10

THE ROLE OF SECURITY OVER FUTURE AND CIRCULATING CAPITAL: EVIDENCE FROM THE BRITISH ECONOMY *CIRCA* 1850–1920

*Joshua Getzler**

> A system of credit which has slowly grown up as years went on, which has suited itself to the course of business, which has forced itself on the habits of men, will not be altered because theorists disapprove of it, or because books are written against it.
>
> Walter Bagehot, *Lombard Street, A Description of the Money Market* (1873) 160

A. Freedom of Contract and the Supply of Debenture Finance

Freedom of contract suggests that credit secured against corporate assets is created because it is in the interests of the parties to do so. We can presume that if secured credit arrangements did not bring benefits, then parties would pursue alternative methods of raising finance. Corporations favour secured credit as a means to access a wider pool of impersonal creditors, thus making it possible to enlarge their investment base and operating capital; and lenders prefer secured claims because the expected return on loan capital can be calculated to a nicety, execution is simplified and all or most entrepreneurial risk is left with the borrower. Indeed lenders in impersonal credit markets might choose not to

* I thank James Edelman, Louise Gullifer, Michael Macnair, Jennifer Payne, Lionel Smith, Robert Stevens, and Oren Sussman for much helpful discussion; and I owe a special debt to John Armour for his excellent advice and criticism. Errors that persist are my responsibility alone.

supply any capital without security; thus collateral may be important primarily for ensuring the supply rather than reducing the price of loan capital.[1]

If such freedom of contract reasoning is correct, then it follows that English law has rightly pursued a policy since the 1860s of inventing legal facilities to satisfy the desire for credit secured against future and circulating assets such as receivables and book debts, as well as fixed assets. For most commentators, the economic functionality of security over floating collateral is seen as the key to its emergence in the late nineteenth century; law follows market need.[2]

Modern debates over characterization of floating and fixed charges and powers and priorities on insolvency may be framed within the freedom of contract model. Parties may have contributed to the value of an enterprise, but in some cases will not be able to bargain *ex ante* or *ex post* to enhance their payment claims against those lenders able to take security. Their exposure to the risk of debtors' insolvency is therefore not amenable to control by contractual arrangements; freedom of contract does not benefit them as 'non-adjusting' creditors.[3] Examples include employees who contribute their labour to enterprise wealth, the State which provides infrastructure in return for taxes, and perhaps smaller creditors who are prevented by transaction costs or bargaining disabilities from exacting security. Tort victims owed compensation are yet another case. The advantages of security granted to some lenders are therefore imposed as externalities or unbargained costs to those who are not privy to credit deals, and the argument goes that these externalities should be reduced by promoting certain unsecured creditors' claims in an insolvency distribution to take ahead of the secured lenders.

The older policy of the law was to look askance at all non-possessory security and require that notice to other creditors be signalled by some level of receipt or possessory control of security by the lender. Judges from the 1860s who wished to facilitate non-possessory security over productive assets in the hands of the borrower removed a series of doctrinal barriers and allowed security to be given over generic future and circulating assets. One crucial

[1] For an overview of economic theories, see BE Adler, 'Secured Credit Contracts' in P Newman (ed), *The New Palgrave Dictionary of Economics and the Law* (1998) vol III, 405–10.

[2] For historical analysis of the floating charge, seeing its root in the needs of entrepreneurs, see GF Curtis, 'The Theory of the Floating Charge' (1941) 4 University of Toronto Law Journal 131, 132–4; RR Pennington, 'The Genesis of the Floating Charge' (1960) 23 MLR 630, 630–4; R Gregory and P Walton, 'Fixed and Floating Charges—A Revelation' [2001] LMCLQ 123, 125–6, 135–9ff; R Nolan, 'Property in a Fund' (2004) 120 LQR 108, 118–30; J Armour, 'The Chequered History of the Floating Charge' (2004) 13 Griffith Law Review 27, 27–32; and J Armour, 'Should We Redistribute in Insolvency?', ch 9 above.

[3] See L Bebchuk and J Fried, 'The Uneasy Case for the Priority of Secured Claims in Bankruptcy' (1996) 105 Yale Law Journal 857, especially 864–5.

step taken in the late 1870s was to eliminate from company insolvency law the long-established reputed ownership doctrine, by means of a creative reading of the effect of the Judicature Acts.[4] The late nineteenth-century legislature was uneasy about the reduction of notice to third party and non-adjusting creditors and took countermeasures, restoring notice protections through bills of sale and company law statutes, and carving out exemptions to floating charge priority for preferential creditors (employees and the State) who were perceived to have directly contributed to circulating capital.

It may be that in the twenty-first century the fixed/floating charge distinction provides a poor basis for discriminating between situations when preferential creditors should be promoted and when not; the use of that distinction is widely perceived to be a hangover from past legislative compromises. But across this entire debate over characterization and redistribution, the basic efficiency and validity of secured credit is not put into issue—only how far the private arrangement of priorities should be regulated in favour of the non-adjusting creditors, and what should be the appropriate legal triggers for redistribution, if any is to occur.[5]

It is no exaggeration to say that the freedom of contract assumptions outlined above inform nearly all academic accounts of the rise of the charge over floating assets and the function of such credit instruments in the modern corporate economy.[6] This same economic model is also the implicit—and sometimes

[4] See especially Gregory and Walton (n 2 above). The key cases in the elimination of the reputed ownership doctrine were *Re Stockton Iron Furnace Company* (1879) 10 Ch D 335, and especially *Re Crumlin Viaduct Works Company* (1879) 11 Ch D 755, both decisions of Jessel MR in the Court of Appeal that amounted to abrupt judicial legislation. The disquiet of some Chancery judges at Jessel MR's uprooting of reputed ownership surfaced in later cases but was put down in *Gorringe v Irwell India Rubber and Gutta Percha Works* (1885) 34 Ch D 128, CA. The legislature at the same time pushed in the other direction, with the Bills of Sale Acts 1878–82, ss 5 and 17 in effect prohibiting individuals and partnerships from using floating charges and so subjected non-corporate traders to the continued restraint of reputed ownership rules. Jessel MR's favouring of specifically corporate debentures against reputed ownership policies may have provided the fillip for the late nineteenth-century rush to incorporation, exemplified in *Salomon v A Salomon & Co Ltd* [1897] AC 22, HL.

[5] See S Worthington, 'Floating Charges: The Use and Abuse of Doctrinal Analysis', ch 3 above, L Gullifer and J Payne, 'The Characterization of Fixed and Floating Charges', ch 4 above, and J Armour, 'Should We Redistribute in Insolvency?', ch 9 above.

[6] See references in n 2 above. Some writers accept the need for charges over future and circulating assets, but doubt the optimality of the specific floating charge institution itself. For example, Roy Goode in the important essay 'The Exodus of the Floating Charge' in D Feldman and F Meisel (eds), *Corporate and Commercial Law: Modern Developments* (1996) 193 argues that alternative credit instruments (such as those created by Article 9 of the Uniform Commercial Code in the United States) can supply more of the needs of entrepreneurs more successfully. Goode called for the abolition of the floating charge, even if 'English law can take pride in having fashioned through the ingenuity of its equity judges an instrument of great power and even greater

explicit—theory of judges and lawyers in practice. A clear judicial statement of the economic model may be found in the House of Lords' decision in *Re Spectrum Plus Ltd*,[7] in the speech of Lord Scott:

> By the middle of the 19th century industrial and commercial expansion in this country had led to an increasing need by companies for more capital. Subscription for share capital could not meet this need and loan capital had to be raised. But the lenders required security for their loans. Traditional security, in the form of legal or equitable charges on the borrowers' fixed assets, whether land or goods, could not meet the need. The greater part of most entrepreneurial companies' assets would consist of raw materials, work in progress, stock-in-trade and trade debts. These were circulating assets, replaced in the normal course of business and constantly changing. Assets of this character were not amenable to being the subject of traditional forms of security.[8]

There are perhaps three important claims in this passage: the scarcity of equity investment after initial economic modernization; the preponderance of circulating capital such as inventory and receivables within enterprises; and the need to improve security for large-scale loans by making circulating capital available to lenders as collateral.

The goal of this chapter is to examine more closely these judicially noticed historical claims concerning the economic need for effective legal security over future and circulating collateral.[9] My argument is that the importance of such

mystery' (at 203, and see also R Goode, *Legal Problems of Credit and Security* (3rd edn, 2003) 111–53, especially 152–3; R Goode, 'The Case for the Abolition of the Floating Charge', ch 2 above). Gregory and Walton (n 2 above) 123–6, 146–9, suggest that the personalty mortgage permitting partial enforcement would have been a superior institution to the floating charge. RJ Mokal, 'The Floating Charge—An Elegy' in S Worthington (ed), *Commercial Law and Commercial Practice* (2003) 479 argues that the floating charge brings with it unjustified control and priority rights, problems exacerbated by the reforms to insolvency administration under the Enterprise Act 2002. Despite hostility to the floating charge amongst academic lawyers it remains popular with practitioners, and abolition has not been pursued by the Law Commission in its latest reform proposals (*Company Security Interests*, Law Com No 296, Cm 6654, August 2005); and see M Bridge, 'The Law Commission's Proposals for the Reform of Security Interests', ch 12 below.

[7] [2005] UKHL 41, [2005] 2 AC 680, para 95 (hereinafter *Spectrum*).

[8] Lord Scott's statement appears to be a paraphrase of Pennington, 'Genesis' (n 2 above) 631. Pennington's great article, now nearly 50 years old, has been a dominant presence in all debates over the floating charge since its publication. Gregory and Walton (n 2 above) offer a revisionist challenge to the received 'Genesis' story, emphasizing the lead role of bankruptcy statutes and the haphazard responses of the courts.

[9] Circulating capital has to be distinguished from future property that stays within the assets of an enterprise once it has been received; if future property such as receivables is placed in a blocked account with control rights split between chargor and chargee, then it still can be regarded as a form of fixed or non-circulating collateral. *Spectrum* and *Re Brumark Investments Ltd sub nom Agnew v IRC* [2001] UKPC 28, [2001] 2 AC 710 (hereinafter *Brumark*) set limits on how much control the chargor could have over the economic value contained within a so-called blocked account before the collateral would have to be characterized as floating: see S Worthington, 'Floating Charges: The Use and Abuse of Doctrinal Analysis', ch 3 above, and L Gullifer and J Payne, 'The Characterization of Fixed and Floating Charges', ch 4 above.

secured lending may have been significantly overestimated by lawyers. The history of the late Victorian corporate and financial sectors significantly undermines the thesis that security over receivables and other circulating assets was essential for the health of the economy. Rather it was essential for the profitability of credit banking, and it may be that the law, by meeting the banks' sectoral needs through provision of the floating charge as a security device, may have damaged the longer-term prospects of the economy. Lawyers and economists have assumed the efficacy of security over receivables for smoothing of trade and consumption cycles. My concern is rather with the efficacy of such security for longer-term production cycles, especially industrial production with high fixed costs. The lesson is that what market actors seek is not necessarily optimal for the market overall.

Lord Millett's speech in *Brumark* provides an important lead in this inquiry. In the midst of his detailed review of the doctrinal history of the floating charge Lord Millett commented:

> Such a form of security is particularly attractive to banks, and it rapidly acquired an importance in English commercial life which the Insolvency Law Review Committee (1982 Cmnd. 8558 at para. 1525) later considered should not be underestimated.[10]

This was not simply a restatement of the historical orthodoxy. Lord Millett noted the especial attraction of the floating charge for banks, and we will pursue this insight into the data of the late Victorian corporate economy. So my concern is with the economic history, and analysis of the jurisprudential history of the floating charge will have to wait for another occasion.

B. Why Secured Lending?

At a simple analytical level, improving security for one class of lender or investor to an enterprise must immediately weaken security for rival lenders or investors by depleting the available asset pool to satisfy claims (or misleading as to the size of the available assets)—though all parties may ultimately benefit if the secured credit injection improves the overall health of the enterprise.[11] Nonetheless on a static analysis, a cheapened cost of credit or enlarged supply of credit from the

[10] [2001] UKPC 28, [2001] 2 AC 710, para 8, and see Lord Millett, 'Company Charges', Foreword to this volume.

[11] For an argument along these lines, see RJ Mokal, 'The Search for Someone to Save: A Defensive Case for the Priority of Secured Credit' (2002) 22 OJLS 687. The controversial *Quistclose* trust illustrates one form of secured credit injection: see M Bridge, 'The *Quistclose* Trust in a World of Secured Transactions' (1992) 12 OJLS 333; E McKendrick, 'Commerce' in WS Swadling (ed), *The Quistclose Trust: Critical Essays* (2004) 145.

favoured class of creditor should, with proper notice to the other creditors, lead to those creditors raising the cost of credit or reducing credit supply in response. The borrower therefore cannot improve his overall position by segregating his capital into classes and giving different orders of claim to different creditors (or equity holders, for that matter, who may themselves have a spectrum of rights from preferential fixed interest shares without votes to full control and entitlement to returns on total capital).[12] Nineteenth-century judges may have intuited such economic considerations. Malins V-C in the seminal 1876 case of *Re General South America Co*,[13] defended the fairness of the floating charge against the claims of unsecured creditors by arguing that such creditors must be taken to have known of the possibility of pledges over corporate assets being issued, and they could have made inquiries at the time they extended credit without security. The implicit notice argument, strengthened by the requirement of registration of company charges to prevent loss of priority since 1900,[14] is indeed one of the dominant justifications for the recognition of the justice of charges, be they fixed or floating. But this assertion of the fairness of these devices through implicit notice only tips the inquiry back to the economic problem of how borrowers in well-informed markets can possibly improve their overall position by differential security in the first place.[15]

One explanation for the efficacy of secured debt is that the short-term operating capital necessary to bridge liquidity gaps over the span of the production cycle of a firm can only be procured by offering more liquid and more highly secured collateral to, for example, a lending bank. This is a different type of capital injection to the long-term debenture, whether secured against fixed or circulating assets, which helps form the fixed capital of an undertaking and which can attain its own form of liquidity through secondary market trading. In other

[12] This is a re-working of the Modigliani–Miller theorem of corporate finance to the narrower problem of rival issues of corporate debt: cf F Modigliani and M Miller, 'The Cost of Capital, Corporation Finance and the Theory of Investment' (1958) 48 American Economic Review 261; A Schwartz, 'A Theory of Loan Priorities' (1989) 18 Journal of Legal Studies 209.

[13] [1876] 2 Ch D 337, 341–3.

[14] Companies Act 1900, s 14; WR Cornish and G de N Clark, *Law and Society in England 1750–1950* (1989) 261–2. Registration was introduced partly in response to a clamour from typically 'non-adjusting' creditors that the floating charge be abolished, especially in the wake of *Salomon v A Salomon & Co Ltd* [1897] AC 22, HL. This was no new hostility; in the 1880s the Associated Chambers of Commerce made annual resolutions along the lines 'That the Joint Stock Companies Acts require amendment to make it illegal to defraud their ordinary creditors for the benefit of debenture holders as they may now do by mortgaging their future property and book debts': (1881) 3 Journal of the Institute of Bankers 247, quoted in JB Jefferys, *Business Organisation in Great Britain 1856–1914* (PhD dissertation, University of London, 1938, published 1977) 256.

[15] The implicit notice theory of priorities can be seen to shade into the theory that insolvency administration itself is the product of an implied creditor contract: see RJ Mokal, 'The Authentic Consent Model: Contractarianism, Creditors' Bargain, and Corporate Liquidation' (2001) 21 Legal Studies 400.

words we must take account of dynamic capital flows within companies over different time horizons in order to understand the need for different forms of corporate finance, and here historical data can provide an important testing ground.

An alternative defence of floating charges, which is much in favour today, focuses not on the need for different types of capital in founding and running corporate enterprises, but rather the need for effective monitoring by creditors of the quality of management, especially of distressed and dying enterprises, whether in relation to the entire undertaking or to specific assets of the company. The argument runs that senior creditors, especially where they wield a contractual power to appoint receivers,[16] can concentrate information about an enterprise and monitor its management of assets effectively on behalf of all other stakeholders. Such monitoring can prevent opportunistic managerial behaviour such as distribution of capital, excessive risk-taking including trading on brink of insolvency, or undue delays in initiating liquidation—negative behaviours that may tempt directors and shareholders protected by limited liability and indemnity in the declining stages of their enterprise. Yet the reverse may as well be true, that senior creditors can use their powers to appoint receivers or to precipitate liquidation in an opportunistic manner, in order to protect their collateral at the expense of overall enterprise value or with bland disregard for other stakeholders. In the late nineteenth century it was established that the contractual receiver was appointed as an agent of the company and not of the creditors, thus shielding the creditors from suit for running down the assets of the company and also putting up a wall between the debts of the company and the assets of the chargees. Receivers appointed by banks or other lenders under charging instruments were not directly concerned with the interests of unsecured stakeholders in companies; in any case the agency owed to the company was non-fiduciary and the primary legal duty was to realize the bondholders' security.[17] We cannot broach the history of corporate receivership

[16] Contractual receivership is displaced by the new administration procedure of the Enterprise Act 2002, Pt 10, esp s 250: see J Armour, 'Should We Redistribute in Insolvency?', ch 9 above; RJ Mokal, 'The Floating Charge—An Elegy' in S Worthington (ed), *Commercial Law and Commercial Practice* (2003) 479; V Finch, 'Control and Co-ordination in Corporate Rescue' (2005) 25 Legal Studies 374; for the pre-2002 regime see Sir Gavin Lightman and G Moss QC, with R Snowden, *The Law of Receivers and Administrators of Companies* (3rd edn, 2000) 1–173.

[17] The non-fiduciary quality of the receiver's agency is set out in WW Kerr, *A Treatise on the Law and Practice as to Receivers Appointed by the High Court Of Justice* (3rd edn, 1891) 179–84, 198–200; and see RP Meagher, JD Heydon, and MJ Leeming, *Meagher, Gummow and Lehane's Equity: Doctrines and Remedies* (4th edn, 2002) 926–51 for the remarkably complex equitable rules allocating rights and duties to receivers and receiver-managers. A defence of the wide powers of administrative receivership against State regulation is given in J Armour and S Frisby, 'Rethinking Receivership' (2001) 21 OJLS 73. The non-fiduciary character of credit relations is a general feature of English law, as with the merely contractual nature of the core banker–customer

and liquidation here; instead we shall focus on the upstream question of whether capital needs drove the development of new forms of company charges.

C. Did Scarcity of Share Capital Require Debenture Lending to Companies?

1. The beginnings of corporate capital

Lord Scott's most prominent historical claim in *Spectrum* was that equity capital was inadequate and new debt instruments had to be found to meet the corporate sector's capital needs in the latter part of the nineteenth century. In the earlier period of industrial and commercial expansion from 1760 to 1850 the opposite was true: equity was issued only when loan finance ran out. New enterprises preferred retained profits as a source of capital, and when this was inadequate to kickstart or expand a business, entrepreneurs turned to local sources of credit.

Sources of loan capital in the eighteenth and earlier nineteenth centuries included funds raised in family, religious and business circles, moneys pooled by local attorneys, goldsmiths, or other professionals, and later in the century, liquid assets pooled in regional banks. Such 'relationship lending' commonly involved no security beyond the informal trust and information extant in face-to-face dealings by actors in local markets. Often the personal assets of managers, whether as partners of firms or directors of companies, would be made available as a backing of the loan, whether under joint and joint-several liability regimes or through special covenants.[18] In this world of personal, local finance, issue of new equity was resisted as this might mean sharing control and profits with incoming partners who were strangers to the inside group of investors and entrepreneurs.[19]

relationship established in the great case of *Foley v Hill* [1848] 2 HL Cas 28, 9 ER 1002, HL; though there are overlays of confidentiality and in some circumstances fiduciary duties can be superadded. See further R Cranston, *Principles of Banking Law* (2nd edn, 2002) 129–33, 159–65, 167–81; EP Ellinger, E Lomnicka, and R Hooley, *Ellinger's Modern Banking Law* (4th edn, 2006) 121–35, 165–9.

[18] See J Getzler and M Macnair, 'The Firm as an Entity before the Companies Acts' in P Brand, K Costello, and WN Osborough (eds), *Adventures of the Law* (2005) 267, 278–85.

[19] It is a common claim that with imperfect information in early capital markets, improved security had to be provided to tempt outsiders to invest in enterprise at all: see for example, J Armour, 'The Chequered History of the Floating Charge' [2004] Griffith Law Review 27, 27–28. But in many cases outside equity was not wanted; or only wanted if concomitant control rights could be excluded, as with preference shares.

There were institutional constraints on the supply side as well. Publicly traded common stock before the 1840s was regarded with suspicion in the wake of speculative manias; the 1720 South Sea Bubble had burnt itself into the consciousness of the nation, and 100 years later confidence in stock markets could still be shaken; in the crash of 1827, for example, some three-quarters of all recent company flotations foundered. In 1835 at the start of the railway age it was claimed that local finance mediated by public stock exchanges accounted for only 5 per cent of total capital invested in railways north of Manchester.[20] Joint stock capitalism was hampered because it was difficult to separate ownership from control and allow any form of monitoring of non-owning managers within early firms; and some conservative judges frowned on private law attempts to allow freely tradable shares with constantly shifting investor-owners moving in and out of relations with a company. Lawyers were nonetheless adept at creating the necessary legal vehicles for larger enterprises using partnerships and trusts, deed of settlement companies, and corporations constituted by charters and special statutes, but these techniques could be costly and accounting and governance and auditing structures were weak.

Two factors external to the law transformed local and national security markets to make possible more extensive equity investment in joint stock corporations. The large liquid markets for government issue in the eighteenth century provided a model for private equity shares to be floated and traded impersonally,[21] though outside certain narrow sectors such as transport the joint stock company never won an easy dominance against other forms of business and investment.[22] Then the railway boom of the 1840s provided a spur to joint stock enterprise, and equity capital reached new levels of magnitude and liquidity.[23] Legislation was then used to overcome early nineteenth century judicial hostility to joint stock enterprise, with company acts being passed to

[20] 'Circular to Bankers' (1835), cited in JB Baskin and PJ Miranti Jr, *A History of Corporate Finance* (1997) 136.

[21] L Neal, *The Rise of Financial Capitalism: International Capital Markets in the Age of Reason* (1990); L Neal, 'The Finance of Business during the Industrial Revolution' in R Floud and D McCloskey (eds), *The Economic History of Britain Since 1700, Volume 1: 1700–1860* (1994) 151, 171–81; S Quinn, 'Money, Finance and Capital Markets' in R Floud and P Johnson (eds), *The Cambridge Economic History of Modern Britain, Volume I, Industrialisation, 1700–1860* (2004) 147, 167–73.

[22] R Harris, in *Industrializing English Law: Entrepreneurship and Business Organization 1720–1844* (2000) 85–198, shows how path dependence and legal inhibitions could prevent adoption of joint stock corporate form even where investors and managers desired it, as in the insurance sector.

[23] RW Kostal, *Law and English Railway Capitalism 1825–1875* (1994) 11–52; RC Michie, *The London Stock Exchange, A History* (1999) 52–69; MC Reed, 'Railways and the Growth of the Capital Market' in RC Michie (ed), *The Development of London as a Financial Centre, Volume 1: 1700–1850* (2000) 266.

permit general incorporation, separate legal personality, and free joint stock investment in 1844, and then in 1855–8, allowing limited liability to all companies that wanted it,[24] so encouraging raising of capital by security issues. Trading in the stock of utilities, trading, commercial and financial enterprises took off, though it was still a much smaller market than that for government issue until at least the 1860s. Alongside new sources of equity, lawyers and enterprises developed new forms of credit, including debentures with or without collateral in manufacturing and commerce, and, particularly in the railway industry and other utilities, preference shares that supplied a fixed income, a right to some distribution of further profits, but with no control rights as with common stock and no right to seek liquidation for non-payment of interest or to recover secured capital.[25]

2. Corporate capital after 1862

The later nineteenth century witnessed an explosion in share capital as a source of corporate finance and a corresponding diminution in the importance of debt. Table 1 gives statistics derived from the Companies Register setting out rough figures of the accumulation of equity capital within the corporate sector from the time of the modernizing Companies Act of 1862 into the interwar period. Figures 1 and 2 give the same data in pictorial form.

This data shows a crescendo of capital formation in the form of share equity investments from 1862 until the First World War, with 20–25 per cent accretions to aggregate corporate share capital every five years in this period. There are significant dips before 1870 and again before 1880, balanced by significant accelerations before 1875 and after 1880; one would expect such movements as simple reflections of the business cycle.

Close to one-half of equity capital had qualities of long-term loan finance, being preference shares that gave fixed interest and some profit-sharing, but without voting rights and also without security or liquidation powers to enforce payment. To the reported sums of equity capital may be added long-term fixed interest debentures issued by companies to augment their fixed capital base, and which were traded like securities. Such loan instruments, pioneered in the

[24] Cornish and Clark (n 14 above) 246–59. Insurance was an important exception, attaining access to limited liability only in 1862; hitherto insurance entrepreneurs had to construct limited liability by network contracts, see RR Pennington, 'The Genesis of the Floating Charge' (1960) 23 MLR 630, 640–2; Harris (n 22 above) 100–9; B Supple, *The Royal Exchange Assurance: A History of British Insurance, 1720–1920* (1970) 56–61, 118–20; CA Cooke, *Corporation, Trust and Company: An Essay in Legal History* (1950) 163–8.

[25] Harris (n 22 above) 127; J Reeder, 'Corporate Loan Financing in the Seventeenth and Eighteenth Centuries' (1973) 2 Anglo-American Law Review 487; G Heberton Evans, *British Corporation Finance 1775–1850—A Study of Preference Shares* (1936) 107–34.

Table 1. Capital formation through joint stock equity investment in registered companies, England 1862–1920

	New nominal share capital	New nominal share capital	Running total paid-up share capital
	Annual	Five-yearly totals	Five-yearly totals
	£ millions at contemporary prices		
1862	51.1		
1863	137.9		
1864	232.5		
1865	198.7	620.3	NA
1866	68.9		
1867	29.0		
1868	34.1		
1869	138.9		
1870	37.4	308.3	NA
1871	66.0		
1872	122.8		
1873	144.4		
1874	104.0		
1875	76.7	513.8	NA
1876	41.8		
1877	53.0		
1878	60.0		
1879	69.6		
1880	160.6	385.0	NA
1881	190.4		
1882	220.3		
1883	144.1		
1884	125.3		
1885	111.4	791.5	39,816
1886	138.4		
1887	160.8		
1888	340.0		
1889	229.5		
1890	222.3	1091.0	52,183
1891	126.4		
1892	95.7		
1893	84.7		
1894	108.9		
1895	216.3	632.0	75,113
1896	285.3		
1897	269.4		
1898	247.7		
1899	229.6		
1900	206.8	1238.8	121,002
1901	137.5		
1902	147.6		
1903	115.7		
1904	83.9		
1905	108.7	593.3	159,853
1906	125.2		
1907	125.2		
1908	96.9		
1909	132.1		

Continued overleaf

	New nominal share capital	New nominal share capital	Running total paid-up share capital
	Annual	Five-yearly totals	Five-yearly totals
	£ millions at contemporary prices		
1910	205.1	684.6	183,307
1911	150.6		
1912	165.0		
1913	146.8		
1914	104.3		
1915	49.2	616.0	210,396
1916	46.5		
1917	62.1		
1918	119.0		
1919	384.1		
1920	559.3	1171.0	272,232

Sources: Report by the Board of Trade on the matters within the Companies Acts (1924), Annex No VI—*Statement of the Total Number and Nominal Capital of . . . Companies . . . registered under the Companies Acts, 1862 to . . . 1920*, 12; Report by the Board of Trade on the matters within the Companies Acts (1928), Annex No V—*Statement of the Total Number and Paid-Up Capital of all Companies having a Share Capital . . . on the Register*, 11.

railway era and then copied by other sectors, were favoured by cautious private and institutional investors who sought higher returns than consols. They were favoured by directors as they gave companies stable interest rates and accorded management a relatively unrestricted power to raise capital for expansion, especially in the cheap money era of the later nineteenth century. Fixed interest debenture funding without profit-sharing, whether secured against fixed assets, floating assets or unsecured, may be estimated to add another 20 per cent to the equity capital of private concerns in 1885, rising to just below 30 per cent in 1915.[26] In the result, the orthodox pre-war company flotation used roughly equal parts of ordinary and preference shares and debenture stock. Issue of the three forms was typically simultaneous, but since much equity capital was raised in nominal form, debenture finance could make up a greater weight of the paid capital. Debenture capital was increasingly raised institutionally by banks and insurance companies who favoured the perceived security of capital and income, and also by new investment trusts who retailed debenture products to the public, and especially to trustee investors.[27] Demand for debentures in fact eased off from the 1890s as prices rose and share profits became more attractive. At any rate the annual and five-yearly fluctuations of capital formation using equity and debentures cannot obviously be mapped onto judicial concerns about weak capital supplies for corporate enterprise across the period when floating charges

[26] JB Jefferys, *Business Organisation in Great Britain 1856–1914* (PhD dissertation, University of London, 1938, published 1977) 266–9.

[27] KF Sin, *The Legal Nature of the Unit Trust* (1997) 19–27.

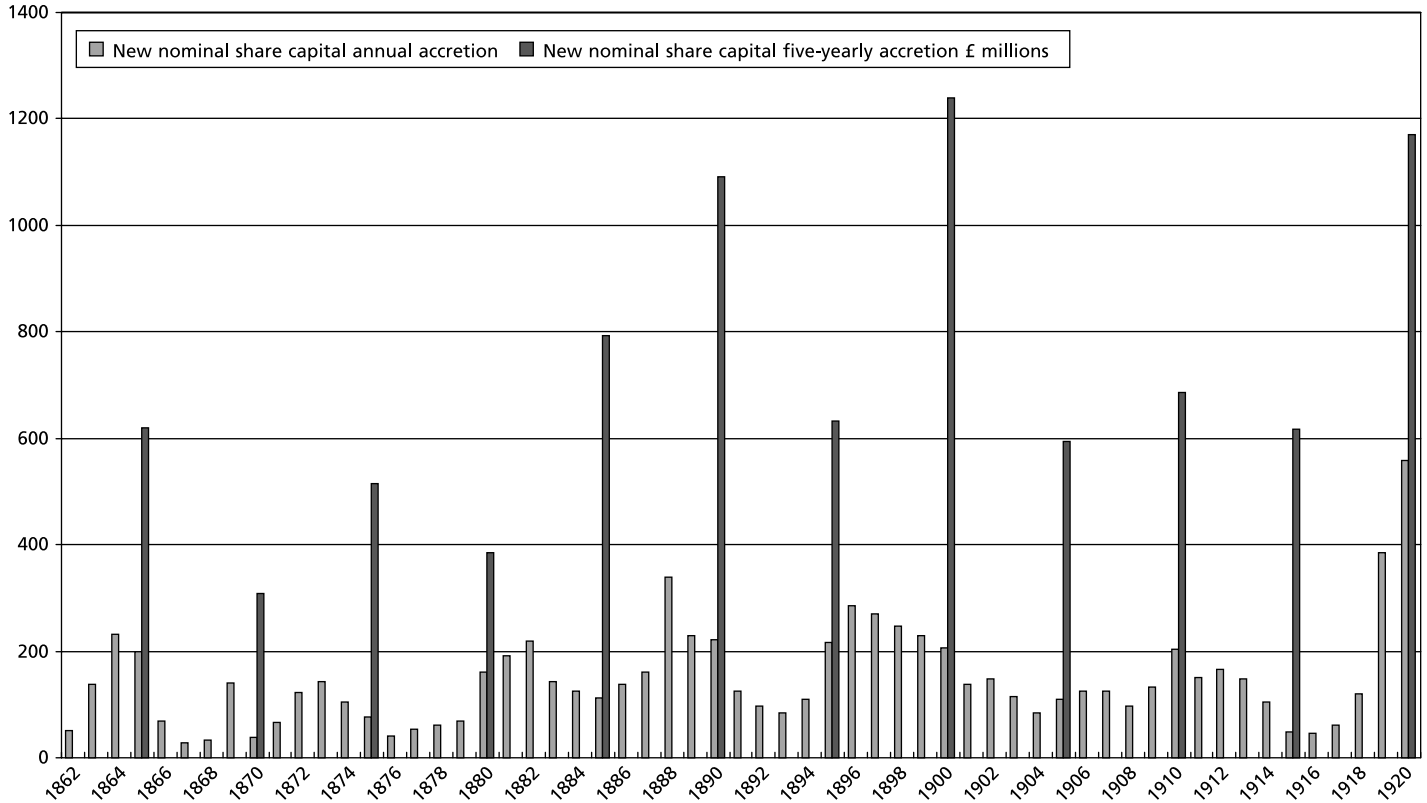

Figure 1 Capital formation through joint stock equity investment in registered companies, England 1862–1920. Annual and five-yearly accretions to nominal capital, £ millions at contemporary prices

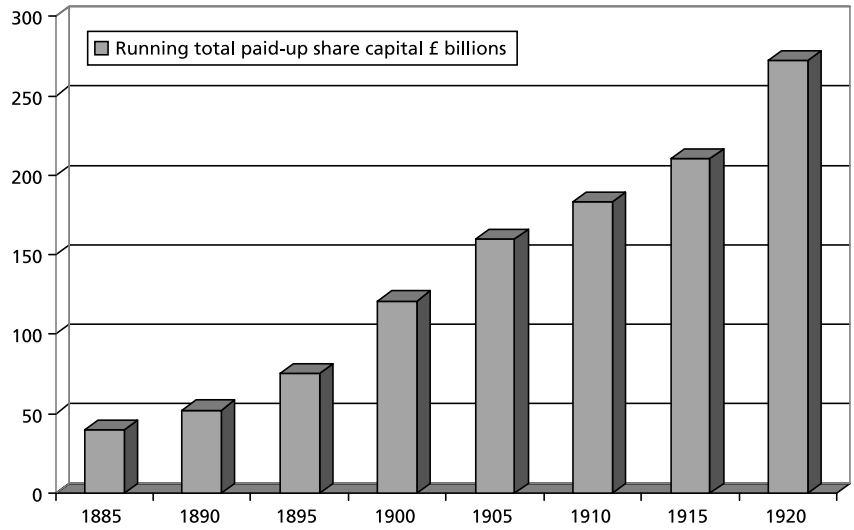

Figure 2 Capital formation through joint stock equity investment in registered companies, England 1862–1920. Running total paid-up share capital, £ billions at contemporary prices

were given recognition. Rather this was a period of marked acceleration in the growth of equity and other stock.

The official statistics of share capital growth provide only a limited window into the historical problem of measuring the pace of overall corporate capital accumulation and investment. There are many other variables in assessing the scarcity or abundance of capital available to enterprise in the late nineteenth and early twentieth centuries. Two important adjustments are missing from the Table 1 data. The first involves relative prices: from 1862 to around 1890 prices decline by a third, and then recover by the end of the period, so the extent of new investment in the years either side of 1890, a period of massive acceleration of capital accumulation, ought to be increased still further to give a sense of relative magnitudes. To offset this factor, one would expect all economic indicia to grow with rising population and gross domestic product; according to one calculation capital formation in equity form in 1895 had fallen to an historically low point measured as a proportion of overall savings.[28] Reasons for this are complex and must be teased out.

It is of the first importance that much of the capitalization of the London market was tied to railways, and even more so to government issue which

[28] RS Grossman, 'New Indices of British Equity Prices, 1870–1913' (2002) 62 Journal of Economic History 121, 126–8. I am grateful to John Armour for this point.

embraced other utilities. In 1873, of the London capital market's total of £2.27 billion, well over half was government issue, split between British (38 per cent) and foreign (21 per cent) debt; fully 32 per cent was in railways, split equally between domestic and foreign systems; 5 per cent was bank capital, 1 per cent was in utilities, and just 1 per cent was in industry and commerce. These aggregate figures for capital traded in London do not capture the extensive networks of local credit outside London that helped form the capital stock of industrial enterprise outside gilts and utilities. But even with a large weight of local investment in local industry, one may conclude that in 1873 non-utility and non-governmental enterprise placed a very small demand for capital on the overall financial system. It is notable that the share of government debt in the London market fell steadily until the First World War, reducing from 70 per cent of market capitalization in 1853 to 9 per cent in 1913, as set out in Table 2. These figures are consistent with an improved tax base reducing the need for bond issues in public finance (indeed national debt was being rapidly amortized in this period), and as a concomitant it indicates a deepening private capital market.

The marked shift in allocation from public to private investment indicates a heightened supply for private enterprise, a 'crowding in' which further cheapened the cost of private domestic capital. Indeed low nominal and real interest rates (often negative) are a feature of the period, and finance capitalists impatient for quick profits therefore sought fresh arenas for growth outside the domestic economy. This is one explanation for the considerable capital export from the London markets to the formal empire and especially to the Americas and the Dominions after 1865. It has been estimated that new issues in the London securities markets rose from £34 billion in 1865 to £192 billion in 1914 in adjusted real values; of that some £3 billion was exported, with £1.2

Table 2. Growth and structure of the London Stock Exchange, 1853–1920

	Total nominal value £ millions	UK Government share per cent
1853	1,215	70.2
1863	1,683	53.6
1873	2,270	37.6
1883	5,677	24.0
1893	6,561	16.5
1903	8,834	13.4
1913	11,263	9.0
1920	16,626	32.6

From: N Ferguson, *The Cash Nexus: Money and Power in the Modern World 1700–2000* (2001) 136; *source*: RC Michie, *The London Stock Exchange, A History* (1999) 88ff, 175, 184, 320, 322, 360ff, 419, 421, 440, 473, 521ff, 589ff.

billion going to the British Empire.[29] National accounts show a shift in the proportion of net capital outflow to GDP rising from 0.4 in 1856 to 0.8 in 1873, to peak at 1.8 in 1913 (representing one-third of non-land UK capital and half of all new gross domestic savings) and then rapidly to decline.[30] It is hotly debated what these significant capital exports revealed. On one view, weak demand pull at home, whether on the production or consumption side, could not attract that new capital available from the maturing industrial and financial economy, especially when quicker profits were available in governmental and utility investment abroad. The result was underinvestment in human and fixed capital at home, which cut growth rates in the longer term. The alternative view is that retained business profits, debt, and equity could provide all necessary capital to fund the home market; all extant domestic demand was met. Hence the significant spillover from domestic accumulation to foreign investment; investors simply moved to higher rates of return overseas when the domestic market became saturated. There was no point in building a second English railway system when a first system could be built in Australia or America for a better return.[31]

Such debates tend to focus relentlessly on the role of the City and the Bank of England that regulated City finance. We must recall that until close to the end of the nineteenth century much business and industrial investment was local and personal; London securities markets that brokered government and overseas

[29] LE Davis and RA Huttenback, *Mammon and the Pursuit of Empire: The Political Economy of British Imperialism, 1860–1912* (1986) 30–72.

[30] RCO Matthews, CH Feinstein, and JC Odling-Smee, *British Economic Growth 1856–1973* (1982) 128 (Table 5.2); NFR Crafts, *British Economic Growth During the Industrial Revolution* (1985) 63. The debate on the scale and effects of British capital export has extended from the time of JA Hobson and the early twentieth century Marxist theorists of imperialism to today; for recent calculations, see DCM Platt, 'British Portfolio Investment Overseas before 1870: Some Doubts' (1980) 33 Economic History Review 2nd ser 1; PJ Cain and AG Hopkins, 'The Political Economy of British Expansion Overseas, 1750–1914' (1980) 33 Economic History Review 2nd ser 463; S Pollard, 'Capital Exports, 1870–1914: Harmful or Beneficial?' (1985) 38 Economic History Review 2nd ser 489; M Edelstein, *Overseas Investment in the Age of High Imperialism: The United Kingdom, 1850–1914* (1982); M Edelstein, 'Foreign Investment, Accumulation and Empire, 1860–1914' in R Floud and P Johnson (eds), *The Cambridge Economic History of Modern Britain, Volume II, Economic Maturity, 1860–1939* (2004) 190; Davis and Huttenback (n 29 above); I Stone, *The Global Export of Capital from Great Britain, 1865–1914: A Statistical Survey* (1999).

[31] N Ferguson, *The Cash Nexus: Money and Power in the Modern World, 1700–2000* (2000) 297–302. Ferguson cites Edelstein and Pollard for support concerning the benefits of capital export; but Edelstein (*Overseas Investment* (n 30 above) 194–5, 232) and Pollard ('Capital Exports' (n 30 above) 512–14) were careful to avoid claiming that overseas investment and profit-taking strengthened the domestic economy in the longer term. For the controversy as to whether entrepreneurs neglected investment opportunities at home, see DN McCloskey, 'Did Victorian Britain Fail?' (1970) 23 Economic History Review 2nd ser 450; NFR Crafts, 'Victorian Britain Did Fail' (1979) 32 Economic History Review 2nd ser 533; DN McCloskey, 'No It Did Not: A Reply to Crafts' (1979) 32 Economic History Review 2nd ser 538.

stocks did not comprise or control the entire capital supply.[32] Britain's development as an industrial power from the eighteenth century to the twentieth occurred largely outside the corporate joint-stock sector in the *mittelstand* of partnership firms, family enterprises, and sole traders, forming clusters of industry and entrepreneurship drawing on local sources of credit and mutually supporting a division of labour encouraging innovation. The Company Acts of 1844–62 did not lead to a significant shift of business into corporate form. As late as 1880 joint-stock enterprise was a weak presence outside transport and utilities, and corporatization of the economy only really took place between 1880 and 1914, with a further concentration of enterprises in the interwar period.[33]

Let us take a closer look at forms of finance outside that traded in the City. The bulk of commercial, industrial, and agricultural investment before the 1860s, and hence well before extensive corporatization had taken place, was arranged by country banks, attorneys, and networks of bill discounters—'relational investment' on a small scale based on personal connections and information.[34] A shift towards use of bank capital in trade and industry from the 1870s can be observed as a more centralized banking sector emerged providing impersonal credit pools, replacing personal credit relations in local stock markets and business networks.[35] It is crucially important to determine the nature of this new type of bank lending. Studies of loan relationships between banks and the English industrial corporate sector between 1860 and 1914 suggest that typical loans were made to well-established companies with regular turnovers, in the form of six-month overdraft facilities, with the loan relationship typically rolled over once to last one year.[36] The average bank loan to business in 1890 hovered

[32] C Muldrew, *The Economy of Obligation: The Culture of Credit and Social Relations in Early Modern England* (1998); LS Pressnell, *Country Banking in the Industrial Revolution* (1956) 75–125, 322–43; Quinn (n 21 above) 157–67; PL Cottrell, *Industrial Finance 1830–1914: The Finance and Organization of English Manufacturing Industry* (1979, reprinted 1993) 248–73; PL Cottrell, 'Domestic Finance 1860–1914' in R Floud and P Johnson (eds), *The Cambridge Economic History of Modern Britain, Volume II, Economic Maturity, 1860–1939* (2004) 253.

[33] J de Vries, 'The Industrial Revolution and the Industrious Revolution' (1994) 54 Journal of Economic History 249; S Pollard, *The Genesis of Modern Management: A Study of the Industrial Revolution in Great Britain* (1965); F Crouzet (ed), *Capital Formation in the Industrial Revolution* (1972); Jefferys (n 26 above) 54–154; Cottrell, *Industrial Finance* (n 32 above) 162–93; Cottrell, 'Domestic Finance' (n 32 above) 261–70; Matthews, Feinstein, and Odling-Smee (n 30 above) 359–61; L Hannah, *The Rise of the Corporate Economy* (2nd edn, 1983) 8–26; AD Chandler, *Scale and Scope: The Dynamics of Industrial Capitalism* (1990) 235–392.

[34] A representative portrait of this world, that went into many printings, is found in G Rae, *The Country Banker: His Clients, Cares, and Work, From an Experience of Forty Years* (1885). See also Pressnell, *Country Banking* (n 32 above).

[35] WA Thomas, *The Provincial Stock Exchange* (1973); PL Cottrell, 'The Domestic Commercial Banks and the City of London, 1870–1939' in RC Michie (ed), *The Development of London as a Financial Centre, Volume 2: 1850–1914* (2000) 106.

[36] See, for example, F Lavington, *The English Capital Market* (1921) 143–5.

around the mean of £10,824 and the median of £2,000. Loans of this scale and duration were not used to finance capital expansion or to promote entrepreneurial risk-taking on any extent of time. Rather this was bridging finance, typically for acquisition of raw materials and inventory, with the invoices of expected profit being used to secure and then pay off bank overdrafts, and with banks shuffling the trade profits of one set of clients into overdraft for another set.[37]

The residual personal nature of much of this local bank finance is shown by the finding that for some decades after the 1860s, perhaps half of such bank overdrafts and loans were not secured, or were secured only by personal covenant of the directors in closely held corporations, a practice descended from the giving of personal credit to partners. But towards the end of the century pressure grew on bank managers, increasingly line managers of amalgamated banking groups with London headquarters, to lend against collateral. These short-term bank injections of liquidity could at the margin free up enterprises' retained cash profits to be directed into longer-term investments, though banks might monitor to prevent too much illiquidity in firm assets. But banks were committed to avoiding any long-term illiquid investments in firms with bank money, so much so that the avoidance of committed loans became a banker's dogma. A striking feature of the English industrial finance system that emerged was that bank loans, like preference shares and long maturity bonds, did not give rise to managerial credit relationships as in German and French industry. Rather, banks and other creditors remained at arm's length from their investment targets, eschewing seats on boards or close accounting and reporting praxis. The collapse of two provincial banks that had attempted to fund industrial expansion in 1878 only strengthened the instinct that banks should not share enterprise risk with industrial clients.[38] British banks instead sought profits in amalgamations and cartelization of services, or in intermediated investment in London securities, rather than pursuing active investment policies involving entrepreneurial asset allocation. We do not find the development of large investment banks that supplied

[37] RP Higonnet, 'Bank Deposits in the United Kingdom, 1870–1914' (1957) 71 Quarterly Journal of Economics 329; Neal, 'Finance of Business' (n 21 above) 153–62, 168–70; Cottrell, 'Domestic Finance' (n 32 above) 270–9; FH Capie and M Collins, 'Banks, Industry and Finance, 1880–1914' (1999) 38 Business History 26; FH Capie and M Collins, 'Bank/Industry Relations, 1870–1990' in RC Michie (ed), *The Development of London as a Financial Centre, Volume 2: 1850–1914* (2000) 178, 182–8; MH Best and J Humphries, 'The City and Industrial Decline' in B Elbaum and W Lazonick (eds), *The Decline of the British Economy* (1986) 223, 226–9.

[38] See M Collins, 'The Banking Crisis of 1878' (1989) 42 Economic History Review 2nd ser 504.

long-term capital, especially to industry with heavy fixed costs as was common practice in the German economy.[39] To sum up, the English banks did not pursue a significant role as 'gatekeepers' of the economy. They did not serve as arbitrageurs of capital through superior access to information.[40] Rather they acted as cash grocers.

Debate continues as to whether the unique structure of the British banking sector—its commitment to liquidity, its lack of commitment to industry save for short-term, small-scale credit relations, its centralization and divorce from the regions—was responsible for British industry's failures in investment and technology that led it to fall behind its rivals before the Great War. Adverse comparisons are sometimes drawn with the system of bank investment, monitoring, and supervision in German industry, but the relevance of this rival model may be doubted. There is evidence that the German universal banks with their concentrated holdings and seats on company boards simply substituted for an underdeveloped share market in providing capital to heavy industry; further that the banks neglected the *mittelstand* or small to medium enterprises, even though barriers to entry stopped such firms raising share finance; and finally that banks were ineffective monitors of management.[41] The active defence of the British corporate finance system before the Great War is that retained profits and developed stock markets provided all the capital that was desired. The causes of inadequate investment therefore must be sought elsewhere, for example in the cultures of management and labour—not in the praxis of

[39] The debate was enlivened by A Gerschenkron's famous 1952 essay on 'Economic Backwardness in Historical Perspective', where he stated:

> The difference between banks of the crédit-mobilier type and commercial banks in the advanced industrial country of the time (England) was absolute. Between the English bank essentially designed to serve as a source of short-term capital and a bank designed to finance the long-term needs of the economy there was a complete gulf. The German banks, which may be taken as a paragon of the type of universal bank, successfully combined the basic idea of the crédit mobilier with the short-term activities of commercial banks.

(in A Gerschenkron, *Economic Backwardness in Historical Perspective. A Book of Essays* (1962) 13).

See further M Collins, 'English Bank Development within a European Context, 1870–1939' (1998) 51 Economic History Review 2nd ser 1; DM Ross, 'Commercial Banking in a Market-Oriented Financial System: Britain between the Wars' (1996) 49 Economic History Review 2nd ser 314; J Edwards and K Fischer, *Banks, Finance and Investment in Germany* (1994). For French bank participation in industry, see E Paulet, *The Role of Banks in Monitoring Firms: The Case of the Crédit Mobilier* (1999).

[40] cf JA Schumpeter, *The Theory of Economic Development* (1911), postulating a direct link between the quality of financial institutions and economic development.

[41] Ross (n 39 above); Edwards and Fischer (n 39 above); RH Tilley, 'German Banking 1850–1914: Development Assistance for the Strong' (1986) 15 Journal of European Economic History 113.

bankers.[42] A further defence is that the isolation of banking from industry helped Britain avoid the banking crises of the interwar period that afflicted Europe and the United States. It is fair to say that the jury is still out on this controversy.

3. Prominence of circulating capital

Lord Scott in *Spectrum* suggested that circulating capital took on more importance than fixed capital at the time the floating charge developed.[43] Assessing such a claim requires sensitivity to different periods. Early industrialization based on textiles employed slight fixed capital, with a greater proportion of investment in inventory.[44] American evidence reinforces this claim.[45] It was the rise of heavy industry such as metallurgy in the later nineteenth century that led to heavier fixed investments.[46]

For the later period from 1870, encompassing the creation of the floating charge, aggregate formation of fixed, inventory, and exported capital is captured in the data in Tables 3–6 below, which gives some sense of relativities.

These aggregate figures do not permit much discrimination in assessing the balance of fixed and circulating capital in English enterprise, but they do not suggest a major tilt towards circulating capital as the economy developed, but rather the opposite. The figures for non-land fixed capital in manufacturing show a flattened increase in the 1880s but otherwise between a 25 per cent and

[42] The case for the prosecution against the British banking and financial sector is stated in WP Kennedy, *Industrial Structure, Capital Markets and the Origins of British Economic Decline* (1987) and Crafts, 'Victorian Britain Did Fail' (n 31 above) focusing on the opportunity costs of foregone domestic investment; and Best and Humphries, 'The City and Industrial Decline' (n 37 above), seeing entrepreneurial failures and weak demand for investment as caused by the commercial slant of the banks; see also M Dintenfass, *The Decline of Industrial Britain 1870–1980* (1992) 40–9; W Hutton, *The State We're In* (1995) 132–68. Defence of the financial sector's role as meeting all extant demand is given in WA Thomas, *The Finance of British Industry, 1918–1976* (1978) 53–82; Cottrell, *Industrial Finance* (n 32 above) 194–247; FH Capie and M Collins, *Have the Banks Failed British Industry? An Historical Survey* (1992) 20–43; M Collins, *Money and Banking in the UK: A History* (1988) 92–122. The cultural debate over industrial failure is pursued in MJ Wiener, *English Culture and the Decline of the Industrial Spirit, 1850–1980* (1981); MJ Daunton, ' "Gentlemanly Capitalism" and British Industry 1820–1914' (1989) 122 Past and Present 119 and WD Rubinstein, 'Debate—"Gentlemanly Capitalism" and British Industry 1820–1914' (1989) 132 Past and Present 150; Y Cassis, *City Bankers, 1890–1914* (1994) 139–81.

[43] See text accompanying n 8 above.

[44] See essays in F Crouzet (ed), *Capital Formation in the Industrial Revolution* (1972), especially S Pollard, 'Fixed Capital in the Industrial Revolution in Britain', 145–61, originally published (1964) 24 Journal of Economic History 299.

[45] KL Sokoloff, 'Investment in Fixed and Working Capital During Early Industrialization: Evidence From U.S. Manufacturing Firms' (1984) 44 Journal of Economic History 545.

[46] Matthews, Feinstein and Odling-Smee (n 30 above) 222–35, 381–95; S Pollard, 'Entrepreneurship, 1870–1914' in R Floud and D McCloskey (eds), *The Economic History of Britain Since 1700, Volume 2: 1860–1939* (1994) 62.

Table 3. Growth and structure of UK circulating capital, stocks, and inventory, 1850–1920

	Total farm stocks	Non-farm stocks	Total stocks
		£ millions at 1988 prices	
1850	266	169	435
1860	352	254	606
1870	363	356	719
1880	362	435	797
1890	289	469	758
1900	279	621	900
1910	328	729	1,057
1920	930	2,054	2,984

Source: CH Feinstein, 'Stocks and Work in Progress, Overseas Assets, and Land' in CH Feinstein and S Pollard (eds), *Studies in Capital Formation in the United Kingdom 1750–1920* (1988) 394.

Table 4. Gross reproducible (non-land) assets, 1856–1913

	Gross domestic fixed assets	Inventories	Net overseas assets	Total
		£ billions at 1938 prices		
1856	4.22	0.6	0.5	5.4
1873	5.92	0.7	1.5	8.2
1913	12.86	1.3	7.3	21.5

Source: RCO Matthews, CH Feinstein, and JC Odling-Smee, *British Economic Growth 1856–1973* (1982) 129 (Table 5.3). Land is omitted from the estimates; land values are augmented by investment, but aggregate historical values cannot be calculated with any accuracy: ibid 121.

Table 5. Growth of UK manufacturing fixed capital, gross and net stocks, 1850–1920: machinery and equipment

	Gross fixed capital formation per annum	End-period gross stock	End-period net stock
		£ millions at 1900 prices	
1850		142	88.3
1851–1860	8.36	210.9	126.6
1861–1870	10.91	291.1	167.1
1871–1880	15.18	401.3	216.2
1881–1890	13.61	438.9	217.6
1891–1900	23.86	526.6	298.1
1901–1910	37.63	751.1	451.9
1911–1920	44.98	1061.4	592.0

Source: CH Feinstein, 'Manufacturing' in CH Feinstein and S Pollard (eds), *Studies in Capital Formation in the United Kingdom 1750–1920* (1988) 300.

Table 6. Growth of UK manufacturing fixed capital, gross and net stocks, 1850–1920: total fixed assets

	Gross fixed capital formation per annum	End-period gross stock	End-period net stock
		£ millions at 1900 prices	
1850		252.4	165.7
1851–1860	12.60	360.4	228.7
1861–1870	14.75	471.7	285.2
1871–1880	21.07	632.9	365.0
1881–1890	17.95	704.0	376.3
1891–1900	29.94	839.3	478.7
1901–1910	47.51	1140.0	679.8
1911–1920	66.63	1622.0	952.6

Source: CH Feinstein, 'Manufacturing' in CH Feinstein and S Pollard (eds), *Studies in Capital Formation in the United Kingdom 1750–1920* (1988) 300.

30 per cent growth rate per decade across the 1850–1920 time period. The ratio of domestic fixed to circulating capital is 8.45 in 1873 and 9.89 in 1913; the ratio moves even more strongly towards fixed capital in this period if overseas capital formation is included.

To summarize the data presented so far: after 1870 there was an explosion in equity shares and also in total fixed capital; there was no proportionate increase in circulating capital and possibly a declining ratio; there was a vast supply of domestic credit, leading to sizeable capital exports; and at the same time there was quite limited availability of loan capital, typically in the form of short-term bank overdraft facilities. All of this casts doubt on the view that the floating charge over the circulating assets of enterprise was a crucial element of corporate expansion from the 1870s onwards.

4. Liquidity preferences of banks

In light of these historical arguments Lord Scott's claim in *Spectrum* might perhaps be adapted to yield the following claim: that there was a large amount of available capital for investment in enterprise both within and outside equity markets from the 1870s; and some of those funds took the form of loan capital that lenders such as banks (who can be seen as agents for both bank shareholders and depositors) *preferred* to invest in short-term overdraft facilities and debentures of limited size rather than in equity or long-term bonds. A favouring of floating security by the banks represented an entrenched liquidity preference.

Floating charges, especially over receivables such as book debts, were readily realized as cash assets unlike fixed assets that required liquidation, and without

the price volatility of liquid equity assets.[47] We have seen that the median loan from bank to business before 1900 was around £2,000 for six months, to be repaid from profit and rolled over, and manuals of banking practice expressly recommended that there be no deeper involvement in the capital structure or management of enterprise.[48] There may have been good reason for such liquidity preferences. At all times in the late nineteenth century bank investments had to compete with the availability of stable earnings from purchase of government issue; discount rates could affect the expected return on 3 per cent consols but the nominal government rate still set a benchmark. In pursuing a competitive return banks needed to maintain liquidity since the bill payment, discount, and clearing systems were maintained by cash to deposit ratios often running as low as 10 per cent. Central reserve banking by a responsible public authority was not yet in place, and runs by depositors could easily put a bank to the wall if it could not access cash quickly in a crisis. Local banks had lower reserve to lending ratios than London banks, and it was the local banks that financed home industry.[49]

The banks' short-term liquidity preferences dictated by their high leveraging within a relatively unregulated and uninsured financial system may be the key explanation of why the English legal system in the 1870s helped lenders develop the facility of security instruments attaching readily available circulating corporate capital such as book debts or receivables. Credit rationing to business and the invention of new forms of security such as the floating charge expressed a policy of ensuring easy and rapid realization of security, rather than representing an assessment of the expected return from corporate debt. Curiously the liquidity preference of the banks may not have been dictated by raw economic function as time passed on; inland bill of exchange financing declined and bank deposits rapidly grew at the end of the century as the banking and financial system matured and as capital accumulated in the late Victorian economy, almost eliminating leveraging by most banks in the 1890s. So lenders' liquidity preferences from the turn of the century may have been dictated by the internal culture of banks as formed in prior decades, more than by contemporary

[47] Though evidence of difficulties in realization of book debts are adduced by J Armour and S Frisby 'Rethinking Receivership' (2001) 21 OJLS 73, 94–5.

[48] SE Thomas, *British Banks and the Finance of Industry* (1931) 112–37, citing James William Gilbart's classic treatise *The History and Principles of Banking* (1834, 2nd edn, 1866) as having stated the norms of lending practice for the nineteenth century. See also HT Easton, *History and Principles of Banks and Banking* (1904) 93–123. Bank control of stock in American corporations tells a different story: see AA Berle, *Studies in the Law of Corporation Finance* (1928) 41–63.

[49] CAE Goodhart, *The Business of Banking, 1891–1914* (1972) 167–91; Capie and Collins, 'Banks, Industry and Finance' (n 37 above); Capie and Collins, 'Bank/Industry Relations' (n 37 above) 182–8; Cottrell, 'Domestic Commercial Banks' (n 35 above); Cottrell, 'Domestic Finance' (n 32 above) 270–9.

economic conditions. A particularly strong form of path dependence had set in to determine bank–industry relations.

5. Summary

Arguments from historical evidence can only be approximations, suggestive of possible causalities. Nonetheless the history of banking and corporate finance does suggest that our current understanding of the economic need for the rise of company charges, and in particular of charges over receivables, is ripe for review. Capital supplies in the late Victorian period were not running short due to limitations in the size of banking pools or equity markets. Nor was security over circulating capital including receivables the only plausible method to secure working capital for enterprise. An alternative thesis is that banks at one particular stage in their development from the mid-nineteenth century had certain liquidity preferences involving short time horizons, and this led to pressure for certain types of realizable security that met those preferences. Finance was only made available to enterprise if credit suppliers' preferences for short-term liquidity could be met. Whether the law should have adapted its institutions to satisfy and entrench the banks' preferences raises another set of questions.[50]

D. Was American Prohibition Efficient?

It is striking that American credit markets had to do without floating liens from 1925 until the advent of registration under Article 9 of the Uniform Commercial Code,[51] on the basis that the debtor who controlled and disposed of receivables could not be said to have constituted *any* kind of charge over them—*Spectrum Plus*-plus, if you like. There is controversy to this day as to whether Justice Brandeis' denial of floating charges over receivables in *Benedict v Ratner*[52] adversely affected capital supply in the corporate economy. The pressure for short-term finance may have been reduced by American corporations' heavy reliance on long-term bonds for finance, with significant issues around 1900, and then huge growth after the First World War.[53] In any case the decision excluding floating charges arguably may have enhanced rather than degraded

[50] There was of course pressure from other credit suppliers, not just banks, for recognition of floating security; a range of publicly traded debentures were secured against entire undertakings, not just against fixed assets (see J Armour, 'Should We Redistribute in Insolvency?', ch 9 above). But much of this debenture market was colonized by banks and other institutional investors.

[51] Article 9 of the Uniform Commercial Code was drafted by 1950, and the Uniform Commercial Code itself was first promulgated in 1951, but only widely adopted in revised form in 1962. See G Gilmore, *Security Interests in Personal Property* (1965) vol I, 288–94.

[52] 268 US 353 (1925), Sup Ct US.

[53] See WB Hickman, *The Volume of Corporate Bond Financing Since 1900* (1953) 44.

disciplined lending and strengthened the management and monitoring of debtor companies in the United States, by requiring notice to assignees of changes in the collateral and giving chargees a strong legal incentive to police the debtor businesses lest priority be postponed.[54] In this chapter I have offered a similar argument in reverse: that the benefits of the floating charge in English corporate finance have been overplayed, and that the inimical effects of such charges, contributing to and symptomatic of a weak system of industrial finance with severely constrained time horizons, have consistently been underestimated. This may further suggest that those who predict harm to the United Kingdom's credit system and economy as a result of the downgrading of bank security over receivables as decided in *Spectrum* may simply be wrong. At the very least they cannot assume that they have history on their side.

[54] Gilmore analyses the impact of the *Benedict* rule in detail in his study of accounts receivable financing in *Security Interests* (n 51 above) 250–86. He notes that steep transaction costs may have offset some of the advantages of the rule forcing parties to use what in effect were fixed charges over itemized receivables with licences to deal. Devices developed in the wake of *Benedict* included channelling inventory receipts through assignees' accounts, using revolving credit, and old-fashioned factoring arrangements—all devices that find an echo in English receivables financing today. At the peak of the *Benedict* regime in the mid-1950s some $10 billion was loaned under such arrangements. See further EJ Janger, 'Brandeis, Progressivism, and Commercial Law: Rethinking *Benedict* v. *Ratner*' (1998) 37 Brandeis Law Journal 63; GR Warner, 'The Anti-Bankruptcy Act: Revised Article 9 and Bankruptcy' (2001) 9 American Bankruptcy Institute Law Review 3. Louis Brandeis, the author of *Benedict* in 1925, had earlier signalled his reservations about the power of banks and corporate managers to extract monopoly rents in *Other People's Money and How the Bankers Use It* (1914, RM Abrams (ed), 1971). For a recent study of Brandeis's business ideology, see RA Posner, 'Brandeis and Holmes, Business and Economics, Then and Now' (2005) (1) Review of Law and Economics § 1.