# Introduction

The global credit crisis that began in the summer of 2007 threw a large rock into the calm waters of central banking. Though many commentators, and indeed some central bankers themselves, had for some time been drawing attention to the risks posed for financial stability by global imbalances, surging credit, and liquidity, and narrowing risk spreads, when the crisis hit in August 2007 the speed and severity came as a surprise, not least to central bankers.

The proximate causes of the crisis lay in securitizations based on the subprime mortgage market in the United States, but the first serious signs of a major liquidity problem in the banking system were observed in Europe. On 9 August BNP Paribas froze three funds it managed, blaming "a complete evaporation of liquidity in certain market segments of the U.S. securitisation market." On the same day the ECB launched emergency operations to boost liquidity and injected almost €100 billion into the market, in an attempt to bring down overnight lending rates. The operation was successful, up to a point, but did not prevent the subsequent collapse of IKB in Germany, the first of several European bank failures.

In London, the first major casualty was Northern Rock, a mortgage bank heavily reliant on short-term wholesale funding. The Bank of England initially declined to provide emergency liquidity support to facilitate the sale of the bank to another, larger institution. Lloyds TSB (as it then was) was reported to be ready to take on the bank on condition that the Bank guaranteed funding for a period. But the Bank did eventually provide upward of £30 billion in funding, the disclosure of which led to the first bank run in the United Kingdom for over 150 years and eventually, after an undignified attempt by the government to sell it to Richard Branson, the airline entrepreneur, to the nationalization of Northern Rock.

In the United States, the Federal Reserve cut rates sharply, expanded its own liquidity operations, and broadened the range of collateral it was prepared to accept. In spite of these efforts, by March of 2008 the Federal Reserve Bank of New York was obliged to engineer a rescue of Bear Stearns through a heavily discounted sale to J.P. Morgan, and furthermore to open the discount window to the investment banks, a move which it had long resisted.

Through the summer of 2008 more and more institutions came under pressure. In Benelux, Fortis failed. In the United Kingdom, Alliance & Leicester was rescued by Santander, while Bradford & Bingley was dismembered, leaving the government holding the mortgage book. In the United States, other banks emerged as needing public support, notably Washington Mutual, Wachovia, and Indymac. Then, in mid September, the crisis entered a new and more dramatic phase. The insurance group AIG was expensively rescued, but in the same week Lehman Brothers was allowed to go to the wall, precipitating generalized panic across global financial markets. The U.K. and U.S. governments, followed by others, took direct stakes in systemically significant institutions, including the major investment banks, which changed status to become bank holding companies with Federal Reserve support. By the spring of 2009 the British government owned majority stakes in both the Royal Bank of Scotland and a new entity created by the merger of Lloyds TSB and Halifax Bank of Scotland. Monetary policy was further relaxed over the winter of 2008–9, with interest rates approaching zero in many developed countries. Once zero, or close to it, had been reached, further reductions in the policy rate were no longer an option and central banks resorted to "quantitative" (or "credit") easing: buying commercial or government securities directly, increasing the supply of base money.

As the crisis rolled on, leaving wreckage in its wake in the financial markets and pushing Western economies into recession, questions were inevitably asked about who was responsible for the debacle. The major financial institutions themselves were, of course, the prime suspects. It was argued that their incentive structures had led them to take excessive risks, and that their boards and senior management did not understand the characteristics of the complex instruments to which they were increasingly exposed. The whole credit risk transfer business, ostensibly designed to allow risks to be held by those best able to bear them, appeared to have, instead, left risks with those least able to understand them. There seemed to have been a dislocation between the financial and the real economies, with the nominal values of the derivative instruments, in which the losses were concentrated, parting company from the value of the underlying assets. In these markets business had been increasingly concentrated on creating large risk exposures purely between financial firms, rather than between them and their customers. By 2007 the nominal value of the credit default swap market was over $40 trillion. It was argued that the "originate to distribute model" was fundamentally broken, and that hedge funds—always available to play the role of stage villain—had acted as destabilizing players. They were widely accused of engineering the collapse of Bear Stearns, for example.

Ratings agencies had connived in the fast expansion of the market, earning fees for rating each new securitization. Some ostensibly AAA-rated securities traded at a fraction of their face values. The credibility of the agencies was severely damaged, and many critics pointed to fundamental conflicts of interest at the heart of the agencies' business models. Monoline insurers, whose backing had allowed securitizations to achieve AAA status, collapsed into the arms of the public authorities.

Regulators were also seen as part of the problem: too slow-moving to understand what was happening on their watch and powerless, or even unwilling, to control it. Prudential regulators, whether in central banks or outside them, had overseen banking systems that were undercapitalized when the crisis struck. The capital requirements imposed on banks proved in many cases to be wholly inadequate to absorb the losses incurred, and perhaps, through magnifying procyclical effects, added fuel to the flames of the asset price bubble that preceded the crash. Backward-looking capital requirements tended to fall as asset prices rose. The absence of effective oversight of the creation of credit through the derivative markets was argued to be a further weakness. Regulatory arbitrage had created a shadow banking system, and a proliferation of off-balance-sheet "structured investment vehicles," which regulators had largely ignored. A comprehensive global overhaul of the practices and structures of financial regulation was launched, with parallel reviews in the United States, the EU, and many individual countries.

Politicians, too, were in the firing line, especially in the United States, where pressure on the government-sponsored enterprises Fannie Mae and Freddie Mac to support lending to poorer families was a powerful impulse behind the expansion of the subprime mortgage market. Even private citizens could not escape blame. The collapse of personal savings, especially in English-speaking countries (though the Spaniards have acquired honorary Anglo-Saxon status in this context), and the associated credit-fueled consumption and house price bubbles were factors underlying the boom and subsequent bust.

It was not long before the role of the central banks themselves began to be seriously questioned. How could they have allowed such huge financial imbalances to build up without reacting? Were they, too, asleep at the wheel? Or, as one central banker himself put it, how was it that the radar was not connected to the missile defenses? In retrospect it is easy to see that risk spreads had reached unsustainably low levels and that an explosion of liquidity and credit had fueled dramatic asset price appreciation, especially in the property markets. Consumption growth was further stimulated by the "release" of equity from property. Yet through this period central banks, and especially the Federal Reserve, had maintained low interest rates, focusing attention narrowly on the behavior of consumer prices.

Steve Roach, the former chief economist of Morgan Stanley, argued that the central banks themselves bore the prime responsibility for the crisis.[1] "Central banks," he said, "have failed to provide a stable underpinning to world financial markets and to an increasingly asset dependent global economy . . . the current financial crisis is a wake up call for modern day central banking . . . the art and science of central banking is in desperate need of a major overhaul—before it's too late." John Taylor,[2] author of a celebrated rule for monetary policy making, similarly placed most of the blame on monetary policymakers: "there is an interaction between the monetary excesses and the risk-taking excesses."

Less outspoken critics advanced similar arguments. Was there not a fundamental problem with the way central banks' objectives had been specified, with a narrow focus on consumer prices? Even if it may be unrealistic to expect central banks to prevent all financial bubbles and head off all prospective crises, they could nonetheless "lean against the wind" of emerging imbalances and bubbles. Economists at the Bank for International Settlements, the central banks' own central bank, had been arguing as much for some years. In an important paper published in January 2006, Bill White, then chief economist of the BIS, maintained that, while central banks had been successful in the recent past in delivering low variability of both consumer price inflation and output, numerous financial and other imbalances had emerged and, should these imbalances revert to the mean, there could in future be significant effects on output growth. He asked whether monetary and regulatory policies should give more attention to avoiding the emergence of imbalances in the first place. Others argued that the central banks had in fact been misled by low reported consumer price inflation, which had been artificially held down by the emergence of China and India on the global scene, and the arrival in world markets of hundreds of millions of new workers prepared to work at very low rates of pay. The increased savings propensities of Asian economies meant that strong demand growth in the United States was not inflationary.

Former Federal Reserve chairman Alan Greenspan's initial response to this critique was robust. In his view central bankers could not hope to head off asset price bubbles and should not attempt to do so. The most a central bank could do was to mop up efficiently after the event. While the markets continued to power ahead, and confidence in the maestro's ability to keep the music playing remained high, the Greenspan view dominated. But as the scale of the crisis became apparent, more critics emerged. Greenspan himself offered a partial recantation of his earlier view, and by 2009 his reputation had taken a dive.

Other charges were brought as well. Had the central banks failed to keep up with changes in financial markets and grown too distant from them? Sir John Gieve, then the deputy governor of the Bank of England, admitted that "we hadn't kept pace with the extent of globalization."[3] He maintained, too, that the Bank had not had the tools needed to respond to an asset price bubble. That reinforced the argument of those who believed that governments had been wrong to separate central banks from banking supervision.

Neither the European Central Bank nor the Bank of England were themselves direct supervisors of banks. In Japan, too, the Japan Financial Services Agency has the prime responsibility for banking supervision while the Bank of Japan is supposed to oversee only bank liquidity. In the United States, the Federal Reserve has only partial oversight of the banking system and had no direct supervisory relationship with the investment banks at the eye of the storm. Had this partial perspective been a handicap, preventing them from building a full understanding of what was happening to credit? Much of the credit expansion that fueled the boom had taken place outside the regulated banking system.

Furthermore, while central banks everywhere were thought to have a responsibility for something called financial stability, the nature of that responsibility was rarely spelled out, and the tools with which they might promote it were ill-defined, perhaps nonexistent. A large financial stability industry sprang up from the mid 1990s on, producing reviews at a great rate, but it had little measurable impact on policy or on markets. Just as Roach had argued was the case in the monetary arena, was there not a need for a fundamental rethink of the appropriate role of central banks in today's more diverse and global financial markets? In particular, the links between monetary and financial stability looked in need of serious attention, as indeed did the relationship between the real economy and the financial system.

Questions were asked, too, about the effectiveness of coordination between central banks as the crisis hit. Central bankers had long prided themselves on their habits of communication and cooperation with each other. They meet privately every two months at the BIS headquarters in Basel, where, we are told, they talk frankly and openly about monetary and financial developments. These habits of cooperation are far better developed than those between finance ministries, or among other kinds of regulators. But in the summer of 2007 the benefits of this network were not very visible and, despite intensive discussions behind the scenes, it was not until December that the first public signs of a coordinated approach to the provision of liquidity were seen. Even then, it became painfully clear that the techniques they used to assist the market were clumsy and out-of-date. The monetary authorities proved unable to establish the structure of interest rates that they wanted to see, and their money market intervention techniques needed almost constant reengineering.

There was worse to come. Even those who maintained stoutly that the central banks could not be blamed for the genesis of the crisis, and who supported the Greenspan line on crisis resolution, were alarmed to discover that they were ineffective even at the crisis resolution task. Interest rate cuts, even on an unprecedented scale, proved to be inadequate, and even massive injections of liquidity on terms that the central banks would not have considered feasible beforehand failed to rebuild confidence for a long time. During the Greenspan era financial markets had come to believe in the myth of the all-powerful Federal Reserve. It was seen to have feet of clay when the crisis hit.

Perhaps the high water mark of central bank power and influence had been reached. Was the golden age of central banks, a period in which their independence and autonomy had been widely accepted around the world, now over?

What Mervyn King had called the NICE decade—noninflationary and consistently expansionary—came to an end with a crash. Mervyn King himself had come into office claiming the ambition to make monetary policy "boring." By that he meant that interest rate decisions should be as predictable as possible, with deft touches on the tiller from time to time in order to keep inflation within the target range. For a time, he came close to succeeding, but from the middle of 2007 onward central banking certainly became "interesting" again, in the sense of the overworked Chinese curse. In late 2008 the Bank slashed rates by 100 basis points, then by another 150, in short order, which many saw as recognition that it had fallen behind the curve.

But, while it was accepted that some kind of overhaul of practice and procedure was required, there was no easy consensus on what such an overhaul might entail. Was there a need for more coordination of central bank policies with those of other authorities? Should central banks become less powerful and be made more subject to political control, or be given more tools to achieve financial stability? Had the trend of removing central banks from direct supervisory responsibilities gone too far? Should that trend, indeed, be reversed? Did the crisis reveal a need for different types of expertise within central banks—particularly more market-related skills?

In this book we explore these arguments and offer answers to these and other questions. We argue that a new approach to central banking is indeed required in response to the crisis, and sketch out what we see as its key features. In part, this involves central banks returning to their roots in financial markets: forward to the past, perhaps.

To answer the questions, we need, first, to explore the ways in which central banks have evolved in the last two decades, in both developed and developing economies. So we begin, in chapter 1, by reviewing the core functions of central banking, and the global landscape of central banks today.

In chapter 2 we describe the monetary policy challenge, and assess how central banks have performed in recent years, especially in the context of the credit crisis. Chapter 3 discusses the second main focus of activity, in relation to financial stability, including a discussion of the appropriate role for central banks in financial supervision.

Chapter 4 reviews the way central banks provide liquidity to the markets, which has changed radically in the credit crisis, their role as overseer of the payment system, and the part they play in government debt management.

In chapter 5 we explore two of the more controversial questions that have emerged as a result of the crisis: the extent to which central banks should take account of the risks posed by asset price bubbles in setting monetary policy, and the role they should play in determining capital ratios for commercial banks.

Chapter 6 examines the structure, status, governance, and accountability of the major central banks today.

Chapter 7 discusses the particular circumstances of the European Central Bank, and the further reforms needed to make the Eurosystem function effectively, while chapter 8 looks at the development of central banking in emerging markets, including the special case of Islamic finance.

Chapter 9 explores the efficiency of central banks and their cost-effectiveness, a sadly neglected area. Chapter 10 assesses the way central banks cooperate internationally, and the role of the Bank for International Settlements. Chapter 11 reviews the culture and “psyche” of central banks. What kinds of people run them? Has the “central banker as hero” model gone too far? Is there an ideal profile for a governor?

Finally, chapter 12 pulls together the recommendations we make in the earlier chapters and sets out an agenda for change.