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Merchantilist institutions for a first but precocious industrial revolution

The Bank of England, the Treasury and the money supply, 1694-1797

Patrick O'Brien

Professor of Global Economic History

London School of Economics and Political Science

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Department of Economic History

London School of Economics

Houghton Street

London, WC2A 2AE

Tel: +44 (0) 20 7955 7860

Fax: +44 (0) 20 7955 7730

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I

One topical implication of the ongoing programme of attending more closely to the state's role in the construction and development of institutions behind the First Industrial Revolution has been that historians are re-engaging with a theme in financial history that virtually disappeared from view while cliometricians focussed on proximate determinants of long run growth.[1] Thus the wider purpose of this paper is to recall the well documented interactions of England's financial institutions with internal trade and external commerce and to bring into relief the related support they accorded over the long eighteenth century to the operations of an exceptionally powerful fiscal state and its mercantilist strategies of promoting British economic interests at home and overseas**.**[2]

The restoration and widening of this discussion in political economy is predicated, however, upon elaborating upon knowledge out there in secondary and primary sources upon the sustained and systematic connections between the Treasury, the Bank of England and the accumulation of Government debt which (by way of unintended consequences) strongly influenced one all important macro variable behind the growth of the economy - namely the money supply.[3] My analysis of these connections will be heavily concentrated upon evidence for the late eighteenth century because the circumstances of a major war against Revolutionary France 1793-1802; leading to the suspension of cash payments in 1797 exposed their nature and ramifications more clearly than at any time since the foundation of the Bank of England during another costly bout of warfare in 1694.[4] Furthermore and after a century of financial intermediation under the auspices of the Bank by the late eighteenth century the scale, density and spread of provincial (country) banks had reached a level where the British economy

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[1] P. K. O'Brien, 'State Formation and the Construction of Institutions for the First Industrial Nation', in H. J. Chang (ed.), *Institutional Change and Economic Development* (New York, 2007)
[2] P. K. O'Brien, 'The Nature and Historical Evolution of an Exceptional Fiscal State and its Possible Significance for the Precocious Industrialisation of the British Economy from Cromwell to Nelson', (forthcoming as a Survey and Speculations in *Economic History Review,* 2010. Hereafter, *An Exceptionai Fiscal Slate* .
[3] E. Coppieters., *English Banknote Circulation* (Louvain, 1955).
[4] D. W. Jones, *War and Economy in the Age of William III and Marlborough* (Oxford, 1988), 5 R. Levine, 'Financial Development and Economic Growth: Views and Agenda', in *Journal of Economic Literature,* 35 (1997), pp. 688-726.

conducted a very high (alas unmeasurable) share of its transactions with bank notes and deposits and with paper credit (negotiable bills of exchange) - convertible with greater ease that anywhere outside the Netherlands into the liabilities of specialised institutions for the funding of trade, agriculture and industries as well as the state.

On theoretical and empirical grounds modern economics posits 'a positive first order relationship between financial development and economic growth'. An efficient network of financial institutions reduces transaction and informational costs, mitigates risks, monitors firms, mobilises saving and facilitates trade.[5] Although technical and organisational innovations have undoubtedly promoted development in the financial services industry, other functions including a country's legal and political systems have also promoted its expansion, integration and efficiency at critical stages in the growth process. Thus it remains important to understand the evolution of the kingdom's financial system through time and to comprehend how the fiscal and financial activities of the State operating in cooperation with a chartered private corporation (the Bank of England) generated benign as well as malign outcomes for the growth of the economy. Major connections are most easily exposed and referenced for a period of intense and costly warfare for which sources happen to be abundant Nevertheless they operated over the entire century between the Foundation of the Bank of England and the suspension of specie payments in February 1797 to provide an elastic supply of revenues which were created to fund the foreign, imperial and strategic policies of England's successful mercantilist state and which were based upon a highly effective fiscal constitution. Without the fiscal and financial operations of the state (which intensified during six interludes of warfare between 1689 and 1793) it is difficult to conceive of a comparable pace and pattern in the long run development of the financial services industry for the economy as a whole.

II

By the late eighteenth century national supplies of money and credit consisted of gold, silver and copper coins, tokens, bills of exchange and liabilities of banks, including notes of the Bank of England, notes of private banks of issue and bankers deposits. To plot trends for any kind of statistical breakdown of the total money supply is impossible because data on such important components as bills of exchange in circulation and bank deposits does not exist. Only

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[5] R. Levine, 'Financial Development and Economic Growth: Views and Agenda', in *Journal of Economic Literature* 35 (1997), pp. 688-726.

conjectures are available on the amount of gold, silver and copper coin and bank notes in circulation. These gaps in information are serious because according to Ashton bills of exchange in the hands of the businessmen may well have been a very important component of the nation's money supply[6]. Furthermore and although bank deposits were not generally employed as a means of payment in the provinces, within the capital cheques and drafts upon bankers may have exceeded the value of Bank of England notes in circulation.

Forms of money which attracted contemporary attention included gold, silver and copper coins, and notes issued by the Bank and by bankers located outside the metropolis. For long stretches of the eighteenth century the supplies of coins failed to meet growing demands for a means for fractional payments particularly during the wars with France (1793-1815) when the market price of specie rose and they all be disappeared from circulation.[7] Within the metropolitan area notes issued by the Bank filled the gap left by the negligence of the Government to mint adequate supplies of coins, but its notes seldom circulated beyond a thirty mile radius from central London. Elsewhere, as Pressnell's classic study demonstrated, the problem had been alleviated by the note issues of country bankers. At the beginning of the Revolutionary War the amount of their notes outstanding throughout Great Britain probably equalled issues by the Bank and by the battle of Waterloo may have exceeded it[8] Country bank notes circulated within fairly well defined geographical areas and were employed for such payments as wages and purchases of local produce. Payments for goods and services traded between different parts of Britain generally took the form of bills of exchange drawn upon banks located in the capital.[9] Between the end of the Seven Years Wars and 1793 the liabilities of the banking system probably achieved a new position of dominance in the country's money supply. Bankers issued notes and created deposits in exchange for assets offered by those who wished to obtain acceptable purchasing power. Their ability to acquire assets and create liabilities is today regulated by the central bank, but until well into the nineteenth century it seems incorrect to use a term as strong as 'control' to refer to the status of the Bank of England with respect to the economy's supply of money. The Bank's Directors never claimed to exercise "control" and

[6] T. Ashton, 'Bill of Exchange', in R Sayers (ed.), *Paper.\· in Monetary History,* (Oxford, 1953) pp. 37-38; Coppieters, *Bank Note Circulation,* pp. 21, 144-5, 150 and 154.

[7] A. Feavearyear, *Pound Sterling,* (Oxford, 1931) pp. 169, 183 and 187; L. Pressnell, *Country Banking in the Industrial Revolution,* (Oxford,. 1956), p. 159; thereafter: Pressnell, *Country Banking.* ; CC on Suspension, 1797. Three Reports from the Committee of Secrecy on the Outstanding Demand on the Bank of England and on the Restriction of the Payments in Cash, 1797, in Parliamentary Papers 1826 (3), [henceforth P,P. 1826 (3)]; H. Thornton, *Paper Credit,* (London, 1802), p. 97 and Statesmen's Papers deposited at British Library Additional Manuscripts, [henceforth BLAM Papers, with volume numbers]; p. Mathias, "Official and Unofficial Money in the Eighteenth Century'. in *The British Numismatic Journal,* 74 (2004), pp. 68-83.

[8] Coppieters, *Bank Note Circulation,* p. 1; Pressnell, *Country Banking.* pp. 15, 16, 136, 142 and 159.

confusion has been created about the extent of their powers by a conflict of views among contemporary and more modem writers on the nature and degree of central direction over the eighteenth century monetary system.

Controversy has arisen not on the problem of the Bank's relations with London banks, a subject generally ignored by contemporaries, but about its influence upon issues by banks outside the metropolis. One school of thought, ("bullionists") maintained that the expansion of credit by country bankers could be determined by the Bank.[10] Malthus, for example considered it 'a point of susceptible of complete demonstration that an increase in the issue of Bank of England notes is attended with a proportionate increase in the issue of country bank notes'.[11] On the other side while few contemporary writers denied all connexion between the Bank of England and the note issues of country banks, Bosanquet (a Bank Director), economists such as Wheatley and (Chancellor of the Exchequer, Vansittart) came close to this position. Decades ago two American economists, Silberling and Angell argued that the Bank exercised little influence over variations in the money supply.[12] Yet nearly all bankers who appeared before Parliamentary Committees investigating the monetary system during the war admitted they followed the lead of the Bank in the expansion and contraction of credit.[13] Gilchrist, Chairman of the British Linen Bank, to take but one example, stated quite unequivocally that, 'If the Bank of England were to restrict the issues of course Scots Banks would find it necessary to restrict their issues.'[14] Parliamentary reports had no doubt, to quote one, that 'the Bank of England is at the head of circulation', or to cite another that the credit of private bankers was 'a superstructure raised upon the foundation of the Bank of England'.[15]

Most contemporaries might well have shared such general opinions but the mechanisms

[9] Feavearyear, *Pound Sterling,* p. 159.
[10] D. Ricardo, 'High Price of Bullion', 1811, in P Sraffh (ed), *Works* 3 (1951), pp. 87-88; W. Boyd, 'Letter to Pitt', (1811), Goldsmiths Collection,. University of London Library {henceforth GC]: p. 23 ; F. Fetter (ed.), *Economic Writings of Francis Horner* in *Edinburgh Review, 1802-6* (London, 1957), p. 46; H. Parnell, 'Observations on Paper Money'. (1828) GC. p. 33 and E. Cannan.. *Paper Pound of 1797-1821*: *The Bullion Report 8th June 1810* (London 1925), p. 61.
[11] T. R. Malthus. 'Rewiew of the Controversy'. (1811) GC pp. 457-8.
[12] C. Bosanquet. 'Pactical Observations', (1810) GC p. 78; J. Wheatley. 'Remarks on Currency and Commerce'. (1803) GC pp. 209-21; Cobbett's Parliamentary Debates 1803/4 - 1812. Vols. 1-22 [henceforth: PD]; Vols. 23-31 are Hansand's Pariamentary Debates: N. Silberling. "Financial and Monetary Policy", *JPE'* (1924), pp. 399 and 419-20; J. Viner, Studies in *The Theory of International Trade* (1955). pp. 157-70; J. Angell *Theory of International Prices.* (Cambridge, Mass. 1926). pp. 44, 479 and 490.
[13] *CC* on Suspension. 1797, PP 1826 (3). 142. pp. l90 and 212; *CC* on Bullion, together with Minutes off Evidence from the Select Committee on the High Price of Gold Bullion in Parliamentary Papers 1810 (3) [henceforth: PP 1810 (3)]: 141 and 143.
[14] *CC* on Bullion PP 1810 (3), 114.
[15] *CC* on Suspension, 1797, PP 1826 (3),142.162; Cannan. *Paper Pound,* 61; and CC on Bullion PP 1810 (3), 90 and 132.

through which the Bank brought about variations in the money supply at the end of the eighteenth century were not elucidated until modern times by Wood, Clapham and Pressnell. Briefly stated, their conclusions are that the Bank affected the overall creation of credit by influencing the reserves of London banks and through them (indirectly) the reserves of banks located outside the metropolis.

London bankers regulated the liabilities they incurred on reserves of specie and Bank notes.[16] During the war years when specie all but disappeared from Circulation, Bank notes became the dominant form of reserve money. London banks obtained their reserves from several sources including the deposits of clients (largely landowners and merchants), handling public funds, en route to or from the Exchequer, deposits from country bankers and finally directly or indirectly as credit extended from the Bank of England itself.[17] Before 1797, the Bank did not permit London banks to rediscount bills of exchange, but this regulation could easily be circumvented by arrangements between the London bankers and one of the Bank of England's mercantile clients. But London banks could open drawing accounts at the Bank and borrow money in that way and Clapham's figures show that in 1793 just under half of them kept balances at the Bank. As long as alternative ways existed for London bankers to obtain Bank notes and specie, direct and immediate control over their reserves could not be exercised by the Bank. Nevertheless, since the Directors determined the level of Bank notes and deposits in Circulation, by expanding or contracting the Bank's credit they could ultimately effect the reserves of London Bankers.

The Bank incurred liabilities (issued notes or created deposits) in four ways: in exchange for gold or silver, as advances to individuals or firms, by discounting bills for the Government and by discounts for the private sector.[18] The exchange of Bank notes for gold did not add to the supply of reserve currency since gold already took that form, but advances and discounts for either the private or the public sector certainly did. The Bank followed normal banking practice and matched liabilities with assets and its accounts for the years 1789-91 show that about half of its liabilities were backed by public securities, 41 per cent by bullion and the remainder by private assets. If the portion of notes and deposits backed by bullion is excluded from view and attention is focused on the monetisation of private and public assets, it then appears that some 80 per cent of the Bank's outstanding liabilities in the years immediately before the war were incurred in the form of loans afforded to the state. This picture changed radically during the war

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16 E. Morgan.. *Theory of Central Banking 1797-1813.* (Cambridge, 1943). p. 52; *CC on Suspension*, 1797. PP 1826 (3*).* 35-7, 43 and 191-2; Boyd, 'Letter to Pit', (1811), GC p. 23

17 D. Joslin. 'London Private Bankers', in *Economic History Review* (1954), pp. 167, 176-7.

18 J. Clapham. *The Bank of Engand, a history* 2 Vols (Cambridge. *1945),* pp. 169, 172 and 204-5; J. Clapham. 'The Private Business of the Bank', *Economic History Review*, 16 (1941), pp. 83-4

years when the amount of bullion held at the Bank fell sharply and discounts for the private sector became a more important proportion of total assets.[19] Nevertheless, the point to stress is that the creation of reserve money by the Bank of England originated as a response to requests for loans. By refusing to meet either Government or private demands the Bank could effectively curtail the supply of reserve money upon which London and indirectly provincial bankers conducted their operations and expanded credit.

Although the Directors could legally refuse requests for credit from the Treasury, in practice they had little choice but to accede in wartimes which occurred frequently after the foundation of the Bank in 1694. Outright refusals could have disrupted military and naval mobilisation and no Government would for long tolerate the frustration of its strategic policies by a private corporation. Furthermore, the Bank enjoyed a monopoly as a joint stock bank of issue for continued services to the State and Ministers took good care to make the Bank's privileges subject to periodic review and renewal.[20] Its Directors recognised that, in the last resort, they simply had to obey and their conflict with the Treasury during the years 1795-97 reveals how their power to curtail loans to the Government consisted of no more than pressuring the Chancellor to borrow more money directly from the capital market.[21] The monetary history of these three years is also very revealing for the light it sheds on the influence exerted by the Bank and the Treasury on the liquidity position of London's money markets. Between 1795 and 1797 the Chancellor of the Exchequer as head of the Treasury attempted to comply with the Directors' pressure to market bonds rather than bills and to issue a higher proportion of bills direct to the capital market. Whenever the Bank exchanged its notes for exchequer and other Government bills, subsequent expenditure by the navy, army and other departments of state added to the supply of Bank notes in the hands of the public, who then deposited surplus cash with private bankers. Finding themselves with more reserve currency in their tills bankers then granted additional credit to clients and money supplies and transactions increased. When the Treasury offered a larger amount of public securities (bills as well as bonds) directly to the money market (and the Bank of England concurrently failed to increase its discounts and advances to the private sector), bankers found themselves confronted with higher levels of demand for loans

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[19] The data on liabilities and assets of tbe Bank o fEngland 1720-1815 ? : Refers to: Notes in Circulation; Drawing accounts; Private Deposits; Total Deposits; Bullion Reserves; Public Securities: Private Bills and Notes Discounted; Private Securities. Miscellaneous. It can be reconstructed from statistics published by Clapham. *The Bank*, Vol I. pp. 295-96 and Report from the Committee of Secrecy on the Expediency of Renewing the Charter of The Bank of England in Parliamentary Papers. PP 1831-32 (6) appdxs. 5, 24 and 32 [henceforth PP 1831-32 (6)].

[20] Clapham, *The Bank*, Vol 1, p. 177 and CC on the Bank PP 1807 (2), p. 111.

[21] *CC* on Suspension 1797, PP 1826 (3), 17, 73, 14S and 157 and Appendix. 9.

and credit. Unless they lowered the ratio of Bank notes and specie to outstanding liabilities, demands for loanable funds exceeded the available supplies and interest rates rose. Rates on public securities, unaffected by the operation of usury laws, inevitably went higher than rates on private bills, shares and mortgages. As state assets were less risky and more liquid than mercantile bills of exchange a greater share of the available supply of investible funds passed into the hands of the Government and the private sector experienced shortages of credit. Furthermore, the higher profits made on Government paper prompted clients of London bankers to withdraw their deposits (which paid no interest) in order to invest in liquid Government bills. This reduction or slower rise of cash deposited with London bankers reduced still further their capacities to create credit. Thus when pressure from the Bank forced the Treasury into the market and the market obtained no compensatory reserve money in the form of discounts from the Bank of England, facilities for borrowing money diminished and interest rates increased.[22] Although the Bank could only divert demands from the Treasury to the market it held powers to refuse to discount bills or make advances to the private sector. In wartime when higher profits could be made from speculation in public securities, merchants, landowners, farmers and industrialists often found it difficult to secure accommodation from London bankers and turned to the Bank of England.[23] Provided they expressed willingness to pay 5 per cent and the Bank complied with their requests, the level of private finance available would not fall. Moreover, as the Bank increased its loans the supply of reserve currency available to London bankers also rose and credit conditions in the metropolis did not become stringent. But when the Bank behaved as it did between December, 1795 and February, 1797 (when the Directors not merely forced the Treasury into the market but rationed credit to the private sector at the same time), the private sector inevitably experienced real difficulty in raising funds and interest rates rose sharply.[24] Moreover, the effects of the Bank's policy went beyond restriction in loans and reserve currency and adversely effected the confidence of London Bankers, who withheld accommodation and operated with higher reserve ratios.[25]

While the experience of 1795-97 revealed clearly how the liquidity of the London money

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[22] PP 1826 (3). 22, 35-7, 43, 72, 157, 175, 178, 180, 191-2, 212, 303; *CC* on 10 Naval Report. PP 1805 (5), 42, 47 and 69; Thornton. *Paper Credit.* 281, 289 and 291; Boyd, "Letter to Pitt", (1811). GC, pp. 2 and 5; Minutes of the Committee of the Treasury of the Bank of England (henceforth Bank Minutes/BM) 15.4.96, 23.6.96 and 3.11.96; Pitt Papers, Public Record Office 03/08/115 (hereafter P.R.O.); 115; Auckland Papers BLAM 34454; G. Wakefield, Ge, 'Observations', (1797), 26 and 54 and *Monthly Magazine* (henceforthMM), May (1796), p. 326 andMM, July, (1796), p. 498.

[23] D. Joslin, 'London Bankers' in J.. Pressnell, (00.), *Studies,* (1960), in *1he Industrial Revolution,* pp. 157 and 175; PP 1826 (3), 17, 43, 71,145 and 207.

[24] "Pitt Papers P.R.O. 30/8/115, 145 and 178; Bank Minutes/BM 9.2.97 and PP 1826 (3), 12, 154, 175 and 208.

[25] PP 1826 (3), 35-7, 173-5, 190 and 215 and Pitt Papers, P.R.O. 30/8/115.

market depended on the credit policies of the Bank of England the indirect dependence of banks outside the metropolis was only elucidated by Pressnell in 1956. Although some appreciation of their subordinate position can be detected from the evidence of country bankers to Parliamentary Committees in 1797 and 1810.[26] Outside London the dominant component of the money supply (apart from bills of exchange) consisted of notes issued and to a lesser extent deposits created by bankers. Since liabilities incurred by provincial banks were legally convertible either into gold or (after the suspension of specie payments in 1797) Bank notes, some limits to their abilities to create credit existed, namely their need to retain a certain amount of reserve currency in order to meet fluctuations in demand.

Provincial banks did not however, regulate their liabilities simply upon a reserve of specie and Bank notes but on reserves which included gold, notes of the Bank of England and portfolios of London assets. The latter consisted of highly liquid securities including exchequer bills convertible at call into cash and a balance on deposit with a corresponding London banker.[27] London assets had to be purchased with London money. Deposits with London bankers could only be created or maintained if country bankers left a balance of Bank notes and specie in the hands of a banker in the metropolis or London bankers extended credit to them.

Country banks obtained their reserve currency and London assets through several channels and in a variety of forms. Undoubtedly the most important source included deposits from clients who, as merchants, landowners, farmers and industrialists, traded either with or through the capital and received remittances in the form of specie, Bank notes, or, more commonly, bills of exchange drawn upon banks located in London. Deposits from officials concerned with the despatch of taxes to the Exchequer formed another but less important source of reserve funds. Other deposits came from local Government bodies, turnpike trusts and the carriage, haulage, canal and coastal shipping companies involved in the business of transporting passengers and goods overland and by sea. Given the dominance of London as a market for the consumption of provincial products and also as a centre of internal and international trade, the flow of funds from the metropolis to its hinterland provided country bankers with a more or less constant supply of London money or assets such as bills of exchange, readily convertible into money in the capital.

Thus country banks could increase credit when permitted to draw upon the resources of

[26] PP 1826 (3), 179 and PP 1810 (3),113-5 and 140.

banks in London. By the late eighteenth century nearly all provincial bankers had established close working arrangements with a bank in the capital. They maintained a balance of funds surplus to their needs in London to redeem their bills of exchange and other drafts made payable there. London bankers also acted as intermediaries for country banks in the purchase of public and other securities sold on the metropolitan capital market.[28] In brief London bankers held and used the reserves of country bankers and could increase their reserves by extending credit to them.[29] Banks located in the agricultural counties rarely called upon banks in London for advances, because usually their balances on deposit more than sufficed to meet any payments in the capital. But banks located in the industrial parts of the country often borrowed from metropolitan banks in order to provide their customers with facilities for the finance of their purchases through London.[30] Since the Bank of England could bring about changes in the amount of reserves (Bank notes, specie and London assets) held by country bankers, it was in a position to influence their ability to create credit. The Bank could do little to affect the propensity of the population outside London to exchange cash for bank deposits, although the effects of its credit policies on confidence might increase the general preference for liquidity.[31] But the Bank could certainly inflate or deflate demand for provincial products in London by expanding or contracting the supply of credit afforded by London bankers and mutatis mutandis the flow of remittance from the capital to the countryside. Moreover, since London financed and handled a large share of the country's exports any alteration to supplies of metropolitan credit to provincial merchants and industrialists affected the level of receipts from exports. If the Bank deflated, country banks, with a time lag, would find that deposits from clients would either fall or fail to rise and unless they obtained reserve currency from an alternative source their ability to grant credit diminished.

Their only important alternative consisted of advances from London bankers. But if the Bank restricted its credit either to the Government or to its private customers, the ability of London bankers to make advances to country banks declined and because country banks depended on London banks for advances the Bank of England could thereby "influence" not merely the liquidity available to the london capital market, but the overall supply of bank money

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[27] Pressnell, *Country Banking,* pp. 116, 120, 197, 285-8., , 408 and 416; Thornton, *Paper Credit,* pp. 215-7; PP 1810 (3),113-5 and 140; J. Leighton-Boyce, *Smith Payne and Smith* (London, 1958), pp. 111 and 116 and R Sayers., *Lloyds,* (London, 1957), p. 110.
[28] Pressnell,. *County Banking,* pp. 45, 60-67, 76, 77, 122 and 243-59.
[29] Joslin, 'London Private Bankers', pp. 180 and 183; Leighton-Boyce, *Smiths,* pp. 111, 116 and 127; Pressnell, *Country Banking,* pp. *76-7,* 80-1, 84, 98, 117-25, 285, 408 and 416, and R Fulford, *G{ynns,* (London, 1953), p. 96.
[30] Morgan, *Central Banking*, p. 21; Feaveryear, *Pounds Sterling,* pp. 164-5, and Pressnell, *Country Banking*, pp. 76 and 288.
[31] PP 1826 (3), 35-7.

for the economy at large.

Influence is not, however, the same as control and it cannot be proved that the expansion or contraction of credit by the Bank never led to proportionate changes in the liabilities of the entire banking system. In the eighteenth century the Bank of England never occupied a position strong enough to maintain the money supply at some pre-determined level.[32] It had only slight influence on the volume of bills of exchange circulated as money. Inflows or outflows of bullion which accompanied changes in the country's balance of payments position increased or diminished the gold reserves of private bankers and parri passu their ability to create credit. While movements in exports and imports or remittance on capital account were certainly not as independent of the policies pursued by the Bank of England as its Directors asserted at the time, there are no reasons to describe monetary policy as having not more than an "influence" on international trade.[33] Thirdly, changes in the level of cash on deposit with bankers could come about through changes in general preferences for liquidity without any contraction or expansion of credit by the Bank. Only if the Bank's policies influenced confidence could the Directors affect the public's disposition to switch between bank deposits and cash holdings. Here again the Bank policies constituted only one factor among many which disposed the public towards liquidity.[34] But by the rationing credit and forcing the Treasury into the market the Directors could force up interest rates and initiate a switch from bank deposits into public securities. Provided the money then expended by public departments did not pass back immediately into bank deposits private bankers would be prompted to contract liabilities. Fourthly, the Bank could not effectively control its advances to the Treasury and any increase in Government expenditure financed by the Bank created possibilities for a multiple expansion of credit throughout the banking system. In order to restrain rises in the money supply during periods when the level of public expenditure increased the Bank could only encourage the Treasury to borrow directly from the market and to cut back its own advances to the private sector.

Perhaps most important of all, the Bank's powers over the money supply were limited by the fact that both London and country banks regulated their liabilities on *flexible* rather than *fixed* reserve ratios. Abundant statistical evidence demonstrates pronounced variations in the ratios maintained by country bankers for the early nineteenth century.[35] Unfortunately no comparable statistics exist for London bankers, but remarks by Henry Thornton and John

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[32] E. Wood, *English Theories of Central Bank Control* (Cambridge, Mass., 1939).
[33] PP 1810 (3), 95-7.
[34] Morgan, *Central Banking,* pp. 52-4.
[35] Pressnell, *Country Banking,* pp. 196, 203-6 and 214; Sayers, *Lloyds,* p. 177 and Morgan, *Central Banking,* p. 12.

Wheatley's in their pamphlets suggest that similar flexibility prevailed in the capital.[36] The range of variation depended very much on confidence. If bankers took an optimistic view of business prospects their advances expanded. If their perceptions tended towards pessimism the money supply often contracted. Many of the economic crises of the eighteenth century originated in changes on liquidity preference among the public and bankers. The ratio of reserves to the outstanding liabilities of the banking system usually fell in the upswings of business cycles and rose in downswings.[37]

Given these very real constraints on the Bank's powers it is, to sum up, inappropriate to use verbs like control to refer to its status vis a vis the rest of the banking system. Since the Bank had never made any consistent attempt to exercise control it is difficult to decide how serious these limitations were. The experience of the years 1795-97 suggest that the expansion of credit by the Bank created conditions for expansion by other banks and that any significant contraction of its advances either to the State or the private sector lead to some unmeasurable contraction in the overall money supply. Bankers operating at the time accepted this view and no record exists of credit contraction by the Bank coinciding with expansion by private banks. By the late eighteenth century if the Bank was not yet in control, it certainly stood at the head of the banking system.

III

Government borrowing affected the money supply and in turn the money supply affected the terms and facility upon which the Treasury marketed public securities. If the Treasury borrowed directly from the Bank of England, through the issue of exchequer bills, the supply of reserve currency in circulation rose and created conditions for credit expansion throughout the banking system. Whenever the banks expanded their liabilities competition between the public

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[36] Thornton, *Paper Credit,* pp. 113 and 286; J. Wheatley, 'Remarks on Currency and GC Commerce', (I802), GC, pp. 209-21; PP 1810 (3), 147-8 and Viner, *Studies,* p.159.

[37] CC *on Commercial Credit* 1793. Report from the Select Committee Appointed to Take into consideration the Present State of Commercial Credit 1793 in Parliamentary Papers 1826 (3), [henceforth PP 1826 (3)], 125-33; T. Tooke, *History of Prices,* Vol. 1, (1838), p. 177; CC on Suspension 1797, PP 1826 (3), 69 and 303; *LC on Suspension* 1797, Report of the Lords Committee of Secrecy to Enquire into the Causes which Produced the Order of Council of 26 February 1797 in Parliamentary Papers 1810 (3) [henceforth PP 1810 (3)], 284-5; Thornton, *Paper Credit.* p. 280 and CC *on Resumption,* Two reports from the Committee of Secrecy Appointed to consider the stale of the Bank of England with Reference to the Expediency of the Resumption of Cash Payments in of the Resumption of Cash Payments in Parliamentary Papers 1819 (3) [henceforth -pp I819 (3)], 166-7.

and private sectors for loanable funds declined and the Treasury found it easier and cheaper to borrow the funds it required. A plentiful supply of credit satisfied demands for liquidity and encouraged those with idle balances to speculate in Government bills. When we recall that the Treasury sold public securities to middlemen (loan contractors) who normally operated with borrowed funds, it is obvious why easy credit conditions would raise the level of demand for bills and bonds. As Sir Richard Carr Glynn, the London banker, observed, 'a want of cash forces Merchants and traders to sell out of the funds and obtain cash from people with money in the funds'.[38] Thus whenever the Bank restricted the supply of its notes and deposits either by forcing the Treasury into the market or by rationing discounts to the London business community, its policy produced a decline in the money supply which heightened competition between public and private sectors for funds and forced up rates of interest. If the Bank's action also affected confidence the pressure for liquidity could prompt a withdrawal of balances from banks by the public thereby reducing the supply of loanable funds still further. Since changes in the liquidity of the London money market exercised such a powerful influence on the prices obtained by the Treasury for its securities, it is important to understand the principles upon which the Bank normally regulated advances to the State and the private sector.

Advances took the form partly of deposits but mainly of notes issued to the Government and the private sector. Since the Bank could not refuse to accommodate the Treasury effective control over its liabilities could only be exercised in relation to credit granted to the private sector. This credit included discounts on bills of exchange and drawing and deposit facilities granted occasionally to individuals but more generally to the large city corporations such as the East India, South Sea and Hudson Bay Companies.[39] Bills of exchange constituted the most important private asset held by the Bank, but its regulations on discounting do not indicate that the Bank set out to attract clients in the eighteenth century. Only firms located in the capital could discount their bills. The privilege also required a Directors' recommendation, usually accorded only to well-established and solid businessmen. Bankers could not enjoy the facility nor, for example, could persons the Directors disdainfully referred to as 'speculators'. Rules on the kind of bills discounted appear to have been equally stringent, but practice by the 17905 had departed from the letter of the law. Bills discounted had to be for the purpose of industry of trade, of short maturity (one to three months) and for amounts above £50. Continuation loans could not be countenanced and no firm could owe the Bank more than £3,000 at any one time on inland bills of exchange. These rules and the higher rates of interest charged by the Bank suggest the Directors did not compete seriously with London bankers in the discount business.

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[38] *CC* on Suspension 1797, PP 1826 (3), 43.

By the French wars some 1200 to 1500 firms discounted with the Bank. Just under half of outstanding advances on bills of exchange in 1799 were to merchants engaged in foreign trade and the remainder covered almost every other mercantile and manufacturing activity represented in London.[40] Even the Bullion Committee, so hostile to the Bank on other counts, noticed that 'the discount of mercantile paper is confined to paper of undoubted solidity arising out of real commercial transactions and payable at short fixed periods'.[41]

The Bank never enunciated principles for the regulation of credit in the eighteenth century and it is not easy to make unequivocal statements on the subject. A survey of practice over time supported by somewhat vague statements made by its Directors to Parliamentary Committees allows historians to deduce, if not principles, at least rules of thumb. First of all, it is clear that since the Bank's liabilities represented promises to pay on demand a certain sum in specie, the gold reserve ultimately regulated issues of notes and deposits. Only the rules governing the amount of liabilities incurred by the Bank on a given reserve of bullion are in doubt. Lovell's article and statistics covering the period 1720-97 reveal that the Bank did not maintain anything that could be termed a fixed ratio of bullion to either its note issue or its total outstanding liabilities of notes plus deposits.[42] Although the range of variation ran from a minimum of 5 per cent to a maximum of 66 per cent, for 58 of the 76 years covered by the data the ratio fluctuated between 20 per cent and 50 per cent; for ten years it fell below 20 per cent and for seven years rose above 50 per cent.'[43] Indeed, in 1797 the Directors repudiated the idea that they regulated credit on anything but highly variable specie ratios. When asked by the Committee on Suspension, 'Will it appear from any documents laid before the Committee in what proportion the Bank regulates its issues?', Bosanquet then a senior Director, replied: 'No I conceive it will not because although the Directors have attention to the state of their cash they have no stated or precise rule to regulate their conduct'. When asked why the Bank wished to suspend specie payments in 1797 though they had more gold in hand than in 1783 Bosanquet admitted, 'It is possible for the Bank to be a much safer situation with a smaller sum in specie when public affairs are prosperous'. He also revealed that the Bank judged the quantity of gold necessary for its safety 'from a probability of permanent abundance. Whenever there is an influx of bullion the Bank has nothing to fear, when a drain takes place it is a period for them to be alarmed'. For the Directors, predicted indications of actual or potential movements in specie

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[39] Clapman, *The Bank,* Vol I. pp. 204 and 208.
[40] Clapman, *The Bank,* Vol 1. pp. 124, 125, 129-30, 204, 205, 208, 215-6; *CC* on Bullion PP 1810 (3), *89, 95, 97, 9S,* 157 and 220.
[41] Cannan, *Paper Pound,* (1925), p. 46.
[42] J. Horsefield, 'The Bank and Its Treasure', in T. Ashton and R Sayers (eds.), *Papers in Monetary History,* (Oxford, 1953), pp. 59 and 65; Clapman, *The Bank,* Vol 1. p. 156.

included changes in the volume of exports and imports and anticipated remittances on capital account of the balance of payments.[44] The data available to them to make informed judgments was, needless to say, inadequate.

Clearly the Directors could not be pinned down either in 1797 or at any other time in the eighteenth century. Lovell's seminal study of the occasions when the Bank actually limited credit and of situations when its low bullion reserve might have prompted limitation leaves the impression that they acted upon a variety of purely ad hoc criteria. It depended on the circumstances of the moment and upon the Directors' own hunches about future changes in the economy.

For example, there is no record of discount contraction by the Bank in 172021 or 1725-26 when the ratio of bullion to liabilities outstanding had fallen well below the normal level and exchange rates with Hamburg had dropped below par.[45] But an internal drain of gold associated with the victories of the Young Pretender prompted the Bank to limit discounts in the last quarter of 1745. On this occasion no action was taken until the ratio of gold to liabilities had fallen to the exceptionally low level of 14 per cent.[46] No limitations of discounts are recorded at the Bank in 1761 and 1762 when the exchange had fallen sufficiently below par to make it profitable to export bullion.[47] In 1763 Dutch capital left London and British bankers supported their Dutch correspondents in a post-war European wide credit crisis by loans of bullion. The exchange on Amsterdam fell below par and the Bank's ratio of bullion to liabilities stood at its lowest level for the entire century but commercial discounts continued to expand.[48] Throughout the years 1766-1773 the reserve ratio at the Bank was at a low level. 'Heavy investment in houses, turnpikes, canals, and other public works had been in process for several years at a rate that probably tended to outrun current savings'. Credit was over expanded and in the summer of 1772 private bank failures occurred first in Scotland and the England and spread in the latter months of that year to Amsterdam. Bullion again left England in the early months of 1773 to restore confidence in Amsterdam. Clapham's statement that the Bank early in 1772 'had tried to

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[43] PP 1831-32(6).

[44] *CC* on Suspension 1797, PP 1826 (3), 15-7, 22-5, 39-41, and 73 and *LC* on Suspension 1797, PP 1810 (3), 151, 158, *160* and 247.

[45] PP 1831-32 (6) and T. Ashton. *An Economic History of England,* (London, 1955), p. 253. M Lovell, 'The Role of the Bank of England as a Lender of Last Resort' in *Explorations in Entrepreneurial History* 10 (1957), pp. 166-189.

[46] Clapham, *The Bank,* pp. 233-4; H. McCleod, *Theory of Banking,* (London, 1855), p. 57 and T. Ashton, *Economic Fluctuations,* (Oxford, 1959), p. 123. GC.

[47] Ashton, *Economic Fluctuations,* p. 125; R Mushet, GC, 'An Inquiry', (1810), p. 96.

[48] C. Wilson, *Anglo Dutch Commerce,* (Cambridge, 1941), p. 168; G. Chalmers, *Domestic Economy,* (1812), GC, p. 138 and Mushet, 'An Inquiry', (1810), GC, p. 96.

put a brake on over-trading' is misleading. At the height of the crisis in the summer of 1772 the Bank discounted liberally and throughout the period of strain on the gold reserve the Bank's reaction had simply been to reject private securities the Directors had reason to dismiss as 'doubtful' -such as the paper of certain Scottish banks or Jewish houses involved in speculation on the Amsterdam Bourse.[49] A decade later, from August 1780 to August 1784, the Bank's bullion reserve fell steadily. Total note issues were reduced with the diminution of Government expenditure at the end of the war, but not sufficiently to prevent the ratio of bullion to liabilities falling to the very low level of 8 per cent in 1784. Bullion outflows in 1780 and 1782 had been connected with the Government specie payments to the British Army in the United States.[50] In April 1782 the Governor of the Bank complained that the exchange on Hamburg continued to be adverse enough to produce a heavy drain[51] When peace came at the beginning of 1783 Dutch investors again repatriated capital and the exchange remained below par until 1785.[52] At the close of the war the demand for credit had been stimulated in Britain by speculation exports sent to the United States and a boom in the cotton industry.[53] The Banks reaction to this apparently unfavourable situation was to limit discounts early in 1783 and in May it refused to make advances on the scrip of the Government loan raised for that year.[54] But by June commercial discounting was again heavy and in October with bullion still at an extremely low level the Directors felt safe enough to reverse their policy and make advances to holders of scrip. The policy pursued by the Bank was described by Bosanquet in these words: The drain of cash proceeded from the great extension of commerce which followed the peace, and which occasioned so considerable an export of the commodities of this country that the circulation was hardly sufficient to support it. It was evident that if this drain could be supported for a short time the influx of wealth that must follow from the return of the amount of the Exports would amply compensate for the preceding drain, - and so it turned out. The Bank Directors, therefore, without opening the state of their affairs to the Administration, took a bold step on their own authority and refused to make the advances on the loan of that year; this answered the purpose of making a temporary suspension in the drain of specie. The time at which they had most ground of alarm was not when their cash was at the lowest, but about April or May when they refused advance on the loan, and although in October their cash was lower than before, *yet* they

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[49] PP 1831-32 (6); Ashton, *Economic Fluctuations,* pp. 127-8; Wilson, *Anglo Dutch Commerce,* pp. 176-7 and Clapham, *The Bonk,* (1945), p. 245.
[50] McCleod, *Theory of Banking,* (1855), p. 61; W. Acres. *The Bank of England,* (London, 1931), p. 200 and Clapham, *The Bank.* p. 245 and R. Mushet 'An Inquiry', p. 100.
[51] Ashton, *An Economic History,* p. 253 and Clapham, *The Bank,* p. 253.
[52] D. McPherson, *Annals of Commerce,* Vol. 2 (London, 1805), p. 34 and R Mushet, 'An Inquiry', p. 100.

[53] McCleod, Theory of Banking, p. 66; Ashton, Economic Fluctuations, p. 131 and L. Pressnell, Country Banking, p.91.
[54] McCleod, *Theory of Banking,* pp. 66-7 and Clapham, *The Bank,* pp. 255-6.

had such reason to expect a turn in their favour by a favourable alteration of the exchanges that they were under much less apprehension.[55] Tooke's opinion that the Bank had resorted to a 'forcible and extraordinary contraction in 1783 and 1784' is certainly not borne out by any evidence.[56]

The Bank's guides to action in the eighteenth century appear to have been straightforward. Discount all first class bills of exchange for respectable members of the London mercantile community at fixed rates of interest but with regard for the safety of the treasure. Directors of the Bank had exercised this concern with a high degree of flexibility both in peace and war. They made no attempts to maintain either a fixed ratio of bullion to liabilities or to restrict advances when the rate of exchange fell below par. In fact only two accounts of discount limitation are on record. One occurred in the unusual circumstances of the Jacobite Rebellion in 1745; the other at the end of the American War of Independence which lasted for a very short period of time. On no occasion had the Bank refused to provide the Government with credit required for the public service, although it did limit advances to contractors on the scrip of the public loan for 1785. With two exceptions cited above the same is true for the private sector. Established London businessmen, willing to pay interest at5 per cent and who offered the Bank secure bills of short maturity seldom had their requests rejected. As Horsefield observed, 'the chief intellectual basis of banking theory at the end of the eighteenth century was a belief that to supply the needs of trade was not only to fulfil most adequately the purpose of banking but to avoid any danger of over issue.[57] The Bank's pragmatic approach grew out of and seemed suited to a century when confidence in credit of all kinds increased steadily and for most of the time the country probably enjoyed the luxury of an active balance of payments on income account. Lord North described the Bank in 1781 as 'part of the constitution'.[58]

At the outbreak of war in 1793 if historical experience in peace and war alike formed any guide both the Treasury, the London business community and the financial sector at large could expect support from the Directors for their respective concerns. Before that famous conjuncture in the kingdom's geopolitical and economic history; for decades preceding Britain's precocious industrial revolution the economy's internal trade, external commerce, agriculture and manufacturing sectors had been serviced by a system of financial intermediation operating more or less effectively upon fluctuating reserves of bullion but above all upon the accumulation of

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[55] *LC* on Suspension 1797, PP 1810 (3), 24-5 and 73.
[56] Tooke, History of Prices. p. 193.
[57] Horsefield. 'Duties of a Banker', in Ashton and Sayers (eds.), *Papers in Monetary History,* p. 7.
[58] Clapham, *The Bank,* p. 181 and F. Fetter, *Development of Monetary Orthodoxy,* (Cambridge, Mass. 1965), pp. 1-19.

fiscally well serviced public debt incurred by the state to wage geopolitical and mercantilist warfare for the defence of the realm and the expansion of British interests overseas. By the late eighteenth century that process was contributing not only to the extension of the market for capital and credit, but to its integration.[59]

Historically the extension and stability of that system rested ultimately upon the confidence displayed by the public that notes issued, deposits created and drawing rights sanctioned by banks (including a range of proto banks) which their clients held and utilized for all kinds of transactions could be redeemed on demand either directly into specie with intrinsic and stable values or would remain readily convertible into a reserve currency in the form of notes issued or deposits created by the Bank of England.[60] In turn the Banks redeemable notes and deposits were backed by its own reserves of specie, by real assets behind the private bills of exchange and other securities held in its portfolio but above (and in the highest proportion) by the bonds and bills of the state issued and on the security of inflows of its tax revenues.[61]

Unfortunately the data available to reconstruct the Banks balance sheets of liabilities (notes in circulation and deposits) backed by assets (especially the symbolically important bullion but increasingly by private and public securities) cannot be properly constructed for the entire period 1694-1815. Nevertheless the available figures presented in Table 1 (and other evidence) reveals that the significance of bullion (gold and silver) as the traditionally acceptable reserve asset behind the expansion of the supply of paper credit for supporting the growth of the kingdom's commerce, trade industry and agriculture fluctuated year by year in no predictable way.[62] Nevertheless the data do indicate that for a period still supposedly obsessed with bullion the significance of specie had clearly diminished over time to some extent in favour of real assets accepted as security for credits and loans offered to the private sector but to a much larger degree as the outcome of extending the Banks notes, deposits and drawing rights to departments of state.[63] In short the supply of widely acceptable reserve asset to promote the long term development of the financial services sector of the British economy depended in very large measure upon the states increasing needs for liquidity, the rapid accumulation of a national debt and above all upon its growing fiscal capacities and commitment to service that debt.

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[59] M. Buchinsky and B. Polak, 'The Emergence of a National Capital Market in England, 1710-1810,' *in Journal of Economic History*" 53, (1993), pp. 1-25.

[60] R Cameron et at (eds.) *Banking in the Early Stages of Industrialisation,* (Oxford, 1967); B. L. Anderson and P. Cottrell, *Money and Banking in England,* (Newton Abbot, 1974); M. Dawes and N. Ward-Perkins, Country Banks of England and Wales, (Canterbury, 200l).

[61] Clapham, The Bank; R. Rabents and D. Kynaston (eds.), The Bank of England: Money Power and Influence 1694-1994. (Oxford, 1994).

[62] Lovell, 'The Role of the Bank of England'.

By the outbreak of protracted and costly war with Revolutionary and Napoleonic France public and business confidence in the combined operations of the State, the Treasury and the Bank had grown to the point where the British monetary and financial system was less than four years away from a suspension of specie payments and from conducting a highly successful experiment with fiat money based upon reserve asset issued to record the liabilities of the Bank of England.[64] Compared to several rivals on the mainland the deployment of paper money for the support of the state and the economy never emerged (even during the years of costly warfare 17971822) as a concealed *way* of levying taxes.[65]

[63] See Table 1 and F. W. Fetter, *Development of British Monetary Orthodoxy* (Cambridge, 1965).
[64] E. Cannan, *The Paper Pound 1797-1821* and N. Silberling, 'Financial and Monetary Policy of Great Britain During the Napoleonic Wars', in *Quarterly Journal of Economics,* 38 (1924), pp. 214-36.
[65] L. Prados de Ia Escosura (ed.), *Exceptionalism and Industrialisation: Britain and its European Rivals* 1688-1815, (Cambridge, 2004), chapters by Bonney, Capie and Neal and vide M. Bordo; and E. White, 'A Tale of Two Currencies: British and French Finance during the Napoleonic War', in *Journal of Economic History,* 51 (1991), pp. 303-16.

Table 1

Liabilities and Assets of the Bank of England, 1720-1815 in £ millions									
Year	Notes in Circulation	Drawing Accounts	Private Deposits	Total Deposits	Bullion	Public Securities	Private	Securities	Rest
							Bill and Notes Discounted	Total	
	£m	£m	£m	£m	£m	£m		£m	£m
1720	2.5	1.6				1.0			0.1
1721	1.9	1.1				1.0			0.1
1722	2.8	1.2				1.2			0.2
1723	3.3	0.8				1.7			0.4
1724	3.8	1.5				1.9			0.5
1725	4.5	1.2				1.2			0.3
1726	3.0	1.7				1.8			0.3
1727	4.5	2.1				3.0			0.3
1728	4.3	2.3				2.4			0.3
1729	4.2	1.9				3.2	0.3		0.3
1730	4.4	1.9				2.2	0.3		0.3
1731	5.2	1.8				2.7	0.2		0.3

1732	4.6	2.5				2.5	0.2		0.3
1733	4.5	2.0				3.4	0.2		0.3
1734	4.6	2.9				3.7	0.3		0.3
1735	4.7	2.9				3.7	0.1		0.3
1736	5.1	2.6				4.0	0.1		0.3
1737	4.4	2.6				3.3	0.1		0.3
1738	4.6	2.5				3.0	0.2		0.3
1739	4.1	2.7				4.1	0.1		0.3
1740	4.4	2.8				4.8	0.1		0.3
1741	4.1	3.2				4.1	0.1		0.3
1742	5.0	2.7				3.4	0.1		0.3
1743	4.2	2.7				2.6	0.1		0.4
1744	4.2	2.9				1.7	0.1		0.4
1745	3.5	2.1				0.8	0.1		0.3
1746	3.9	1.9				2.3	0.1		0.3
1747	3.7	2.4				1.9	0.1		0.3
1748	3.8	1.7				2.2	0.2		0.3

In conclusion: the combination of fiscal, financial and monetary institutions established for the support of the geopolitical and mercantilist concerns of the State turned out to be benign for the development of an effective financial services industry and integration. of the market for capit~1 which promoted the long run growth on industrializing economy. Whether these unintended consequences might be convincingly connected to the deposition of a Stuart monarch and a kind of Parliamentary regime that emerged in the wake of the Glorious Revolution looks increasingly improbable.[66] The reasons why they were established and the evidence of how they operated and evolved overtime all points to a conclusion that the financial institutions that supported England's precocious industrialization can be represented as mercantilist in origin, form and function. [67] Finally, the alternative theoretical speculation that the participation of the kingdom's state in a succession of mercantilist wars from 1651 to 1802 (funded by the accumulation of debt) "crowded out" investment for an earlier industrial revolution is not only anachronistic and ontologically unreal to pursue but has almost no historical evidence to commend it. Mercantilists of the day (including Adam Smith) knew more than modern neo-classical cliometricans about their times and their economies' prospects for sustained growth within a violent geopolitical and economic order of competing nation states.[68]

[66] D. North and B. Weingast:, 'Constitutions and Commitments: evaluation of institutions governing choice in seventeenth century England', in *Journal of Economic History*, 49 (1989), pp. 803-32.
[67] O,Brien, 'An Exceptional Fiscal State.'

[68] This hypothesis is elaborated and historicized in P. K. O'Brien, London School of Economics, Department of Economic History Working Paper 150 (2011).

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