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The Bank of England's profits across 300 years: wars, financial crises and distribution

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We have produced a series on the Bank of England's profits from its foundation in 1694 to the present time. This has not been available before. We explain the path of these profits over more than 300 years and account for their changing pattern. We next examine from where the profits derived, first in 'normal times', and then seeking, in particular, the impact of wars and financial crises. Other questions are: how much derived from seignorage; to what extent were profits passively acquired? Finally, we examine what the distribution regime was, and if, and how, that changed. This becomes more interesting in the period after nationalisation with some surprising results.

Keywords: central banking, profits, financial crises, accounting history

JEL classification: E58, G01, N23, N24

I

Interest in central bank finances was not particularly high until sparked by the global financial crisis of 2008–9. Scrutiny then focused mainly on the balance sheet, and capital and reserves in relation to crises or independence: the profits of central banks have received less attention either in times of crisis or other events (Cukierman 2011; Darbyshire 2011; Stella 2011; Archer and Moser-Boehm 2013; Martin-Acena *et al.* 2019). However, profits did feature, and to offer some perspective in this article we provide for the first time a series for the profits of the Bank of England (hereinafter the Bank) over the period from its foundation to the present time. Of course, a profits series of this length is rare for any business, let alone a central bank, but the Bank is unusual in both its longevity and its gradual evolution from a private bank with concern for its shareholders into a central bank that accepted its public responsibilities, and later became the state's bank. While there are no similar series currently available for comparison, the importance of our series lies in setting

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profits against the changing nature of the Bank's role and its relationships with its shareholders, the state and the wider financial sector.

We first outline how central banks are financed, and describe the general pattern of the Bank's profits (Section II). That is followed by a discussion of the sources of profits and how these varied, for example in times of war or periodic financial crisis, and whether profits were actively or passively acquired (Sections III and IV); Section V examines the accumulation and use of reserves. Finally, we look at how the profits may or may not have been contested in terms of charter renewal, tax and distribution to shareholders, including the state (Section VI).

II

Central banks can be financed in four main ways: from taxation; from seignorage; from a levy on financial institutions; or out of their own banking business profits (Pringle and Courtis 1999, pp. viii, xix-xxii). For our purposes the first is straightforward. The Bank has never been financed from taxation. The second, seignorage, is essentially the revenue from issuing notes and coin. The Royal Mint has always been responsible for coin, but Mint charges were abolished in 1666 (Feavearyear 1931, p. 88). As for notes, initially, and for most of our long period, England / the United Kingdom was on a metallic standard (first bimetallic then *de facto* gold and later *de jure* gold) with note issue related to the metallic reserve. There should be little seignorage revenue in these circumstances. The third, a levy, came through bankers' balances. From the late nineteenth century and more clearly in the twentieth century the Bank had revenues from the interest earned on bankers' balances on which no interest was paid. Initially, the balances were placed in the Bank for convenience but by the second half of the twentieth century they were an obligation. In the latter part of the twentieth century this was formalised in the Cash Ratio Deposits scheme that remains the current basis for financing.[1]

But, until the second half of the twentieth century, the Bank survived essentially on its own profits from its banking business, both Government and commercial. Over our entire period, the Bank earned income from interest on securities, bills, discounts and advances, and various management fees and charges for services. Much of this was dependent on the level of interest rates – something the Bank played a part in determining. But with the Usury Laws being in place for the first half of the period there were long spells – sometimes decades – when Bank Rate did not change.[2]

Later in the period, profits were occasionally boosted by capital receipts, sometimes significant sums. There had been some one-off profits from the sale of bullion or

[1] The CRD ratio as at 29 Feb. 2020 was 0.324% of eligible liabilities. In addition to CRDs and remunerated services, from 2018 there has been a levy to cover the Financial Market Infrastructure supervisory costs. Bank of England Annual Report and Accounts (henceforth R&A), 2020, p. 36.

[2] www.bankofengland.co.uk/monetary-policy/the-interest-rate-bank-rate (accessed 22 Dec. 2021).

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securities, but in the late twentieth century there were exceptional items for the Bank's divestment of shares in various institutions, and the sale of buildings and property. There were no significant short-term fluctuations in the Bank's expenditure. The largest element was salary and wages, which varied over time with staff numbers.[3] Overall then, the main variations in profits were a result of changes in the Bank's income.

We first assess the data available in the official histories of the Bank. Clapham touches on early profits, but does not provide a series. A series covering the period from 1890 to 1939 is included in Sayers. Fforde's history has no discussion about profits, though this was addressed to some extent by Hennessey and more fully by Capie. Like Fforde, James is not concerned with profits, though he does include a table based on the published accounts (Sayers 1976, Appendix 35 pp. 343–4; Hennessey 1992, pp. 221–3; Capie 2010, pp. 349, 818; James 2020, pp. 114–15). Thus, there has been no published profits series covering the first two centuries of the Bank's existence; after that data are available but not on an entirely consistent or easily comparable basis. It is a similar situation with internal sources and our new series, using archival sources, is a major part of this research (see Table 1, available online).

The construction of the series is dealt with elsewhere but a couple of points should be mentioned here. First, the profits from note issue. When the gold standard was temporarily interrupted in wartime at the end of the eighteenth / beginning of the nineteenth century, a debate arose over the profits the Bank derived from extra note issue.[4] The possibility was raised that there could be a separate institution responsible for issue, but instead the 1844 Bank Charter Act split the Bank and its accounts into two: the Banking Department and the Issue Department. The Bank had, since early in the eighteenth century, by various means including interest-free loans and gifts, paid for the privileged position it held in note issue. The 1844 Act gave the Bank the monopoly of note issue and required it to pay to the Treasury a sum of £180,000 per annum for the privilege. The Bank was allowed to keep any profits from Issue over and above that.[5] However, the sums retained were comparatively small: an average of 7 per cent of the Bank's total profits up to the First World War. After 1928, as a consequence of the Currency and Banknotes Act 1928, all of

[3] Approximate staff numbers: 1800, 680; 1900, 1,560; 1949, 8,260 (peak figure); 2000, 2,424; 2020, 4,395.

[4] Bordo and Kydland (1995, p. 424) assert that leaving gold was a deliberate policy designed to raise revenue for the Government through seignorage. There is no evidence of a policy change for these reasons and while there were profits from note issue they went to shareholders not government.

[5] The Bank agreed, during the Charter renewal of 1833, to make an annual payment to the Treasury of £120,000. There was also a composition payment to the Stamp Office of about £60,000 that was converted to a fixed payment in 1844. Hammond Chubb (Secretary), 'The Issue Department of the Bank of England, in its relation to the issue of Bank Notes, and the arrangement with the Government connected therewith.' Aug. 1898, p. 4, Bank of England (BoE) G15/142.

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the profits were passed to the Treasury and that continued to be the case. For completeness, we have compiled a long-run series for Issue Department profits even though these are peripheral to our story for most of the time and particularly after 1928.

The second point is that from the outset the accounts were shrouded in secrecy. The Bank's shareholders knew only the annual dividend, and even the Directors had limited knowledge (Clapham 1946, vol. II, pp. 122–3; Horsefield 1953, p. 50). The only other insight into the Bank's financial affairs was the Bank Return published weekly in *The London Gazette* from 1844; however, this was a balance sheet rather than a profits statement. It was not until February 1971 that published accounts appeared for the first time, coinciding with similar transparency for the clearing banks in relation to hidden reserves (Capie and Billings 2001, pp. 227–8; Billings and Capie 2009; Capie 2010, pp. 444–7).

Looking at gross profits (before tax and dividends) in nominal terms, during the early years of the Bank's life there was, unsurprisingly, wild oscillation. It was a period when it was unclear whether or not the Bank would survive (Rogers 1887). In the first 15 years annual profits fluctuated between £10,000 and £370,000. After that they settled down and grew quite steadily to £0.5 million in the middle years of the eighteenth century, and further to closer to £1 million at the end of the century. In the Napoleonic Wars they rose sharply to over £2 million. After that they slumped to a low point of £0.363 million in 1819 before settling at a little over £1 million in the middle of the nineteenth century and then growing steadily to £1.5 million.[6] They had risen to around £2 million by the outbreak of war in 1914. And all of that was across a period of 220 years when, apart from the Napoleonic Wars, prices were relatively flat on trend.

From the First World War onwards prices fluctuated greatly and inflation finally took over. Still in nominal terms, profits rose from £2 million in 1914 to a peak of £12 million in 1922 and then fell back to around £4 or £5 million in the rest of the interwar years with a low point of £2.7 million on the outbreak of the Second World War. Profits then grew rapidly in the post-war years. In 1969 they stood at £20 million, a point at which the Deputy Governor felt the need to say they were at 'embarrassing levels'.[7] But they went on climbing and reached a peak of £225 million in an exceptional year, 1995. The highest ever figure, £995 million, was reported in 2009.

To display the data in a helpful way there is a need to adjust for price behaviour over the last 120 years or so of the Bank's history. Notwithstanding the pitfalls of using a deflator covering more than 300 years, Figure 1 shows gross profits in constant

[6] The collapse in profits was due to a combination of reduced income and higher expenditure due to purchases of gold bar and silver ingots.

[7] Jasper Hollom (Deputy Governor) to Leslie O'Brien (Governor), 'Bank profits', 1 Jan. 1969, BoE G15/12.

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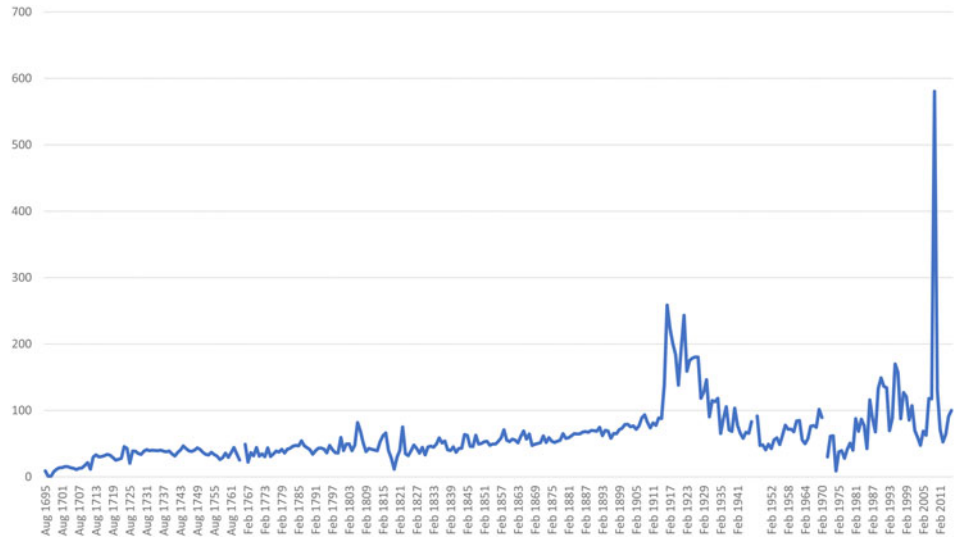

Figure 1. *Bank of England profits (pre-tax, pre-dividend) 1695–2015, constant 2013 prices, 2015 = 100*
Source: calculated from Table 1 (available online).

terms for the entire period.[8] The general pattern described above still holds: the gentle upward trend, the rises in the Napoleonic Wars, some hints of the higher amounts in the financial crises in the nineteenth century, the dramatic rise in the First World War, the variable movement after the Second World War and the final exceptional spike in the global financial crisis of 2007–9.

Overall, in the first 200 years or so, much remained unremarkable. With the exception of the Napoleonic Wars, so many things stayed not constant, but stable. There is clearly less stability in the century following the outbreak of the First World War. In the remaining sections we consider how these profits were acquired, and how the profits were used.

III

The Bank began its life as a commercial bank with a special customer, the Government. It took deposits and competed with the rest of the system for business. In the early years it acquired a monopoly in joint stock banking in England. But it had limited scope for exploiting its privileged position for fear of losing that position or some of its privileges. From the outset, it also had a responsibility to its shareholders. It had agreed, after all, from the first day of its operations, to pay a dividend of 8 per cent on its capital (Clapham 1946, vol. I, pp. 17–18). Over the next 100 years it grew

[8] We have used an implied GDP deflator at market prices, column O, sheet A47, Bank of England dataset, *A Millennium of Macroeconomic Data*, www.bankofengland.co.uk/statistics/research-datasets (accessed 4 Aug. 2021).

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steadily along with the rapidly growing banking sector. By the end of the eighteenth century it was completely dominant and central to the system and its discount rate was the one that mattered – Bank Rate. The Bank was acquiring responsibility for the system even if it was another one hundred years before it accepted that.

When did it become a central bank and to what extent did that affect its behaviour and profits? Dowd takes 1890 as the date for public responsibility taking over from private (Dowd 1991, p. 159). However, precise dating is difficult. Suffice to say, the Bank reached the position slowly and reluctantly in the course of the late nineteenth century. Unlike commercial banks, central banks are not primarily concerned with profits but the Bank was nevertheless a profit-seeking institution. Its own financial strength continued to be a concern throughout. Its profits were those of a banking business but because of its importance to Government we look first at that and ask whether the Bank's profits were passively or actively acquired.

Throughout the first 200 years or more the Bank saw itself as a profit seeker if not a maximiser. In the eighteenth century the Governor William Ewer insisted that the Bank's profit 'arose from the industry, the hazard, and management of the directors of the Bank' (Kynaston 2017, p. 55). Later, in the nineteenth century Samuel Jones Loyd, a leading banker, praised the separation of departments which allowed the directors, 'an opportunity of directing their attention more to the banking department, and making it more profitable, … with great advantage to the proprietors' (Kynaston 2017, p. 161). Other than in wartime, it was not until the 1920s that the bank was accepting that it should be 'policy before profit'. Not that that was universally accepted as its position. One persistent critic was Jarvie, who in the 1930s saw it unnecessarily engaged in foreign business for its own interest (Jarvie 1933). There is no obvious break in the profit series reflecting a switch from profit driven to policy driven – from private to public.

In addition to the banking business which arose from the Bank's relationship with Government, there was also private banking business. This was very small up to 1760, and although it did grow in importance, it fell away in the nineteenth century (Bowen 1995, pp. 14–15). It did not disappear entirely, however, as the Bank's branches continued to pursue commercial business at least into the 1890s (Ziegler 1990). Goodhart finds that the Bank's commercial business effectively ceased from 1914 following an informal agreement with the clearers not to compete (Goodhart 2018, p.15).

One further question that arises is the impact of gold holding on the Bank's profits. Higher gold reserves (a non-interest bearing asset) would reduce the profits of the Bank, and this was a stated concern in the late nineteenth century. Building reserves would have meant selling securities and that meant in the short run it was impossible for the Bank to maintain both control and income (Sayers 1936, p. 10; Goodhart 1972, p. 105). Yet would the impact on profits, and the dividend, have been that significant? Total profits in the decade to February 1912 were £13.3 million of which only £0.8 million came from the Bank's share of the Issue Department profits (where the bulk of the gold was held). Our assessment is that maintaining the gold standard was not a significant net cost to the Bank given the unquantifiable benefits that flowed from the Bank's operation of the gold standard.

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There was a good deal of discussion in the nineteenth century on whether Bank Rate led or followed market rate. Although open market operations were used from early in the nineteenth century, it was not until late in the century that the Bank began to make Bank Rate effective through these operations. Apart from that, as already remarked, for the first half of the period the usury laws meant there was a cap on Bank Rate at 5 per cent. Bank Rate stayed unchanged at 5 per cent for more than 70 years from 1746 until 1822. And while the Bank's profits were relatively stable on trend, there were fluctuations. Correlations of profits with Bank Rate across the whole period and selected subperiods are somewhat mixed. For the entire period it is very weak (0.075). For the period of banking crises, 1820–70, there is a moderate correlation (0.316). Similar results are obtained for other periods, with the exception of 1947–70 where there is a strong relationship (0.867) – a short period with frequent changes. Of course, as well as the rate, the quantity of interest-earning assets is also a factor. The correlation between the Bank's profits and its balance sheet over the entire period is 0.513, again moderate. Overall, the results tend to support the view that, on balance, profits were more often actively acquired, as we shall amplify.

The recurrent conflicts in the eighteenth century meant that Britain was almost continuously at war and to some extent that became the norm. There was a clear rise in profits during the Revolutionary and Napoleonic Wars. Indeed, there were serious criticisms of the Bank at the time for profiting – and some said profiteering. In 1797 the attachment of the pound to gold was severed and the Bank was free to print its notes without limit. It did print freely and there were indeed increased profits, which show clearly in this series. But note issue was not the main source. Some perspective on this can be gained by looking at the Bank's revenues across the longer period. The Bank's underlying income over the 50 years from 1790 showed a clear and strong upward trend peaking in 1816, and then following some adjustment, there was a flat trend around £1.5 million per year from the late 1820s. The main sources of income were interest earned on securities, debt management, and in wartime a sharp rise in Government bills discounted. Yearly expenditure over the same period was largely flat, and averaged £0.43 million.

Profits during the First World War increased dramatically, as in the Napoleonic Wars, not in the main from note issue but from interest received on securities, advances and other loans, including a substantial credit of £42 million made to the French in April 1915 (Horn 2002, p. 98). Total income for the year ending February 1915 was £4.9 million, growing to £14.8 million for the year to February 1918 and £18.6 million in the following year. This included, over the same period, a dramatic jump in the interest received on Government securities held in the Banking Department from £2.1 million to £16.2 million.[9] The scale of war loans issued after 1914 meant the resources required for the Bank's

[9] Bank of England, unpublished half-yearly accounts, BoE G28.

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management of stocks increased sharply. For the year ending February 1915, charges to the Government for these services amounted to £0.4 million, rising to £1.1 million by February 1919. This did not fully reflect the increased costs, and indeed there was a feeling within the Bank that this work had been effectively undertaken free of charge.[10]

The Second World War was rather different from the First because although pre-tax profits were higher than in the preceding years, there was no colossal increase. In fact there were large profits in the Issue Department, and the huge expansion in the Bank's consolidated balance sheet in the years 1939–45 was primarily due to the Issue Department growth. But of course, all of these profits were going directly to the Treasury.[11] Part of the explanation for the relatively constrained profits in the Banking Department is that by dint of the experience in the First World War and some good management there was no financial crisis on the outbreak of war and there was no hike in interest rates apart from a brief raising and quick reversal. A variety of measures employed thereafter meant that this held throughout the war. By contrast with 1914–18, the income position was, after an initial increase, stable. Total income for the year ending February 1939 was £4.8 million. In the following year it rose to £7.4 million, but for the next six years averaged £7.3 million. Similarly, interest on securities in the Banking Department was £2.6 million, rising to an average of £3.3 million over the next five years and then just over £4.0 million by the end of the war.

It is evident that profits rose substantially during some periods of war when the Government required funds. But were the related profits passively acquired? After all, all manner of firms might find their business prospering in wartime; others may enter when spotting opportunities. Equally, at other times the Bank could find the value of its major assets (Government stock) falling in a period of inflation not of its own making. It must manage its portfolio to mitigate this and try to compensate elsewhere.[12]

Nationalisation in 1946 brought about state ownership of the central bank, though it is not clear that this had any impact on profits. Interest on Government securities remained the principal source of income, with fees for Government work accounting for around 12 per cent of income in the 1950s and 1960s. If anything, there have been greater fluctuations in profits during public ownership. Some of this was due to changes in presentation once the accounts were published, particularly the apparent collapse in profits in the 1970s. During this decade there were substantial provisions made against losses on support operations; and on the need to ensure sufficient

[10] 'Report of the Committee appointed by the Court to consider the question of the disposal of any special profits of the Bank and whether an application to increase the capital of the Bank is desirable, 25 Sep. 1919', BoE C40/180.

[11] Historic data on the Bank's balance sheet can be found here: www.bankofengland.co.uk/statistics/research-datasets (accessed 19 Nov. 2020).

[12] For a comprehensive study of the Bank's management of gilts see Allen (2019).

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funding of the Bank's pension scheme. Similar provisions for support operations were made in 1985 and 1992–3. On the other hand, profits were boosted by recoveries from rescue activities (sometimes over a long period) and the disposal of assets. The latter included substantial receipts from the sale of shareholdings in institutions that the Bank had helped to create. For example: £11.5 million from the sale of shares in the Commonwealth Development Finance Corporation in 1985/6; £8.3 million from the Agricultural Mortgage Corporation in 1992/3.[13] Most notable was the Bank's disposal of its shareholding in the investment company 3i, which realised a capital receipt of £237.9 million in the two years 1994/5 and 1995/6.[14] £41.8 million came from the sale of a strategic holding in Portals (producers of the paper for Bank notes) in 1989/90.[15] The sale of Bank buildings and property has also realised large sums.[16] These were fortuitous exceptional items maybe, but they were certainly active sales and were timed to maximise value.

IV

What happened to the Bank's profits in financial crises? We follow the widely used definition of financial crisis provided by Anna Schwartz, the essence of which is that there is a sudden rush for cash in the banking system and the payments system is put under threat (Schwartz 1986, p. 12).[17] This means that what were sometimes regarded as such were not in fact financial crises. For example, Barings in 1890 was the failure of a large institution and not a financial crisis.[18] The outbreak of war in 1914 in particular was entirely different. It was not a 'Schwartz' crisis but a failure of remittance from continental Europe (Roberts 2013). 1931 saw an exchange-rate crisis and not a financial crisis, '1931 does not qualify as a financial crisis' as Schwartz put it (Schwartz 1986, p. 21; Accominotti 2019 offers an alternative approach). Our focus here is on the period when there were several clear financial crises (à la Schwartz) in the nineteenth century, in 1825, 1836–9, 1847, 1857 and 1866 (Capie 2014).

Keynes is said to have claimed on one occasion that central banks liked financial crises because they boosted their profits. And we know that the British Government was concerned about the Bank's profits in times of crisis. In the crises of 1847 and 1857, when

[13] R&A, 1986, p. 21; 1993, p. 9.

[14] R&A, 1996, p. 42. 3i was the successor to the Industrial and Commercial Financial Corporation which the Bank had helped to establish in 1945.

[15] R&A, 1990, p. 17.

[16] These properties were mainly former branches. The sale of the offices at New Change (London) raised £22 million in 2000, R&A, 2001, p. 48.

[17] For a slightly differing view on the definition and the number of crises in this period see Turner (2014).

[18] In a financial crisis the central bank tends to profit. In a bailout, it uses its capital. In the case of Barings, which was a bailout, in 1895 a £100,000 write-off of consols was applied from the Bad Debt Reserve which had been set aside to meet a possible liability in connection with the liquidation, General Ledger no. 27 f. 747, BoE ADM7/53.

the Chancellor permitted a break with gold to allow the Bank to print notes freely, he also insisted that any profits arising from the crisis be paid to the Treasury.

In the early crises the emphasis was on the profits arising from the extra note issue. In 1847 the Chancellor wrote: 'Her Majesty's Government are of the opinion that any extra profit derived from this measure (note issue) should be carried to the accounts of the public, but the precise mode of doing so must be left to the future.'[19] In 1857 similarly, 'Her Majesty's Government reserve for future consideration, the appropriation of any profit which may arise upon issues in excess of the statutory amount.'[20] The Chancellor, Gladstone, allowed the break with the gold standard in May 1866 on condition that Bank Rate be raised to 10 per cent. He stressed that the profits from the crisis transactions be transferred to the Treasury: 'After deduction by the Bank of whatever it may consider to be a fair charge for its title, influence, and trouble, the profits of these advances will accrue to the public.'[21] However, there was an element of ambiguity. Was it profits from an increased note issue or from all 'excess' business? The Bank was in fact on this last occasion, 1866, able to satisfy all the calls for liquidity without breaching the 1844 Act. Therefore, if the instruction related to notes alone there were no profits due to the Treasury.[22]

In any crisis there were some losses made by the Bank when firms failed, but these losses appear to have been small. For example, following the 1857 crisis, £22,500 was written off in bills unpaid, and £43,000 was written off in 1866.[23] But since the objective was to keep fundamentally sound firms in business such losses were more than offset by other gains, certainly over the longer term. Of course, in saying that, it would have been difficult to distinguish 'crisis profits' from other profits.

Given the absence of crises after 1866 there is no evidence of periodic increases in profits after that date and so no interest by the state in what was happening. Our focus then is on the period when financial crises were regular in the English banking system in the nineteenth century, what we will call the 'crisis period' of 1820–70. Financial crises were usually short-lived and it is possible that there is some loss of information in looking at annual data. For that reason Figure 2 presents a six-monthly profits series for the 'crisis period'. A perusal of this series suggests that while profits did rise at crisis points, there is certainly no strong evidence of substantial increases. Gross profits were fluctuating gently throughout, around a flat trend of between £1.0 million and £1.5 million. In 1830 profits were reduced to £0.836 million because £0.25 million was written off to cover losses relating to the forgery of Bank notes by Henry Fauntleroy, who in 1824 was the last person in England to be convicted and hanged for the offence.

[19] BoE G6/350.
[20] BoE G6/397.
[21] Minutes of the Court of Directors, 12 May 1866, BoE G4/89.
[22] There are no obvious payments in the accounts of monies paid to the Treasury and no mention of the matter in further correspondence.
[23] Discount Office Analyses and Summaries, BoE C30/3.

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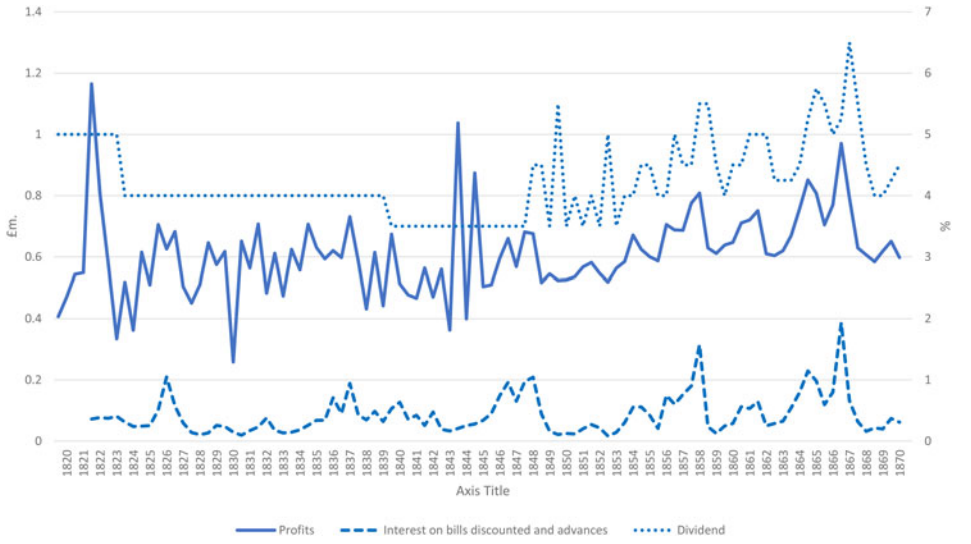

Figure 2. *Bank of England six-monthly profits, interest on bills discounted and advances (£m.) and dividend on Bank Stock (%), 1820–70*
Source: Bank of England General Ledger, BoE ADM7/41-ADM7/49.

Nevertheless, all the peaks in profits, no matter how muted these might be, are at times of crisis (though there is no precise alignment because the accounts are for the financial year ending in February). There is a low peak in 1825; and something similar for 1836–9; and another low peak in 1847. The evidence is perhaps stronger for 1857. And profits did clearly reach a higher peak in 1866–7, even if they then fell sharply almost immediately.

This can be examined more closely by considering two of the Bank's main items of income, the interest on bills discounted and the interest on private loans (i.e. advances). It might be expected that in periods of crisis, the Bank would discount a greater number of bills, and interest rates would be higher (at least after 1847 when the Usury Laws had gone completely); the Bank was also likely to have been prepared to make additional advances during such periods. Both of these factors would be reflected in higher income and, with little reason for there to be a rise in costs, with a resultant increase in profits. The impact of bills discounted would be short-lived given the typical three-month duration of these instruments, while advances took longer to run off. The figures for interest on bills discounted are shown in Figure 2 and clearly confirm increases in income during crisis periods, with the timing of the rises fitting with the outbreak of the crises.[24] In some cases, particularly

[24] The picture can be readily confirmed from Clapham's charts on income from discounting, though these use a 12-monthly accounting period ending in August rather than February (Clapham 1946, vol. II, pp. 440–1).

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in 1825, 1857 and 1866, the effect is quite pronounced, while 1847 is strong. The period 1837–9 is rather harder to trace, though on the 12-monthly data, what stands out are the years ending February 1837 and 1840.

The fluctuations in interest on loans are more difficult to interpret: the 1866 crisis is the only one with an obvious spike, though during the other episodes the yearly interest was high (over £100,000) – in some cases greater than that from bills discounted.[25] In each of these nineteenth-century crises income from discounts and advances jumped and peaked in the period of the crisis (Anson *et al.* 2017, p. 26).

Thus, although business increased in crises this was clearly limited and contained. In short, there were increases in profits associated with crises. But they were not large. And we find no evidence that any profits were passed to the Treasury in line with Gladstone's instruction. The Bank worked hard to find means of supplying liquidity to the market without in fact having to send 'excess profits' to the Treasury. This also appears to be true of the crisis on the outbreak of the First World War (Roberts 2013).

After a long period of financial stability from 1870 to the 1970s, financial crises returned. In the 1970s there was the secondary banking crisis; in addition in the early 1980s there were problems for the clearers resulting from the international debt problem, and the rescue of Johnson Matthey in 1984. The latter two were more crisis management that financial crises, and the impact on the Bank profits figures is not obvious. Indeed, because of the Bank's exposure in these cases, the provisions for losses made in the accounts served to suppress total profits in the first instance. However, in the long run these losses were not necessarily realised. The annual accounts for the year ending February 1977 included such provisions amounting to £16 million, and £35 million was set aside to cover Johnson Matthey's collapse in 1985. Yet the 1989 accounts included as an exceptional item £46.776 million in recoveries related to Slater Walker, which the Bank had rescued in 1976. Capie puts total provisions for losses from the secondary banking crisis at £113 million: by 1994 this figure had halved to £55 million and was written off (Capie 2010, pp. 581–3).

But then the small banks crisis broke in the early 1990s. A provision of £90 million was made in the 1993 accounts for losses in relation to this crisis, and at the same time there was also a retrospective provision applied to the 1992 accounts to cover support activities that had not been revealed at the time. The provision had been reduced to £74 million in 2000 and was largely to cover losses on the NMB Group that crystallised at £67 million.[26]

The financial crisis of 2007–9 was the biggest of all time and the Bank's profits were greater than ever before (Turner 2014). There was a mix of liquidity problems that threatened the payments system and solvency problems that had to be dealt with by other means. In each of the five years from 2006, reported gross profits

[25] For an extensive discussion of this crisis see Flandreau and Ugolini (2014).
[26] R&A, 2000, pp. 76–7.

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were: £99 million, £191 million, £197 million, £995 million and £132 million. The Annual Report for 2008/9 explicitly highlighted that profits reflected the various open market operations and policy actions taken during the crisis, including the Special Liquidity Scheme and the Emergency Lending Assistance (ELA).[27] For the ELA, HBOS and RBS were charged £176 million for this support.[28] But given the scale of the crisis and that the prevailing arrangement with the Treasury was to split post-tax profits 50/50, the Bank clearly earned and retained substantial profits in this particular crisis.

How should the question of active/passive profits be considered for financial crises? Crises blew up for all the kinds of reasons that Kindleberger provided a long time ago (Kindleberger 1978). The Bank responded to the needs of the market. Sometimes it did this well and at other times less well. It worked hard to avoid paying any 'excess' to the Treasury. Insofar as it had responsibility for financial stability it had to behave as it did, but it did so before any formal responsibility was imposed on it. Our judgement is that profits from crises should be considered 'active'.

V

What happened to the profits? Well, firstly, there were two periods when there was significant accumulation of reserves: the growth of the unallocated profit known as 'The Rest' from around £2 million in the 1780s up to a peak of £8.6 million in 1816; the First World War to the end of the 1920s, when reserves increased from £3 million to around £40 million. Most of the former was ultimately returned to shareholders (see below), while the latter were held for what might be financial stability purposes (either domestic or foreign), and expenditure on the Bank itself. This included the reconstruction of the Bank by Herbert Baker in the 1920s and 1930s at a cost of £5.3 million (Abramson 2005, p. 255). In the years after 1945 the level of profits allowed a further accumulation of reserves and capital expenditure, at least in nominal terms. Reserves grew from £62 million to £116 million in the 1950s and 1960s. This allowed further spending on the Bank: a library, a sport and recreation centre, a yacht, extravagant new branches, pensions and so on. This is what finance academics have termed 'expense preference' behaviour.

As far as domestic financial instability (crises) went there was no need for additional reserves. If necessary the Bank manufactured liquidity. But at some point, from around the late nineteenth century, it began to see another role as bailing out 'deserving' institutions to prevent fear or panic developing. If it were to do that, then there

[27] We also note the Bank of England Asset Purchase Facility Fund Ltd (BEAPFF) incorporated in Jan. 2009. BEAPFF was indemnified by HM Treasury and was not consolidated into the Bank's accounts as it had no interest in its activities, R&A, 2009, p. 71.

[28] The Special Liquidity Scheme ran from Apr. 2008 to Jan. 2012 and allowed commercial banks to exchange high-quality but illiquid collateral for Treasury Bills. The gross surplus from this scheme of £2,262 million was passed to HM Treasury as an additional payment in lieu of dividend.

was a need for reserves. This is what in part helps explain the growing concern and action of Norman and others for increased reserves after the First World War.

The Bank was concerned about its capital position in the 1930s; this is not surprising when all the rescue activities it engaged in (on both the domestic and international fronts) are borne in mind. The Bank provided £3 million to Lazards following misbehaviour in its Brussels Office that had led to losses of £6 million. A further £7 million was needed for the English commercial banks, Cox, and Williams Deacon's (Sayers 1976, vol. II, pp. 530–2). With international payments difficulties in the early 1930s others too got into difficulties. By June 1932 the Bank had incurred liabilities of £7 million on these activities. Another £2.9 million was provided to Austria to help with its problems in 1931.

In the late 1960s the Governor Leslie O'Brien justified increased reserves, and particularly hidden reserves, at least in part as giving the Bank the wherewithal to help struggling financial institutions behind the scenes, or in the phrase of the time, 'doing good by stealth' (Select Committee on Nationalised Industries 1970, p. 254). This, of course, had been a justification for contributing to financial stability that went back to Norman in the 1920s.

On the associated question of the exchange rate, so long as the Bank was the dominant player in the fixed exchange-rate regime that was the gold standard (that is up to 1914) its ability to attract inflows meant it had no need of reserves for the defence of the exchange rate. That, however, was becoming less true since from the 1890s onwards the ability of the Bank to influence capital flows was declining (Ugolini 2013). As it began to detect this it began to build reserves that might be needed. Certainly, after 1914 it was clear that greater reserves were required. There were periods of floating rates when in theory there was no need for reserves; but for most of the time from 1914 to 1945 there were fixed or managed rates that did require the support of reserves. Britain had by then lost its position as the dominant country and the Bank had lost its ability to influence flows to the extent required. Throughout the 1970s there were on-going attempts at managing the exchange rate at some cost to reserves. The final calamity came in 1992 when the pound fell out of the Exchange Rate Mechanism (ERM). Various figures have been estimated for the cost of that operation, with one of the more conservative being £2.3 billion (James 2020, p. 306).[29]

Looking over the period of reserves accumulation, the mid 1930s represented a high point, about 6 per cent of the balance sheet, and thereafter followed a decline to less than half that figure in the 1970s; in more recent decades reserves formed about 2 per cent of the balance sheet. However, changes in accounting conventions, revaluations and other movements have meant that the once clear link between the surplus annual profits and growth of reserves is not so evident. It might be argued that reserves have

[29] A similar figure is given for the exit from the 'snake' in 1972. But the 'losses' are difficult to measure since gains usually followed over the next several years.

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become ever less relevant given that ultimately the Treasury stands behind the Bank. However, the central bank must conduct its affairs in an appropriate manner, and central bank reserves do allow for a certain amount of independence of action. This helps explain why the Bank has been concerned with building and maintaining them.

VI

Finally, we look at how the Bank's profits were viewed externally, and on occasions contested, by shareholders, by the state and by the state as owner. Table 1 (available online) also shows the declared percentage dividends. The initial years of uncertainty are reflected in the collapse, and indeed failure to pay a dividend in 1696, and the volatility. But from the 1720s there was considerable stability in the rate paid for the next one hundred years with several periods when the rate was constant. In the second half of the nineteenth century there was noticeable fluctuation. This was also the period when dividend payments were very closely aligned to profits. In the twentieth century there were again long periods when the rate paid was completely constant, and the 12 per cent figure paid in 1924 was unchanged until nationalisation.[30]

The Bank's profits in the wartime period of the 'restriction' soared. The Bank's annual dividend was as high as 12 per cent. But there were still more profits to distribute. In 1799 the Bank paid out to its shareholders over £1 million in a 'bonus' payment.[31] Further payments in the form of additional dividends or annuities transferred to shareholders were made in 1801, 1802, 1804, 1805 and 1806. These payments were not exactly voluntarily paid. They were rather the result of a campaign by a shareholder and Member of Parliament, Alexander Allardyce, who waged a campaign for both more openness and fuller distribution of profits. In fact Allardyce did not know what the profits were and had to make not entirely accurate guesses (Clapham 1941, pp. 80–2, and 1946, vol. II, pp. 40–4).[32] In 1816 the Bank's capital was increased by £2.9 million. This amount was charged to the profit and loss account with £2.4 million coming from retained profits and the reminder from current profits. Shareholders were allotted new Bank Stock on the basis of their existing holdings (Clapham 1946, vol. II, pp. 54–7).[33] All this, in these few years, totalled more than £3.6 million, a quite remarkable sum given the previous level of profits in the eighteenth century.

[30] Some comparison of returns can be made with returns in banking and more generally in, for example, Abildgren (2016), Capie (1988), Dimson *et al.* (2001), Hickson *et al.* (2011) and Matthews *et al.* (1982).

[31] 'To £5 per cent Annuities of the subscription 1797 standing in the names of the Governor & Company of the Bank of England for the amount thereof transferred to the several proprietors of the Bank Stock at the rate of £10 per cent on their respective interests pursuant to Resolutions of the General Courts of the 21st of March and 9th April.' General Ledger no. 17 f. 35, 1 Jun. 1799, BoE ADM7/32.

[32] Alexander Allardyce, [no precise date but *c.*1801] 'An address to the Proprietors of the Bank of England', BoE M6/29.

[33] The increase of £2,910,600 took the total capital to £14,553,000, after which it remained unchanged.

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What about Bank stock as an investment? The key point to emphasise here is that because of the secrecy surrounding the accounts, there was asymmetric knowledge about the Bank's profits. A crude figure could be derived from the declared dividend and total capital (and was done by contemporary commentators), but this revealed little about the actual profit and loss account and what might have been kept aside. Thus the share price could only really react to declared dividends not published profits. This can partly be discerned from data on the average share price of Bank Stock, though there are also periods of price fluctuation when dividends are stable but the share price fluctuates. As some measure of riskiness, the Bank's gross dividend yield (share price/dividend) can be compared to what is commonly used as the risk-free asset, Consols. In the earliest years, Bank stock was clearly a risky investment but, interestingly given the long period of war, from the later eighteenth century until the 1820s there is a very close correspondence between the two. That closeness returns at the end of the nineteenth century and remains thereafter. But in between, across the 'crisis period', the Bank's gross dividend yield is consistently above that of Consols, often significantly, offering confirmation that the Bank was seen as riskier across this time when crises were regular.

Some have asserted that things changed as the Bank moved from being a joint stock bank with its first responsibility to its shareholders, to a primary concern with its public responsibilities (Sayers 1976, vol. I, p. 11; Howe 1994, pp. 40–1). Further, the claim has been made that the move was eventually 'effected in part by transforming the dividend into a constant payment unrelated to current profits so that shareholders became transformed, in practice, into bondholders' (Capie *et al.* 1994, p. 13). This certainly looks to be the case after 1914. However, in the second half of the nineteenth century, dividends were closely related to profits and dividend payments were highly variable, and there were periods of stable dividends which did reflect current profits.

What about the Bank's profits and the state? The Bank was established by charter and there were a number of subsequent renewals (Clapham 1946, vol. I, pp. 58–65, 94–6, 98–103, 177–82). Broz and Grosman list the financial inducements that were exchanged in return for rights and privileges (Broz and Grosman, 2003, pp. 51–2, 58–60). The financial concessions came mainly in the form of low interest or interest-free loans, representing income forgone for the Bank. For example, the £1.6 million interest-free loan in 1742 (when Bank Rate was 5 per cent) represented lost annual income of £80,000 when profits were running at around £500,000. More explicit was a payment of £110,000 made to the Government in 1764 and described in the General Ledger as 'money given by the Bank for the renewal of their Charter…'. Profits in that year were £414,000. Much of the debate was around the 'value' of the charter to the Bank, but as with profits this was based on guesswork (Clapham 1946, vol. I, pp. 179–82). There is scarce detailed archival evidence on the process of charter renewal until that of 1833 with correspondence between the Bank and the Chancellor. Here, there is a mention of profits with the Bank holding out against any arrangements which encroached on the 'profits of their private business,

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and the beneficial investments which they now possess, in neither of which have the Government any just or equitable right to participate'.[34] This aside, we find little evidence to suggest that charter renegotiations were conducted with any knowledge of actual profits, though some of the financial aspects did represent a loss of revenue.

All firms have to pay tax and the Bank was no exception. But for the first 200 years approximately of its life taxes were light. That changed with the First World War when, in addition to income tax, an Excess Profits Duty (EPD) was imposed. The Bank had to make an assessment of its pre-war normal profits and that was used as the base for assessing excess profits in war. There were several exceptions of different kinds (Kirkaldy 1921; Arnold 2014; De Cogan *et al.* 2015). For the years 1915 to 1921 the Bank paid EPD totalling £12.26 million on calculated excess profits of £21.75 million. However, due to the way that the base was calculated, and other allowances, the excess profits figure was far lower than the actual profits of £49.19 million. This is confirmed in a 1919 report to the Bank's Court of Directors that admitted that the treatment of tax assessments meant that actual profits were still greater than the profits in previous years, and total reserves had substantially increased.[35]

During the Second World War, EPD was replaced by Excess Profits Tax (EPT), which, like its predecessor, was assessed against a chosen base year. The year selected, 1937, proved to be 'an exceptionally favourable standard period'.[36] Indeed, so favourable was it that the Bank did not pay any EPT at all. Although there was no dialogue with the state, general rates of taxation were high, meaning that overall the Bank paid £10.7 million in tax during the financial years ending February 1941 to February 1946 which was 40 per cent of total pre-tax profits.

Nationalisation of the Bank in 1946 clearly represented a change in the relationship between the Bank and the state, though as Capie argues little changed in reality (Capie 2010, pp. 75–60). Holders of Bank stock were compensated with '3% Treasury Stock 1966 or after' to produce the same income as their Bank stock had. (Chester 1975, pp. 237–40; Fforde 1992, pp. 1–30). The Treasury as the single shareholder received a flat annual dividend of £1,746,000 from the Bank. As far as we are aware no other nationalised body paid a dividend to the state in this way. For more than two decades after nationalisation the amount remained unchanged, with the Treasury having no more idea about the Bank's true profits than did previous shareholders. Indeed this unique position was conceded by the Permanent Secretary to the Treasury before a Select Committee in 1970. When asked whether the Bank was the only institution in this country, public or private, in which the directors are answerable to nobody, he replied: 'If by "answerability" you mean producing accounts

[34] J. Horsley Palmer (Governor) and R. M. Raikes (Deputy Governor) to Althorp (Chancellor), 12 Apr.1833 (M5/202).

[35] 'Report of the Committee appointed by the Court to consider the question of the disposal of any special profits of the Bank and whether an application to increase the capital of the Bank is desirable, 25 Sep. 1919', BoE C40/180.

[36] Humphrey Mynors (Secretary) to Montagu Norman (Governor), 4 Jul. 1941, BoE ADM6/122.

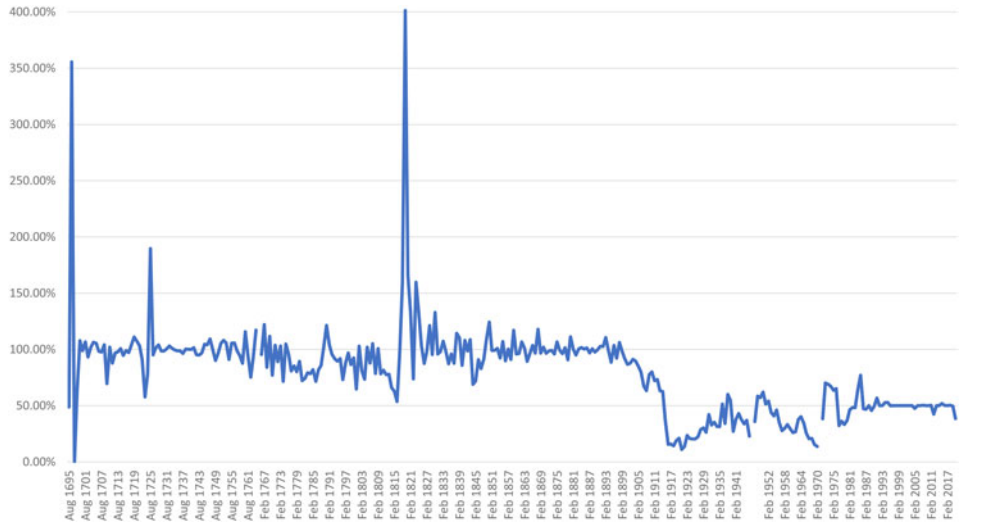

Figure 3. *Bank of England profits returned to shareholders as a percentage of annual post-tax profits, 1695–2020*
Source: calculated from Table 1 (available online).

which somebody else inspects, the answer is yes' (Select Committee on Nationalised Industries 1970, para. 249). In 1972 the payments increased to £5.5 million and were thereafter variable, and the subject of testy negotiations between the Bank and the Treasury. From 1984 the wrangling was replaced by a formula that set the dividend at 50 per cent of post-tax profits. With some adjustments for exceptional items, this 50/50 split has remained the basis for profit distribution.[37]

Finally, Figure 3 shows the changing balance of the distribution between the Bank and the shareholders over 300 years, measured by dividends as a percentage of pre-tax profits. Where this is more than 100 per cent indicates a loss which was met from reserves; less than 100 per cent, and the Bank was retaining profits. Between 1694 and 1946 four periods can be identified. From foundation to around 1760 profits were largely returned to shareholders with only a small accumulation of reserves. There followed 50 years or so when retained profits grew substantially; but by the end of the Napoleonic Wars, and following some pressure from the shareholder Allardyce, these profits were distributed in the form of high dividends and bonus payments. There was then a period ending around 1890 when profits were fluctuating but were again largely distributed in dividends. Over these three periods 96 per cent of profits were returned to shareholders. From the final decade of the nineteenth century to the end of the Second World War accumulated profits again grew

[37] Robin Darbyshire to Rupert Pennant-Rae (Deputy Governor), 'Dividend to HMT', 15 Mar. 1994, BoE 5A19/12.

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rapidly and this was reflected in the sums retained in reserve and contingency accounts. From 1891 to 1946, only 37 per cent of profits were distributed to shareholders.

Perhaps surprisingly, after nationalisation the percentage of profits returned to the shareholder (HM Treasury) fell to historically low levels. From 1946 to 1970 of the total post-tax profits of this nationalised firm only 31 per cent were returned to the shareholder; and in the late 1960s it was as low as 20 per cent or less. After some fluctuations in the 1970s and early 1980s a 50/50 split in the profits becomes clear.

VII

The Bank's profits are of interest for their scale, changing path, principal sources and what happened to them. But first a proper series had to be constructed. The compilation of the series over a period of more than three centuries, and on a reasonably consistent basis, presented some challenges. That it can be done at all highlights the contemporary book-keeping and the subsequent preservation of the records in the Bank's Archive. However, to reiterate, these figures were shared with very few people, even inside the Bank. Until annual accounts were first published in 1971, the outside world, and that included the Treasury, had little idea of the actual profits: over 270 years of secrecy.

In terms of the source of profits, an important point to make is that seigniorage was never more than a tiny source of income for the Bank, and after 1929 not at all. The main source of the Bank's income was from banking business: interest, either on investments (Government securities) or from discounts, loans and advances. Since expenditure was largely stable, any significant increase in interest rates meant larger profits. Of course quantity was important as well as price, so the amount of securities held (reflected in the balance sheet), or the Bank's market operations (for instance during crises) also mattered.

One of the reasons for the changing path of profits was war. There were many armed conflicts over three centuries, but only two really stand out: the Napoleonic Wars and, to a greater extent, the First World War. During and after the latter, even the payment of EPD failed to dent the scale of the increase. Financial crises also had some impact on profits, but apart from 2007–9, not hugely so. In the era of published accounts after 1971 the trends are interesting but much of the variation is explained by a combination of changes in accounting conventions, provisions and capital receipts.

Perhaps surprisingly, it was during the early decades of public ownership after 1946 that the Bank retained some of the highest proportions of its post-tax profits, although the First World War and after also stand out. In the second half of the nineteenth century profits were volatile, and with virtually everything paid out to shareholders, this was mirrored in the volatility of the dividend in these decades. Reserves were built up out of retained profit to large levels on occasions. The first peak was during the

Napoleonic Wars, though the shareholders reclaimed most. The second, and most significant, peak came during and after the First World War, and this leads to a final point about the Bank's profits and its emergence as a central bank.

During Norman's period as Governor (1920–44), profit levels were high, but the accumulation of hidden reserves reflected Norman's efforts to build a bank capable not only of financing a substantial rebuilding but of coming to the assistance of banks it felt deserving. This view also prevailed after nationalisation. Through the Bank's behaviour during the financial crises of the nineteenth century it gradually emerged as a central bank. Substantial reserves allowed it another role, to give support to individual banks in need – 'to do good by stealth'. While this had its uses, the danger was that it contributed to the notion that the Bank would do a great deal to prevent bank failure, and perhaps contributed to the less prudent behaviour that appeared in later years.

The question of whether the Bank's profits were actively or passively acquired is not straightforward. On occasions the Bank was certainly able to make higher profits as a result of external events. But our judgement is that on balance active acquisition predominated. The Bank managed its banking business and its portfolio of investments in a prudent way, yet remained ready and able to offer support and assistance to banks when required. The excitement of events such as wars, banking and financial crises, and even the odd fraud aside, the Bank's profits and its returns to shareholders over more than three centuries have largely presented a picture of stability. That perhaps is all that is required of a bank, and especially after it became a central bank.

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