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## Introduction

We started out a long time ago with an ambition to produce a monetary history of the United Kingdom along similar lines to that of Friedman and Schwartz's *Monetary History of the U.S.* We recognized that it was a considerable ambition and were not unaware of some of the hazards. A great deal was achieved and we published a substantial volume of monetary data for the British economy from 1870 to 1982. This was a major archival project, the results of which were published in 1985 (Capie and Webber, *A Monetary History of the United Kingdom, 1870–1982*; and reprinted twice thereafter). Until that point there were no long-run consistent series for monetary data over this period. That provided a solid statistical basis for future work by ourselves and others.

However, more serious problems than originally anticipated arose when it came to writing an analytical account of British monetary experience. With an open economy such as Britain's was over the entire period, these difficulties were not readily resolved. The US on the other hand was not nearly as open in the international trade sense and could be approximated as a closed economy for the period covered by Friedman and Schwartz, as indeed Friedman and Schwartz did treat it. The treatment of the American economy as closed is important, and in part accounts for the fact that American macro-economic models of the economy for a long time have entirely left aside external aspects. Given the dominance of American economics it is not surprising that the rest of the world tends to import and employ these models without adaptation, and often with unhelpful results. The difficulty arose particularly with extensions of the Phillips Curve analysis.

Treating that relationship as a 'menu of policy choice' (Samuelson and Solow, 1960) had led to unsatisfactory outcomes in many countries. Inflation tended to fluctuate, sometimes significantly, about a rising trend as policy lurched from the unemployment to the inflation objective. But despite the original specification of the curve not being consistent with how it was often used, it took some years, and the arguments of Friedman (1968) and Phelps (1968) to teach that the approach was not just unworkable in practice but theoretically ill thought out. Attention then shifted to the 'inflation-augmented

Phillips Curve', in recognition that people were really concerned with real rather than nominal earnings and labour costs. In practical terms, this tended to be interpreted as monetary policy's being guided by the output gap, subject to attention being paid to measures of inflation expectations. In the years 2010 and 2011 in the UK, for example, the minutes of the Bank of England's Monetary Policy Committee consistently display claims that inflation would fall back to target because there was substantial spare capacity in the economy, and inflation expectations and wage awards were not rising with inflation. There was none of what was termed by some 'domestically generated inflation'.

There are two types of difficulty with this approach. The first, which we do not discuss in detail at this point, is that it is inconsistent with the reasons for central bank independence. The primary purpose of that was not to take policy away from the politicians who had manipulated it to electoral advantage—there is little evidence of such systematic behaviour—but rather to give it a clear and long-term focus, to have it unbuffeted by current events and focused consistently on stability in the longer term.

The second type of criticism is that the approach described above is unhelpful for an open economy. Britain has something of the order of 30 per cent of national income engaged in foreign trade. British wages, therefore, are substantially affected by wage costs overseas. The claim that because wage awards are moderate there are no inflation dangers fails to recognize that. Similarly, inferring from below-inflation wage settlements that there are no significant long-term inflation expectations is simply unjustifiable in an economy as open as the UK—and even in the US now, with its expanding foreign trade share of GNP, is much more dubious than it used to be. And finally, what is the 'output gap'? In principle it is the gap between the economy's supply potential and aggregate demand. All acknowledge that to be hard to measure. But even more important, is it a meaningful concept? Do we in the UK talk of the 'supply potential' of a particular geographical area? Where are the estimates of the 'supply potential' of Milton Keynes? They do not exist, and for the excellent reason that Milton Keynes has as its source of potential supply the rest of the UK. And in turn, the UK has as its source of potential supply the entire world. In other words, the output gap is in principle a meaningless concept for any economy that is open to the rest of the world; and for an economy as open as the UK that principle is of practical importance.

Recognizing the fundamental difference between open and closed economies did as we have remarked make writing a complete monetary history distinctly intractable. Nevertheless, we did produce a substantial amount of work on many aspects of the monetary economy across the whole period. These mark many of the key points in the story. The papers presented in this volume were written over a long time period. But motivation remained the same throughout and we believe that the results have held and have a chance

of continuing to do so. Further, we believe that, while a more complete account still has to be written, a consistent story can be told and that the papers that follow here point the way to such a story.

We have divided the papers into three groups, and presented them in chronological order as all good history should. The first part covers the period of the classical gold standard from 1870 until the First World War and focuses on the key issues of that time. The second part deals with the troublesome inter-war years, when there was a breakdown in the international economy, and it goes further, into the War and immediate post-war years. And part three brings together papers on some post-war international questions. It also adds a new paper and some conjectures on the outlook for central banking given what has happened more recently and drawing on historical experience.

#### PART 1: THE YEARS 1870–1914/39

For a long time the common perception of this period was that it marked the beginning of British economic decline and that the ‘great depression’ and deflation dominated the period. It is perhaps easy to see how this view emerged but it has long been recognized as a distorted picture. Several features are related and quite often one was used to support another without there being a sound reason. Economic growth was slowing from what it had been. There was a long period when prices were falling (1873–96) albeit at a very low rate. Neither of these features is difficult to explain but the scale is in need of revision before the explanation is given.

At the same time it should also be remembered that this was a period of great stability with macro-economic stability resting on monetary stability, which in turn was supported by financial stability. The banking system had evolved in the course of the nineteenth century to the point where banks had learned prudence, worked out what the shape of their balance sheets should be, and carried the appropriate liquidity and capital to guard against financial uncertainty. This was also a time before there was any suggestion of a cartel being in operation in banking. The Bank of England had also learned how to behave as a lender of last resort to provide liquidity in times of unexpected need. Although the gold standard was in place it had become accepted that temporary suspension would be required in times of crisis as had happened on several occasions before 1870. That recognition was in part responsible for the lack of need to suspend. It was also a lightly regulated world. All these elements contributed to the remarkable stability that prevailed across this period and indeed lasted until well after the Second World War.

Nevertheless, it is not surprising to find that come the latter part of the nineteenth century Britain was doing less well in terms of output growth than

it had been doing. With the American Civil War and the Franco-Prussian War behind them, more and more countries were industrializing at faster rates and provided considerable competition for Britain, where no doubt a certain complacency had crept in. This is to put it at its simplest. There are many explanations offered for the comparative slowdown in British performance that is sometimes called decline, ranging over everything from the class system through the education system, the price paid for being the first to industrialize, the costs of Empire, the overly conservative banking system, and so on. This was certainly a period of clearly failing agricultural performance and gently falling prices, most clearly in the years 1873–96. All this added up for some to the conclusion that the country was in decline and in the grip of a great depression. However, agriculture was suffering from intense foreign competition as transport costs tumbled and grain flowed in from around the world. Agricultural interests, particularly the grain-growing part, were disproportionately represented in Parliament, and the parliamentary inquiry into the observed distress arrived at the gloomiest of views. But it was agriculture rather than the wider economy that was in decline.

Economic performance generally was less bad than was implied. The most recent views depending on the work of Matthews, Feinstein, and Oddling-Smee (1982), and of Greasley (1986), and Crafts (1991), and others show that average annual growth rates fell from a high in the middle of the nineteenth century of around 2.5 per cent to a low point of around 1 per cent, but that was not reached until the first decade of the twentieth century.

One of the reasons for the gloomy perspective was the fact that prices were falling. The theories of the business or trade cycle that were prevalent at that time suggested that all series moved together. In the upswing when things were good prices, employment, incomes, and so forth were all moving up. While in the downswing prices were falling along with employment and incomes. So falling prices went with depression. It is clear that the general price index—not that there was one available at the time—was falling from 1873 to 1896. (This incidentally was true for many countries.) But prices were falling at a very gentle rate, something less than 1 per cent per annum. That must have been barely perceptible to contemporaries. After a period of years it would have become clearer but it was a very gentle decline. It is possibly the only occasion in recent British history—say after 1790—that qualifies as a period of deflation, though the 1920s might on some measures. (Occasional years of falling prices are not deflation.) The principal cause of the fall was the worldwide adoption of the gold standard. As more and more countries were building gold stocks to participate in the system, that put pressure on gold supply and hence on base money, and that squeezed money growth. Interestingly, for Britain, money growth over these falling-price years was about 1 per cent below output growth. After the gold discoveries of the mid 1890s gold was sufficiently plentiful and British money growth picked up again and grew at

around 1 per cent more than output growth and there were rising prices of close to 1 per cent per annum.

But how serious for the economy was the experience of deflation? Our papers on the subject examined the theories of Maynard Keynes (1930) and Irving Fisher (1933). For Keynes's theory the key is to see whether there is any evidence that price change was expected; while for Fisher it was to see whether unexpected price change produced problems through some specified channels. Our conclusions were that deflation transmitted no adverse effects to the real economy through the channels suggested by these models. This evidence is supported by the behaviour of bond rate spreads. So the period of falling prices does not appear to have brought the calamitous effects that are sometimes thought of as inevitable consequences.

More generally, our investigation of the effects of money in the economy was guided by basic monetary theory. That tells us that, under the gold standard, determination of the quantity of money lies outside the control of the authorities, although that must be modified for a large or dominant economy in the system, such as Britain was. But there is still interest in examining the relationship between broad money and the monetary base. In this system money should move after a change in income. If the authorities did expand the money supply and lowered short-term interest rates then, in the absence of exchange-rate risk, money would flow abroad in search of higher interest rates, and the monetary expansion would be negated. Against that, if real incomes grew the demand for money would increase and there would be an inflow of money. And yet money moving after income does not mean that money is unimportant for movements in income. We examine these questions in several papers.

As far as the demand for money goes our findings were that the demand for money was stable in this period, with the income elasticity very close to unity and the price elasticity also close to unity.

Our interest in economic fluctuations was guided in the first instance by the traditional theory of the impact of monetary fluctuations on a range of variables. The fluctuations would eventually dissipate themselves in price movements. One puzzling result of this investigation was a positive effect of money growth on interest rates. Money growth should ultimately leave interest rates unchanged unless it is overly rapid and produces expectations of inflation. But there was also clear confirmation of the Gibson Paradox, the relationship between the level of prices and that of interest rates. We provide an explanation in our paper written jointly with Professor Terry Mills, 'Money, Interest Rates, and the Great Depression: Britain from 1870 to 1913' (Chapter 2 of this collection.)

Although there was remarkable stability in this period there is still much of interest for investigation. But we have provided a sounder base for the conclusions that have been reached by different means.

## PART 2: INTER-WAR/WAR AND IMMEDIATELY AFTER

The world of stability and comparative prosperity for the world at large that had prevailed for forty years or so before the war came to an abrupt end in 1914. For the course of the war and the immediate post-war years of adjustment there was a huge disruption to international trade and finance. Trading patterns were of course immediately affected. That then had a serious impact on domestic production which apart from the switch to production of materials for the war had also to cater for the loss of imports. In the British case, for example, this meant a major switch from pastoral to arable farming. With meat imports severely reduced substitution had to take place.

There was an immediate problem for the financial markets when war broke out. A failure of remittance from continental Europe produced conditions much like those of a typical financial crisis and that led to a large injection of liquidity. That together with the continuous need for more resources led to further monetary expansion, and that in turn produced inflation that eventually reached 20 per cent per annum. Different countries suffered to differing degrees and the consequences for exchange rates further complicated international exchange.

In addition to monetary expansion most countries borrowed on a huge scale from whatever sources were available. The repayment of these debts plus the reparation payments imposed by the victors on the losers produced another set of problems for the world economy for the next ten and even twenty years.

### Exchange rate

The first obvious problem on the international front after the war was how to restore stability, and attention focused quickly on international trade and the exchange rate. Britain had been at the centre of the international gold standard before the war and so most of the attention centred on what Britain was going to do about restoring the system. Difficulties were increased because not only were price levels greatly out of kilter but they had risen so much that the available supply of gold was insufficient to support the value of prevailing incomes.

As far as Britain was concerned the ambition quickly became the desire to return to the gold standard at the pre-war parity (of \$4.86). That entailed a certain amount of deflationary pressure and the support of the United States who were keen to see a restoration of the pre-war arrangements. The shortage of gold was overcome by allowing countries to hold foreign exchange in

addition to gold in their reserves in the new system, hence the new name 'gold exchange standard'.

Argument continues about whether or not this was the correct approach to the problems of the time. For example, should another rate have been chosen? Or might something entirely different have been constructed? But there was almost unanimous agreement at the time that it was the appropriate course. Britain then led the way, but it was impossible to know what other countries would do and at what rate they would return to the standard. As it happened the French, the most important economy and holder of gold after the US and Britain, went back at a rate that placed them at an advantage to the others. The Soviet Union had been born in these troubled years, hyperinflation was raging in much of Central and Eastern Europe, debt repayment was being argued about and German reparation payments were a source of continuing difficulty. These all combined to frustrate attempts at international agreement.

For Britain, then, the 1920s were dominated by the question of the exchange rate. For the first five years efforts were concentrated on getting the price level in line with the US. This was more or less achieved and the standard was restored in its new form in April 1925. In the following few years the efforts were aimed at keeping to the restored rate. Although there were these deflationary pressures British growth in these years was surprisingly good—something in excess of 2 per cent per annum and the best that had been achieved for more than forty years.

### Financial crisis

At the end of the 1920s and beginning of the 1930s there was the biggest ever collapse of the world economy in the Great Depression. The worst of that was in the United States and parts of continental Europe. But interestingly, Britain remained remarkably unscathed. There was certainly a recession. Output fell by around 5 per cent across the period 1929–32. Unemployment rose sharply but that is better explained by real wages (see Beenstock, Capie, and Griffiths, 1984). But while there were financial crises around the world there was none in Britain.

We use Schwartz's (1986) definition of a financial crisis as something that threatens the payments system. There was no sign of that in Britain. There were none of the common conditions for a crisis. There was no monetary expansion, no easy credit, no surge in asset prices, and none of the euphoria that commonly accompanies the build-up to a crisis. The banking system was entirely sound. There was barely a threat to the level of profits of the banks through these years. There were problems for the merchant banks which were directly exposed to the crises in continental Europe. But these did not seriously impinge on the commercial banking system and, to the extent that they did,

were easily contained. Solutions were found in the German standstill agreements and other means.<sup>1</sup>

We argue that what happened in 1931 is better understood as an exchange-rate crisis. That certainly can be seen in big part as an immediate consequence of the continental European crises. But it should be stressed that in the world of the time it was no longer possible to hold to the parity of pre-war days. The system had come to the end of its useful life. As we argue in our paper on 1931, it was not simply a question of overvaluation of the pound. The system was abandoned as a consequence of its internal inconsistencies.

### Debt conversion

Apart from the problems of international debt Britain's domestic debt was a burden carried across the inter-war years. Where the debt ratio had fallen to a low of 27 per cent immediately before the First World War, after the war it was 200 per cent. With interest rates of roughly 5 per cent, that came to annual debt-servicing payments of £400m. Anything that could be done to ease that burden was desirable.

Attention fell on War Loan 1917. That carried a coupon rate of 5 per cent. It had been issued in 1917 and had a final redemption date of 1947. The scale of the issue was staggering: £2,553m had been issued, and this one stock was equal to roughly half of GDP. By the beginning of 1932 there was still £2,100m outstanding and at that stage equal in value to around 30 per cent of GDP. The ambition then was to carry out a conversion into a stock with a 3.5 per cent coupon with a redemption date of '1952 or after'.

It was a complicated exercise. All manner of enticements and penalties were employed alongside a major propaganda exercise. And the conversion was generally felt to have been a big success in terms of replacing the existing stock with the new stock without damage to the markets or producing monetary expansion. So one immediate objective was achieved, that of reducing the current debt-servicing burden.

But a bigger ambition was to reduce the whole structure of interest rates and whether that was achieved is more difficult to establish. According to some it did. For example, Kaldor said just that: it 'brought down the whole structure of long-term interest rates . . . which led to the fastest rate of economic growth in British history' (Kaldor, 1982, p. 1) Among other things our paper sets out to test that. The short rate is more easily explained by what was happening to sterling. That rate was rising with the pressure on sterling in 1930/31 and it eased after the break with gold in 1932. As for the long rate as captured in the

<sup>1</sup> Arguments are being put that link the difficulties of the merchant banks to financial stability. (See for example Accominotti, 2011.)



consol yield the conversion lengthened the maturity of the debt, and so long rates would be expected to rise relative to short rates. That is what happened. But there was some drop in the yield that coincided with the conversion. A possible explanation for that is that the reduction of debt-servicing costs produced an immediate expectation of reduced taxes. So the successful operation could have produced the observed fall in the yield at the time of the conversion. But there is no evidence of a dramatic fall in the consol yield brought about by the conversion, and it was not that that brought about the era of 'cheap money'.

Leaving the gold standard allowed interest rates to fall and monetary expansion to follow, and paved the way for the economic expansion that took place across the rest of the 1930s. Prices rose gently from 1932 to 1939 and output grew rapidly at around 4 per cent per annum.

### Price controls

On the outbreak of war in September 1939 there were fears of inflation (partly from the memory of the First World War), but also because in war resources are used by government on a scale much greater than peacetime. And there is a quickening in the pace of resource mobilization. Governments have almost invariably resorted to controls to enable them to carry this out. The fears of inflation were soon realized as prices rose sharply in the first eighteen months of the war. Government aimed to win the war with as little inflation as possible, and in the budget of 1941 it was forecast that prices would be held at their then current level for the duration of the war. The available price indexes suggest that this was achieved. How was it done?

Fiscal policy was implemented for the first time in a Keynesian fashion. An estimate of the inflationary gap was made and taxes altered to close as much of the gap as possible. Borrowing made up another tranche. There was, nevertheless, monetary growth in excess of 'normal' times. We estimate the extent of that and its impact on the price level and then show that the other measures taken must be responsible for the success in holding prices fairly steady across the following four years. These measures were rationing and subsidies and price controls.

Containing inflation was a major objective of policy and must be considered a considerable success. Increased taxes and bond finance contributed to the success and reduced the need to print money. Subsidies simply altered relative prices. Price controls played a significant part, supported by rationing; indeed, we argue that rationing was crucial to the success. And there was more than patriotism involved—there were severe penalties for violation of the controls. We accept that it is impossible to allow properly for the quality changes that undoubtedly took place.

However, it remains to ask if prices then return to where they would have been in the absence of the controls. That is more difficult to answer, but the indications are that they do. The controls work in the sense that they keep the lid on prices for the duration of the war and inflation then has to be coped with in the calmer times of peace.

### PART 3: POST-WWII, THE INTERNATIONAL DIMENSION, AND THE FUTURE

Will money as we currently know it, fiat money, survive, or will it be displaced by electronic barter? The first paper in this section addresses that question from a transactions costs perspective, the argument that money evolved to reduce the costs of transacting via barter. The approach is a very traditional one, and follows on the work of many scholars, most recently Karl Brunner and Alan Meltzer. (See particularly Meltzer (1998) for an overview of their work and its predecessors.) In the first chapter of this section after setting out that approach we develop a formal model which, utilizing transactions costs arguments leads to the conclusion that money will survive, and thus to the further conclusion that central banking in a form we would recognize today has a future.

But central banks have evolved over the years. This is particularly emphasized in the final paper in this section, which traces the evolution of the objective of central banks from their early origins, reaching the conclusion that the ultimate objective has always been, in the current terminology, the preservation of monetary and financial stability. Vital to that evolution, though, particularly in Britain but in fact worldwide, has been the changing international dimension. Two issues particularly bearing on this have been European Monetary Union, and the development of the International Monetary Fund into a body which some have claimed serves, or in weaker versions of the claim can serve, as a central bank for the world.

#### **Monetary unions**

In our work on European Monetary Union we have consistently maintained that there are important lessons from past monetary unions, and that these lessons have been neglected in most discussions of the subject. Reviewing analytical work on EMU leads inescapably to the conclusion that the literature cannot guide one to any conclusion on whether EMU is an optimal currency area or even a feasible currency area. Rather one can consider whether EMU

satisfies the conditions under which previous unions have survived. As numerous previous authors have shown, these conditions are quite demanding: for example, Balassa observed (1973) ‘reserve flows<sup>2</sup> are not solely responsible for the equilibrium of regional balances of payments and that short-term as well as long-term capital movements, income changes, government transfers as well as labour migration all contribute to it.’

Our examination of previous monetary unions in the nineteenth and the twentieth centuries fully supports this conclusion; it showed that institutional change well beyond the simple establishment of a union was necessary for it to survive. In particular, there needed to be the political cohesion that would allow all the factors Balassa listed to be acceptable. Most notably, there was need of labour mobility and of fiscal transfers in response to regional difficulties, and these needed to be arranged by a permanent and generally accepted institution and mechanism, not produced on an ad hoc emergency basis.

### **An international lender of last resort?**

As has, regrettably, often been the case in recent years, discussion of the institutions of the international monetary order has taken place entirely ahistorically. There has been no consideration of the conditions under which these institutions were designed and established, or of the problems they were designed to address.

The IMF grew out of the years of dirty floating, trade barriers, and competitive devaluations of the 1930s. But the main protagonists in its design were the United States and the United Kingdom, and that was undoubtedly reflected in its design. The US was concerned mainly to stabilize exchange rates, while the UK’s goals were both to safeguard its balance of payments position if the inter-war system of imperial preference were abandoned, and to restore sterling’s international position. This led to two proposals, the White plan and the Keynes plan. The latter seemed to seek to deal with all possible international financial problems including postwar reconstruction and development finance. The White plan focused on exchange stabilization, and the fund to achieve that would not have the new international currency Keynes envisaged, but have as its reserves existing national currencies and gold. The plan adopted was much closer to that of White than that of Keynes, in particular involving little interference with domestic policies. The IMF was the institution designed to run the system, and the main obligation of IMF members was to allow free current account convertibility. Restrictions on the capital account were allowed. Many, notably Ronald McKinnon (e.g. 1979),

<sup>2</sup> These he mentioned because of the stress laid on them in a prior paper by Mundell (1973).

have argued that the system never really functioned as intended. But be that as it may, it is clear that the IMF was primarily designed to deal with exchange rate stabilization in a pegged exchange rate system. Its evolution from that has been considerable.

It survived into the era of floating exchange rates by reinventing itself as a ‘crisis manager’. Or so it has been claimed. But the evidence for the existence of *international* crises, analogous to domestic ones by, for example, being spread by contagion, is slight. Argentina’s 1995 problems followed those of Mexico in 1994—but the problems of Argentina were genuine, and the biggest effect Mexico may have had is to lead people to look more carefully at Argentina than they had done heretofore. And as for the spread of problems across South East Asia in the late 1990s, the problems of all countries involved were the same—imprudent bank lending combined with inflation resulting from currency pegs. In sum, the Fund’s role as crisis manager requires international crises—and these are hard to find.

And of course the IMF cannot lend as an international lender of last resort, analogous to the last resort lending of a central bank, for it cannot supply national currencies to any but a trivial extent. On the occasions when it is claimed to have done so it has, rather, simply lent to one government funds it has borrowed from others at times when no lender was willing to lend his or her own funds on as easy terms. Perhaps a supplier of risk capital of last resort, but not a lender of last resort.

In sum, while the IMF has undoubtedly evolved, its self-interested evolution has not led to its supplanting domestic central banks in their last resort role.

That role is, of course, relevant in the crisis at the end of the first decade of the twenty-first century. Or was it? In fact, a remarkable feature of that episode was that there was little consideration of whether appropriate lender of last resort action would have prevented panic turning to crisis, or, at the least, diminished the consequences of the crisis. Yet again, for all the talk of the lessons of history, when a problem suddenly arose the lessons seemed to be forgotten.

In the past lender of last resort action served to stabilize the system even when individual banks failed. And it was seen as important that individual banks fail, lest, to use the modern term, moral hazard should be allowed to flourish. One reason that lender of last resort was not used in the recent episode was that there was not in most countries provision for orderly closure of banks, and even in countries which had such legislation there were doubts over whether it could handle large or international banks; and it was acknowledged that nowhere could it handle investment banks.

The consequence of that neglect has been a sustained increase in moral hazard. And from that follows a clear lesson. It is essential that banks—banks of all sizes and types—be capable of being allowed to fail, and occasionally actually do so, and in an orderly way. A large grocery chain can fail without

causing economy-wide disruption. The legal framework has to be developed so that the same can be true of banks. Without that, panic responses to failures and calls upon taxpayers will be an inevitable feature of our future.

### Independence and inflation

Towards the end of the period we had sought to cover, the Bank of England, as part of a worldwide trend, was granted 'independence'. That term was generally left undefined, but as with the Reserve Bank of New Zealand, which the new-model Bank of England closely resembled, the independence took the form discussed in a curiously neglected study by Milton Friedman. In that 1962 paper, which ultimately concluded by arguing that a monetary rule was the best approach to conducting monetary policy, he carefully discussed the meaning of the term 'independence'. He suggested that it could usefully be interpreted as similar to the independence of the judiciary—being free to carry out laws passed by the government, and free of interference from the government, until the law was changed (if it was).

There have been various studies which claimed to show that lack of independence on the part of central banks was the root cause of the endemic inflation of the post-Second World War years (e.g. Barro and Gordon, 1983).

It is far from clear that the deliberate manipulation of monetary policy for electoral advantage described in that analysis was behind most inflations, but, be that as it may, there was a large amount of work which, almost regardless of country and of how independence was measured, claimed to demonstrate that independence was favourably associated with low inflation. But a problem with this result was that every study drew on a good part of the same rather short period—the years of exchange rate flexibility after about 1973. That was understandable in that only with floating exchange rates can most countries have monetary independence, but it did open up the possibility that the result was a chance feature of a particular period.

Accordingly we examined a rather longer period, on the grounds that it was important to distinguish the form of monetary regimes from the substance, and that many regimes—even the gold standard—were not as constricting as a literal interpretation of the rules suggested. We also used as determinants of independence a variety of criteria.

The results were not completely straightforward. Some countries achieved persistent low inflation despite the status of their central bank; changes in that status were entirely unconnected with the central bank's inflation performance. And some countries had rather different inflationary performance despite having identical central bank constitutions. Nevertheless, our longer run study was undoubtedly in general terms supportive of the relationship's existing. Independence did seem to help.

Of course, independence meant that the central bank needed an objective—what it became fashionable to call a mandate. In the final essay of this section, one written for this collection, we argue first that mandate is not the best term, and second and more important, the objectives of central banks have been unchanging since their inception, albeit described in different terms at different times.

Notable in the discussions of independence was the neglect of one of the central bank's key responsibilities—the maintenance of the stability of the banking system, what is called in current terminology financial stability; that being the counterpart to monetary stability. There was no such neglect in the earlier discussions and periods we consider. Rather there was continuity, with objectives unchanging, albeit sometimes described in different terms. How might this dual objective be better obtained in the future than it has in recent years?

One of the remarkable aspects of the recent crisis was the revelation that monetary economists were inclined to downplay, if not actually ignore, the part that the financial system played in the economy: 'the 2007–09 financial crisis made it clear that the adverse effects of financial disruption on economic activity could be far worse than originally anticipated for advanced economies' (Mishkin, 2010, p. 83). Financial frictions should be front and centre in macroeconomic analysis; they could no longer be ignored in macroeconomic models that central banks used for forecasting and policy analysis' (ibid.). Mishkin goes on to say that before the crisis the view amongst most economists in academia and in central banks was that price and output stability promoted financial stability. Familiarity with the nineteenth-century gold standard would have raised their eyebrows at that. It seems that a lesson learned from the financial crisis is that monetary policy and financial stability policy are intrinsically linked; some better grasp of history would have served policymakers better.

### Central banking in future

Central banks have in recent years come, not altogether successfully, through turbulent times. In the UK, inflation targeting, having at least so far as inflation control was concerned worked well in its early years, has in the years of turbulence been a failure. The Bank of England has not achieved its mandate. There are dangers here for the Bank's credibility, and thus in turn dangers of inflationary spirals and sharply rising bond yields. The stability of prices and long-term interest rates which contributed so much to the nineteenth century's prosperity seems far away. But what to do about it? One reason behind the failure obvious to outsiders is the failure of the Bank's inflation forecasting. While we explain above one reason that we think lay

behind that failure, we do not claim remedy is easy. In view of that, it would surely make sense for the Bank, and any central bank in similar difficulties, to target, not the inflation forecast, but rather actual inflation, responding to deviations from the desired rate in a damped manner, an approach akin to that of the Taylor (1993) (or the less well-known McCallum (1988)) rule, but focusing on inflation not on an amalgam of that and real growth.

As for financial stability, when there is, as there is now, an opportunity to clean the slate and begin again, we believe that the following principles, or perhaps we had better call them guidelines based on historical experience, should be adopted. Failure must be possible. Regulation should be light and characterized by simplicity and clarity. Transparency must be full. The payments system must be protected. Competition should be encouraged. In other words, the framework must be clear and uncertainty reduced as far as possible. The latter must be aided by credibility—conviction by the participants that the rules will be followed.

The payments system should be protected. Competition within the payments system should be encouraged. The failure of any one institution should not matter greatly for the system. The rest of the financial system can be left to do what it chooses with the proviso that suitable closure procedures are available. The Bank of England should behave as lender of last resort within the payments system. There is no moral hazard involved in that. Banks within the payments system can and should fail if they do not have the liquid assets appropriate to the occasion.

For the system, but particularly the non-payments sector, there should be light regulation and full transparency. Light, clear, and simple regulatory rules aid the process of market discipline. Transparency means that balance sheets need to be understood by directors, auditors, shareholders, and other interested parties.

## CONCLUSION

This introductory chapter has sought to summarize and draw together the large body of work in this collection, a body of work itself a sample of a larger body.

A further summary is therefore unnecessary. What we would say in conclusion is that we think we have learned a great deal from the study of history. We think all economists would learn from such study, and we hope that our efforts will both help and encourage them to do so.

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