

David Kynaston's *Till Time's Last Sand*:
A History of the Bank of England, 1694-2013.

A review essay

by

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Abstract

This essay reviews *Till Time's Last Sand*, David Kynaston's history of the Bank of England from its foundation in 1694 to the present day. I focus on three themes running through his narrative. First, for much of that time the Bank was a private company playing a public role; how did it manage to do this and why was it eventually brought into public ownership? Second, I examine the various attempts to constrain the Bank's monetary policy to follow a simple rule; these almost invariably proved unsustainable unless the rule provided enough room for discretion. Finally, I cover the Bank's journey to becoming the lender of last resort, together with its evolving attitude to the associated risk of moral hazard.

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1. Introduction

The Bank of England (henceforth just “the Bank”) is not the oldest central bank – that honour belongs to the Swedish Riksbank – but until the Great War it was certainly the most important, sitting at the heart of the international financial system. And even if the US Federal Reserve and the European Central Bank are more significant institutions today, there is still much to learn about central banking from the Bank’s rich past.

There have already been several official histories of the Bank¹ but those studies focussed on particular periods and were written for the specialist reader. David Kynaston’s study originates in former Governor Mervyn King’s desire to see an up-to-date single-volume history that was accessible to a general reader. Given that objective, it is no surprise he commissioned Kynaston, the author of a widely admired four-volume history of the City of London (Kynaston, 1995; 1996; 2000; 2002), to write it. Kynaston was able to draw not only on the work of those earlier historians of the Bank and public records and official papers, but also (excepting the past twenty years) the Bank’s own extensive archives. For more recent events, Kynaston was also able to conduct interviews with many of the participants themselves.

In accordance with King’s remit, the book is certainly pretty comprehensive, running from the Bank’s foundation in 1694 right through to the arrival of Mark Carney as Governor. Along the way, all the important events and people are described, as well as numerous more frivolous, though diverting, episodes. It also includes a great deal of material describing what it was like to work inside the Bank in different epochs.

The book itself is divided into four unequal parts, with one chapter in each part devoted to painting a picture of life inside the Bank. Part 1 covers the period from the Bank’s foundation in 1694 until the conclusion of the Napoleonic wars. Created initially to help meet the government’s financing needs, the Bank steadily grew in importance over the following century, so that by the end it had become, in Adam’s Smith phrase, “a great engine of state”. Early on, the South Sea Company unsuccessfully tried to muscle in on the Bank’s profitable monopoly of managing the government’s finances, leading to one of the earliest financial crises. This period also saw the issuance of the Bank’s first notes; the suspension from 1797 (until 1821) of the convertibility of those notes into gold² was associated with the issuance of small denomination notes resulting in an explosion in forgeries (a capital crime), as well as the first debates about the dangers (or otherwise) of fiat money. Last but not least, this part also covers the development of the Bank’s own building, a landmark in its own right³.

¹ Clapham (1944), covering the Bank’s foundation until the Great War; Sayers (1976), who took the story up to end of the Second World War; Fforde (1992), documenting a period either side of the 1946 nationalisation; and Capie (2010), covering the 1950s, 60s and 70s.

² It was this episode that led to the Bank acquiring its nickname ‘The Old Lady of Threadneedle Street’ after a cartoon by James Gillray showed Prime Minister William Pitt ravishing an old lady dressed in bank notes and sitting on a chest containing the Bank’s gold.

³ Widely seen as Sir John Soane’s crowning masterpiece, its demolition in the 1920s was described by Nikolaus Pevsner as “the greatest architectural crime, in the City of London, of the twentieth century”.

Part 2 covers the period from the battle of Waterloo up to the opening of hostilities with Germany a hundred years later. This period began with the resumption of the convertibility of notes into gold. As a result of the Bank Charter Act of 1844, the Bank was subsequently to acquire a monopoly of the note issue but also found itself subject to limits on the value of the notes it could issue. This was also an era of recurrent banking crises, culminating in the 1866 crisis precipitated by the collapse of Overend Gurney. This episode finally saw the Bank acknowledge its role as a lender of last resort, so becoming a central bank in the modern sense.

The first two parts, covering some 220 years, occupy just a third of the book's nearly 800 pages (excluding endnotes and references). The pace becomes more leisurely as we move into the twentieth century.

Part 3 covers the period bounded by the two world wars. This was, of course, a period of great turmoil, not only for the international economy but also for the Bank under its longest-serving Governor, Montagu Norman. The Bank's efforts to re-establish the convertibility of sterling into gold at its pre-war parity are covered at length. That was finally achieved in 1925, but only at considerable cost to the domestic economy. And it was then abandoned for good only six years later as the Great Depression took hold. During this period, the Bank clashed repeatedly with the Treasury and its advisers, including one Maynard Keynes. The Bank's repeated tendency to be on the wrong side of the argument, as well as Norman's own imperious manner, led to increasing pressure for the Bank's nationalisation. Norman's efforts to build an international network of central bankers, including his relationship with Benjamin Strong of the Federal Reserve Bank of New York, are also covered⁴.

Over a third of the book is taken up by Part 4, running from nationalisation in 1946, which relegated the Bank to a subservient role, to the granting of operational independence in monetary policy in 1997. We see the authorities groping towards a better understanding of the proper role of monetary policy, moving from the 1959 Radcliffe Report which downplayed the significance of monetary control, through Competition and Credit Control (1971-73), to the 1980s by which time monetary policy was seen as the primary tool for managing demand. The 1970s and 1980s were also marked by the ceaseless search for an effective nominal anchor, moving through monetary targets, an exchange rate peg, and ultimately settling on inflation targets in 1992. On the financial stability front, there was also plenty happening: the 1974 secondary banking crisis; the 1979 collapse of Johnson Matthey Bankers; and the closure in 1991 of the fraudulent Bank of Credit and Commerce International. None of these episodes did much to enhance the Bank's reputation as a bank supervisor. The changing relationship with the City is also documented, as is the Bank's evolution into a more analytical and professional institution.

Finally, there is a 70-page Postscript that brings the story up to present, incorporating the Bank's role in the 2007-8 financial crisis, both on the monetary and the financial stability fronts.

⁴ This period has been the subject of several other excellent studies, notably by Ahamed (2009) and Eichengreen (1995).

The book is meticulously researched and elegantly written. The personalities of the main protagonists are sketched deftly, while liberal quotations from primary sources bring the story alive by allowing the actors to speak for themselves. As well as recounting all the big events, Kynaston also finds space for a wealth of diverting episodes and anecdotes. For instance, we hear about the unfortunate demise of the first Deputy Governor, Michael Godfrey, who lost his head to a stray cannon ball while on a trip to visit the King at the siege of Namur⁵. And we learn of the encounter between Kenneth Graham, the Bank's Secretary and author of *The Wind in the Willows*, and an armed lunatic who had gained access to the Bank's inner sanctum. There are many more examples in this vein.

The book is less successful in some other respects. Despite running to nearly 800 pages, the discussion of many events often feels compressed. That is especially true for the first third of the book, spanning the period from the Bank's foundation to the eve of the Great War, which covers a lot of ground pretty swiftly. The *dramatis personae* is also long, many of whom wander onto the stage for a page or two and then disappear, never to be seen again. Consequently the reader easily loses the narrative thread. Fortunately, this is less of an issue for the later parts of the book, where the exposition is fuller. To some extent the problem lies not with the author, but with the original commission: there is just too much territory to be covered.

Kynaston also assumes rather a lot on the reader's part and some knowledge of London's financial markets past and present is desirable. For instance, non-specialist readers will probably have little idea what a bill of exchange is and the purpose of discount houses, yet these were central to the functioning of Victorian financial markets. A fuller explanation of these and similar terms would have been beneficial. By the same token, some familiarity with the wider historical and political context is advantageous. Again, this is less of an issue with the later parts of the book, which covers times that will be more familiar to readers.

Finally this is a history – sometimes veering into social history – written by a professional historian. It is not – and was not intended to be – an *economic* history, still less an *economist's* history. It is very strong on the recording of events, personalities and details. It is less focussed on bringing out the enduring themes and concepts that may be of most interest to a professional economist. Moreover, despite Kynaston and King agreeing that the author should retain complete independence of judgement, Kynaston often seems reluctant to exercise it. Consequently, the reader is often left to join up the dots and to draw their own conclusions. From time to time I would have welcomed the expression of a stronger authorial view.

In the remainder of this essay, I shall expand on three particular themes that run through Kynaston's narrative and which also have resonances today. These are: the tensions associated with being both a private company and a public institution; the difficulty of running monetary policy according to a rule; and the emergence of the Bank as a lender of last resort.

⁵ The volume's unusual title – *Till Time's Last Sand* – comes from an elegy to Godfrey by Elkanah Settle.

This is, of course, only a small selection of issues but they are, I think, ones that may interest readers of this journal.

2. *Private or Public Institution?*

One consequence of the 1688 revolution, which saw the Catholic James II replaced by the Protestant Dutchman William of Orange, was to drag England into war with France. The government urgently needed to re-build the navy but initially struggled to raise the funds. The creation of a Bank of England was proposed as a solution to this problem⁶. In return for providing a loan of £1.2 million at 8 per cent interest, subscribers were also given the right to run a limited-liability joint-stock bank, able not only to accept deposits and issue notes but also to make loans and trade bills of exchange. This offer was so attractive that the loan was fully subscribed in just 12 days.

At the outset the Bank was thus a private company, constituted by royal charter⁷ and run by a 'Court' of directors who represented the shareholders' interests. One of the directors was then chosen to act as Governor, serving just a two-year term. According to that original charter, the Bank was intended to "promote the public Good and Benefit of our People"; although a private company, the Bank also had a public purpose.

Till Time's Last Sand documents the growing importance of the Bank over the following two centuries as a central plank of the British state, to begin with as manager of the public debt and banker to the government, then as custodian of the currency, and finally as overseer of the City and protector of financial stability. By the end of the Victorian era, the Bank occupied a position of immense influence not just on the citizens of the United Kingdom but also in the Empire and beyond. Yet until the end of the Second World War when it was nationalised, the Bank remained a private company. How did the Bank for so long remain a private company, operating in the interests of its shareholders, yet also a public institution, serving the interests of the nation?

At this point, it is worth noting that this dual status was by no means unique. Over the years, other private institutions have also been central to the functioning of the British state. In Elizabethan times, England's naval prowess relied heavily on privateers licensed to plunder Spanish ships. Later, private companies were established to operate profitable foreign trade monopolies, but were expected also to advance the state's territorial interests. The most notable of these was the East India Company, which was largely responsible for establishing and administering British rule in India; the Hudson's Bay Company and the British South Africa Company were others. Ferguson (2003) provides a compelling account of the importance of such institutions in the forging of the British Empire.

⁶ The idea drew inspiration not from Sweden but rather from the success of the Bank of Amsterdam, which had proved a crucial factor in the flowering of the Dutch Republic. The Bank of Amsterdam took deposits, which could be transferred to settle debts, and issued notes. It did not, initially at least, make loans, i.e. it was a 'narrow' bank in which the deposits were fully backed by gold and silver.

⁷ Royal charters were (and still are) used to establish major independent organisations, such as cities and universities.

Perhaps the Bank's longevity as a private company lies in the modern case for central bank independence? That rests on the benefits that accrue from delegating decisions to an independent agent that does not suffer the incentive problems facing the principal. For instance, if the government is in charge of monetary policy, the short-term reward from raising output or financing government spending by printing money rather than raising taxes is likely to lead to an upward bias to inflation unless the government has a sufficiently long time horizon. However, the central bank of this literature is not a private company but a technocratic agency, at most interested in maximising prestige rather than profits.

Perhaps private and public interest rarely conflicted? Kynaston, however, records plenty of occasions when there was in fact tension between the two. Two examples are the Bank's initial reluctance to restore the convertibility of notes into gold after the end of the Napoleonic wars and its lending activities before the 1825 financial crisis, both occasions when concern for the Bank's profits seem to have weighed heavily in the directors' minds. Moreover, there appears to have been plenty of resentment regarding the healthy profits the Bank was earning on its note issue, from the provision of banking facilities to the government and its management of the public debt. Indeed, *Till Time's Last Sand* is chock full of such criticism: for instance, David Ricardo, writing to James Mill, declared "the Bank an unnecessary establishment, getting rich by those profits which fairly belong to the public". Even if it was respected, the Bank was certainly not loved.

How then did the Bank come to survive for so long as a private company? In part, the answer lies in the fact that the Bank's charter needed to be renewed periodically. That provided an important discipline on Court not to abuse the Bank's position to generate excessive profits. In addition, the renewal of the charter presented the government with the opportunity to reset the terms if they had become too favourable to the Bank.

Nevertheless, it seems that was not the whole story as the records suggest the directors also saw themselves as playing a public role as well as representing the shareholders' interests. For instance, in 1802 we find the banker, parliamentarian and early monetary theorist Henry Thornton describing the directors as men "who feel themselves to be most deeply interested not merely in the increase of the dividends or in the maintenance of the credit of the Bank of England, but in support of commercial as well as public credit in general."

If the Bank had successfully balanced private and public interest for so long, why then did the Bank eventually lose its independence in 1946? First, the Bank came to seem rather too much of an over-mighty citizen. Kynaston's narrative reveals the Bank and its Governors to have grown increasingly aloof in their behaviour. That reached its apogee under Montagu Norman, who more than anyone else was responsible for creating the mystique of the central banker as high priest, neatly encapsulated in his aphorism "never explain, never apologize".

Moreover, Governors had previously served only for short terms, usually just two years. Short terms meant that anyone thought by the government to be too difficult could not occupy the position for very long. Norman was a complete outlier in serving as Governor for almost a quarter of a century, from 1920 to 1944, coming to embody the Bank in a way that none of his predecessors or successors ever could. Kynaston reports a perceptive intervention by

Norman's predecessor, Brien Cokayne, during a discussion in 1927 of the prospective renewal of Norman's term: after endorsing the view of a fellow director that long terms would encourage the government to foist their own nominees onto the Bank, he argued that failing to return to short terms risked losing the "magnificent legacy of independence which (previous directors') prudence and altruism has secured for the Bank." This represents an interesting reversal of the usual argument that central bankers need *long* terms in order to cement their independence from government; very long terms may also invite interference.

The Bank's aloofness and Norman's long tenure as Governor might not have mattered too much if the Bank's stewardship had been good. But the Bank at that time was too often on the wrong side of the argument, most notably in its support for the restoration in 1925 of the convertibility of sterling into gold at the pre-war parity and its subsequent defence until its abandonment in 1931 as the economic depression took hold. Norman and the Bank saw the restoration of the pre-war parity as key to maintaining trust in the currency. In many ways, that was simply a continuation of the policy after previous suspensions of convertibility. But the Bank's interest rate policy now had a greater impact on the domestic economy and the Bank's willingness to create unemployment in order to meet its currency objective made it a natural target. Moreover, Norman, with his reliance on experience and intuition as the basis for the Bank's actions, faced a formidable intellectual adversary in the shape of Maynard Keynes ("Montagu Norman – always absolutely charming, always absolutely wrong").

The upshot was growing political pressure to take the Bank into government ownership. That finally happened in 1946 under the post-war Labour government⁸. Of course, that was by no means the end of the story, and in 1997 another Labour government took the decision to return operational responsibility for monetary policy to the Bank. Although the journey to that decision was, as Kynaston relates, a tortuous one, it rested essentially on the arguments identified in the modern literature on central bank independence.

Are there lessons for the future from the Bank's loss of independence in 1946? It may be tempting to think the case for central bank independence is so well established that the answer is No. But I believe that would be a mistake. Central banks have been forced to undertake a range of unusual actions in the wake of the 2007-8 financial crisis, some of which have proved controversial. Critics on Capitol Hill claim that some of the US Federal Reserve's support actions overstepped the mark. Quantitative easing has been criticised for its impact on the distribution of wealth and also for crossing the line into fiscal policy (a particular issue for the European Central Bank). Moreover, despite being implicated (at least, according to some) in causing the crisis, central banks have been acquiring more, rather than fewer, responsibilities, notably in banking supervision and macro-prudential policy.

All this adds up to a world where central banks are at risk of looking like over-mighty citizens. Moreover, while they can be held to account for achieving their monetary policy objectives (e.g. through an inflation target) without much difficulty, that is harder in the sphere of

⁸ There is an interesting parallel here with the East India Company, which was stripped of its role in running the Indian sub-continent following the 1857 Indian Rebellion, brought on in large part by the Company's deficient administration.

financial stability where the lack of an accepted observable measure of the risk of instability renders the necessity of many a prudential action open to debate. Finally, the success of populist politicians and the associated scepticism of elites renders central bankers a natural target. The high-water mark for central bank independence may well have been passed⁹.

3. Managing the currency: rules v. discretion

The Bank was founded to help finance the government. But from today's perspective it is its eventual role as the monopoly provider of the ultimate settlement asset in the economy – high-powered money – that is more interesting, as from that stems the dual responsibilities characteristic of a modern central bank: managing the currency; and maintaining financial stability. The rest of my remarks focus on particular aspects of these two responsibilities.

To begin with, however, it is helpful to recall some relevant features of late-Georgian financial markets. First, by law the Bank was the only note-issuing joint-stock bank in London, although there was a large number of small non-issuing partnership banks. Outside of the capital, there was a plethora of small country banks that could issue notes.

Second, the primary financial instrument of the day was the bill of exchange, a promise to pay a given sum at a future date (say, by a merchant to his supplier). A bill of exchange could be endorsed by the creditor and sold on – at a discount to its face value – to a third party, allowing the creditor to be paid immediately. If the original debtor (the 'acceptor' of the bill) defaulted, then the endorser became liable to pay the new bill holder. Consequently, such bills were pretty safe assets, especially if there were several reputable endorsers. Banks were natural buyers of bills and specialised financial intermediaries (bill brokers) facilitated the bill trade, often selling them in bundles rather like a modern Collateralised Debt Obligation.

From the outset, the Bank was empowered to discount bills of exchange but, because it charged a relatively high discount rate (Bank Rate¹⁰), it was a relatively marginal player in normal times. But the supply of bills to the Bank for discounting would rise during financial panics, when other potential buyers would tend to disappear from the market. Moreover, panics were a regular occurrence, including in: 1763 (Dutch bank failures); 1772 (Scottish bank failures); 1793 (war with France); 1825 (Latin American debt and country bank failures); 1836-7 (US financial crisis); 1847 (end of the railway boom); 1857 (US banks and railways); and 1866 (collapse of Overend Gurney). At such times the demand to convert the Bank's notes into gold would also tend to rise.

During the Georgian period, the Bank's 'monetary policy' was normally directed to ensuring it had sufficient gold reserves to maintain confidence in the convertibility of its note issue. Kynaston reports the Bank as aiming to keep a ratio of notes to gold of about 5:3, though there is not much discussion of the principles behind it. The debates about monetary policy become more interesting once we move into the 1797-1821 'restriction period' when

⁹ Tucker (2018) provides a fuller discussion of these issues.

¹⁰ Until 1833, Bank Rate was capped by usury laws, so during a crisis the Bank relied on rationing its loans and discounts. Thereafter, Bank Rate became an effective instrument for managing the Bank's extension of short-term credit and gold outflows.

convertibility was suspended as a result of the wars with France. This saw a substantial expansion in the use of paper money and a fierce debate regarding the dangers of uncontrolled fiat money expansion that pre-figures monetary debates of 150 years later.

On one side of the debate were the Bullionists, who argued that the removal of the discipline imposed by convertibility would create an endemic tendency to excessive note issue and thus inflation. The Bullionists included David Ricardo who, in 1809 following a sharp rise in the price of gold and other commodities, blamed the “over-issues of the Bank, to the dangerous power with which it was entrusted of diminishing at its will, the value of every moneyed man’s property”. On the other side, the Bank argued that it supplied credit only in response to legitimate commercial demands, i.e. it subscribed to the ‘real bills’ doctrine. The following year the Bullion Committee, set up by Parliament to investigate the matter, came down firmly on the side of the Bullionists, judging that the suspension of convertibility had removed a key discipline on the Bank’s note issuance and recommending the early restoration of convertibility¹¹.

As it turned out, convertibility was not restored until 1821, well after the conclusion of hostilities. Rather than a tight rule, the Victorian-era gold standard is probably better thought of as a regime of ‘constrained discretion’. Under the influence of Horsley Palmer (Governor 1830-34), the Bank adopted an early form of feedback rule (the ‘Palmer rule’), whereby it varied Bank Rate in order to maintain a ratio of liabilities (notes and deposits) to gold of around 3:1.

As Kynaston’s account makes clear, however, that rule was adhered to quite elastically – too elastically for some. In particular, the second half of the 1830s saw a financial boom-bust, which the Bank blamed on reckless lending by a wave of new joint-stock banks that had sprung up in the wake of the financial market reforms that followed the 1825 crisis. The critics, led by the banker and MP Samuel Jones-Loyd, instead attributed it to the Bank’s note issuance being driven by its banking activities and advocated complete separation of the two functions¹². That separation was duly carried through in the Bank Charter Act of 1844, which gave the Bank a monopoly on note issuance but required it to be limited to the Bank’s gold reserves plus a fiduciary issue of £14 million.

In so doing, the Act made the supply of currency less responsive to economic conditions – more rule and less discretion, in other words. But it was soon to prove *too* restrictive, as the next crisis in 1847 led to a spike in the demand for notes and gold, forcing the Bank to seek a temporary suspension of the Act. The same happened in the crises of 1857 and 1866. Inflexible rules are prone to need to be overridden from time to time.

Let me now skip forward to monetary developments in the post-war period. By this time the Bank was in public ownership, so the key decisions became the responsibility of the Treasury,

¹¹ There is a large economic literature on the Bullionist debates; Laidler (2000) provides a good summary.

¹² There is a parallel between the ‘Banking’ v ‘Currency’ controversy of the 1830s and 1840s and recent debates about the causes of the 2007-8 financial crisis, where some pin the blame on the behaviour of the banks while others attribute it to undue laxity on the part of central banks.

with the Bank acting as its not-always-trusted adviser. Against a background of post-war reconstruction, large war debts and the constraints of the Bretton Woods system of fixed but adjustable exchange rates, the focus was most often on managing the systematically weak balance of payments position (including devaluations in 1949 and 1967). Monetary policy and the level of Bank Rate did not loom especially large in economic policy discussions of the time and the Bank's role was more concerned with exercising control of the volume of credit through a mix of explicit controls and moral suasion.

Matters become more interesting as we get to the early 1970s and the end of the Bretton Woods system. A toxic mix of excessively expansionary fiscal policies (the 'Barber boom') and buoyant credit growth together with adverse supply developments in the shape of increased union militancy and rising commodity prices resulted in rising price pressures, including in the property market. As Kynaston tells it, the Bank was on the right side of the argument on this occasion, correctly diagnosing the need for a measure of monetary control if those inflationary pressures were to be contained. But the Prime Minister, Edward Heath, was adamantly against raising Bank Rate to do so, hankering instead for qualitative controls on the banks' credit expansion.

The Bank's response was the introduction of Competition and Credit Control, an attempt to manage the money supply through open market operations rather than through variations in Bank Rate, but dressed up as a policy to increase competition in the financial sector in order to appeal to the government. In practice it proved to be ineffective in restraining the growth of money and credit, with broad money rising at an annual rate in excess of 20 per cent in 1972 and 1973. In 1973, the Bank was forced to introduce additional measures, in the form of a requirement on the banks to make additional deposits at the Bank if their liabilities rose too rapidly (the 'Corset'). None of this sufficed to prevent inflation hitting 25 per cent in 1975.

The subsequent search for an effective nominal anchor dominated British monetary policy for the next twenty years. In academia, Milton Friedman's views were becoming more influential and those views were also gradually permeating into official thinking. Kynaston's account documents the Bank's internal discussions as it moved towards embracing money supply targets, albeit in a flexible rather than dogmatic way. And in 1976, Chancellor Dennis Healey was persuaded to voice his intent that the next year's "money supply growth should be about 12 per cent", though an incomes policy remained the cornerstone of their approach to keeping inflation under control.

That first somewhat tentative embrace of monetary targets was replaced by the more fundamentalist approach adopted under Margaret Thatcher. Multi-year targets for broad money (£M3) growth stood at the core of her government's strategy for squeezing inflation down. And there was no room for corporatist-style incomes policies; instead competitive markets were supposed to work their magic. The government also dallied with introducing direct control of the monetary base, though the Bank successfully dissuaded them, arguing that it would result in excessive interest rate volatility.

As it turned out, broad money growth substantially exceeded the target ranges, which Thatcher attributed to the Bank's incompetence. In fact, the rapid growth in broad money

seems to have been the result of regulatory and structural changes, including the removal of the Corset. Narrower monetary aggregates instead suggest monetary conditions were tight, a view supported by the slowing in nominal demand growth and sharply rising unemployment¹³. This misbehaviour of the targeted monetary aggregate is often held up as a canonical example of Goodhart's Law (Goodhart, 1975) that any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes¹⁴. Or, as the Governor of the Bank of Canada Gerald Bouey put it rather pithily in a similar context: "We didn't abandon monetary aggregates, they abandoned us".

What could replace a monetary aggregate as the nominal anchor? As early as 1980, the Bank began to consider the virtues of instead targeting the exchange rate by joining the European Monetary System (EMS); effectively that meant adopting an external nominal anchor provided by the Bundesbank. Nigel Lawson, then Financial Secretary and later Chancellor, soon came round to the same view, though not the all-important Thatcher. Kynaston describes the subsequent long, winding and acrimonious road to eventual membership of the Exchange Rate Mechanism (ERM) of the EMS in October 1990.

With hindsight, that timing could not have been worse: the fiscal demands of German reunification meant higher interest rates were needed in what was, in effect, the anchor currency and the political dynamic towards monetary union ruled out any general realignment of parities. The result was excessively contractionary monetary policy in the other members, especially in the UK where output growth had already stalled. Continued membership eventually became incredible, leading to intense speculation against sterling. In September 1992, the UK had little alternative but to quit the system, enabling sterling to adjust and interest rates to be cut sharply and ushering in a long period of steady expansion that was to last until the 2007-8 financial crisis. Once again an insufficiently inflexible rule had proved unsustainable.

Although ultimately economically beneficial, Britain's forced exit from the ERM was highly damaging to the reputation of the authorities. "Trust us" – that is, pure discretion – was not a viable strategy in the wake of the ERM debacle, so an alternative and credible nominal anchor was needed and quickly. The decision to focus on the final objective of monetary policy – price stability, in the form of an inflation target – rather than on an intermediate objective was made in just a few weeks.

Merely setting an inflation target was unlikely to cement private expectations unless complemented by supporting institutional changes. There was some discussion of delegating monetary decisions to the Bank, but the political constituency for independence was not yet there. Instead the Bank was asked to take on the disciplinary role of a 'monetary watchdog', participating in a publicly-minuted monthly meeting with the Chancellor to set interest rates. That left the Governor free to make known any disagreement with the Chancellor, as indeed was the case in the months leading up to the 1997 election when the Bank team believed

¹³ For a short history of this period, see Bean and Symons (1989).

¹⁴ Chrystal and Mizen (2003) provide a discussion of the origins of Goodhart's Law and its relation to the Lucas Critique.

rates needed to rise; the fact that this did not unduly damage the Chancellor might be taken as an indication of the weakness of these arrangements as a disciplining device. But these arrangements were all to change after the election when the new Labour government took the next step of delegating operational responsibility for monetary policy decisions wholly to the Bank (though the *quid pro quo* turned out to be the loss of banking supervision and debt management).

The inflation targeting regime has turned out to be significantly more durable than those earlier nominal anchors. Kynaston does not discuss why this might be, but I think there are several aspects worth highlighting. First, because inflation targets focus on the final objective rather than prescribing a path for the instrument or some intermediate indicator (in the terminology of Svensson, 2003, it is a targeting rather than an instrument rule), it is robust to shifts in the link between the instrument and the final objective.

Second, the Bank (and indeed all inflation-targeting central banks) does not aim to keep inflation at target at all times, i.e. it is not, in King's memorable phrase, an "inflation nutter". Instead, it is explicitly acknowledged in the annual remit letter from the Chancellor to the Bank that it may decide to permit temporary deviations of inflation from target in order to avoid excessive volatility in output, for instance in the face of a hike in oil prices or (depending on the cause) a sharp movement in the exchange rate¹⁵. It is thus a regime of 'constrained discretion'. Svensson and Woodford (2005) argue that such an arrangement is likely to permit a good approximation to an optimal policy.

Finally, at least until the financial crisis, it was associated with very good economic outcomes. For instance, Benati (2005) finds that inflation targeting was associated with the most stable macroeconomic environment in recorded UK history. This, of course, does not imply that inflation targeting was the main cause, but it had certainly not obviously failed in the way previous nominal anchors had.

The 2007-8 financial crisis and its aftermath was, though, bound to prompt questions about the continued suitability of the regime. Kynaston's account records the debates before and after the crisis as to whether monetary policy should attempt to 'lean against the wind' of an asset price or credit boom, deliberately undershooting the inflation target for a while in order to reduce the risk or severity of any subsequent correction (see e.g. White, 2009). While the crisis may seem to strengthen the case for leaning against the wind, in my view the burden of restraining excessive credit expansion is better assigned in the first instance to (macro-) prudential policies as they can often be targeted directly on the source of the problem. Monetary policy should only take on the additional burden if prudential policies are

¹⁵ Deviations from target of more than one percentage point trigger an open letter from the Governor explaining what action the Monetary Policy Committee is taking to get it back on track and how that fits with the government's wider objectives. The interest is not so much in that letter, as the Bank already publishes a lot of material about its decisions. Rather it lies in the Chancellor's (public) response, which provides an opportunity to say openly that he would prefer inflation to be returned to target less or more swiftly. It thus deals with an incompleteness in the remit to the Bank, namely the absence of any instructions regarding the weight to place on output relative to inflation. For more on this issue, see Bean (1998).

ineffective. Since 2013, such a lexicographic ordering of policies has been formally part of the remit to the Bank's Monetary Policy Committee. Even then, the uncertain future gains from leaning against the wind need to be weighed against the more certain near-term costs, and the cost-benefit analysis of Svensson (2017) suggests that the hurdle is high for leaning against the wind to be the optimal response.

The financial crisis has brought another challenge to inflation targets in the form of the lower bound to policy rates. Ahead of the crisis, this was not thought to be a serious issue as any lower bound episode was expected to be short-lived. Viewed from today, when Bank Rate has been close to its effective lower bound for getting on for a decade, that is no longer the case. Moreover, the apparent drift down in the natural real safe rate of interest over the past twenty years or so makes lower bound future episodes more likely. One relatively straightforward response would be to raise the inflation target from 2 per cent to, say, 4 per cent (Blanchard, Dell'Ariccia and Mauro, 2010). I suspect, though, that this would be more costly than it appears at first sight; at 2 per cent, economic agents can forget about inflation for many purposes but that is less true for 4 per cent. Though it may not figure in our models, there is probably considerable value in agents being essentially able to ignore inflation in their calculations.

A more substantial change would be to move to targeting the level of prices (or nominal GDP¹⁶). Woodford (2012) suggests that this would be an effective way of programming a suitable degree of history dependence into policy that replicates the optimal policy under commitment in New Keynesian macroeconomic models. This is particularly valuable when policy rates are constrained by the lower bound because it commits the central bank to compensate for any current inflation undershoot with higher inflation at some point in the future, thus depressing future policy rates as well. Provided expectations of future policy rates and inflation affect aggregate demand and inflation today – as is the case in New Keynesian (and many other) macroeconomic models – then it will also boost activity today, in spite of the current policy rate being stuck at the lower bound. Such a policy is, however, time inconsistent, as it involves committing to holding the policy rate on a lower path than will appear warranted *ex post*. Hence, there must be doubts about its credibility in the absence of some suitable enforcement mechanism.

4. Financial Stability and the Lender of Last Resort

Whatever the appropriate role of monetary policy in reducing the risks from excessive credit growth, there is general agreement that central banks do have a key role in maintaining financial stability by acting as a lender of last resort to solvent financial institutions that experience a sudden withdrawal of funding. And it is to the historical experience of the Bank of England – and its subsequent codification by Walter Bagehot – that we owe the basic approach: lend freely against any 'good' security but at a penalty rate.

¹⁶ Bean (2009) includes a comparison of targets for inflation and the *growth* of nominal GDP and argues that there is no important practical difference between the two.

The first occasion when the Bank seems to have provided such emergency funding during a crisis was in 1763, precipitated by spillovers from the collapse of several Dutch banks. But while the Bank responded to the heightened demand for funds by sharply increasing its discount business, it remained selective in those it dealt with. Moreover, with the Bank's discount rate already at the 5 per cent ceiling prescribed by usury laws, there was no imposition of a higher penalty rate. Finally, there is no sense from the minutes of Court that this represented a conscious policy carried through for the wider benefit of the economy. Nevertheless, it represented a first step towards becoming the acknowledged lender of last resort.

As noted earlier, banking crises were a regular occurrence over the next century, usually following periods of excessive credit expansion, and the nature of the Bank's response varied. The panic occasioned by the collapse of Overend Gurney in 1866 is usually regarded as the point at which the Bank finally took on the mantle of being the system's lender of last resort. However, Kynaston's account suggests that it may be better viewed as a more evolutionary process. That view is supported by recent analysis of the Bank's ledgers of individual transactions which suggest that the Bank's response in the earlier crises of 1847 and 1857 were also broadly consistent with Bagehot's dictum (Anson, Bholat, King and Thomas, 2017).

The sequence of crises that culminated with the collapse of Overend Gurney also contain some interesting parallels with the 2007-8 crisis. The story starts with the Bank's hesitant response¹⁷ – in part because of concerns about maintaining its own gold reserves – to the widespread bank failures of 1825, which prompted the London banks to seek to increase their own self-insurance by holding more liquid assets. Spotting an opportunity, some bill brokers had started taking deposits, withdrawable on demand, from the banks and investing the proceeds in bills of exchange. These 'discount houses' were the shadow banks of the time, though because bills of exchange were both fairly safe and generally short in tenor it was not a particularly risky business model, at least initially. The viability of the business model was further bolstered when the Bank decided to re-discount bills offered up by the discount houses, so ensuring that the latter could liquidate their assets quickly should funding evaporate.

The 1857 crisis – the first truly global financial crisis – seems to be the first time that the Bank started worrying about the moral hazard consequences of this decision. In particular, in the run-up to that crisis, the discount houses (of which Overend Gurney was by far the largest) had run down their own cash reserves, knowing that they could re-discount their bills at the Bank if needed. The failure of the Borough Bank of Liverpool in October, triggered by events overseas, prompted other banks to withdraw their funds, both from the discount houses and from the Bank itself. Finding they were unable to fund their assets, the discount houses then looked to offload them at the Bank instead. As a result, the increased demand for Bank notes

¹⁷ Bank director Jeremiah Harman claimed it had "lent by every possible means and in modes that (it) had not attempted before...", but Kynaston and other scholars (Dimsdale and Hotson, 2014) suggest that this was something of a defensive exaggeration.

necessitated another suspension of the provisions of the 1844 Act, while the Bank also found its own reserves coming under severe strain.

The following year, the Bank's directors responded to these events by deciding to restrict the discount houses future access to the Bank's discount window so as to encourage them to increase their own self-insurance¹⁸. That decision to limit the discount houses' access was not, however, the cause of Overend Gurney's failure nearly a decade later. Like many other failed banks before and since, Overend Gurney's undoing was instead the result of an ill-advised shift away from the relatively safe business of investing in bills of exchange into making long-term risky loans in railways and the like. When those loans began to go bad, the banks on which Overend Gurney relied for funding called back their deposits. Overend Gurney was eventually forced to seek support from the Bank but was refused on grounds of insolvency¹⁹ and forced to suspend payments.

Much like the collapse of Lehman Brothers in 2008, the closure of Overend Gurney triggered a widespread panic and a dash for cash. The Bank was now notably accommodating in its provision of support, both through the increased discounting of bills and the extension of loans against suitable collateral, leading the Bank's assets-to-cash ratio to plummet from 16 per cent to just 2 per cent. In the words of Governor Lancelot Holland, "Every gentleman who came here with adequate security was liberally dealt with". This response was complemented by yet another temporary suspension of the limit on the note issue. The panic was quelled, while the wider economic consequences were relatively modest, at least by the standards of some earlier crises.

This episode is generally regarded as a canonical example of how a lender of last resort can prevent a panic caused by the failure of a large financial institution turning into a systemic crisis with major macroeconomic consequences, and Bagehot (1873) drew heavily on it in codifying how a lender of last resort should behave. Nevertheless, Kynaston's account makes clear that some Bank directors were uncomfortable about openly committing to such a policy because of its potential moral hazard consequences. In particular, former Governor Thomson Hankey described it as "the most mischievous doctrine ever broached in the monetary or banking world". For them the underlying problem lay in the banks holding such large quantities of money on call, which would only be encouraged if the Bank stood ready to step in the event of trouble; a contemporary parallel is the heavy reliance of some banks and shadow banks on footloose wholesale funding prior to the 2007-8 crisis. Some constructive ambiguity was needed to mitigate the inevitable moral hazard. The tension between standing by as a lender of last resort and its adverse moral hazard consequences was to figure again in the early stages of the Bank's response to the 2007-8 crisis.

Till Time's Last Sand goes on to cover several subsequent UK financial crises. In some, the Bank operated as a classic lender of last resort, most notably to stem the international

¹⁸ Unsurprisingly the discount houses were not best pleased and Overend Gurney subsequently orchestrated a run on the Bank in revenge.

¹⁹ Sowerbutts, Schneebalg and Hubert (2016) suggest that it was insolvent to the tune of nearly £5 million on a balance sheet of £20 million.

financial panic occasioned by the sudden slide into war in August 1914. In others, the Bank either orchestrated support from other banks (notably in support of Barings in 1890 and several 'secondary' banks in 1974) or else temporarily took an institution onto its own balance sheet (Johnson Matthey Bankers in 1984). But there was no further conventional run until that on Northern Rock in 2007.

Kynaston's treatment of the Bank's response during the 2007-8 crisis is, I think, pretty even-handed, giving the case for both the prosecution and the defence. In the early part of the crisis, the Bank, and Governor Mervyn King especially, came in for considerable criticism for being excessively focussed on the issue of moral hazard and too reticent in the provision of extra liquidity. This was not without justification, as at the time extra liquidity provision was either through the Bank's operational standing facility (with a premium of 100 basis points and requiring high-quality collateral) or else a bespoke arrangement (Emergency Liquidity Assistance) offered only to banks in a critical situation. And whatever the validity of King's argument that the liberal provision of liquidity in such circumstances rewarded the irresponsible at the expense of the responsible, that argument was surely better made when the vulnerabilities were building before the crisis in order to encourage more responsible behaviour, rather than once the crisis had begun to unfold.

That said, as Kynaston recognises, the demise of Northern Rock was ultimately down to its adoption of a business model that was excessively reliant on apparently cheap short-term wholesale funding²⁰, while the subsequent retail run was triggered by the public revelation that the Bank was in fact providing a substantial support loan (thus suggesting that the bank was in serious trouble) together with only limited deposit insurance²¹. Moreover, at that time there was no special regime for resolving failing banks quickly. Those limitations had been largely addressed by the later stages of the crisis.

As the financial crisis wore on, the Bank, like the Federal Reserve and European Central Bank, substantially expanded its liquidity provision, providing loans (or collateral upgrades) at longer tenors against a broader range of collateral, including mortgage-backed securities under the £185 billion Special Liquidity Scheme. And it provided covert support to two of the UK's largest banks, Halifax Bank of Scotland and Royal Bank of Scotland, during the height of the crisis in 2008. So by the latter stages of the crisis, if not at the outset, the Bank was fully living up to Bagehot's dictum.

One outcome of the crisis that Kynaston does not mention, however, is the post-crisis reforms to the Bank's liquidity support facilities. These now allow for borrowing – both on demand and through market-wide auctions – against a much broader range of assets, including illiquid raw loans whose quality have been pre-evaluated by the Bank, on pre-specified terms. The range of potential counterparties has also been greatly expanded and includes non-bank counterparties, such as central clearing houses. The effect of these reforms is to remove much

²⁰ On the eve of the crisis roughly three-quarters of Northern Rock's funding came from the wholesale markets; Shin (2009) provides a good account of the 'run on the Rock'.

²¹ At that point, only the first £2,000 was fully insured together with 90 per cent on the tranche up to £35,000.

of the constructive ambiguity that previously surrounded access to the Bank's liquidity facilities. Instead the responsibility for dealing with the moral hazard consequences of being lender of last resort now rests squarely on the shoulders of the supervisory wing of the Bank.

5. Concluding remarks

Till Time's Last Sand provides a comprehensive, if somewhat compressed, history of the world's first, and for a long time its most important, central bank. As well as covering all the important events and personalities, it also provides a fascinating picture of life for those working inside the Bank. But the book is aimed at the general reader, rather than the specialist economist or economic historian. So readers of this journal wanting to understand, say, the monetary debates of the early nineteenth century, how the Bank came to be a lender of last resort, the economics of the end of the Gold Standard, or Britain's late-twentieth century monetary experiments are probably going to want to consult the relevant professional literature for additional enlightenment. But in each and every case, Kynaston's book offers a useful complement to that literature by providing a window on the views of the protagonists, frequently in their own words. For that reason alone, it is likely to prove to be an enduring and valuable point of reference.

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