2007, from which peak it has fallen only because interest rates have declined. Personal saving in the USA fell continually from around 10% of income in 1980 to zero in 2005, and below zero thereafter.

This presents two headaches for the next decade:

- Dealing with the debt – through paying back or through defaults.
- Dealing with the slowing in growth as the OECD consumers slow their spending.

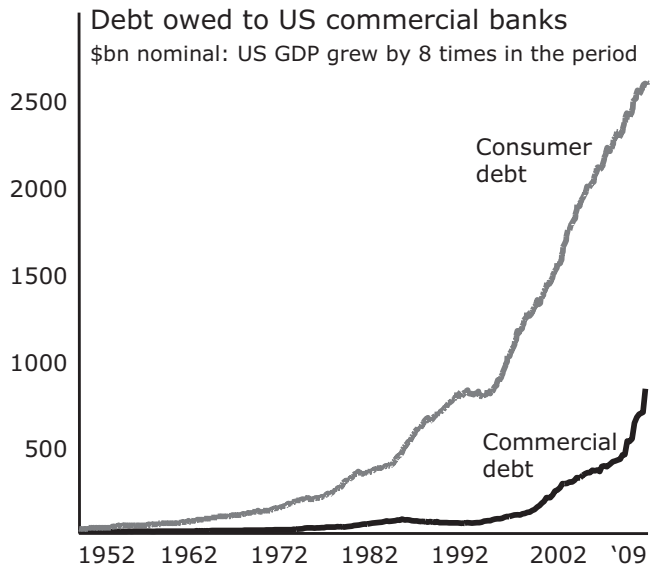

Figure 1.4 Consumer debt in the USA

Dealing with the debt

If this consumer debt generates significant default, there is absolutely nothing that any state can do to bail the situation out, because the numbers are simply too vast. The two options considered by most governments are to do nothing, which is not feasible when facing a gigantic crisis that makes 2007–9 fade into insignificance, or to print money and inflate the relevant economies out of the situation. (Inflation dilutes debt, the value of which remains constant whilst the currency in which it is denominated of course contracts in value. Ten thousand dollars would have been a large mortgage in 1970, but is less than the average outstanding credit card debt today.) Naturally, nations which did this would see their currencies collapse and their economies labour under a burden of inflationary value destruction that would last for decades.

What might precipitate a widespread default on debts? The three most immediate threats are:

- high interest rates,
- high taxes and
- high unemployment.

Unemployment is rising in all of the industrial economies, and history shows us that past recessions have a 3–4-year trough during which employment is below trend and wages are static or falling.[13] States will have to cut their expenditure to balance their books, as some are running deficits as large as 10% of GDP, unprecedented outside of wartime. This, too, will affect employment. This is a real threat, therefore. Higher taxes are also a reality, for the same reasons.

Might real interest rates rise as well? Central banks will eventually have to raise their base rates above the near-zero figures that apply today. Knowing what affect this might have, they will be extremely cautious in doing this. However, the very large sums poured into the economy in 2008, and a growth spurt – coupled with depleted supply chains – might force interest rate rises. This is probably unlikely, as assessments of pressures on both the supply and demand side of the developed economies suggest that the forces are, if anything, deflationary.

The OECD consumer

Second, the US consumer represents an enormous chunk of world economic activity. Aside from their debt position, their propensity to consume has a profound impact on the world economy. It represented 18.2% of world product in 2008, up from 14.9% in 1980. To put that in proportion, that is about three times greater than Germany's entire economy for the same year. The attitude of US

consumers, as much as their actual financial status, has a profound effect on the world economy.

Once again, debt is the key. Crudely, consumers have to cut their debt level in half to re-attain the sense of financial security that they enjoyed when house prices and equities values were high. To do this, they would have to cut their spending. That would depress economic growth. To avoid having to do this, security and house prices would have to rise. What are the prospects of this happening quickly?

House prices had risen sharply against incomes in most OECD countries. Most have now fallen to the historical average. In the USA, the numbers of new and existing family homes for sale are at a high level not seen for a generation. Consequently, a return to house price inflation will be slow.

Of course not all countries have large levels of consumer debt. Savings rates in much of Asia remain high.

> The behaviour of OECD consumers during the recession shows four trends: demand for simplicity, a call for ethical business governance, a desire to economise, and a tendency to experiment with new offerings. Trends slowed by the recession are green consumption, the decline of deference, ethical consumption and extreme-experience seeking. Green consumption is expected to be a feature again beyond the immediate crisis, while attitudes to extreme experience will be altered for the long term.[14]

Equities

What about equities? Here, the issue is out of the hands of the US consumer and is heavily influenced by other factors, such as foreign interest in US securities, the value of the dollar, interest rates and so on; but most of all by prospects for corporate profitability. Companies are in much better shape than are consumers: their markets may have fallen, but the plant and people are still there and technology is racing ahead.

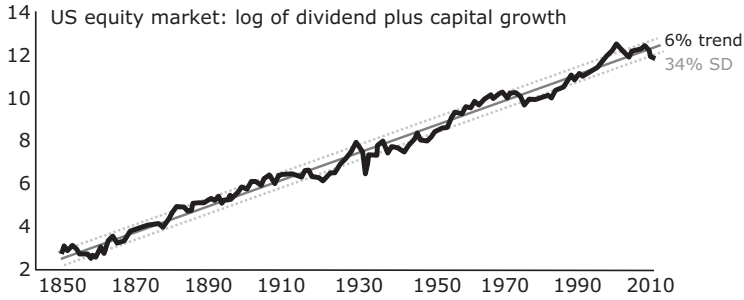

Figure 1.5 US equity market long-term trend

The chart in Figure 1.5 shows how the real-term values of investments in the US have grown since 1850.[15] It uses a logarithmic scale, and performance waivers only for the short run from the underlying trend of 6% annual growth. The dotted lines show one standard deviation from this trend, meaning that the line will walk randomly to or beyond this bound only 34% of the time. Using this pragmatic guide, we can estimate the probability that equities will revert to their former values within a given time frame. There is a 50% chance that US equities will bounce back to historical rates of return by 2020, and a 50% chance that they will still not have done so by 2030.

Assessments of this sort are no more than extrapolations, but unhappily more complex modelling activity suggests that the long-term effects of the bubble will be lasting, trimming perhaps 2% off industrial world growth until well into the 'teens of the century. US consumers are most likely to feel this cold wind, as they are far and away the most indebted group. Also, nations which have run up great debts – again, the USA but also the UK, Japan and others – will have to pay these back.

A more active government role

There is pressure from many directions for governments to take a more active role in the regulation of financial services, both

nationally and internationally. As Robert Reich said in the *Harvard Business Review*, speaking of the US economy:

> The massive failure of world economies has paved the way for government action not seen since the 1930s. New regulations will be designed to encourage desired behaviours, for instance through regulation in financial services, guaranteeing loans for small businesses and requiring employers to either insure workers or pay into a national pool.[16]

Executive Summary

- **The financial crisis marked the end of a period of 'fake' economic and organisational stability, brought about by a consumer boom and a belief in the power of markets under a system of benign neglect.**
- **Banks took on unsustainably high levels of debt. The debt was underpinned by assets of questionable value, such as CDOs, in the belief that they had found a way to manage complexity: senior staff had very little idea what their subordinates were doing.**
- **There are two headaches for the next decade: dealing with the debt (through paying back or through defaults); and dealing with the slowing in growth as the OECD consumers slow their spending.**
- **There will be increased pressure for regulation of financial services, and the OECD debt will take some time to unwind.**
- **The net effect of this changing landscape is that money supply for investment in the West will be more constrained and more expensive.**