The rise and fall of capital market borrowing by UK local government over 200 years

Webster, Ian

Award date:
2022

Awarding institution:
Queen's University Belfast

The rise and fall of capital market borrowing by UK local government over 200 years

Ian Webster

Thesis submitted for the degree of Doctor of Philosophy

Queen's Management School

Queen's University, Belfast

August 2022

The rise and fall of capital market borrowing by UK local government over 200 years

Abstract

The aim of these four pieces is to chart the changing relationship between central and local government in the UK over 200 years. They do this by examining the rise and fall in capital market borrowing by local government. In doing so, the articles contribute to four broader topics in economic and business history. The first three relate to the nineteenth century: how the role of government grew; why state-owned enterprises developed; and how the municipal capital market grew. The last broader topic is the twentieth century increase in central control of local government in the UK, when international trends were for greater local autonomy. Over the two centuries in the UK, central government grows in importance, and local government becomes relatively less important.

Keywords: Public Works Loan Board, municipal capital market, local autonomy, central and local government relations, state-owned enterprises.

Acknowledgements

Many people and institutions have helped me with this thesis. But the biggest thank you must go to John Turner and Michael Aldous, my supervisors throughout this work.

Many others in the Queen's Management School, and at the Economic History Society conference in Belfast in 2019 also helped. I also need to thank the editors and peer reviewers of the Economic History Review and Business History.

Supervisors, reviewers, conference participants and others have all wanted me to produce the best work possible. I can only thank them and applaud their selfless motives. Their questions, comments, and challenges have turned rather rough and narrowly drawn first drafts into finished chapters and articles with, I hope, a broader appeal.

Historical inquiry rests heavily on the existence of accessible archives, and I have made extensive use of local, national, and international archives. Increasingly, I have been able to consult these online, rather than attending in person. I must thank the archivists for making so much material available on the Internet. Without this digital material, my research would have been almost impossible.

My final thanks must go to my partner, Pat. She has coped with years devoted to this study, and tolerated my dereliction of many other activities. Without her support, I could not have completed this PhD.

Contents

List of tables and figures

Chapter 1

Introduction

Introduction

This dissertation consists of four articles on the rise and fall of capital market borrowing by local government in the UK over two centuries. The first and third papers, on the nineteenth-century Public Works Loan Board and the growth of the municipal capital market respectively, are the first published works on these topics. The *Economic History Review* has recently published both papers.[1] The second article, on the growing local council involvement in utility, school, and hospital provision, is original in its theory of why councils increased their role. This article is forthcoming in *Business History*.[2] The fourth provides a new explanation of the twentieth-century move from a largely independent local government to one mostly funded by money from central government.

In examining the changing patterns of financing local government's capital spending, the four articles also show how central and local government relations have changed over 200 years. In the early nineteenth century, local government spending was higher than central government civil spending, and rates and charges financed nearly all local spending.[3] Central government had reversed this picture by the end of the twentieth century, by which time it spent much more than local government and financed most local spending. This transition illustrates four key issues in economic and business history. Three relate to the nineteenth century: the causes of growth in government spending; the early creation of state-owned enterprises; and the growth of a municipal capital market. In the twentieth century, the fourth change has been the decline in local government's autonomy in the UK.

[1] Webster, 'PWLB'; Webster, 'Municipal capital market'.
[2] Webster, 'Companies and voluntary organisations'.
[3] Mitchell, *Historical statistics,* pp. 587-9, 606-9, 822.

The views of policymakers in the twenty-first century are still changing on these four issues. After the 1970s, the international trend was for the size of government to shrink, and this continued until the 2008 global financial crisis. The crisis led many governments to intervene more, a tendency that increased with the 2019 pandemic. Central and local governments also increased the number of state-owned enterprises, after decades of privatisations.[4] The international move away from government lending to subnational governments has continued, as has the shift towards increasing autonomy for local authorities.[5] The UK has bucked this trend, but its government has recently acknowledged that it is 'one of the most centralised countries in the industrialised world', and therefore aims to devolve more power to local bodies.[6] The current relevance of these broader issues makes it vitally important to understand how we arrived at today's imbalance between central and local government.

There are three parts to this introductory essay. The first explains how the research developed and explores the links between the four articles. It also covers the research questions addressed by the articles, and the gaps they fill in the literature. The second section summarises the principal findings of the four articles. The third section identifies the contribution the articles make to the existing literature and highlights the originality of the research.

Why this topic?

The early focus for the research was the financing of local authority capital spending in England. My aim was to discover why councils ended the twentieth century by borrowing nearly all their capital from central government, through the PWLB. Why did

[4] Bernier et al., 'Introduction', p. 1; Albalate et al, '(Re)municipalisation', p. 573; Bird, 'State-owned enterprises', pp. 60-1.
[5] Ladner et al., *Patterns of local autonomy*; Ladner and Keuffer, 'Index of local autonomy'.
[6] HM Government, 'Levelling up', pp. 135-6.

the government create the PWLB, and how did its role change over two centuries? Early investigations uncovered the entire nineteenth-century PWLB archive of ledgers and minute books, and these provided some answers. After 1876, the PWLB's annual reports provided more detail on the continual changes in its activities.[7] Most nineteenth-century council borrowing was from individuals and institutions; but who were these lenders, and what caused councils to prefer PWLB loans after 1945? And how did practices in England compare with those in other countries? The existing literature is silent on these questions.

There are several strands of literature which are relevant to these four articles, covering both the UK and international experience. Travers has written about local government current spending and its financing during the twentieth century, but he does not cover capital spending or its financing.[8] Wilson examined UK local government capital spending between 1870 and 1914, showing the increasing scale of utility and school investment, but gives no details on how councils financed the investment.[9] Page has discussed local government borrowing instruments over a five-hundred year period, but does not cover the reasons for the changes.[10] The literature on financing council capital is therefore limited, and Flinn and Prest separately note the lack of research on the PWLB.[11] Writing about the PWLB's early years, Flinn argues that the government's aim was to provide employment for the poor at the end of the Napoleonic wars.[12]

---

[7] PWLB annual reports are in Parliamentary papers between 1876 and 1930, 1930-89 in the National Archives, post-1989 in the House of Commons library.
[8] Travers and Esposito, *History of local government finance.*
[9] Wilson, 'Municipal capital expenditure'.
[10] Page, *Local authority borrowing*.
[11] Flinn, 'Poor Employment Act'; Prest, *Liberty and locality*.
[12] Flinn, Poor Employment Act', p. 92.

In contrast, there is an extensive literature on the nineteenth-century UK capital market for government debt, railway and bank equity, foreign capital, and corporate bonds.[13] While there is no literature about the UK municipal capital market, the literature on the US municipal bond market is plentiful, from both the borrowers' and lenders' perspectives.[14] There is also a growing literature about post-1980 changes in municipal borrowing in other high-income countries, but nothing on earlier periods.[15] The growth of this international literature has encouraged data collections by the IMF and OECD, but the data does not exist for any pre-1972 periods.[16]

A further strand concentrates on councils' investments in utilities, and why they invested. Millward has written extensively on this topic, arguing that councils aimed to earn profits from their utility undertakings to 'relieve the rates'.[17] Many other scholars accept this argument.[18] The literature on state-owned enterprises offers an alternative explanation based on the differences between the motives behind private and public undertakings.[19] This literature also covers the post-1980s privatisations and the later return of some enterprises to the public sector.[20] Most of the broader literature on central and local government relations concentrates on legal, managerial, and policy freedoms, and on current rather than capital finance.[21] And most of the literature on the growth of government concentrates on the long-term increases in central

[13] Dickson, *Financial revolution*; Michie, *London stock exchange*, p. 88; Coyle and Turner, 'Corporate debt', p. 817; Reed, 'Railways and the capital market', pp. 162-183; Cairncross, *Foreign investment*, pp. 187-208.
[14] Temel, *Municipal bonds*.
[15] Swianiewicz, *Local government borrowing*; Anderson et al, 'Local government funding agencies'; Grant and Woods, 'Australia's fiscal federalism'.
[16] IMF, Government finance statistics database, downloaded from International Statistics from the UK Data Service (jisc.ac.uk) accessed 15 August 2021; OECD *United cities and local governments.*
[17] Millward, 'Growth of the public sector', p. 387; Millward, *State and business*, p. 195.
[18] Falkus, 'Municipal trading'.
[19] Sorrentino, 'The public mission', pp. 79-81.
[20] Albalate et al., '(Re)municipalisation', p. 573.
[21] Goldsmith and Page, *Changing relations*; Leach et al*, Centralisation.*

government spending.[22] An expanding literature on the autonomy of local government in Europe does exist, but only covers the post-1980 years.[23] It highlights the improving local autonomy in other countries, and the declining autonomy in the UK.[24] Finally, the international literature on subnational government covers the different methods of control used by central governments.[25]

A programme of research emerged from this literature review. The focus was still on the changes in the financing of local government capital over two centuries, but the four articles now address a series of broader questions. The broader topics are the growth of nineteenth-century government, the development of capital markets and the protection of lenders, and councils' early creation of state-owned enterprises. The final article examined the twentieth-century loss of local autonomy in the UK, and broadened its perspective to include some international comparisons. Together, the four articles therefore address the gaps in the existing literature by asking a series of questions. First, why did the government set up the PWLB in 1817, and how did its role develop in the nineteenth century? Second, what does this tell us about the growth of government during the period, and specifically about the growth of local government as the provider of local services? Third, why did councils increasingly provide utilities, schools, and hospitals when companies and voluntary organisations had been the early providers of these services? Fourth, how and why did the municipal capital market grow in the nineteenth century? Fifth, who lent money to councils, and why? Sixth, how did the municipal capital market compare with other parts of the capital

---

[22] Wagner, quoted by Lybeck, 'Comparing government growth rates', p. 30; MacDonagh, 'Nineteenth century revolution in government', p. 58; Acemoglu et al, 'Democracy does cause growth', p. 1; Lindert, 'Rise of social spending', pp. 1, 34.

[23] Van Houwelingen, 'Local autonomy', pp. 188-9, assesses the literature on decentralisation and local autonomy.

[24] Ladner et al, *Patterns of local autonomy*; Ladner and Keuffer, 'Index of local autonomy'.

[25] Ter-Minassian and Craig, 'Subnational government borrowing'.

market in the late nineteenth century? Seventh, what caused the twentieth-century transition from financing councils from local taxes and market borrowing to making them reliant on finance from central government? Finally, was this increase in the role of central government seen in other countries?

The broad focus of the research meant that a range of data and archival material was required. Local government spending data after 1882 is readily available, but data for earlier periods had to be collected from many different sources.[26] Feinstein's capital formation data had to be updated to determine the split between private, public, and voluntary provision of capital assets.[27] Data on the sources of council borrowing is only available after 1962, and for all earlier periods it had to be collected from council mortgage registers, stock ledgers, and PWLB data.[28] I also had to extend the existing IMF database on central government support for local governments in high-income countries to put the UK performance into context.[29]

Summary of findings

The articles highlight the four major changes in the financing of UK local authorities over two centuries. These changes explain the transformation in the relationship between central and local government. The first change was central government's development of its role and the growth of local government spending. The Poor Law Amendment Act in 1834 marked the first large-scale move from permissive local legislation to laws that imposed obligations on local bodies. In the early 1870s, Parliament passed two acts giving new duties to local bodies for the universal

[26] The annual local taxation returns are in Parliamentary Papers from 1882 until 1929, and then in the Annual Abstract of Statistics.
[27] Feinstein and Pollard, *Capital formation*, pp. 302-6, 312-78, 429-30.
[28] From 1962 it appears in the annual Central Statistical Office Financial Statistics publications.
[29] Most of the data is taken from annual yearbook publications of many countries, accessed via https://researchguides.library.wisc.edu › yearbooks.

provision of elementary education and water supply.[30] In the cases of all three acts, central government considered these services important enough to provide low-cost PWLB loans to encourage capital investment. The low PWLB interest rates meant that it became the largest lender for workhouses, schools, and sanitation between 1835 and 1880. The changes also saw local current spending increase rapidly, and big rises in central government grants to meet school running costs.

The second major change saw councils increasingly become utility providers and builders of schools and hospitals. Local government investment rose in the late nineteenth century as councils set up utility undertakings for water and gas, and later for trams and electricity. These services had previously been the preserve of private sector companies. Councils entered the field because they wanted to make all four services available to more of their residents, and this meant putting growth ahead of profit. In contrast, private firms put profit before growth. Firms were also anxious about the greater frequency of council takeovers and about government regulation that they felt would make companies less profitable.[31] Increasingly, councils were becoming large-scale providers of these services, a trend that continued until the 1940s nationalisation of gas and electricity and the 1974 removal of waterworks from councils. The government eventually reversed this trend with the privatisations of the 1980s.

There was a similar move towards local school board provision of elementary schools and away from provision by voluntary organisations after 1870. The voluntary organisations found it increasingly difficult to raise capital to invest in building more

---

[30] 1870 Elementary Education Act and 1872 Public Health Act.
[31] Parliament included clauses in electricity and tram acts allowing councils to buy out private companies after a fixed period. Similar clauses were inserted into some local gas acts.

schools. A similar move, for similar reasons, saw councils replace voluntary bodies as builders of many new hospitals. Both groups of voluntary bodies lacked the financial capacity to continue as the main providers of schools and hospitals. The growth of councils as utility, school, and hospital providers, and the decline of private and voluntary providers, reflects the difference between their business objectives. In addition, councils' ability to borrow money in capital markets allowed them to invest heavily in utilities, schools, and hospitals.

The third major change was the development of a large municipal capital market. Until the 1860s, most councils raised capital by borrowing on mortgages from individuals and institutions. To access these mortgage funds, councils had to accept the major improvements in investor protection demanded by the largest lenders – the PWLB, insurance companies, and the Bank of England. These lenders demanded higher standards of protection than legislation required, and only the largest lenders could impose extra conditions on borrowers. In exchange, councils increasingly adopted standard mortgage products to reduce their borrowing costs at a faster rate than the long-term fall in gilt yields. But in the 1860s and 1870s, the scale of councils' urban investment was greater than the mortgage market could support. The result was the growth of municipal stock issues; and, by 1900, councils were raising around a third of their debt through stock issues. The post-1870 municipal capital market was similar in size to the UK corporate bond market, and had similar risks and rewards as corporate bonds, government debt, and equities. But the municipal market was more attractive to institutional investors and local individuals than the other parts of the capital market. This pattern of councils borrowing mainly from the private sector, with the PWLB having only a minor role, continued until 1945.

The final change involved a series of increases in the shares of council capital and current income supplied by central government. In 1945 the new government ended market borrowing, compelling councils to use the PWLB. It did this to avoid councils competing with central government for scarce capital, even though council borrowing was no more than 8 per cent of Treasury borrowing between 1945 and 1951.[32] Governments in the 1950s reversed this change, reverting to the pre-war preference for market borrowing. In the late 1950s, council treasurers thought interest rates were high, and would fall in future. Consequently, as much as 20 per cent of council debt was in the form of temporary loans from banks. The government believed that short-term loans and bank borrowing created monetary policy problems. The government therefore agreed that local authorities could get half their borrowing needs from the PWLB, and at rates close to the government's borrowing costs.

In 1981 the government worried again about the monetary policy effects of increasing council borrowing from banks. To reduce borrowing from banks, the government allowed councils to borrow 75 per cent of their needs from the PWLB. In practice, low-cost PWLB borrowing became so attractive that by 1990, 90 per cent of borrowing was from the PWLB. The Treasury and the Bank of England later rejected this view of the monetary policy dangers of short-term and bank borrowing.[33] And since the mid-1990s, the central bank and the Treasury view has been that monetary policy is separate to debt management policy. Only foreign currency debt is now seen as potentially dangerous for monetary policy. Other countries have accepted this

---

[32] TNA, file T229/530 Investment programme committee, local authority borrowing, note on renewing the 1945 Act, dated 29 March 1951.
[33] Chrystal et al, 'Government debt structure', pp. 393-6; Goodhart, 'Monetary policy', p. 63.

separation between monetary policy and debt management policy, and many have sought to increase local authority borrowing from banks.[34]

In the twentieth century, central governments increased their current grants to councils. This reflected a government concern to keep local tax increases lower than local spending increases. Councils' increasing reliance on PWLB loans and current grants from the government caused a long-term decline in their financial autonomy. While other high-income countries saw a similar trend in the earlier part of the twentieth century, it was reversed in the later part of the century. After the 1950s, governments in other countries reduced their lending to local government, and after the late 1970s they also began to reduce the share of local current spending financed by grants. The cause of the long-term loss of councils' financial autonomy was therefore central governments' wish to keep local tax increases down, and the replacement of bank borrowing by PWLB loans. The common view that central governments needed to exert detailed control over local spending for macroeconomic reasons does not explain the long-term loss of local autonomy.[35] Instead, most countries now minimise the macroeconomic risks of high local spending by imposing hard budget rules.[36]

Contribution

In the only other article on the PWLB, Flinn argues that the government set up the PWLB to create employment in the post-Napoleonic depression years.[37] Yet the first article in this dissertation demonstrates that the PWLB had a negligible impact on employment. Instead, I show that PWLB loans were essential to the rapid rollout of

[34] The annual reports of most national DMOs set their objective as cost minimisation.
[35] Layfield, *Local government finance*, p. 238; and Radcliffe, *Monetary system.*
[36] IMF data shows most high-income countries prohibit deficit budgets and only allow borrowing for capital purposes.
[37] Flinn, 'Poor Employment Act', p. 92.

workhouse, school, and sanitary provision. The second article refutes the common view that local authorities became utility providers to make profits and keep local taxes down.[38] Instead, I argue that councils wanted to extend utility provision to more of their residents, often at a cost to their ratepayers. I also point out that utility firms preferred short-term returns to owners rather than long-term growth. The third article shows that the municipal capital market had higher levels of institutional investment and higher levels of home bias than other parts of the capital market.[39] It also demonstrates that the risks and returns to lenders were similar to the rest of the capital market. The fourth article is original in showing the differences between the UK and other countries' financing of subnational government capital spending. It also provides a new explanation of why government financing of local councils increased.

These four articles also contribute to wider debates in economic and business history. The first article contributes to the debate about the causes of the growth of government. It shows that local rather than central government was responsible for most of the increases in spending. Central governments also increased public spending by increasingly requiring, rather than allowing, local authorities to act. The use of the PWLB also reveals that governments provided local authorities with the means to meet these new responsibilities. The second article contributes to business history by examining one of the first examples of the transfer of undertakings between the private and public sectors. The article points to the differing motives of public, private, and voluntary organisations by looking at their financial performance.

[38] Millward, *State and Business*, p. 195.
[39] Scott, 'Cult of the equity'; Rutterford and Hannah, 'Rise of institutional investors'; Rutterford, Sotiropoulus and Van Leishout, 'Local bias'.

The third article engages in the law and finance discussion on the development of better protection for lenders.[40] It argues that legislation did not increase the protection for lenders to councils, because it set too low a standard. Instead, it was pressure from larger lenders – the PWLB, insurance companies, and the Bank of England – which demanded and received greater security for their loans to public bodies. Only large lenders had the ability to impose better protections for lenders. The fourth article contributes to the international literature on central and local government relations.[41] It does this by contrasting the UK's falling local financial autonomy with the rising autonomy in 20 other countries for which similar data is available. This comparison extends the timescale and increases the number of countries beyond those in the existing datasets.[42] This article also argues that the causes of declining local autonomy in the UK are more political than economic. Others have argued this for the post-1990 changes, but I argue that this was true over a much longer timescale.[43] These four articles therefore all participate in international debates that are far broader than the question of financing capital spending by UK local governments.

The four articles in this dissertation will be of interest to policymakers worldwide, as all countries need to establish relationships between central and local government, and determine how local bodies can access capital. International institutions prefer local government to have greater autonomy from central government, and prefer market borrowing to loans from central government.[44] Most of the literature on local autonomy

[40] La Porta et al, 'Investor protection', p. 5; Acheson et al, 'Private contracting'.
[41] Goldsmith and Page, *Changing relations*; Van Houwelingen, 'Local autonomy'; Shah, *Local governance*.
[42] Ladner et al, *Patterns of local autonomy*; Ladner and Keuffer, 'Index of local autonomy'.
[43] Hughes, 'Fiscal federalism', p. 12; Midwinter and Carmichael, 'Central grants', pp. 69-70; Carmichael, *Glasgow and Liverpool compared*.
[44] Ter-Minassian and Craig, 'Subnational government borrowing'; Peterson, 'Local credit systems'; UC & LG, *Gold report II*, pp. 6, 327.

also strongly favours decentralisation.[45] In the UK there is a conflict between local and international views, and between political messages and actions. The UK says that it wants greater devolution of power to local areas, but has not reversed the centralisation of the last 40 years.[46] The autonomy of today's subnational governments is therefore still the subject of current debate. In a similar way, the debate over private versus public ownership of utilities, and public rather than private provision of other services, continues. The debate is still around the mix of financial and social objectives, regulation, and access to capital.[47] A recent collection of essays on state-owned enterprises is a reminder of the regular changes of view on the merits of public ownership.[48]

Finally, the recent moves by many central governments to limit their lending to local governments have encouraged a literature on managing the transition to more market borrowing.[49] In the twenty-first century, the UK Treasury has questioned the existence of the PWLB.[50] The body lost its independence from government long ago, although it kept its unpaid commissioners. In 2016, the government abolished the commissioners, and the PWLB became part of the government's Debt Management Office.[51] Had the UK government followed international trends, it might have increased the distance between the PWLB and Treasury policymaking, rather than reduced it. Local autonomy, financing capital investment, public versus private ownership, and cross-country comparisons are still all matters of current interest.

---

[45] Van Houwelingen, 'Local autonomy', pp. 188-9.
[46] HM Government, 'Levelling up', pp. 105, 121.
[47] Helm, 'Infrastructure finance'.
[48] Bernier et al, *Handbook of SOEs*.
[49] Anderson et al, 'Local government funding agencies'; Grant and Woods, 'Australia's fiscal federalism'.
[50] The government took powers in the Infrastructure Act 2015 to abolish the PWLB and consulted on doing so in May 2016. In November 2016, the government concluded that it should be abolished.
[51] PWLB annual report 2018-9, p. 7.

Chapter 2

The Public Works Loan Board and the growth of the state in nineteenth-century England

Published in *Economic History Review*, 71(3) (2018), pp. 887-908.
DOI: 10.1111/ehr.12609

The published article has been reformatted to be consistent with the other chapters in this thesis. With one exception, the content is unchanged. The exception is that section headings have been inserted instead of the original Roman numerals. The bibliography has been removed and consolidated with that from other chapters, and is at the end of the thesis.

The Public Works Loan Board and the growth of the state in nineteenth-century England

Abstract

The nineteenth-century archive of the Public Works Loan Board (PWLB) has been overlooked by economic historians. Yet the archive reveals how the PWLB came to play a major part in the financing of new schools, water supplies and sewers in the 1870s. Ten thousand loan applications have been analysed to highlight the changing patterns of the PWLB's lending, while the 60 volumes of minutes indicate why the pattern changed. The analysis shows that in the 1870s there was a large rise in local infrastructure investment caused by the switch from permissive to compulsory public health and education legislation. At the same time, the PWLB became predominantly a low-cost, rather than a market rate lender. This change shows how MPs' views developed as they became more sensitive to the impact of the local costs of parliamentary legislation. Overall, the activities of the PWLB illustrate the legislative and institutional changes that contributed significantly to the growth in the role and spending of the state.

Introduction

The importance of the Public Works Loan Board (PWLB) has been overlooked in the economic history of nineteenth-century England. In the only article about the PWLB, Flinn rightly sees its creation in 1817 as an indicator of increased government support for public works.[1] Indeed, the majority of the PWLB's early loans were intended to finance public works on normal commercial terms, when private sector loans were not

[1] Flinn, 'Poor Employment Act' p. 92.

available.[2] But Flinn also says that the 1817 Act's passage 'shifted the emphasis of economic policy … in the direction of the relief of poverty and unemployment'.[3] The detailed evidence shows that this was only ever a very minor and temporary part of its role; the PWLB granted just three loans worth less than £3,000 for the direct relief of poverty and unemployment.[4] Examining the decades after 1870, Wilson says that 'as a result of Treasury strictures [the PWLB] was only able to lend at 5 per cent'.[5] But by the 1870s, the PWLB's records show that it had become a large-scale provider of 3.5 per cent loans to local government bodies to build schools, extend water supplies and build sewage facilities.[6] Writing about the same period, Millward and Sheard describe 'the urban fiscal problem' local authorities faced in paying for public infrastructure after 1870. Yet they do not mention the PWLB and the cheap loans it provided to local authorities.[7] It is surely time to examine the role of the PWLB in the nineteenth century.

The evolution of the PWLB should be seen in the context of the more general growth of the state in the nineteenth century. In 1877, Wagner argued that the growth of government reflected the 'shift … to the public sector of education (and) health'.[8] Much later, MacDonagh highlighted the importance of institutions and pressure groups in making the case for higher levels of government intervention.[9] More recently, Acemoglu and others established a direct relationship between extensions to the voting franchise and the scale of government spending.[10] However, Aidt et al. argue that the relationship was a complex one.[11] They examined sanitary spending by 75

[2] TNA, PWLB minute book, PWLB 2/3, 15 Feb. 1821, p.178.
[3] Flinn, 'Poor Employment Act' p. 92.
[4] *PWLB Report to Parliament*, (P.P. 1851, XXXI), p. 420
[5] Wilson 'Finance of municipal capital expenditure', p. 35.
[6] Analysis of TNA, PWLB applications ledgers, PWLB 6/6
[7] Millward and Sheard, 'Urban fiscal problem', pp. 501-35.
[8] Wagner, as quoted by Lybeck, 'Comparing government growth rates' p. 30
[9] MacDonagh, *'Revolution in government'*, p. 58.
[10] Acemoglu and others, 'Democracy does cause growth', p. 1.
[11] Aidt, Daunton, and Dutta, 'Retrenchment hypothesis', p. 1012.

English municipal boroughs between 1852 and 1884, and established that 'spending fell when the (local) franchise was widened … and it rose again when a (still) wider franchise was introduced'.[12] Lindert also recognised the long-term relationship between democracy and the rise of the welfare state, but he concluded that 'the quantitative patterns fail to reveal the mechanisms that caused' the rise in social spending.[13] This article uses the case study of the PWLB to illustrate how the changes in its role reflected the many changes that led to the growth of the state.

The focus of the case study is the changing role of the PWLB between 1817 and 1876. During this time, it produced just four reports on its activities to Parliament; after 1876, annual reports were produced, and its activities were better documented.[14] The main source material is therefore the 60 PWLB minute books, and seven ledgers of loan applications to the PWLB held in the National Archives.[15] Analysis of the applications shows the source, value and outcome of nearly 10,000 loan applications. The minute books show why the PWLB granted some applications and rejected others. Together, the minutes and the ledgers chart the growth in the PWLB's lending to the increasing number of local government bodies. They also make it possible to follow the Board's changing relationships with governments and the Treasury.

The views of MPs also changed over the period, and by 1876, they wanted to see PWLB loans offered at interest rates well below market levels. This reduced the cost to local ratepayers of implementing national legislation. During these 60 years, the PWLB ceased to be a provider of loans in cases of market failure, and became a provider of low-cost loans to local government. The views of government and the

[12] Daunton, *Victorian Britain*, p. 107.
[13] Lindert, 'Rise of social spending', p. 1.
[14] *PWLB Reports to Parliament,* (P.P. 1831, XIII); (P.P. 1843, XXX); (P.P. 1851, XXXI); and (P.P. 1872, XXXVI). After 1876, the annual reports are in Parliamentary Papers.
[15] TNA, PWLB minute books, PWLB 2/1-60; and Applications ledgers, PWLB 6/1, 1a-6.

Treasury were slower to change, but they did change, and the low interest rate policy has remained into the twenty-first century. While this approach may offer advantages to local government, it also has clear pitfalls, and these were very obvious in the nineteenth century. More generally, this article suggests how legislative changes, the resulting new state institutions, and the changing views of MPs, led to a rapid growth in the role of the state after 1870.

Flinn concluded his article on the early years of the PWLB by writing that the PWLB 'deserved a more prominent place in history than it has so far been accorded'.[16] Thirty years later, Prest wrote in a similar vein, that the PWLB 'was a body whose history needs to be written'.[17] This article fills this gap in the literature. In doing so, it revises the received wisdom about the purpose and role of the PWLB. It also adds materially to the growth of government debate by showing how individual legislative decisions led to significant increases in local and central government spending. In doing so, it shows that these decisions were not part of a longer-term plan.

In the twenty-first century, the PWLB is still the major provider of loans to finance local government capital expenditure, and it is still providing loans at sub-market rates.[18] Yet its existence is still subject to challenges from a Treasury that would prefer to see a higher proportion of private sector finance in local government.[19] Its low interest rates have also been challenged.[20] On a broader stage, the World Bank prefers to see regional or local governments raising loans on capital markets, rather than from

---

[16] Flinn, 'The Poor Employment Act of 1817', p. 92.
[17] Prest, *Liberty and locality*, p. 184.
[18] Total UK local authority debt was £86bn in 2015. Of this, PWLB advances were £65bn. *Local Authority Borrowing and Investment,* Nov. 2015, p. 1; and *PWLB annual report 2015/16*, p. 12.
[19] HM Treasury, *Transfer of Functions,* pp. 8-10.
[20] HM Treasury, *PWLB annual report 2011/12*, p. 16, reporting the Chancellor of the Exchequer's speech delivered in October 2010, increasing PWLB rates by one per cent.

national governments.[21] So the nineteenth-century English debates about the role and existence of the PWLB remain unresolved. Debates about the 'proper' functions and size of government are also unresolved, and as current as ever.

The remainder of this article is divided into five sections. The first examines the circumstances that led to the permanent establishment of the PWLB in 1817. The second, third, and fourth sections describe how and why the PWLB evolved in the early, middle, and late parts of the 60 years covered by the research. They also chart the change from financial break even, to large losses and then to large profits as the role of the PWLB changed. Section IV in particular shows how the emerging role of the PWLB was part of the large-scale expansion of the role and spending of the state. The final section contains the conclusions of the research.

Establishing the PWLB in 1817

The PWLB can trace its history back to 1793, when the country experienced 'the worst financial crisis it had known'.[22] The crisis was marked by 'a widespread flight to liquidity' as bank depositors withdrew their money from banks, afraid that they would fail.[23] As the crisis unfolded, a group of merchants met the Prime Minister, William Pitt, to persuade him to act. In response, Parliament appointed a temporary commission to lend money to merchants to make up for the lack of credit in the market. The commission would also oversee the repayment of the loans. Over 200 loans were made to merchants, totalling £2.2 million; all were repaid within 12 months, and a small

[21] World Bank, *Lessons for the urban century,* pp. 63-7.
[22] Clapham, *The Bank of England,* vol. 1, p. 259.
[23] Presnell, *Country banking in the industrial revolution*, p. 23.

profit was made.[24] This process was used again in 1795, and again in 1799 to deal with similar credit crises amongst merchants.[25]

In 1811, a similar temporary commission was established after pressure from merchants who had unsold inventories of goods that they had hoped to sell in South America. The merchants were unable to repay the bank loans they had used to build up these inventories. Although there were wider and deeper economic problems in 1811, further loans were made and successfully repaid.[26] However, Clapham considers the 1811 operation to have been 'ill judged'.[27] In effect, a mechanism that was designed to assist with a credit crisis was being used against much wider economic problems.

In 1817, the country's economic problems had increased. With the discharge of 300,000 men from the armed services, annual poor relief costs rose by 40 per cent.[28] As a result, the Chancellor of the Exchequer Nicholas Vansittart came under pressure from three sources.[29] First, a petition from 11,000 Birmingham labourers pleaded for the creation of jobs to replace those lost when ordinance contracts ended in 1815.[30] Second, the promoters of the Regent's Canal and the Ardrossan Canal in Scotland needed to raise more capital than the markets were willing to lend, and they asked the government to step in as a lender of last resort.[31] Finally, Vansittart's 'economic mentor', Henry Beeke, suggested that the government should lend money 'for the purposes of commercial and agricultural speculation' in order to generate economic

[24] *Report on the 1793 Act*, (P.P. 1810-11, IV), pp. 1-3.
[25] The 1799 commission was different, being based in Liverpool, with its commissioners drawn from that city.
[26] Clapham, *Bank of England*, vol. 2, p. 33-4.
[27] Ibid., vol. 2, p. 33.
[28] Nicholls, *A history of the English poor law*, p. 438.
[29] Vansittart was chancellor between 1812 and 1823 in Lord Liverpool's government.
[30] Smart, *Economic annals 1801-20*, p. 541.
[31] Flinn, 'Poor Employment Act', p. 87, quotes both.

activity.[32] Vansittart responded by proposing to use the 1790s mechanism of a temporary commission to lend money. His draft Bill offered £0.5 million for the 'completion of public works now in progress, or about to be commenced; to encourage fisheries; [and] to employ the poor in different parishes'.[33] The sum was later increased to £1.5 million for Great Britain, and a further £0.25 million for Ireland, and support for mines was added.

While those who spoke in the parliamentary debates recognised that the economy was struggling, they could not agree on the cause of the problems, or on what needed to be done.[34] Some thought the issue was a shortage of credit, some that it was due to a lack of demand, and some thought it was caused by excessive government spending. Yet others thought that the solution was for the government to increase spending by offering agricultural subsidies to increase production.[35] Some supported Vansittart's approach and wanted the government to lend money to increase the volume of public works.[36] Irrespective of their different approaches, all speakers were united in the belief that there was a need for action.

However, there was no agreement about the action that should be taken. Vansittart rejected proposals to draft the 1817 Bill to favour specific groups such as agriculture or industry. He also rejected framing it to explicitly include proposals that would create large-scale employment. Instead, Vansittart cast the 1817 Bill in terms of supporting public works projects. For the first time, there would be a general power for the state

[32] BL, Add. MS 31,232, Vansittart Papers, Beeke to Vansittart, 30 Dec. 1816, fo. 137. Hilton, *Corn, cash, commerce*, p. 157, for the description of Beeke.
[33] *Hansard* (Commons), 1st ser., vol. 36, 28 April 1817, cols. 27-48.
[34] Ibid., 14 May 1817, cols. 569-74; 21 May 1817, cols 818-19.
[35] Charles Western MP, a leading spokesman for agricultural interests. Quoted in Cookson, *Lord Liverpool's administration*, p. 96.
[36] John Christian Curwen MP, in *Blackwood's Magazine*, June 1816, quoted in Smart, *Economic annals*, p. 545.

to support infrastructure projects. Even so, Lord Liverpool as Prime Minister distanced himself from this extension of the state when presenting the Bill in the House of Lords. He said that he was ‘generally against measures of this sort’, believing that ‘time was the only effectual remedy’ to current problems and that the Bill was a ‘temporary relief’ only.[37] Hilton argues that Liverpool recognised the need to act, and that the 1817 Act represented the minimum the government could possibly do.[38]

Once the Act was passed, Vansittart appointed 21 PWLB commissioners of whom 19 were City of London figures or MPs (six were both), and nine of the 21 had been members of the earlier commissions. Between 1821 and 1876 a further 47 commissioners were appointed to fill gaps caused by death or retirement. Those with City and/or political experience continued to dominate in these appointments. Commissioners were always appointed by Chancellors of the Exchequer and approved by Parliament, so they were likely to reflect a Treasury view of the world, yet be acceptable to Parliament. There were no manufacturers or industrialists appointed in the 1817-76 period. The first chairman was Charles Grant, a three-time governor of the East India Company, an MP and former minister, and a member of all three previous commissions.[39] Grant and his fellow commissioners brought sound financial experience to bear, learned as merchants, as Bank of England directors, or as directors of large companies. They were very much ‘pillars of gentlemanly capitalism’.[40] In practice, about a third of the commissioners would meet each month, and this small group would take all the lending decisions. In contrast, the PWLB’s secretary, accountant and lawyer were there to advise and deal with the

[37] *Hansard* (Lords), 1st ser., vol. 36, 10 June 1817; vol. 36 cols. 928-932.
[38] Hilton, ‘Political arts of Lord Liverpool’, pp. 151-3.
[39] Casson, ‘Grant’.
[40] Singleton, *Central banking*, p. 39. He used this description of the Bank of England directors. It applies equally to PWLB commissioners.

administration.[41] This pattern of appointments and working continued for the whole of the 60 years studied here.

The early period, 1817 to 1834

The 1817 Act gave the PWLB three objectives. It was to lend to mine owners, lend to support public works, and lend to parishes to support the employment of the poor.[42] This section will examine how the PWLB performed against these objectives between 1817 and 1834. Table 1 shows that the PWLB's lending was less than £5 million during this time, or less than £0.3 million a year. Virtually all of this lending was to support public works projects. Mining loans were the only significant exception, and lending to parishes was negligible. Sixty per cent of its lending (by value) was to not-for-profit bodies: mainly to improvement commissioners, bridge and harbour trusts, and turnpike trusts. The other 40 per cent of lending went to businesses, mostly mine operators and canal companies, but with a few loans to early railway companies. Compared to the rare pre-1817 government loans for public works projects, the average size of a PWLB loan was small, at around £11,000.[43] The PWLB's lending to mine operators was not typical of the vast majority of the PWLB's later lending. Even so, they are worthy of study, since the PWLB commissioners' debates on mining applications showed them developing their own philosophy of lending.

The PWLB minute books show that the Board's decision-making on mining loans was dominated by three factors, each of which limited its willingness to make loans.[44] The first was that the Board's primary concern was to ensure adequate security for each

[41] Analysis of the PWLB's minute books over the 60 years.
[42] Public Works Loan Act 1817, (57 Geo. III, c34, s. 1).
[43] Stern 'United Kingdom expenditure', pp. 196-210.
[44] 'Mining loans' included loans to coal mine operators, to combined coal and iron operations where coal was the larger part of the business, to lead, tin and copper mines, and to a single clay quarry. There were no loans to foreign mine operations.

loan. In this, it acted in exactly the same way as contemporary banks.[45] Most mining ventures were very small concerns, and had little in the way of assets. The PWLB would therefore only lend when the mine operator was able to use other assets as security, or when others were willing to offer personal sureties. The inability to offer satisfactory security led to the rejection of 13 per cent of mining applications.[46]

Table 1. *PWLB Early Period 1817-34*

Panel A: Profits and losses

	Interest rate (%)	*Average size of loan (£'000)*	*Sums lent (£m)*	*Bad debts[a] (£'000)*	*Profit /Loss[b] (£'000)*
Civic improvement	5	10	1.7	155	131
Canals	5	51	0.9	43	54
Harbours & bridges	5	15	0.7	11	11
Roads	5	4	0.6	215	-138
Rail	5	11	0.4	16	42
Mines	5	15	0.3	9	3
Ireland	5	29	0.2	120	-111
Totals		*11*	*4.8*	*569*	*-8*

Panel B: Losses from bad debts by decision maker

	Sums lent £m	*Bad debts £'000*	*Losses, as % of sums lent*
Loan recommendations made to the PWLB[c]	0	0	
All other loans made at PWLB's discretion	3.9	83	2
Loans made at Parliament's direction	0.9	486	54
Totals	*4.8*	*569*	*12*

Notes: a 'Bad debts' includes interest not received as well as loan repayments not received.
b Profit/losses arrived at after adding 0.004% to cover PWLB office expenses, and after meeting the PWLB's costs of borrowing. *c* 'Loan recommendations made to PWLB' includes those made by the PLC, the LGB, the BoT, and the Education Department.
Sources: Analysis of TNA, PWLB 6/1, 1a–6 applications ledgers; and *PWLB Annual Report* (P.P. 1888, XXXIII).

The Board applied a second restriction on its lending to mine operators. It believed that loans should not be made to those who wished to expand their mining activity in order to increase their profits.[47] The Board thought that lending in these cases amounted to speculation, and was the business of commercial lenders, not the PWLB.

[45] Collins and Baker, *Commercial banks and industrial finance*, pp. 181, 184, 195, 205.
[46] Analysis of TNA, PWLB minute books, PWLB 2/1-7 for the years 1817-1826.
[47] TNA, PWLB minute book, PWLB 2/1, 17 Aug. 1817, p. 83.

More than half the mining applications were rejected for this reason. A third restriction was that the PWLB was unwilling to lend to those who wished to borrow in order to repay debts.[48] Five per cent of applications were rejected for this reason. Together, these three self-imposed restrictions accounted for 90 per cent of all rejected mining applications. These restrictions show that security was the most important issue in the PWLB's lending decisions. They also provide clear evidence that the PWLB did not see its role as job creation, or economic development.

There was little demand for loans from mine operators. Demand for coal was rising consistently, making it likely that most mining investment needs could be met from rising retained profits.[49] In addition, the larger mining concerns were beginning to raise finance on the capital markets. The result was that the Board lent just £0.3 million to mine owners in the years up to 1834, with all these loans being made at the prevailing market rate of 5 per cent.[50] Given that capital investment in mines between 1817 and 1826 was around £15 million, the PWLB's lending was less than 2 per cent of the total.[51] It therefore had a negligible impact on the output of the industry or on employment. By the late 1820s, the PWLB's view was that lending to mine operators had been a temporary expedient, suitable only in the difficult times immediately after 1817.[52]

PWLB lending to turnpike trusts was much more typical of its pre-1835 lending to bridge trusts, harbour boards, drainage boards, and so on. All were not-for-profit bodies established by locally sponsored Acts of Parliament which gave the bodies the

[48] TNA, PWLB minute book, PWLB 2/4, 16 and 23 Jan. 1823, pp. 135, 143.
[49] Pollard, 'Coal mining', pp. 39 and 62.
[50] Analysis of TNA, PWLB applications ledgers, PWLB 6/1 &1a.
[51] Pollard, 'Coal mining', p. 62.
[52] TNA, PWLB minute book, PWLB 2/3, 15 Feb. 1821, p. 178.

right to borrow and levy charges on users. The income from charges was used to repay the loans. The number of turnpike trusts peaked at around 1,000 in the late 1820s and early 1830s.[53] This created a boom in trust borrowing, with trust debts rising from £4 million in 1821 to over £8 million in 1834 as they invested in improvements to the main road network.[54] In this boom period the PWLB provided 16 per cent of turnpike trust finance at the prevailing market rate of 5 per cent. As turnpike trusts struggled financially in the late 1830s their borrowing from the PWLB and others dropped sharply.

In this early period, the PWLB made 148 loans to turnpike trusts, worth a total of £0.6 million, and with an average size of £4,000. The decision making on these loans was recognisably based on the assessment of a business case. The Board would examine the trust's proposed cost of the road improvements together with the trust's assessment of its potential future income. If the likely future income was sufficient to cover the costs, including loan repayments and interest, the Board would consider making the loan. The Board minimised the risk of default by asking the local turnpike trustees to provide personal sureties to guarantee the loan repayments. Once again, the Board was acting as a bank would, basing its decisions on business cases and security, and taking no account of any social or economic benefits.

In five cases, Parliament or the Home Secretary intervened in the PWLB's decision making. In three of these cases, the Home Secretary persuaded the PWLB chairman to approve loans to West Yorkshire trusts because of the high level of unemployment in the region.[55] All three loans proved very difficult to recover, and one £3,000 loan

[53] Albert, *Turnpike road system*. Appendix B lists the dates of all the turnpike acts.
[54] *Turnpike returns to Parliament (*P.P. 1821, IV), (P.P. 1836, XLVII).
[55] TNA, PWLB minute book, PWLB 2/16, 21 Dec. 1837, pp. 203-5.

was written off. These were the only cases where there is evidence of ministerial pressure being exerted on the PWLB's decision making. In a further two cases, after the PWLB had declined to make a loan, Parliament approved local acts directing the PWLB to make loans. One of these loans was for £50,000 to build new roads in Lanark and Dumbarton.[56] The second loan was for £54,000 to improve the London-Holyhead Road. [57] In both cases future income was insufficient to service the loans, and £192,000 of interest and loan repayments had to be written off. In both cases, the roads were intended to aid future troop movements and military communication.[58] A more appropriate response to the military need may well have been to provide grants rather than loans. These two cases provided an expensive precedent.

Table 1 shows that during this early period, the PWLB made an insignificant loss of £8,000. Two things were central to whether the PWLB made a profit or a loss. The first was the difference between the cost of government borrowing and the interest rates the PWLB charged borrowers. Before 1835, nearly all of the PWLB's loans were made at 5 per cent interest, considerably above the 3.5 to 4 per cent cost of government borrowing, and very similar to the prevailing market rate for non-PWLB turnpike trust loans.[59] Figure 1 shows the long-term relationship between the PWLB's average lending rates, market interest rates, and the government's cost of borrowing. This confirms that in these early years, the PWLB did not use the advantage of cheaper government borrowing costs to compete with commercial lenders.

[56] Lanark and Dumbarton Roads and Bridges Act 1820, (1 Geo. IV c84).
[57] London – Holyhead Road Act 1827, (2 & 3 Geo. IV c91).
[58] Ginarlis and Pollard, 'Roads and waterways 1750-1850', p. 200.
[59] Albert, *Turnpike road system*, pp. 247-59; Homer, *Interest Rates*, p. 195.

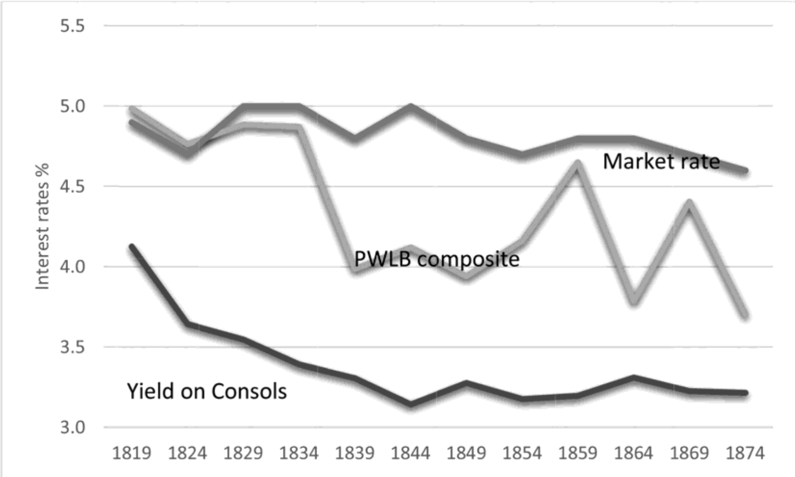


Figure 1. *Interest rates*

Notes and sources: 'Yield on consols': five-year averages from Homer, *History of interest rates*, p. 195, and is taken as the cost of government borrowing. 'PWLB composite rate' is a weighted average of PWLB rates for the same period. 'Market rate' is the interest rate paid for commercial loans by turnpike trusts pre-1845, and by Urban Sanitary Authorities post-1845; *Returns of Money* (P.P. 1874, LVI).

Table 2. *Loans made by the PWLB after parliamentary direction*

	Act	*Year passed*	*Sums lent £000*	*Bad debts £000*
Plymouth & Dartmoor railway	1 Geo. IV c54	1820	18	16
Highland roads	1 Geo. IV c84	1820	52	156
London-Holyhead road	1&2 Geo. IV c35	1823	36	
Charing Cross, London	7 Geo. IV c109	1826	400	
London-Holyhead road	6&7 William IV c35	1827	54	36
Thames tunnel	3&4 William IV c121	1831	250	150
Ulster canal	10 Geo. IV c109	1831	120	120
Irish workhouses	1&2 Vic. c54	1839	1,422	1,607
South Wales turnpike trusts	7&8 Vic. c91	1844	215	
Battersea Park, London	9&10 Vic. c38&83	1847	200	88
Chelsea Bridge	9&10 Vic. c39&83	1847	80	
Irish rail companies	12&13 Vic. c62	1849	500	
Dunbar harbour	20&21 Vic. c63	1857	20	74
Irish rail companies	29&30 Vic. c95	1866	159	
Irish rail companies	31&32 Vic. c81	1868	320	42
Ceylon harbour	32&33 Vic. c77&105	1869	320	
Totals			*4,166*	*2,289*

Notes: In each case the Act approving the scheme directed the PWLB to advance a loan. 'Bad debts' includes interest not received as well as loan repayments not received.

Sources: PWLB Annual Report (P.P. 1876, XXI); *PWLB Annual Report 1888* (P.P. 1888, XXXIII)

The second major influence on the profitability of the PWLB's lending was the scale of its bad debts. Table 1 shows that the PWLB incurred bad debts of £569,000 in this early period, with most of these losses coming from loans that the PWLB were directed to make by Parliament. Table 2 shows the full list of these directed loans, where Parliament rather than the PWLB was the decision maker. Panel B of Table 1 shows that bad debts on these directed loans amounted to 54 per cent of the sums lent. In contrast, bad debts on loans where the PWLB was the decision maker, were just 2 per cent of the sums advanced. While directed loans accounted for 20 per cent of PWLB lending in this period, they accounted for 85 per cent of the bad debts. This outcome demonstrates the potential dangers of state lending.

During these early years, the PWLB's objectives changed, with lending to mine owners and parishes ending, and by 1834 loans to profit-seeking businesses had virtually ended. The PWLB's sole objective had become the financing of public works. This reflected a change in the view of the government as well. In 1821, the initial £1.5 million provided by Parliament was almost exhausted and the PWLB chairman Charles Grant wrote to Vansittart setting out a case for more funding. He argued that the PWLB should no longer 'relieve temporary pressures of commercial distress', or support 'individual trades'. Instead, Grant argued that the Board should concentrate on the 'various useful schemes upon which money cannot be borrowed in the usual way'.[60] Vansittart responded that 'circumstances are so materially changed since … 1817', and that 'public aid … is always liable to much objection'.[61] Effectively Vansittart proposed to wind up the PWLB and withdraw the government from the role of providing support to public works. This threat of abolition was overcome, and in 1822 an Act provided a further £2 million to the PWLB for the support of public works.[62] This

[60] TNA, PWLB minute book, PWLB 2/3, 15 Feb. 1821, p. 178.
[61] Ibid., 22 Feb. 1821, p. 186.
[62] Public Works Act 1822, (3 Geo. IV c86, s. 1).

established that the government was willing to provide a general power to give financial support to public works outside periods of economic difficulty.

By 1834, the PWLB had lent nearly £5 million, equivalent to a sustained 5 per cent increase in civil government spending.[63] This was in a period when the government was trying to reduce spending and the national debt. The PWLB's lending therefore marks a considerable commitment by the government, and a major extension in the role of the state. However, the commitment was to support public works, rather than to provide jobs as Flinn has suggested.[64] Even if the aim had been to create jobs, the scale of the PWLB's lending was insufficient to have much impact. Specifically, the average annual PWLB lending total would have produced no more than 3,000-6,000 extra jobs, or just 2 per cent of the numbers demobilised at the end of the Napoleonic wars.[65] In addition, these early years had shown that the government could lend money successfully and profitably, provided that those making the lending decisions did so on strictly commercial grounds. The disadvantages of non-commercial decision making were also clear.

The middle period, 1835 to 1859

The years between 1835 and 1859 saw a further evolution in the role of both the PWLB and the government. The 1834 Poor Law Amendment Act and the 1848 Public Health Act both saw the PWLB begin to lend to local bodies to finance the delivery of national government policies. In addition, both acts created central bodies – the Poor Law Commission (PLC) and the General Board of Health (GBH) – each with a task of controlling the borrowing of local bodies. These two acts created a very different role

[63] Mitchell, *British historical statistics*, p. 397
[64] Flinn, 'Poor Employment Act', p. 92.
[65] The calculation assumes an average annual PWLB lending of £0.3m, annual average pay costs of £50 a year, and that between 50 and 100% of the sums lent were spent on pay costs.

for the PWLB, and different relationships with the government and with the new range of local bodies. Although section III will concentrate mainly on loans under these two acts, it will also examine several loans made for Irish purposes, often at the direction of Parliament.

The 1834 Poor Law Amendment Act encouraged the creation of 600 poor law unions, and most were expected to build a workhouse to provide accommodation for several hundred paupers.[66] Unions would borrow to finance workhouse building, and these loans would be repaid from the local poor rate. A significant degree of central control would be provided by the PLC, which would have to approve each borrowing application before it went to the PWLB. The 1834 Act set a maximum level of borrowing for a union, and specified that the only security needed was the ability to raise a local rate.[67] Instead of considering a business case, the PWLB merely had to consider whether the provisions of the 1834 Act had been met by each application. Of the 910 loan recommendations the PLC made to the PWLB, over 99 per cent were accepted.[68] In effect, the PWLB had lost its decision-making role on loans, and ceased to act like a bank. Instead, it was acting as a loan-processing agent for the PLC and the government.

An important change occurred in 1836, when six unions who had borrowed from the PWLB applied for the interest rate to be reduced from 5 to 4 per cent.[69] The unions could see that the government was borrowing at around 3.5 per cent and lending at 5 per cent, with very little risk of bad debts, and wanted to pass this advantage onto local

[66] Checkland, *Poor Law report*, p. 438.
[67] 1834 Poor Law Amendment Act, (4 & 5 Will. IV c72, s. 62-63).
[68] Analysis of TNA, PWLB applications ledger, PWLB 6/1a-3.
[69] The change in interest rates can be seen in the list of loans set out in *PWLB report to Parliament* (P.P. 1851, XXXI), pp. 18-28.

ratepayers.[70] The Treasury agreed to reduce interest rates to 4 per cent for any union that chose to apply.[71] Nearly all unions applied successfully for similar reductions. A few months later, the Treasury also conceded when unions applied for loans to be extended from 10 to 20 years.[72] Effectively, the terms of PWLB loans to poor law unions had been changed from 5 per cent over 10 years, to 4 per cent over 20 years. The PWLB and the government were now low-cost lenders on a significant scale.

The PWLB's market-beating terms, combined with an initial absence of alternative large-scale lenders, meant that the PWLB provided 61 per cent of all loans for building workhouses between 1835 and 1844.[73] The demand for PWLB loans from unions was so high that the PWLB ran out of money on six occasions between 1835 and 1842.[74] These shortages encouraged insurance companies to start lending to poor law unions. (Before PWLB rates fell to 4 per cent, insurance companies had been slow to lend because they found it difficult to judge the security offered by the new poor law unions.) However, because insurance companies charged 5 per cent for their loans, they lent primarily when the PWLB was short of funds. But in 1857 the PWLB interest rate reverted to 5 per cent, marginally above the market rate. This led more insurance companies to enter the market, and their share of lending rose. By 1865, the PWLB's share had shrunk, and insurance companies became the major providers of loans to poor law unions.[75]

---

[70] Homer, *Interest rates*, p. 195.
[71] TNA, PWLB minute books, PWLB 2/14, 5 November 1835, p. 129; 12 May 1836, p. 316; and PWLB 2/15, 23 June 1836, p. 32.
[72] TNA, PWLB minute book, PWLB 2/15, 10 March 1836, p. 231; and 10 November 1836, p. 176.
[73] Analysis of TNA, PWLB applications ledgers, 6/1a-2; and TNA, PLC sanctions ledger, MH34 1-3.
[74] TNA, PWLB minute books, PWLB 2/15-17 cover the many debates on the shortage of funds, particularly meetings in May, Aug., and Sept. 1836, April and June 1838, and April and June 1839.
[75] TNA, PLC sanctions ledger, MH34 1-3 PLC.

Why did the Treasury agree to reduce the PWLB interest rate and extend the period of workhouse loans? It was not because it wanted the PWLB to become a large-scale low-cost lender. Nor is it likely that it was simply responding to requests from borrowers. Another rationale emerged in the debates on the 1872 Public Health Act, when MPs voted against a national policy that imposed high costs on local ratepayers.[76] The result in 1872 was that MPs secured lower-cost PWLB loans, and the national policy remained unchanged. MPs were equally unhappy with the erosion of local discretion in the 1834 Act, and would have been aware of the complaints about the high cost of borrowing from local unions. The most convincing explanation of the Treasury's 1836 decisions is that as in 1872, they conceded lower interest rates in order to preserve the national policy. Importantly, both interest rate reductions followed recent electoral reform. The increased sensitivity of MPs and governments to the views of voters on these two occasions is likely to be a principal mechanism for explaining Acemoglu's link between a wider franchise and increased government spending.[77] In any event, the effect of cheap loans in 1836, was to increase investment so that 80 per cent of poor law unions had agreed to build new workhouses or extended old ones by 1839.

The second major act in this middle period was the 1848 Public Health Act. This gave urban local boards of health (LBHs) the power to invest in water supply and sewage systems, but it did not oblige them to do so. It also allowed the PWLB to lend to LBHs at 5 per cent, rather than 4 per cent. The General Board of Health (GBH) had fewer powers than the PLC, and only at the last minute secured the power to approve all borrowing by the LBHs.[78] But in the three years after the 1848 Act, water and sewer

[76] Bellamy, *Central-local relations*, p. 34
[77] Acemoglu et al., 'Democracy does cause growth', p. 1.
[78] MacDonagh, *Early Victorian government*, p. 145.

infrastructure investment was barely higher than it had been in the three years before the 1848 Act.[79] Ten years after the Act, only around 7 per cent of the population lived in areas that had chosen to use the borrowing powers of the 1848 Act.[80] A permissive act and market rate loans therefore resulted in very little extra investment. This was in sharp contrast to the workhouse experience where an act with an element of compulsion and cheap loans led to rapid progress.

In this middle period, the PWLB was directed by Parliament to make a small number of large loans. By far the largest of these was a £1.3 million loan to fund the building of workhouses in Ireland, with the loan to be repaid from local rates. Recognising the poor state of Irish local finances, no interest was to be paid in the first ten years.[81] Between 1839 and the early 1850s, a total of 159 workhouses were built.[82] But in post-famine Ireland, local rate income was insufficient to repay any of the loan, and it was eventually written off.[83] In 1887, Gladstone acknowledged the social case for the investment when writing that the transaction ought to have been treated as a grant, not as a loan.[84]

An example of ‘economic’ rather than ‘commercial’ PWLB loans is the support for Irish railways. These loans totalled £3.1m over the 60 years, and two thirds were made between 1847 and 1858. A third (by value) of all Irish rail loans was made following directions from the government, while the remainder were made at the PWLB’s discretion. There was clearly a case that a railway network in Ireland could aid its economic development. Robert Peel as Prime Minister took the argument further, and,

---

[79] Total water and sewer investment is derived by adding the total amount of GBH sanctions to the sums that water companies and corporations were authorised to borrow under local Acts.
[80] *Local Boards of Health Return,* (P.P. 1857 s2, XLI); and TNA, GBH sanctions ledgers, HLG16.
[81] *PWLB Annual Report* (P.P. 1888, XXXIII), p. 8.
[82] Gray, ‘Conceiving and constructing the Irish workhouses 1836-1845’, p. 24.
[83] *PWLB Annual Report,* (P.P. 1888, XXXIII), App. D.
[84] Treasury minute dated 23 May 1887, quoted in *PWLB Annual report*, (P.P. 1888 XXXIII), p. 8.

‘in pursuing his justice for Ireland policy … was now prepared to assist any [Irish rail] company’.[85] Lord John Russell took a similar view in 1847 by agreeing loans to three Irish railway companies ‘for essentially pragmatic reasons’.[86] But these loans did not foster economic development, and by the mid-1860s, Irish rail companies were using half their annual income to meet interest liabilities.[87] In spite of this, PWLB losses through bad debts on these railway loans were only £103,000.[88]

Table 3. *PWLB middle period 1835-59*

Panel A: Profits and losses

	Interest rate (%)	*Average size of loan (£’000)*	*Sums lent (£m)*	*Bad debts (£’000)*	*Profit /Loss (£’000)*
Ireland	4	184	3.5	1,603	-1,442
Workhouses	4	3	2.6	0	183
Civic improvement	5	4	1.8	97	200
Water & sewers	5	17	0.5	0	37
Harbours & bridges	5	14	0.4	72	-67
Other	5	10	0.2	5	23
Totals		*5*	*9.0*	*1,777*	*-1,066*

Panel B: Losses from bad debts by decision maker

	Sums lent (£m)	*Bad debts (£’000)*	*Losses as % of sums lent*
Loan recommendations made to the PWLB	4.0	9	0.2
All other loans made at PWLB’s discretion	2.6	7	0.3
Loans made at Parliament’s direction	2.4	1,761	73
Totals	*9.0*	*1,777*	*20*

Source: See tab. 1.

Bad debts on the loans the PWLB were directed to make by Parliament totalled nearly £1.8 million during this period, dominated by the loss on the £1.3 million Irish workhouses loan. These losses represented 73 per cent of the sums advanced. (See Table 3.) For the much larger volume of loans made at the discretion of the PWLB or the PLC, the bad debts were around 0.25 per cent of the sums lent. A considerable

[85] Lee, ‘Provision of capital’, p. 55.
[86] Ibid., pp. 57-8.
[87] *Royal Commission on Railways in Ireland* (P.P. 1867-8, XXXII), p. 14.
[88] *PWLB Annual Report* (P.P. 1888, XXXIII), Appendix. D.

proportion of the PWLB's lending in this period was at 4 per cent, and so lower than market rates (see Figure 1). Even so, the composite lending rate of 4-4.5 per cent was still well above the government's 3-3.5 per cent cost of borrowing. These loans were therefore profitable, but the PWLB still lost nearly £1.1 million on its lending of £9 million in this middle period because of the bad debts on directed loans. Once again, these loses highlight the dangers of making lending decisions based on social and economic, rather than commercial, considerations.

Partly as a response to these bad debts, Disraeli proposed abolishing the PWLB in his 1852 budget.[89] Disraeli was also prompted by the Treasury, who pointed out that ending the PWLB's power to lend £360,000 a year would allow Disraeli to present a budget surplus instead of a deficit.[90] Disraeli's budget was defeated and Gladstone took over as Chancellor of the Exchequer, and for the second time, an attempt to abolish the PWLB came to nothing. Shortly afterwards, Gladstone appointed J. G. Hubbard, a former governor of the Bank of England as PWLB chairman. Gladstone also appointed a former senior Treasury official as deputy chairman. Hubbard would express opposition to the PWLB lending at sub-market rates of interest, and within two years of his appointment, the interest rate for workhouse loans reverted to 5 per cent.

The 1834 Poor Law Amendment Act and the 1848 Public Health Act gave the PWLB a new role as well as extending the role of the state. Not only did the two acts increase local government spending; they also created the PLC and the GBH, and a large number of new local bodies. There was also a shift in power to the centre, since these new local bodies could not borrow without the permission of the PLC and the GBH.

[89] Hughenden papers, 32/1 fos. 3-6, 43-6, Bodleian Library, Letters from Trevelyan to Disraeli, 8 and 13 Dec. 1852.
[90] Blake, *Disraeli*, pp. 340-8.

This middle period also illustrates the impact of local views on MP's and then on the interest rate for PWLB loans. However, this middle period shows that the increase in the role of the PWLB and the growth of the state were not 'smooth logical process(es)'; instead, they proceeded 'by fits and starts [and] there were unsuccessful trials and not a few errors'.[91] In particular, the permissive nature of the 1848 Act, and the ending of cheap PWLB loans would be reversed in the future.

The late period, 1860 to 1876

In the years 1860-76, the pattern of the PWLB's lending changed significantly. Table 4 shows that lending was on a much larger scale than in the two earlier periods; with an average of £1.7 million being lent each year, compared to £300-350,000 in earlier years. Nearly 80 per cent of loans were made at low rates of interest, and were made to deliver national government policies. Loans were predominantly to school boards, and to local boards of health to improve water and sewer facilities. These loans for schools and sanitary projects were a major contributor to the 48 per cent increase in all local government spending between 1868 and 1876.[92] The scale of new school building also contributed to an 80 per cent increase in central government's total spending on education between 1868 and 1876.[93] After reviewing the change in the PWLB's profitability, this section will focus on the five events that led to the major increase in PWLB lending, and to the growth of state spending.

In this late period, the government was able to borrow at 3.2-3.3 per cent.[94] So even though the majority of its lending was made at 3.5 per cent interest, the PWLB made

[91] Gash, *Aristocracy and people*, p. 4. Gash was writing about the transition from laissez faire to intervention.
[92] Mitchell, *British historical statistics*, pp. 414, 416.
[93] Ibid., p. 397.
[94] Homer, *Interest rates*, p. 195.

a profit of nearly £2.2 million on its loans of over £28 million. This profit easily outweighed the losses of the first two periods, leaving the PWLB with a surplus, after bad debts, of £1.1 million on lending of £42 million in its first 60 years. The transformation from the large loss of the middle period was due to a 90 per cent fall in the losses from bad debts and unpaid interest. It was therefore the incidence of bad debts that dictated the PWLB's profitability, rather than the interest rate charged to borrowers. The clear conclusion is that loans made after assessments by PWLB/PLC/LGB/education department staff were profitable. In contrast, loans made at Parliament's direction were heavily loss making.

Table 4. *PWLB late period 1860-76*

Panel A: Profits and losses

	Interest rate (%)	*Average size of loan (£'000)*	*Sums lent (£m)*	*Bad debts (£'000)*	*Profit /Loss (£'000)*
Schools	3.5	3	10.2	0	685
Water & sewers	3.5 & 5	7	8.0	7	631
Civic improvement	5	5	5.3	0	876
Harbours	3.25 & 5	47	2.3	60	-113
Ireland	3.5	52	1.4	42	23
Workhouses	5	3	1.1	4	73
Totals		*5*	*28.3*	*113*	*2,175*

Panel B: Losses from bad debts by decision maker

	Sums lent (£m)	*Bad debts (£'000)*	*Losses as % of sums lent*
Loan recommendations made to the PWLB	25.5	61	0.2
All other loans made at PWLB's discretion	2.0	10	0.5
Loans made at Parliament's direction	0.8	42	5
Totals	*28.3*	*113*	*0.4*

Source: See tab. 1.

The first event that changed the role of the PWLB sprang from an 1859 debate between the Treasury and Hubbard, the chair of the PWLB. (See Table 5 for a summary of the five events and their impact on the PWLB and the role of the state.) The Treasury proposed that the PWLB interest rate should be reduced from an above-market rate of 5 per cent to a below-market rate of 4 per cent. In response, Hubbard argued that the PWLB interest rates should not be governed by market rates, and that the PWLB should not be competing with banks and insurance companies.[95] Hubbard went on to define two types of loan. The first were 'loans for works of public utility, but where there was no public interest, such as railways and canals', where 'promoters … are frequently unable to obtain a loan elsewhere'. Hubbard argued that these loans 'ought to command a higher rate of interest than the market rate'. The Treasury accepted this view, and rates were left unchanged at 5 per cent. This defined Hubbard's preferred role for the PWLB as a lender to public works projects at above-market rates of interest, when commercial loans were not available.

Table 5. *Major changes that increased PWLB lending and the role of the state, 1859-1875*

Date	*Change*	*Impact on PWLB*	*Impact on the role and spending of the state*
1859	Chair's concept of the PWLB having a role in lending to 'projects of national importance'	Opens the way for lower interest rates for such projects	Later led to much larger and permanent role for state lending
1860s	Parliament passes six Acts sanctioning low interest rate loans worth £7m	PWLB lending increases from £3m in the 1850s to £8m in the 1860s	Increases civil government annual spending by 7%
1870	1870 Elementary Education Act	£10m lent in first six years.	Commitment to a universal service which increases annual government education spend fourfold from £0.5m to £2m.
1872 and 1875	1872 and 1875 Public Health Acts	Ten-fold increase in the PWLB's annual sanitation lending from £0.1m pre-acts to £1.1m post-acts.	Makes provision of water and sewage services compulsory in all areas. Local annual sanitary spend rises from <£1m in 1868 to nearly £10m in 1878.
1875	Select Committee debates on the role of the PWLB	The PWLB thereafter seen as providing cheap loans to local bodies	Reflects victory of spending departments over the Treasury, and sets government role in financing local govt investment.

Notes: The 'state' includes central and local government.
Sources: See text

[95] TNA, PWLB minute book, PWLB 2/30, 7 Sept. 1859, p. 274. All quotes in this and the next paragraph are from a letter sent to the Treasury the following day.

Hubbard's second type of loan was to prove much more important in the long term, and marked a potential return to its role in providing sub-market rate loans between 1836 and 1857. Hubbard accepted that the PWLB had a role in lending for projects of national importance, 'where there is no private interest as in the case of loans under the Poor Law … and for sanitary purposes'. In spite of the lower risk of bad debts in the loans to public bodies, Hubbard went on to say: 'there appears no reason for attempting to distinguish between [the two types of loan] as regards the rate of interest'. Hubbard's (and what was to become the Treasury's) anti-cheap-loan views did not prevail in the long term. Instead, low interest rate loans for nationally important purposes became critical to the huge growth in PWLB lending and state spending in the 1870s.

The second event occurred in the 1860s when Parliament passed six acts to deal with largely local problems. These acts were important because they extended the role of the PWLB, materially increased civil government spending, and saw MPs acting to set a precedent of low interest rate PWLB loans. The six acts included the 1861 Harbours and Passing Tolls Act, and the 1863 Public Works (Manufacturing Districts) Act. There were smaller scale acts for Irish railways, slum clearance, and to mitigate the impact of cattle disease in Cheshire. Together, these acts added £7 million to public spending over ten years, at a time when annual civil government spending was between £10 million and £15 million a year. In the House of Commons debates on two of these bills, the government conceded that loans should be made at rates that did not make a profit for the government, but which instead protected it from loss.[96] In the other three cases, MPs acted in the interest of their local ratepayers in securing low interest rates for

[96] *Hansard,* (Commons) 3rd ser., vol. 171, 18 June 1863, cols. 1,050-87, vol. 161, 15 March 1861, cols.2,177-30.

these loans. In five cases out of six, the PWLB loans were repayable from local rates at 3.25 or 3.5 per cent a year. This change of behaviour by government and MPs set an expectation that PWLB loans would often be at sub-market rates of interest.

The 1863 Public Works Act was also important because it substantially increased the economic role of the government. The Act was a response to unemployment in the cotton industry when the American civil war stopped the cotton imports to the Lancashire industry.[97] In response, an Act was passed that enabled the PWLB to lend £1.8 million at 3.5 per cent to local authorities in the affected areas. The loans would be used to invest in public works to improve streets, sewers, and water supply. The loans were quickly taken up and the money spent; all of the loans were repaid and a small profit was made.[98] Critically though, 35,000 jobs were provided for the duration of a year.[99] The 1863 Act therefore extended the government's role into the area of lending to create employment in a way that had not been seen before in England, even if it was only for a short period in a single region.

The third event was the passing of the 1870 Elementary Education Act. Under the Act, local areas were obliged to ensure an adequate provision of elementary schools. This need could be met by voluntary bodies, but where it was not, a local school board would be formed, which could then borrow to build schools and repay the loans from a local rate. The government's aim was to 'fill in [the] gaps' in the voluntary system to create a universal provision.[100] The Act marked a change from a grant regime that enabled voluntary groups to build schools, to an Act aiming to create a universal

[97] Lord Derby raised £0.8m as chair of a local committee, and this was distributed to destitute workers. Hawkins, *Forgotten Prime Minister*, Vol. 2, p. 272

[98] The PWLB records show no defaults, and the cost of government borrowing was 3.27% during the 1860s and 3.19% during the 1870s. Homer, *Interest rates*, p. 195.

[99] *Report on Public Works* (P.P. 1868-69, LIII). Based on the p. 7 calculation that £431,000 provided 12,984 jobs for a year.

[100] *Hansard* (Commons), 3rd ser., vol. 199, 17 Feb 1870, col. 444.

service, with the state as a provider. Following Hubbard's 1859 concession of PWLB loans for 'nationally important projects', and the 1860s precedent of low interest rate loans, MPs approved an Act that allowed the PWLB to lend at 3.5 per cent for the purpose. Since all these loans would be repayable from local rates, MPs were again acting in the interest of their local areas, against the interests of the Treasury.

The impact of low interest rates and the legislative desire for a universal service was considerable. Between 1870 and 1876, the PWLB lent £10 million to local boards to build schools, leading to a more than doubling in the number of school places by 1879.[101] The low interest rate also resulted in the PWLB becoming a virtual monopoly provider of loans to school boards in the 1870s.[102] The growth in the number of school places led to a four-fold growth in the education department's grants to schools in the 1870s to meet their running costs. This led to Treasury pressure to reduce the annual grants, but the education department resisted.[103] Eventually the dispute was settled by Disraeli as Prime Minister supporting the education department, deciding that expanding education was more important than limiting spending.[104] In effect there was a change in the balance of power between the spending department and the Treasury.

The fourth event was the slow retreat from the permissive principles of the 1848 Public Health Act, and the gradual move towards the 1872 Act which gave all areas obligations. During the late 1850s and the 1860s, successive public health acts strengthened the powers of the GBH and its successors. The 1848 Act had only applied to urban areas, but in the 1860s its permissive powers were extended to rural areas. Finally, the 1872 Public Health Bill turned the permissive power into an

[101] *Committee of Council Annual Reports* (P.P. 1870, XXII), p. xi; (P.P. 1880, XXII), pp. xi-xiii.
[102] London Metropolitan Archives, London Schools Board mortgage ledger, file SBL/1712 for the example of the only 1870s non-PWLB school loan.
[103] Wright, 'Treasury control' p. 213-7
[104] Sutherland, *Policy making*, pp. 218-9.

obligation.[105] However, many MPs felt that the Bill imposed a national policy at the expense of local ratepayers, and this led to the 'spectacular defeat' of the Bill.[106] In order to get the Bill passed, a concession of 3.5 per cent PWLB loans was offered. Gladstone and his chancellor, Robert Lowe, were reported as 'frowning on' the concession, while accepting that it was necessary to get the Bill through.[107] Here was a clear choice between minimising government spending and the national debt, and the interests of local ratepayers and improving public health. Collectively, MPs backed the local ratepayer and higher spending, against the preferences of the prime minister and the Treasury.

Table 6. *PWLB lending for sanitation schemes*

	Sums lent *£m*	*Annual average lent* *£000*	*Nature of ruling Act*	*Interest rate* *(%)*
1848-62	0.4	27	Permissive	5
1863-72	1.1	110	Permissive	5
1873-6	4.3	1,075	Compulsory	3.5
Total	*5.8*	*200*		

Source: Analysis of TNA PWLB 6/1,1a-6, application ledgers

The transition from a permissive act to one with obligations had a major institutional impact. Sanitary authorities were created to cover the whole country, and each had a duty to ensure that adequate water and sewage services existed in their area. At the same time, the Local Government Board (LGB) was formed, and acted like a large spending department representing its clients – local government.[108] It was prepared to 'take on the Treasury … to fight for … stronger powers [and] for more staff'.[109]

[105] There is a case that the 1866 Act created the obligation, but it was not imposed. It can also be argued that only sections 15 and 55 of the 1875 Act spelled out the obligation. But in practice, it was the 1872 Act that changed behaviour. Lambert, *Sir John Simon*, p. 380, and MacDonagh, *Early Victorian government*, p. 157.
[106] Bellamy, *Central-local relations*, p. 34
[107] Ibid., p. 82.
[108] Ibid., p. 233.
[109] Ibid., p. 233.

Together, the change in legislation, the creation of the LGB, and the low interest rates, led to a very large increase in the PWLB's sanitary lending in the 1870s. Table 6 shows that in the years 1848 to 1862, the PWLB's lending for sanitary purposes was less than £30,000 a year. By 1872, lending had increased to £110,000 a year, and after 1872 it increased a further ten-fold to £1.1 million a year. Between 1872 and 1876, the PWLB was providing nearly half of the finance to local boards for water and sewer investment. These increases in investment also led to a ten-fold increase in local government revenue spending on sanitation between 1868 and 1878.[110]

The fifth event was the Select Committee established in 1875 to consider two largely technical public works loan bills. However, the Select Committee spent most of its time debating two very different views of the purpose of the PWLB, and the interest rates on its loans. Hubbard, the chairman of the PWLB, did not support the PWLB's increasing role as provider of sub-market rate loans. He said that: 'if the purpose of the PWLB was to enable borrowing authorities to obtain money at lower terms than they would on the open market, I should consider that our existence was a public disaster'.[111] Gladstone appeared to share this view, believing that below market rate lending subsidised the cost of local authority lending.[112] The Treasury also opposed low PWLB interest rates, arguing that they would result in losses to the state.[113] When the committee pointed out that school and sanitation loans had produced few if any bad debts, the Treasury line changed to 'there was no gain to the state in lending at 3.5 per cent'.[114]

---

[110] *Local Taxation Returns*, (P.P. 1870 LV), pp. vii, 57, 116; (P.P. 1880 LXI), p. v.
[111] *S. C. on the Public Works Loan Acts* (P.P. 1875, XIV), Q. 388.
[112] *Hansard* (Commons) 3rd ser., vol. 213, 1 Aug. 1872, col. 278. In fact, the PWLB profit on school and sanitary loans suggests that if there was a subsidy, it was from the local ratepayer to the national taxpayer.
[113] *S. C. on the Public Works Loan Acts* (P.P. 1875, XIV), QQ. 826.
[114] Ibid., QQ. 850, 851, 853

Sir Stafford Northcote, Chancellor of the Exchequer in 1874, was also concerned with the growth in the scale of the PWLB's lending. He argued that it would force the government to 'borrow, while our policy ought to be in the direction of reducing debt'.[115] And PWLB lending did of course increase the national debt. However, until 1863, the impact of PWLB lending on the debt had been modest, increasing it by no more than an estimated £5 million over 47 years, as repayments from borrowers broadly equalled new loans. But in the first half of the 1870s, the increased level of PWLB lending far exceeded repayments, and added an average £4m a year to the national debt. Northcote considered an alternative of establishing a municipal bond agency to raise money on the markets and lend on to all local bodies, but this proposal was not adopted.[116] While the largest city authorities did raise municipal bonds, they were always too expensive for small authorities.[117]

The Select Committee did not share the Hubbard-Gladstone-Treasury dislike of cheap PWLB loans, or Northcote's concern about the national debt. One member was the chair of the Glasgow School Board, and was therefore a beneficiary of cheap PWLB loans. He responded to Hubbard by saying: 'But is it not the purpose of the PWLB to advance the interests not of the State, but of localities where great public works are required by enabling them to obtain loans upon better terms than they could obtain on the open market?'[118] Since 12 of the 16 Select Committee members were backbench MPs, this view prevailed in 1875, and has done ever since. The other four members were past, present, or future Treasury ministers or Treasury Lords, and must have

[115] BL Add MSS 50,016, Iddesleigh papers, vol. IV, fo. 254. Letter to Disraeli.
[116] BL Add MSS 50,016, Iddesleigh papers, vol. IV, fo. 263, Page, *Local authority borrowing*, p. 146. At the time, municipal bonds would not have counted against the national debt. A municipal bond agency was established in 2016; Municipal Bond Agency.
[117] Burdett, *Official intelligence for 1884*, p. 963 charts the rise of stock issues by large cities.
[118] *S. C. on the Public Works Loan Acts* (P.P. 1875, XIV), Q. 389.

accepted this view.[119] For the rest of the nineteenth century, the PWLB's lending remained high, with more than 80 per cent of loans being made at sub-market rates.[120] In effect, MPs' sensitivity to local needs had overcome the combined views of Hubbard, the Treasury and the Prime Minister. The impact was higher state spending and debt, and a larger role for the state.

Conclusion

The PWLB started as a government response to short-term problems. It grew into an essential provider of finance to local government by the 1870s, and continues in this role in the twenty-first century. Its growth was caused by two factors. First, several Acts of Parliament in the 1870s called for a many-fold increase in local investment in health and education facilities. Second, the PWLB was able to offer loans at lower rates than commercial providers. However, during the nineteenth century, the PWLB experienced two attempts to abolish it, and a chairman who did not support its move to large-scale low-cost lending. In addition, Parliament occasionally overruled its decisions, and MPs and the Treasury changed their views about its purpose and its interest rates. There was therefore nothing inevitable or planned about these major changes to the role of the PWLB. Instead, the development of the PWLB reflects the three major causes of the more general growth in state activity in nineteenth-century England.

The first major cause was that the early permissive approach to public health and education provision, was transformed into legislation aiming to create compulsory and universal services. The second major cause was that to support the higher levels of

[119] W. H. Smith was the current Financial Secretary, and the chair of the Committee. William Baxter was his predecessor as Financial Secretary. Viscount Crichton was a future Treasury Lord, and Lord Frederick Cavendish was a past Treasury Lord.
[120] After 1876, the PWLB Annual Reports are in Parliamentary Papers.

investment needed for universal services, a number of new institutions were created. These included the PWLB itself, but in addition, the PLC, the GBH, the LGB, the Education Department, and many new local government bodies. These central and local bodies then had an interest in arguing for more powers and access to cheap loans. The third cause was that the views of MPs changed. Initially, MPs were seen as representing different interests, such as agriculture, the Church or economic interests.[121] Much later, they were seen to act mainly in the interests of political parties. But in this period, marked by a series of extensions to the franchise, MPs can be seen to act in the interest of their local ratepayers and voters. This change of outlook led them to favour low-cost PWLB loans. The Treasury responded to this by changing its view to one aimed at avoiding losses, rather than at making profits on the PWLB's lending. Together these three changes go a long way to explain the growth of the state in the nineteenth century.

The PWLB archive offers a great deal of evidence on the advantages and disadvantages of low-cost government lending. It is clear that since the 1870s, Parliament has put greater store by the advantages of the rapid delivery of national policy initiatives; reducing the local cost of implementing national policies; and control of local borrowing. Yet it was too easy for Parliament to advance large loans for political and/or social reasons, and to incur very large losses as a result. The PWLB archive also sheds new light on the changing relationship between local and central government, and between Parliament and the Treasury. More broadly, the overlooked history of the nineteenth-century PWLB offers much new evidence about the decisions that contributed to the growth in the role and spending of the state.

[121] Lang, *Parliamentary reform*, p. 10.

Chapter 3

The decline of companies and voluntary organisations as infrastructure providers in nineteenth-century England

Published online by Business History, 7 June 2021, pp. 56-79.
DOI: 10.1080/00076791.2021.1926990

The published article has been reformatted to be consistent with the other chapters in this thesis. The content is unchanged. *Business History's* approach to citations and some punctuation has not been changed, even though they are inconsistent with other chapters in this thesis. The endnotes of the published article have been converted to footnotes, but their numbers remain unchanged. The bibliography has been removed and consolidated with that from other chapters, and is at the end of the thesis.

The decline of companies and voluntary organisations as infrastructure providers in nineteenth-century England

Abstract

By 1900, local authorities had succeeded companies and voluntary organisations as the major providers of utilities, schools and hospitals. This article examines why the role of companies and voluntary organisations diminished. It does this by comparing the financial results of companies, voluntary organisations and local authorities to identify the differing objectives they pursued. The results show that the priority for companies was short term dividend payments, while voluntary organisations put their charitable objectives first. In contrast, local authorities invested heavily to promote long term growth. Councils also pursued this objective by taking over a significant number of utility companies and voluntary schools.

Introduction

In the early nineteenth century, companies were responsible for almost all gas and water supply investment in England. At the same time, voluntary and private organisations built and ran nearly all schools and hospitals. By the end of the century, this picture had changed dramatically. Nearly half of the water, gas, electricity and tram investment came from public sector bodies, as did three-quarters of school and hospital investment. What caused this significant shift from private to public provision of utility services, and the reduced role of the voluntary sector in the provision of schools and hospitals? Histories of utility industries say little about the relative decline of company investment in the nineteenth century (Byatt, 1979, pp. 197–209; Hannah, 1979, pp. 22–27). Instead, they concentrate more on the twentieth-century development of national state-owned enterprises. The literature on local authority utilities argues that councils sought to earn profits from their utility undertakings (Millward, 2014, pp. 387–405; Millward and Ward, 1993, pp. 1–21; Falkus, 1977). This view has been repeated by many others (Daunton, 2001, p. 284; Middleton, 1996, p. 208). This article argues for a more convincing explanation of the trend towards public sector provision.

Amatori and Colli (2011, p. 189) note that state-owned enterprises often play a significant role in 'industries considered as essential for a modern economy'. This article treats local authorities as state-owned enterprises and the six services as essential for a modern economy. Using the financial results of companies, voluntary organisations and local authorities, it highlights the differences in the objectives of the three sectors. These different objectives are clear from the different balances each sector struck between prices, investment, profit and growth. The article also examines the pressures that discouraged companies and voluntary organisations from investing, and encouraged council investments and takeovers of company utilities.

I concentrate on the four utility services—water, gas, electricity and trams—and on schools and hospitals. There are two important links between these six cases. First, the financial results of large numbers of providers are readily available. Second, by the mid-twentieth century, non-public provision of all six services had virtually ended. The scale of change over the course of the nineteenth century is revealed by calculating capital investment totals for each service. These totals are then split between companies, voluntary organisations, local public sector bodies, and central government. Feinstein undertook the first task but had no need to undertake the second (Feinstein and Pollard, 1988, pp. 302–6, 355–369). I then analyse the financial results of many individual public, private and voluntary providers. From these results it is possible to generate figures for prices, investment, profits and growth in each sector.

I find that there were two main drivers for the shift from private and voluntary to public provision of these six services. First, companies' objectives were focused on short term profits and dividends, and voluntary organisations on their charitable or religious objectives. These objectives limited their willingness to invest. In contrast, local authority objectives concentrated on growing the number of service users, and this encouraged investment. The second reason was that local authorities took over a significant number of utility companies and voluntary schools. However, a number of factors influenced the behaviour of companies, voluntary bodies and councils. Companies were affected by their fear of tighter regulation, legislation allowing council buyouts, and what they saw as unfair competition from councils. Voluntary bodies' investment was limited by the capital available to them, and their ability to meet the running costs of new schools and hospitals. Local authority investment and takeover activity reflected the pressures on them from the government, from their enlarged electorates, their dissatisfaction with company services, and a wish to create competition. These factors affected each service differently, accounting for the different share of public investment in each of the six services.

This study makes five contributions to business history. First, it shows that treating local authorities as state-owned enterprises allows their behaviour to be analysed and contrasted with that of companies and voluntary organisations. The second contribution is to challenge the common view that councils provided utility services to earn profits for ratepayers. A third contribution is to highlight one of the first large-scale transfers of organisations from the private to the public sector. Unusually, this transition happened at a local not a national level. Fourth, I show that the shift to public provision was not inevitable; instead, it reflected the actions of companies, voluntary bodies and local authorities. Finally, the article shows that the challenge of balancing taxpayer and consumer interests in the provision of essential services was recognised in nineteenth century England.

The following section sets out the scale and changing patterns of investment by companies, voluntary organisations and the public sector in the nineteenth century. The third section examines the reasons for the decline in the relative importance of companies, and the fourth does the same for voluntary organisations. The fifth section looks at why local government bodies increased their investment and took over utility companies. The final section draws conclusions.

The scale and pattern of infrastructure investment

National fixed capital formation grew 12-fold in real terms between the first and last decades of the nineteenth century (Feinstein and Pollard, 1988, pp. 444-5). Investment in the six services considered here grew even faster. There were perhaps four drivers of investment in utilities, schools and hospitals. Technological change was rapid during the period, accounting for the early growth of the gas industry, and the later development of electricity and trams. The second was the rapid population growth and urbanisation during the century, and the need to cope with the resulting public health issues and rising mortality rates. These pressures drove the growth of investment in water and health. But investment would not have grown in these services without a strong demand for them. This demand led to the explosion in the numbers of new gas, water, electricity, and tram companies established during the nineteenth century. Interest groups and an expanding electorate created a demand for universal elementary education and for better public health. The final spur was the rapid growth in savings to finance investment in these six services.

It was only with Feinstein's pioneering research on capital formation, that we have had good data for the second half of the nineteenth century (Feinstein and Pollard, 1988). But because of the national income focus of his work, he did not need to split the data between private and public sector providers. Creating this division has involved revisiting some of Feinstein's data, identifying new sources of data, and finding ways of checking the results.

In the early part of the nineteenth century, companies and public bodies could only raise capital by promoting a local act of Parliament. These acts were published each year in *Statutes at Large, Personal and Local Acts*. I have examined all of these and listed their borrowing approvals. After the middle of the century, Parliament expected large public bodies like the Corporation of London and the Metropolitan Board of Works to publish their annual accounts, and these appear in parliamentary papers.[11] I have used these annual accounts wherever possible because they include details of actual capital spending. Many public health acts granted general borrowing powers to local public bodies, but each local board or council still needed an individual borrowing approval from a government department. Annual parliamentary papers list these approvals.[2] After 1884, all local government investment appears in the annual local taxation returns.[3] Investments by government inspected voluntary schools are derivable from Committee in Council annual reports in parliamentary papers after

[1] Corporation of London annual accounts, From PP 1842 (467) to PP 1884-5 (318). Metropolitan Board of Works, annual accounts, from PP 1857-8 (515) to 1884 (86).
[2] Generally included in annual reports of the Local Government Board and its predecessors.
[3] Starting from PP 1886 (22).

1839.[4] Parliament had an interest in utility investment and published annual returns of investment by gas and tram undertakings.[5] I used a mixture of local act borrowing approvals and Garcke's (1897–1900) industry surveys to calculate private electricity investment. Data for voluntary schools not inspected by government, private schools and voluntary hospitals are only known for a few dates: 1851 and 1897 for schools, and 1861 and 1891 for hospitals (PP 1852 (1692); PP 1897 (8634); Pinker 1966, p. 92). Feinstein's (1988, pp. 359-361, 366) estimates for other dates have therefore been used with his estimated building costs.

Table 1 shows the results of this data collection, with the investments in the four utilities split between companies and the public sector. Table 2 show the results for schools and hospitals, split between private, public and voluntary sectors. While around half of the school and hospital totals depend on estimates, only 1% of the utility totals are estimated. There are risks in using estimated pupil or bed numbers and estimated building costs in table 2. In practice, though, actual school place and hospital bed numbers are known for several dates, so the risk affects the timing of increases, rather than the totals. Published opening dates for voluntary hospitals have been used to minimise these risks (Taylor, 1991, appendices). Feinstein also noted that he had been able to check the timing of non-church voluntary and private school building against the secondary literature sources (Feinstein and Pollard, 1988, p. 360). Building costs are also known for similar facilities in different sectors, and the risks are therefore small.

---

[4] *Committee of Council on Education Annual Reports* from PP 1839 (284) to 1883 (3706)
[5] Starting from 1883 (300, 301) for gas, and 1877 (69) for trams.

There are two further potential risks in the approach used in tables 1 and 2, but both are also small. First, reliance on capital raising approvals could lead to understating the total by ignoring investment financed out of annual income. However, a series of checks against fixed asset values in balance sheets (English, 1827, p. 38; Fletcher, 1845, p. 172) reveals only one material difference. London water companies in the 1820s and 1830s invested around £1m in fixed assets out of retained earnings, rather than capital raising, and table 1 includes this sum. Second, companies or authorities might not have used some capital raising approvals, leading to an overstated investment total. Checking capital raising powers against fixed asset values has revealed no material unused approvals. For local authorities, all the evidence suggests that they preferred to borrow to finance capital.[6] A high degree of confidence can therefore be placed in tables 1 and 2.

Table 1 shows the pattern of investment in the four utilities. In all four cases, private companies were the sole early providers, but over time their share of investment fell. Local authorities only became gas and water suppliers after three decades of private sector dominance. In the last decade of the century, companies provided 36% of water investment, and 71% of gas investment. The differences between the public shares of water and gas are important. Later sections will show high levels of council dissatisfaction with water company services and pressure for water supply to all households. For gas, the pressure for change was markedly less, so private companies remained significant suppliers until nationalisation in 1949. Tram and electricity investment in the 1890s is roughly evenly split between companies and local authorities. Later sections will also show that both tram and electricity companies were

[6] PWLB was often under pressure to lengthen permitted borrowing periods.

Table 1. *The rising public sector share of investment in utilities.*

	Water			Gas			Trams			Electricity		
	Public £000	Private £000	Public share	Public £000	Private £000	Public share	Public £000	Private £000	Public share	Public £000	Private £000	Public share
1800s	2	560	0%									
1810s	8	960	1%		933	0%						
1820s	58	1,695	3%	6	2,694	0%						
1830s	338	921	27%		812	0%						
1840s	1,278	3,606	26%		3,182	0%						
1850s	4,375	7,418	37%	1,049	5,330	16%						
1860s	6,717	11,801	36%	1,063	9,587	10%		501	0%			
1870s	18,900	8,411	69%	8,554	11,246	43%	1,297	2,192	37%			
1880s	16,914	6,370	73%	3,769	9,223	29%	848	6,667	12%	36	1,027	3%
1890s	19,329	10,948	64%	7,051	17,215	29%	5,390	4,895	52%	8,885	10,227	46%

Sources: All public sector investment after 1884 from annual Local tax returns in parliamentary papers. Pre-1884 water and gas public investment, and private investment in water, trams and gas from borrowing approvals in Local Acts of Parliament recorded in annual *Statutes at Large* volumes. Additional borrowing approvals for public water and gas investment using 1848 Public Health Act powers from annual parliamentary reports. Private tram and post 1884 gas investments from annual parliamentary reports. Private electricity investments based on Garcke, *Manual of Electricity Undertakings* 1899.

Table 2. *The rising public sector share of investment in schools and hospitals.*

	Schools						Hospitals					
	Public sector		Voluntary sector		Private schools	Public share	Public sector				Voluntary hospitals	Public share
	Board schools	Government grants	'Efficient' schools	Other vol. schools			Fever hospitals	Asylums	Military hospitals	Poor Law infirmaries		
	£000	£000	£000	£000	£000		£000	£000	£000	£000	£000	
1800s			101	18	18	0%	54		91		85	63%
1810s			206	38	44	0%	104		104		146	59%
1820s			246	44	89	0%	5		35		372	10%
1830s		129	470	104	178	15%	4	10		5	516	4%
1840s		257	713	197	673	14%		545		50	703	46%
1850s		712	1,400	295	296	26%		1,055		62	651	63%
1860s		449	1,263	295	591	17%	30	1,018		382	2,211	39%
1870s	11,042	1,108	7,536	2,863	3,114	47%	509	1,802		1,308	939	79%
1880s	10,664	1,115	4,091	1,891	2,915	57%	957	2,439		750	198	95%
1890s	17,510	1,181	1,863	2,340	3,371	71%	3,634	5,364		2,244	2,038	85%

Notes: 'Board schools' are run by local school boards which later were absorbed into local authorities. 'Government grants' cover capital building grants to efficient voluntary schools, and capital building grants to teacher training establishments, mostly run by churches. 'Other voluntary schools' are those not recognised by central government as efficient, and not able to receive capital or running cost grants. 'Private schools' are those run for profit. 'Poor law infirmaries' cover capital costs of providing sick wards or infirmaries in workhouses for the treatment of individuals. Other workhouse building costs are excluded.

Sources: Board schools pre-1884, government grants from annual reports of Committee of Council, in parliamentary papers each year. 'Efficient' voluntary schools based on place numbers in the same annual reports and estimated building costs per pupil. Board school costs post-1884 from annual local taxation return in parliamentary papers. 'Other voluntary' and private schools' based on pupil numbers in PP 1852 (1692) and 1897 (8634) and estimated building costs per pupil. Pre-1884 fever hospitals and asylum costs from local acts granting borrowing powers, in annual *Statutes at Large*. Post-1884, these costs from annual local taxation returns in parliamentary papers. Poor law infirmary costs from Poor Law Commission registers at the National Archives. Military hospital costs from annual civil service estimates in parliamentary papers. Voluntary hospital costs are based on hospital bed numbers for 1861 and 1891 in Pinker, *English hospital statistics*, and Feinstein's cost per bed estimates in *Capital formation*.

subject to many takeovers by councils, and this contributed to the rapid fall in the company share of investment.

Table 2 shows the pattern of investment for schools and hospitals. The state only became involved in school provision in the 1830s, when central government began offering capital grants to encourage the Church of England to build schools. Schools judged ‘efficient’ by government inspectors could also get government grants to offset running costs. The government judged many other voluntary and private schools ‘inefficient’, and they could not receive grants. By the 1860s, around 80% of school investment came from the voluntary and private sectors. The 1870 Elementary Education Act created public sector school boards which were intended to ‘fill in the gaps’ in school provision.[7] After 1870, investment by these school boards boomed, while investment in voluntary schools shrank after 1880. The result was that by the 1890s, the voluntary and private sector’s contribution to school investment had fallen to below 30% of the total.

Table 2 shows a steady increase in public sector investment in hospitals in the second half of the century. This trend started in the 1840s, when local authorities began to build lunatic asylums. Before then, almost all hospitals were provided by the voluntary sector. Public provision increased further in the 1860s, when poor law unions began to build workhouse infirmaries to treat paupers (Pinker, 1966, pp. 91-2). The public sector began to build fever hospitals in the 1870s in response to repeated epidemics of infectious diseases (Ayres, 1971, p. 49). After 1870, there was also a second wave of lunatic asylum building by local authorities and the Metropolitan Asylum Board (Ayres, 1971, p. 43). In contrast, voluntary sector investment was more volatile, and

[7] Forster’s description of the intentions of the Act. Hansard (Commons), 17 Feb 1870, col 444.

confined to general and teaching hospitals. By the 1880s and 1890s, the public sector was providing around 90% of hospital investment.

Why did companies become less important?

This section examines why companies became less important as utility providers. First it contrasts the objectives of companies and local authorities by comparing their investment, pricing, profit and growth records. It then considers a range of pressures that discouraged company investment. These include the potential lack of profit in utility supply in some areas, the impact on utility companies of government regulation and legislation, and of council competition. The section ends by looking at the significant number of local authority takeovers of private utility companies.

Wilson (1991, p. 84) suggests that early gas companies were formed to light the factories of their founders. He argues that gas company objectives were 'strategic' because the financial benefits accrued to the factory owners, not the gas companies. Williams (1876, pp. 8–9) saw the objectives of the early Midland Railway Company in the same way. In the next stage of a company's development, it had 'speculative' objectives, with investors hoping for large capital gains (Freeman et al., 2012, p. 110). Wilson (1991, p. 82) notes that in the early speculative stage, investment levels and capital gains could be high, but dividends low. Pollard (1989, p. 48) comments on the speculative nature of the early electricity industry by saying that nearly all early investors lost their money. Speculative investors were in turn succeeded by rentiers, who focused on dividends rather than capital gains (Acheson et al., 2017, pp. 615, 620). This is consistent with Chandler's (1977, p. 10) view that shareholders preferred to see profits distributed as dividends. Johnson (2010, p. 201) argues that in the late nineteenth century, 'shares in the larger publicly traded companies … were more usually viewed as financial instruments that produced a dividend income'. Using principal-agent terminology, I argue that utility shareholders acted as rentiers or principals, focusing on short-term profits and dividends. The managers of utility companies were less influential than shareholders, and could not insist on Chandler's (1977, p. 10) 'long-term stability and growth'.

It is possible to test this view of utility company objectives by examining their financial results and comparing them to local authority utility undertakings. The comparison concentrates on private and public prices, investment levels, return on capital and growth. Using a return on capital measure avoids the difficulties created by the different capital structures of private and public undertakings. Campbell et al. (2019, table 8, panel B) show the dividend yield on utility shares averaged around 5% between 1860 and 1900. At the same time, most PWLB lending to local authorities for utility purposes was also at 5%. Companies and local authorities should both have been amortising capital assets over their lives. Companies should have done this by including depreciation in their revenue costs, while local authorities should have achieved the same goal by including loan repayments in their revenue cost. Using different methods of providing capital does not therefore distort the comparisons between companies and local authorities.

Table 3 shows that without exception, companies' prices were higher, capital investment was lower, the return on capital was higher, and growth was lower than for local authority undertakings. Nor are the differences trivial: company prices were on average 17% higher; and capital spending was 50% lower. These led to company annual returns on capital 2.2 percentage points higher, and annual growth half that in council undertakings. Again, gas and water show differences of degree on all four

Table 3. *Financial comparisons of company and public utility undertakings.*

Panel A: Water, 1882				
	Price per unit sold	Capex/unit sold	Return on capital	Consumption growth
(1)	d.	£	(2)	p.a. (3)
Companies (19)	7.4	278	7.2%	4.6%
Local authorities (58)	5.9	443	3.9%	12.3%
Panel B: Gas, 1877–99				
	Price per unit sold	Capex/unit sold	Return on capital	Consumption growth
(1)	d.	£	(2)	p.a. (3)
Companies (450)	44	21.5	7.5%	3.5%
Local authorities (232)	39	25.0	6.3%	5.3%
Panel C: Electricity, 1896–99				
	Price per unit sold	Capex/unit sold	Return on capital	Consumption growth
(1)	d.	£000	(2)	p.a. (3)
Companies (42)	6.2	31	6.1%	29%
Local authorities (56)	5.0	55	6.0%	71%
Panel D: Trams, 1896–99				
	Price per unit sold	Capex/unit sold	Return on capital	Consumption growth
(1)	d.	£000 (4)	(2)	p.a. (3) (4)
Companies (84)	1.3	-0.6	8.2%	-3.8%
Local authorities (45)	1.2	13.4	3.8%	105%

Notes: 1) Figures in brackets are the number of undertakings in 1899. 2) Return on capital employed is income minus working expenses, divided by capital employed. 3) Consumption growth p/a: water 11 years from 1883, gas 13 years from 1887, trams 10 years from 1890, electricity 4 years from 1895. 4) Negative figures for tram companies reflect the disinvestments by companies as operations were transferred to the public sector.

Sources: A. Silverthorne, *London & provincial water supplies*, 1884 and W. Hastings, *Water works statistics, 1881–93*. *Gas undertakings*, PP 1900 (143 and 144). Garcke, *Manual of electricity undertakings*, vols. 1–4, 1896, 1897, 1898, 1899. *Tram undertakings*, PP 1900 (315), 1899 (327), 1898 (355), 1897 (375).

measures. The larger differences for water prices, investment, returns and growth, reflect the larger role of the public sector. In contrast, gas shows smaller differences, and therefore lower incentives for councils to set up gas undertakings. The comparison for trams shows wide differences on all measures except prices, where the difference is minor. The contraction in passenger numbers and near net zero capital investment reflect the number of companies taken over by local councils. The electricity comparison shows almost identical returns on capital, but wide differences in prices, investment, and growth. This may in part reflect the relative youth of many council electricity undertakings. Despite these differences of degree, the overall pattern is similar: company objectives put a higher priority on returns on capital, while local authorities' highest priority was growth.

These differences in objectives were the major reason for the relative decline in private investment in utilities, but there were other factors which may also have had an impact. Table 3 data shows that local authority water undertakings were loss making because their return on capital was less than their cost of capital. This suggests that profit seeking companies would be unlikely to invest in these locations. Without a non-profit seeking alternative supplier, this approach could leave many areas without a water supply. A modern economist could see this as a market failure in an essential service which would invite government action. Here it is seen as a potential explanation of the lack of willingness of private water companies to invest in some locations. Table 3 data for trams suggests a similar problem, but on a smaller scale. The market failure explanation has less relevance for gas and electricity because councils' returns were above their costs of capital.

Government regulation of dividends may also have discouraged companies from investing. Modern economic theory sees a need to regulate many businesses to compensate for either a natural monopoly, a market failure or costs that fall on wider society. For the gas industry in nineteenth century England, the government recognised the dangers of monopolies, and sought to limit dividends in 1847 and (London only) prices in 1860.[8] However, gas price regulation was difficult because unit prices were falling with technological improvements. Legislating for dividend caps had limited impact because the cap was set at 10%, and because the cap could be avoided with capital reconstructions (Everard, 1992, p. 184). Matthews (1986, p. 245)

[8] Gas Works Clauses Act 1847, Metropolis Gas Act 1860.

is right to argue that the regulation of gas companies had little impact in the nineteenth century. Regulation of the gas industry was the best developed in this period, largely because the gas industry was highly profitable, generating large dividends. It was also much larger than the newer and smaller electricity and tram industries. The 1847 Water Clauses Act set similar limits to water company dividends, but with no more benefits for the consumer than in the case of gas.

Government legislation also created pressure on utility company investment levels. Many utility companies felt that giving local authorities the right to buyout a local utility company threatened future company returns on investment. For the government and Parliament, these buy out provisions were a response to the monopolies enjoyed by utility companies, and a substitute for competition between suppliers. Legislative provision for council buyouts of utility companies dates from as early as 1837. When Parliament was considering a local act for a gas company in Leeds, they inserted a clause in the bill allowing Leeds corporation to buy out the company after 12 years (Barber, 1980, p. 316). In 1845, the Royal Commission on Large Towns suggested the 'Leeds clause' ought to appear in all local gas acts, but the government rejected that view (Falkus, 1977, p. 143; Clifford, 1885, p. 253). The 'Leeds clause' approach appeared in both the 1870 Tramways Act and the 1882 Electricity Act, albeit only exercisable 21 years after company formation. Parliament inserted the clause into the Tramways Act to counter local authority objections to the bill (Armstrong, 2012, p. 236). And a Select Committee recommended adding a similar clause to the Electricity Act (Hannah, 1979, p. 5). The legislative buyout threat did not exist in the water and gas industries.

Utility companies also felt under threat from what they saw as unfair competition from local authority utility undertakings. These concerns fill the evidence given by witnesses to the 1900 and 1902 Select Committees into municipal trading (Select Committees, 1900 and 1902). Companies claimed that: councils had access to cheap capital; and the legally unlimited backing of ratepayers; authorities were less efficient managers of these undertakings; and had no business running utility undertakings. The evidence of increasing local authority involvement in utility provision must have made the threats seem even greater. The Select Committees did not respond to these fears, and confined their eventual recommendations largely to the auditing of local councils. These four pressures might have had an impact on companies' willingness to invest, but they did not have an impact on the profitability of companies. Indeed, after 1850, Campbell et al. (2019, table 8, panel C), show that utility companies earned better returns for investors than the market as a whole.

These four pressures may though have turned into fears about the future, and contributed to shareholders agreeing to local authority takeovers of their companies. By 1900, local authorities had taken over 44% of water companies, and between 15 and 20% of gas, electricity and tram companies.[9] Silverthorne (1881, pp. 16–23, 74–6) published details of the terms of local authority takeovers of 15 water companies and 37 gas companies, all between 1868 and 1880. Usually, company shareholders were guaranteed payments of between 20 and 25 years of the maximum permissible dividend. In effect, local authorities were paying an average 70% premium on the asset value of the undertakings.[10] Most agreements allowed payments to shareholders to

[9] From a comparison of the 1890s data in table 1 sources, and the earlier local acts establishing the companies.

[10] Wilson (1991, pp. 209-210) notes that councils paid an average of £210 for £100 of share capital in 24 takeovers of north-west gas companies between 1844 and 1878.

be spread over 20 to 25 years, secured against future rate income. Utility company shareholders were therefore able to cash out on good terms. Indeed, Matthews (1986, p. 261) notes that London gas companies ‘maintained that they had no objection to being bought out at a “fair price”’. These takeovers by councils provide a second explanation of the shifting balance of investment from the private to the public sector. These takeovers also confirm company shareholders’ preference for short term returns. Even so, there was nothing inevitable about utility companies’ falling market share. They could have adopted longer term objectives by investing more to retain market share.

Why did investment by voluntary organisations become less important?

What were voluntary organisations’ objectives in building and running schools and hospitals? The Church of England was the largest voluntary organisation building schools, and its first two objectives were: ‘a Church of England school in every parish’; and to ‘provide education for the poor’ (Louden, 2012, pp. 1, 8-9). Their third objective was broader: to reverse the trend that ‘a growing number of people had no connection with the church’. With minor variations, the objectives for Roman Catholic schools were similar. Unlike Church schools, voluntary hospitals were not religious bodies. Instead, the older hospitals either had an endowment from a rich benefactor, or were ‘collecting charities’ set up by wealthy social elites (Abel-Smith, 1964, p. 5; Waddington, 2000, p. 8). These voluntary hospitals provided care to the ‘deserving poor’. Later, the large voluntary teaching hospitals developed extra objectives around teaching and research (Abel-Smith, 1964, p. 16). Unlike companies, voluntary schools and hospitals were not run for profit. But like companies, they needed clear objectives, access to enough capital to build schools and hospitals, and enough income to survive. Their objectives and finances can therefore be compared with those of local authorities.

Table 4. *Income and capital spending of voluntary and public sector schools.*

	Annual income per pupil		Annual capital investment per pupil	
	Voluntary schools	Board schools	Voluntary schools	Board schools
	£	£	£	£
1875-9	3.32	4.20	0.19	0.57
1880-4	3.43	4.18	0.08	0.45
1885-9	3.55	4.49	0.11	0.36
1890-4	3.45	4.53	0.05	0.52
1895-9	3.44	4.75	0.02	0.81

Notes: 'Voluntary schools' includes only those judged 'efficient' by the government. That is, those run by the Church of England, the Roman Catholic Church, Wesleyans, and the British Foreign Schools Society.

Sources: *Board of Education Annual Report* 1899–1900 PP 1900 (330) Vol III, p. 130. Capital investment from Table 2, using pupil numbers from 1899.

As with utility companies, the finances of voluntary schools and hospitals reveal why they had declined in importance by the end of the century. Table 4 compares the income and investments of the local authority board schools with those of the voluntary Church schools over the last 25 years of the century (Board of Education, 1900, vol III, p. 130). It is clear the voluntary schools were financially worse off than board schools, with income per pupil 22% lower, and capital spending per pupil a sixth of the level in board schools. By the 1890s, these funding gaps were growing as the pressure to achieve higher standards pushed costs up, and donations tailed off. As Cruickshank (1963, p. 67) comments, 'many (voluntary) schools had been crushed out of existence. Others had completely exhausted their credit'. These difficulties led to a significant number of school transfers from the voluntary to the public sector. A history of the London Schools Board notes that by 1899, 155 voluntary schools had been transferred to the LSB, mostly for financial reasons (Spalding, 2012 [1900], p. 59). By the end of the century, the British Foreign Schools Society felt the school boards were delivering the BFSS's objectives (Cruickshank, 1963, p. 54). In 1902, the BFSS therefore transferred 755 of their schools to local school boards (Binns, 1908, p. 231). The voluntary sector's main problem was that it simply lacked the financial resources to build and run more schools.

A second major problem was the conflict of objectives. The churches often opposed government education initiatives. This arose first in the 1840s, when they resisted government inspection, then in the 1860s, when they resisted the role of government as a school provider. After 1870, the churches were also divided about whether Church schools should accept local rate funding (Cruickshank, 1963, pp. 58-9). In effect, churches put their religious objectives above the need to generate extra income. These arguments with the government made it difficult for church and state to work together, delaying rate support to voluntary schools until after 1900. The churches' reluctance to work with the state encouraged competition between churches and local school boards, leading to over provision in some areas.[11] This competition worsened the financial standing of church schools.

Table 5. *Sources of income for voluntary hospitals.*

	Donations	Investment income	Patients/ insurance	Other income	Income per bed
	%	%	%	%	£
1891	52	35	8	5	53
1921	41	18	38	3	153

Notes: Covers only 65% of hospitals in 1891, and 47% in 1921.

Sources: Pinker, *English Hospital Statistics*, pp. 149, 152.

Money also lay at the heart of the problem for voluntary hospitals. Table 5 shows that in 1891, 87% of voluntary hospital income came from gifts or investments, and just 8% from charges to patients and workers' compensation schemes. Between 1870 and

[11] Analysis of school places and populations in parish areas. *Committee of Council on Education Annual Reports*, PP 1870 (165), 1880 (2562).

1900, voluntary hospitals focused on raising ever larger sums through donations. This included royal support for Saturday and Sunday fund collections. Even so, Waddington (2000, p. 1) describes London voluntary hospitals as being in an 'endemic financial crisis'. Faced with similar challenges, by 1903, American voluntary hospitals met 43% of their costs from patient payments (Stevens, 1989, pp. 30-1). Pinker's (1966, p. 149) data shows that English voluntary hospitals took until 1921 to get their patient income to this level. In both countries, the figures suggests that voluntary hospitals eventually changed their objectives from the charitable aim of treating the 'deserving poor' to treating those who could pay. The charitable objectives of UK voluntary hospitals therefore limited their capacity to invest and grow in the nineteenth century.

There was little competition between voluntary and public sector hospitals. The public sector mainly built lunatic asylums and fever hospitals, while the voluntary sector provided general acute hospitals. The closest they came to competition were workhouse infirmaries and voluntary general hospitals. But even here, they were serving different client groups: the infirmaries the 'undeserving poor' and the general hospitals the 'deserving poor'. Instead, the competition was between voluntary hospitals, with three-quarters of London hospital beds within one mile of Charing Cross (Waddington, 2000, p. 9). London also had 67 specialist hospitals which mostly cared for paying patients (Select Committee, 1890, p. 210). In contrast, asylums and fever hospitals catered for patients who were unable to pay for their care. The voluntary sector therefore chose not to enter the growth areas of asylums and fever hospitals.

Why did local authorities become more important as investors?

The previous two sections have shown why companies and voluntary organisations invested less in utilities, schools and hospitals. This leaves the question of why local authorities increased their investment in these services. This section first looks at the extent to which councils' water, gas, electricity and tram services were profit or loss-making. I also examine the evidence from council takeovers of utility companies, and show this supports the earlier conclusions about councils' objectives. The section then considers the motives of local authorities in increasing investment and taking over company utilities and voluntary schools. These include: dissatisfaction with company services; the impact of franchise extensions; competition; and government encouragement. A few potential pressures which had no impact on council behaviour are also mentioned.

Table 6. *Local authority utility services, net losses 1884–5 to 1899–1900.*

	Outstanding debt at March 1900	Aggregate totals for 16 years, 1884-5 to 1899-1900				
		Income	Expenditure		Ratepayer impact	
			Day to day	Debt service	Net loss	Net surplus
	£m	£m	£m	£m	£m	£m
Water	53.4	43.9	16.8	35.9	-8.8	
Gas	19.8	69.2	52.8	14.5		2.0
Electricity	7.9	2.6	1.5	1.0		0.1
Trams	5.8	5.2	2.9	1.5		0.8
Totals	86.9	120.9	74.0	52.9	-8.8	2.9
Average per year		7.5	4.6	3.3	-0.6	0.2
Net annual cost to ratepayers					-0.4	

Sources: Local Taxation Returns 1900 (193), 1895 (329), 1890 (196, 364) for outstanding debt, day to day expenditure and income, from five-year summaries. Debt service costs have been estimated based on outstanding debt at the end of each year, and an average interest rate of 3.75% and repayment over 50 years.

Millward (2013, p. 195) in particular argues that local authorities developed traded services to make profits which they would use to 'relieve the rates'. Local authorities themselves did much to foster this view when vaunting their achievements in municipal trading (Select Committee, 1900, pp. 140, 163, 185, 202, 215, 235). Sir Arthur Rollit, the president of the Municipal Corporations Association, also promoted the view that local authority utility provision was profitable.[12] But until 1904, the annual taxation returns did accurately not show the profit or loss for individual services like water or gas. The annual cost of the huge debts councils had incurred to build or buy the fixed assets for utilities were not reported at service level in these returns. Table 6 shows that over a 16-year period, the local taxation returns presented an average £2.9m a year surplus of income over day-to-day costs for the four utility services. Using the outstanding debt figures for each service, which do appear in each return, I have calculated the annual costs of this debt for each service. Table 6 shows that the costs of servicing this debt was £3.3m a year, creating an overall loss of £0.4m a year for the four utilities.

An 1899 annual return to government continued the confusion about profits.[13] The return asked authorities for their costs on all their trading activities, and what they used any profits for. Over 170 authorities said they made a profit on their water undertakings, and 79 said they used the profits to keep down the rates. After including debt service costs, only 25 out of the 170 authorities made a profit on water undertakings. The annual tram returns to Parliament simply excluded the costs of servicing capital.[14] This practice of ignoring debt service costs has led to an exaggerated view of profits on these council utilities, and a mistaken view of councils' objectives in providing these services. Councils were therefore just as flexible in their accounting for profits as companies (Lee, 1975, pp. 19, 21; Pollard 1965, pp. 271-284). While councils may have believed their utility undertakings were profitable, the evidence in table 6 is that losses on water were three times larger than the profits on

[12] At speeches to National Union, 26-11-1889, British Institute of Public Health, 9-8-1895, Association of Municipal Corporations, 26-3-1898.
[13] *Municipal Corporations (Reproductive Undertakings)*, PP 1899 (88).
[14] *Tramways (Street and Road)*, PP 1899 (355) and 1900 (315).

gas, electricity, and trams. Even ignoring the losses on water, the profits on gas, electricity and trams were negligible at an average 0.5% of the £40m a year rate income of local authorities.

Table 7. *Impact of local authority takeovers of utility companies.*

Panel A: Gas, 1889–1899				
(no. of undertakings)	Price change	Increase in capital	Return on capital, 1899	Growth in output
Companies (92)	5%	54%	7.6%	42%
Cos taken over by LAs (10)	-19%	87%	6.3%	96%
Panel B: Trams, 1889–1899				
	Price change	Increase in capital	Return on capital, 1899	Growth in output
Companies (71)	-1%	4%	8.6%	10%
Cos taken over by LAs (23)	-37%	145%	5.8%	57%
Panel C: Electricity, 1896–1899				
	Price change	Increase in capital	Return on capital, 1899	Growth in output
Companies (29)	-15%	34%	8.1%	102%
Cos taken over by LAs (3)	-42%	283%	5.3%	175%

Notes: Panel A includes only undertakings with capital over £80,000 in 1899. Gas capital totals have been adjusted to reflect the capital reconstructions in the 1890s for two London companies. Everard, *Gas Light and Coke Co*. p. 284. 'Cos taken over by LAs' = number of company undertakings taken over by local authorities.
Sources: *Gas undertakings*, PP 1900 (143, 144), 1889 (97, 98), *Tramways* PP 1890 (282), 1900 (315), Electricity Garcke, *Manual of Electricity Undertakings*, 1896, 1899.

A more convincing view of local authority objectives comes from the financial performance of 36 gas, electricity and tram undertakings taken over by councils between 1889 and 1899. Local authorities took over many more companies than appear in table 7, but comparable financial information is only available in this minority of cases. A similar analysis for water undertakings is impossible, because too few sets of financial results are available for private water companies outside London. Table 7 shows that local authorities significantly reduced prices and increased investment in newly acquired gas, tram and electricity undertakings. The result was a faster increase in output volumes, though at the expense of lower returns on capital, compared to the private companies. The comparisons make it clear that council objectives in taking over utility companies were to increase the growth in users, not to earn profits for the ratepayer. There were, however, a range of motives behind councils' growth objectives for individual services.

Council dissatisfaction with private companies' performance was behind the takeover of water companies. Evidence of why 26 cities and towns took over their water companies is in histories written to mark 50 or 100 years since incorporation.[15] Of the 26 local authorities, 25 took over their local private water companies because of dissatisfaction with the quantity or quality of the company's water. Chamberlain (Briggs, 1963, p. 219) used the additional argument that water supply ought to be under democratic control, but this was the single case of this reason for a council takeover of a utility company. Councils were also under pressure from medical officers of health to improve access to clean water in cities and towns. This pressure gained legislative support in a series of public health acts between 1866 and 1875.[16] The municipal biographies show that having taken over a local water undertaking, 17 of the 26 then invested heavily to improve both the quantity and quality of the local water. Investment also increased after the public sector Metropolitan Water Board took over the London water companies in 1902 (Ball and Sunderland, 2006, pp. 265-7). Falkus (1977, p. 145) writes that 'probably the main factor encouraging municipalisation (of

[15] Redford, *Manchester*, pp. 177–81; Jarvis, *Liverpool*, p. 76; Briggs, *Victorian Cities*, p. 219; Hennock, *Fit & Proper Persons*, p. 207; Hawson, *Sheffield*, p. 4; Wright and Jowitt, *Bradford*, p. 144; Allison, *A History of Yorkshire East Riding*, vol. 1, *Hull*, pp. 371–86; Gray, *Nottingham*, p. 193; Storey, *Leicester*, p. 108; Hamer, *Bolton*, p. 36; Gent, *Croydon,* p. 7; Beattie, *Blackburn*, pp. 151–2; Hunt, *Preston*, p. 214; Davey, *Birkenhead*, p. 60; Derby City, *Derby*, p. 92; Mulroy, *Halifax*, p. 25–6; Bennett, *Burnley*, pp. 355–7; Balmforth, *Huddersfield*, p. 12–3; Upton, *Wolverhampton*, pp. 109–11; Barker & Harris, *St Helens*, pp. 396–8; Munford, *Rotherham*, pp. 109, 114–5; Newton, *Exeter*, p. 257; Dewhirst, *Keighley*, p. 72; Wright, *Chesterfield*, vol. 4, pp. 118–9.
[16] 1866 Sanitary Act, 29 & 30 Vic. c90; 1875 Public Health Act, s.55 & s. 62. 38 & 39 Vic. c55. Lambert, (1963), pp. 380-6.

water) was dissatisfaction with the existing state of supplies'. The evidence here removes the need for the 'probably'.

The example of trams also shows councils' dissatisfaction with company performance. In the 1890s, Glasgow corporation wanted lower fares, new tram lines to the suburbs, and electric rather than horse trams (McKay, 1976, pp. 174-8). But the company running the lines refused to change, believing the new policies would make their undertaking loss-making. Eventually the corporation took over the tram company and implemented its low fare and high investment policies. The number of councils (including the new London county council) taking over tram companies shows that Glasgow was not an isolated case (Select Committee, 1900, q. 2113; Ball & Sunderland, 2006, pp. 251-2). These authorities were so dissatisfied with the performance of the private tram companies that they were willing to pay good prices to take them over. After the takeovers, councils substituted their longer-term growth objectives for the short-term profit objectives of the companies.

There is much evidence that councils changed their objectives for utility undertakings over time, from wanting to earn profits to wanting to expand services to local people. Their belief in the profitability of their utilities may have made it easier for them to justify broader objectives for these undertakings. This changing local authority view is consistent with the waning influence of the low rate supporting 'Economist' movement in large city authorities after the 1850s (Hennock 1973, pp. 313-5). Increasingly, councillors were professional and working men, and 'consumers of the municipal services' (Hennock, 1973, p. 329). In 1929, the Balfour Committee noted a move away from councils treating utilities as 'primarily profit-making concerns owned by ratepayers' (Balfour Committee, 1929, p. 308). Instead, councils aimed to achieve 'the largest possible utilisation of the service by the public' (Balfour Committee, 1929, p. 308). Lizzeri and Persico (2004, pp. 3) explain this change by suggesting the franchise extensions of 1867 and 1884 led to councils becoming more 'public orientated'. They argue (Lizzeri and Persico, 2004, pp. 6, 30, 49) that this change resulted in higher spending on the public goods of water, health and education.

The literature on individual councils also has evidence of the development of this more consumer based longer-term growth objective. Leeds corporation took over the local gas company, hoping to make a profit. But later, it decided to reduce prices to expand the number of gas consumers (Barber, 1975, p. 394; Barber, 1980, p. 319). Barber says the council's new objective was to act in the interests of the consumer, not the ratepayer. There are two reasons why councils wanted to increase gas usage. By 1899, there were 1.8m gas consumers, (PP 1900 (143) and (144), Gas undertakings) but this was still a minority of households, with the majority either without lighting, or using candles or oil. Local authorities therefore wanted to improve the living conditions of the majority of households. They also wanted to expand the use of street lighting, and not be subject to monopoly pricing by a private gas company. In Birmingham, Chamberlain expressed a similar consumer-based objective in saying he would use any profits on water to reduce prices to users (Briggs, 1963, p. 224).

Councils' reasons for establishing or taking over electricity undertakings were twofold. Councils were becoming large electricity consumers as they electrified their tram services. As with gas, councils wanted to buy their electricity as cheaply as possible, so having a council undertaking could make economic sense. In addition, electricity provided competition for gas, initially mainly for street lighting, and later for domestic lighting. Establishing a municipal electricity undertaking therefore provided some competition with private gas companies, and the hope of lower prices. There is no evidence of councils establishing or taking over gas or electricity undertakings to create more efficient networked supplies covering large geographic areas. Indeed, all utilities at this time were small, local, unconnected undertakings.

The driver for increased investment in schools was pressure from interest groups who wanted to expand educational provision. Eventually the pressure led to the passage of the 1870 Elementary Education Act. The Act intended public sector provision to be a backstop; it did not anticipate the state becoming the major provider. Sutherland (1973, pp. 95-6) says that initially around half the early school boards were established against local ratepayer opposition, usually on the grounds of cost. However, once established, school boards wanted to build more schools and increase attendance at considerable cost to ratepayers. In the early 1870s, the London School Board told its architects to design schools with no school hall, and 80 pupils per class (Spalding, 2012 [1900], pp. 63, 70). By 1898, the design standard provided for classes of 50 and a school hall. The impact on school building costs was significant, and not just in London. Some local school boards developed objectives that went beyond the Act and further increased costs. Notably, the LSB extended funding for evening classes and began to fund secondary education. The courts eventually judged both actions illegal. Like local authorities with utility services, local school boards wanted to raise standards and increase the number of service users.

The government went a stage further with hospitals, encouraging a larger public sector role in the growth of investment in the late nineteenth century. The passage of the Metropolitan Poor Law Act created a public sector building boom for fever hospitals, workhouse infirmaries and lunatic asylums. The government were responding to outbreaks of infectious diseases, and the need to treat rather than simply accommodate the sick in workhouses (Ayres, 1971, pp.18-9). The Act only applied to London, but the government quickly extended the powers to the provinces. The Act created the Metropolitan Asylum Board, which built three 2,000-place asylums and started work on ten isolation hospitals. MAB could access low-cost capital from the Metropolitan Board of Works and spread its debt service and running costs for the new hospitals across all London's ratepayers (Driver, 1993, p. 92). Both these technical issues made investment decisions appear easy to finance. Table 2 shows the rapid growth of investment in workhouse infirmaries in the 1860s and 1870s. As was the case with schools, the new bureaucracy and pressure from professional staff increased both building and running costs (Abel-Smith, 1964, p. 85). Once local bodies were given powers to invest, they did so on a far greater scale than the government anticipated.

Local authorities' long-term objective was to increase the number of consumers of these six services. And they increased their investment and took over companies to deliver this aim. There were four pressures leading them to these actions: dissatisfaction with company performance; government legislation or pressure; the impact of franchise extension on voter numbers; and competition issues. The balance differed for each of the six services. For water, the main pressures were dissatisfaction, consumer views and government pressure. For trams, there was a similar dissatisfaction with company performance. Competition issues were important in generating public investment in gas and electricity, but as with water, improving living conditions was also important for gas. Like water, the government exerted pressure for public investment in schooling. The government also encouraged increased public investment in asylums, fever hospitals and workhouse infirmaries.

The importance of dissatisfaction, government and voter pressure explains the high proportion of public investment in water, education and hospitals. These pressures were much weaker for gas, electricity and trams, and explain the lower public share of investment in these three services.

Conclusion

Many of the public services challenges faced by local and central governments in the nineteenth century are still faced by modern governments. There is still a tension between the interests of the ratepayer and the taxpayer on one hand, and the interest of the service user of the other. The difficulties of regulating and specifying service levels for monopoly providers are still a challenge for governments. And it is still the case that the easy answer to these problems is often to establish a public sector provider, or takeover an existing private provider. The nineteenth-century challenge of determining profits and losses still persists with many utility services. The lack of agreed modern day solutions to these four challenges makes it important to examine the response to them when they first appeared in the nineteenth century.

The conclusions of this article are important for four reasons. First, they overturn the common view that councils invested in utility services to earn profits. Second, they show the scale and importance of the early transfer of utility undertakings from the private to the public sector. Local councils decided on these transfers, rather than national governments as in the twentieth century. Third, local authorities' actions in nineteenth-century England can be analysed with the tools of business history, rather than those of political or economic history. Finally, the conclusions suggest there was nothing inevitable about the shift from private and voluntary to public provision of these six services. Instead, it was the result of self-inflicted harm by utility companies, churches, and voluntary hospitals.

Chapter 4

Making the municipal capital market in nineteenth-century England

Published in *Economic History Review*, 75(1) (2022), pp. 56-79.
DOI: 10.1111/ehr.13084

The published article has been reformatted to be consistent with the other chapters in this thesis. The content is unchanged. The bibliography has been removed and consolidated with that from other chapters, and is at the end of the thesis. The online appendix of the data sources for table 1 is printed at the end of the thesis, rather than at the end of this chapter.

Making the municipal capital market in nineteenth-century England

Abstract

How did local authorities in nineteenth-century England raise the money to finance the building of roads, sewers, gasworks, schools, and hospitals? The literature on local government and capital markets is silent on this question. This article reveals the size of the municipal capital market, how and why it developed, and how it performed. It shows that most of the capital came from private individuals and institutions, with central government having only a modest role. Avoiding defaults, protecting lenders, the move towards standardization, and the development of open markets, were all important in improving the credibility of borrowers and reducing the cost of debt. The article also reveals that the municipal capital market shared many similarities with the wider capital market.

Introduction

By 1900, the English municipal capital market had become similar in size to the corporate bond market and about half the size of the market for central government debt.[17] The municipal market grew as local authorities borrowed to construct roads and docks, improve public health, and build schools and hospitals. These investments led to expanded trade; they also reduced the previous high levels of urban mortality and increased school attendance. Without a municipal capital market, these objectives either would not have been achieved at all or would only have been attained through

[17] See tab. 2. In this article, the term 'municipal capital market' is used to cover the raising of debt by local authorities, whatever the debt instrument or the source of the lending.

government funding and by incurring a higher national debt. Yet, despite the importance of the municipal capital market, it does not feature in the history of capital markets or in accounts of local government. This article fills the gap by asking how large this market was, why and how it grew, how it performed, and who lent to local authorities. Municipalities in other countries faced similar challenges of raising capital for water, gas, streets, sewers, and dock infrastructure. Indeed, by 1900 about 60 cities in North and South America, Australia and New Zealand had raised capital on the London market.[18] In Europe, state and local governments also raised capital to provide this infrastructure in cities.[19]

Details on the size of the municipal capital market are only known for the last sixteen years of the nineteenth century.[20] For the first eighty years they can only be estimated from the investments made by thousands of local bodies. For this study, a new database has been created to show the scale and purpose of these investments. A second database has been built from the available mortgage and stock registers, which detail the sources of authorities' borrowing. These records, together with published records of municipal stock prices, make it possible to calculate the returns on municipal debt. Analysis of these sources allows us to build a picture of the composition of the municipal capital market.

For much of the nineteenth century, English cites had difficulties removing raw sewage and supplying clean water.[21] Local authorities wanted to improve these conditions, and took the initiative by promoting local acts of Parliament allowing them to borrow money. Central government legislation and finance were less important, and a

[18] *Investor's Monthly Manual*, 30 Dec. 1899, p. 726.
[19] Millward, *Public and public enterprise*, pp.18-19.
[20] In the annual Local taxation returns. From (P.P. 1886, LV) to (1901, LXIII).
[21] Wohl, *Endangered lives*, provides plenty of detail on the unhealthy state of cities.

municipal capital market was needed to raise nearly all the money from the private sector. Before 1869, local authorities could only raise loans on non-tradable mortgages secured on the income from local rates. These mortgages were popular with the private sector, particularly with life assurance companies and trustees, who considered them to be almost as secure as Consols. Municipal mortgages were also popular with individual investors who lived locally, seeing them as a safe home for their savings. To attract investments and reduce their costs of capital, local authorities had to avoid the defaults of the turnpike trust era and develop a standardized mortgage product. They also needed to accept the better investor protection demanded by their largest lenders. With these safeguards in place, investors' confidence improved, and the interest rates paid by authorities fell more quickly than the yield on Consols.

Until 1860, councils could raise as much capital as they wanted from this mortgage market. But in the 1860s, the cost of improving London's polluting sewage disposal system became more than the mortgage market could provide. This led the Metropolitan Board of Works to issue tradable stock. After 1870, stock issues became so popular that the largest authorities gained a third of their capital finance from them. Institutions were less keen on municipal stock than on municipal mortgages, and the ownership patterns were more like those for equities. Even so, most municipal stock issues were oversubscribed, and investors saw their values rise.[22] The partial transition from mortgage to stock financing confirmed that the municipal capital market shared many of the characteristics of the wider capital market.

This article adds to three current economic history debates. It contributes to the law and finance debate by showing that improved investor protection was led by larger

[22] Coyle and Turner, 'Corporate debt', p. 839.

lenders imposing conditions on weaker and more numerous borrowers. This article also adds to the literature on home bias in investing, showing that there was a much higher level of local borrowing than others have recognized.[23] Finally, the article reveals a much higher level of institutional involvement in the municipal capital market than in the equity market of the time. The higher level here anticipates by 50 years the rise in institutional investors noted by Scott in 'The cult of the equity.[24]

Several features of the nineteenth-century municipal capital market are matters of twenty-first-century English political debate. Recent governments have wanted to attract private finance to public infrastructure provision, but after the early twenty-first-century failure of the private finance initiative (PFI), there is little private finance involvement in local authority capital provision. Indeed, the PFI has often been seen as better at providing returns to investors than for bringing social benefits.[25] This is consistent with Zingales' pessimistic response to the question: does financial innovation produce social benefits?[26] The nineteenth-century English innovation of municipal stock issues certainly did so. Modern local government leaders feel they can recapture these benefits by establishing a Municipal Bond Agency to raise money on the markets to replace government loans.[27] The push for more private finance is partly motived by the desire for a more devolved local governance model, with more independent local authorities.[28] Again, this would be closer to the nineteenth-century English model, and to the current approach in America where a large municipal bond market exists.

---

[23] Rutterford, Sotiropoulos, and van Leishout., 'Local bias'.
[24] Scott, 'Cult of the equity'. Rutterford and Hannah, 'Rise of institutional investors'.
[25] NAO, *Lessons from PFI.*
[26] Zingales, 'Does finance benefit society'.
[27] UK Municipal Bonds Agency, www.ukmba.org/ukmba-intro/ (accessed on 2 November 2020).
[28] Leach, Stewart, and Jones, *Centralisation.*

The next section of the article looks at the two datasets showing the scale and sources of council investment. Section II compares the size of the municipal capital market with other parts of the nineteenth-century capital market and examines why the market had to grow. Section III examines the actions that local authorities took to increase their access to capital and reduce its cost. Section IV shows how investor protection improved, from the defaults of turnpike trusts to the lack of defaults by local authorities. Section V looks at the lenders to local authorities and compares the performance of the municipal market with the rest of the capital market. Section VI draws conclusions.

Sources and data

This article relies on two large sets of data. The first, summarized in panel A of table 1, covers the scale and purpose of local authority capital spending in the nineteenth century. This spending was a measure of their need to borrow. The data cover improvement commissions, turnpike trusts, dock trustees, single-function boards, and multi-purpose councils. By 1902, the government had combined all these bodies into county, borough, urban, and rural councils. This dataset is a development of Feinstein's data on fixed capital formation.[29] Most of the data comes from published accounts and local taxation returns, and from borrowing approvals.[30] These approvals came from either local acts of Parliament, or from the Poor Law Commission or the Local Government Board and its predecessors. This is the first time the data for periods before 1884 have been assembled.

The second set of data, in Panel B, shows the six sources of 54,000 loan transactions of 3,000 local bodies. This sample covers 38 per cent of the total borrowed. The mortgage registers and stock registers of many bodies allow an analysis on borrowing

[29] Feinstein & Pollard, *Capital formation*, pp. 302–6, 312–378, 429–430.
[30] A separate app. S1 provides a full list of all the sources used.

from institutions and government, and from individuals organized by gender, occupation, and location. This allows conclusions to be drawn about the holders of municipal debt, and for the results to be compared with other parts of the capital market.

Table 1. *Data for the nineteenth-century municipal capital market*

Panel A: Purposes of borrowing

	Streets, Docks (£m)	*Utility services, and sewers (£m)*	*Workhouses, hospitals, schools (£m)*	*Other (£m)*	*Total (£m)*
1800s	5	0	0	0	6
1810s	8	1	0	1	10
1820s	10	1	0	1	12
1830s	9	1	2	0	13
1840s	15	3	2	1	21
1850s	17	10	3	3	32
1860s	31	18	3	6	59
1870s	37	42	18	8	104
1880s	38	34	18	11	102
1890s	45	60	33	20	157
Totals	*213*	*171*	*79*	*51*	*515*

Panel B: Sources of borrowing data

	1800–99	*Sample*		
	Borrowing (£m)	*Size (£m)*	*No. of loans*	*No. of authorities*
Council mortgage registers	290	29	13,438	35
Smith's return	18	18	4,001	974
Poor Law Commission	20	20	4,536	600
Mersey Docks and Harbour Board	30	11	8,638	1
Stock issues	118	79	20,293	13
School Boards	39	39	3,397	1,452
Totals	*515*	*196*	*54,303*	*3,076*

Notes: Individual service totals are: Streets £153m, docks, £60m. Water £68m, gas £21m, electricity £9m, trams £8m, markets £9m, sewers £56m. Workhouses £18m, hospitals £23m, schools £39m. Other services: Housing £7m, police £6m, fire £1m, parks £7m, libraries and museums £1m, cemeteries £6m, baths £4m, other buildings £11m, other services £8m.

Sources: Panel A data is from unpublished research based on accounts and local taxation returns in Parliamentary Papers, and on borrowing approvals in local acts of Parliament published in the annual *Statutes at Large: Local and Personal Acts*. Panel B data from council mortgage registers come from local record offices. Smith's return is Returns on Money Borrowed by Local Bodies (P.P. 1874, LVI). Poor Law Commission ledgers are in TNA. MDHB ledgers are at the Maritime Museum, Liverpool. Stock issue ledgers are mostly at the Bank of England, and a few are in local record offices. School Board data comes from local record offices, PWLB, and Committee of Council on Education annual reports in Parliamentary Papers. A full list of sources, locations, and file references can be found in online appendix S1.

The collection of council mortgage registers comes mainly from large authorities. These records represent 10 per cent of the total, but the local record office catalogues do not list the remaining records, so we must assume they no longer exist. However, the Manchester collection of registers dwarfs all others, and only a sample are included to avoid skewing the database towards large city authorities. In contrast, Smith’s return, found in parliamentary papers, and the Poor Law Commission records at Kew, provide details of all the 1,600 mostly smaller local bodies, and all these records are included. Two-thirds of stock issue registers are included, but the remaining third cannot be located. The Mersey Docks and Harbour Board records include all their borrowing up to the mid-1860s. Records no longer exist for the remaining part of the century. For the details of school board borrowing we must rely on the records of the Public Works Loan Board (PWLB), since only a small number of the mortgage registers for nearly 2,000 school boards are available. Even so, the PWLB records account for half the money borrowed by school boards.

Taking the six Panel B sources together, the sample provides a close representation of the total pattern of borrowing, reflecting the division over time, by geography, and between large and small local bodies. The dataset is therefore the best sample available.

Why did the municipal market grow?

By any standard, the municipal capital market was large, and an important part of the overall capital market. At the end of the nineteenth century, local authority debt was £294m.[31] Table 2 shows that it was slightly smaller than corporate debt, half the size of the national debt, and a quarter of the domestic equity market. Local authority

[31] *Local taxation return*, (P.P. 1901, LXIII), p. 1205.

investment grew faster than any other element in Feinstein's fixed capital formation series.[32] Only investment in manufacturing, rail and dwellings was materially larger than local authority investment in the nineteenth century. Daunton notes that 'the scale of [local authority] investment was remarkable, and of great importance for the performance of the economy'.[33] Local authority investment was economically important because of its size and because of what it provided. Before 1840, 80 per cent of local authority investment went on streets, bridges, docks, and harbours, largely to promote trade (see table 1). In the final three decades of the century, two thirds of investment went on building sewers, providing the utility services of gas, water, trams, and electricity, and developing education and welfare services.

Table 2. *Municipal capital market in context, 1800–99*

	1800 (£m)	*1829 (£m)*	*1859 (£m)*	*1879 (£m)*	*1899 (£m)*
Government debt	456	801	809	735	591
Domestic equity	n.a.	43	298	850	1,254
UK corporate bonds	Minimal	Minimal	6	101	340
Municipal debt	Minimal	10	30	128	294

Sources: Government debt, Mitchell, *Historical statistics*, pp. 601–3. Domestic equity, Campbell, Grossman and Turner, 'Before the cult of the equity', tab. 4. UK bonds, Coyle and Turner, 'Corporate debt', p. 839 (the 1859 figure is actually for 1860, the first year in their series). Municipal debt, *Local Taxation Returns* (P.P. 1880, LXI) p. viii, (P.P. 1901, LXIII), pp. 1205; 1800, 1829, and 1859 are estimated figures, based on sums invested, minus repayments.

City authorities wanted to borrow for these purposes to combat the impact of rapid urbanization and worsening mortality rates. The extent of this local initiative is made clear from the more than 500 local acts promoted by cities and towns between 1800 and 1840, and the 1,000 promoted between 1840 and 1870.[34] Each of these acts sought permission to borrow to invest in public infrastructure. More specifically, in the six years before Parliament passed the 1848 Public Health Act, seven large authorities

[32] Feinstein & Pollard, *Capital formation*, pp. 429-430.
[33] Daunton, *Trusting leviathan*, p. 285.
[34] Published in the annual *Statutes at Large: Local and Personal acts*.

secured local acts allowing them to borrow £2m for public health-related improvements.[35] They did not want to depend on the uncertainty of the parliamentary process of passing a general health act. The 1848 Public Health Act gave permissive power to local authorities and did not impose large-scale spending obligations. Indeed, it is possible to see the act as a parliamentary response aimed at reducing the number of local government-promoted bills. Successive governments preferred to pass similarly permissive acts. Yet three acts-the 1834 Poor Law Amendment Act, the 1870 Elementary Education Act, and the 1872 Public Health Act-were felt to impose local obligations to spend. In these cases, the government had to offer local bodies low interest rate loans through the PWLB, to reduce costs to the ratepayer.

The initiative to borrow therefore rested with the local authorities. They had the motivation because they wanted to improve local conditions and combat high mortality rates. Local authorities also had the means because economic growth meant rate income doubled between 1870 and 1899. In London it increased twice as fast, and in rural areas it grew at half the national rate. This growth in income made servicing new debt relatively easy. The growing volume of savings in the economy also made it relatively easy for authorities to borrow, often from their local populations.[36] This meant that the same local population experienced both the costs and the benefits. Once the ‘Economists’, effectively a party of councillors opposed to spending, had less influence in large cities, authorities were more willing to borrow to invest.[37] Local authorities then needed an efficient capital market to finance their local improvement plans.

[35] 1842, Southwark, £100,000; 1843, Birkenhead, £100.000; 1844, Manchester, £200,000; 1846, Birkenhead, £100,000; 1847, Liverpool, £480,000; Westminster, £304,000, Manchester, £650,000. *Statutes at Large: Local and Personal Acts.*
[36] Mitchell, *Historical statistics*, pp. 663, 671, 691.
[37] Hennock, *Fit and proper persons*, pp. 31–3, 105–7.

Table 3. *Borrowing by London, other cities, and less populated areas*

	No. of authorities	*Increase in population, 1801 to 1901*	*Decade borrowing per capita rose above average for all local authorities*	*Average borrowing per capita*
London	4	4.7-fold	1820s	£11
Cities	8	8.5-fold	1840s	£16
Larger towns	24	10.5-fold	1850s	£9
Smaller towns	42	13.2-fold	1850s	£8
Smaller areas	c1,600	2.6-fold	1870s	£4

Notes: Covers only borrowing for streets, sewers, water, and gas. London borrowing per capita is lower than for cities because London water and gas investment was entirely provided by companies. Cities had 1901 census populations over 250,000; larger towns, over 100,000, and smaller towns, over 50,000.
Sources: A full list of sources, locations, and file references can be found in online app. S1; Mitchell, *Historical statistics*, pp. 26-7.

These local improvement plans first appeared in the larger cities and towns, with London authorities investing in their infrastructure five decades earlier than smaller rural councils. There was also a clear relationship between the amount borrowed and population growth. The 50 largest towns and cities accounted for two-thirds of the 1900 municipal debt, and saw their populations grow seven-fold during the century.[38] All other authorities saw population growth of well under half this level. Table 3 shows that large cities invested £16 a head on streets, sewers, water, and gas in the nineteenth century, towns invested half this, and smaller areas just a quarter. Mortality statistics also reflect the differences between urban and rural areas. In the Bethnal Green area of London, the average age of death in a labourer’s family was 16; in Liverpool it was 15, and in Derby, a largish town, it was 21. Th pressure to spend was thus lower in Derby, and so investment happened later. In small and rural Kendal, the average age of death in a labourer’s family was 34, meaning that Kendal could delay investment until much later and spend much less per head.[39] Chapman’s recent work

[38] *Local taxation return*, (P.P. 1901, LXIII); Mitchell, *Historical statistics,* pp. 26-7.
[39] Chadwick, *Sanitary conditions*, 1842, pp. 220–7.

shows investment in sanitation having a major impact on reducing local mortality rates.[40]

The nineteenth-century model was largely one of independent local authorities financing most of their capital investment from the private sector. Table 4 shows that 85 per cent of financing came from private individuals and institutions lending money on mortgages or from investing in stock. Only 15 per cent came from the PWLB. In the pre-1835 Municipal Corporations Act period, borrowing had been low, and all on mortgage, with over 85 per cent from the private sector. In the final three decades of the century, the 1870s boom in public health and education spending saw borrowing increase nine-fold. Mortgages were still important, but authorities were now raising nearly a third of their financing through stock issues. The PWLB share had increased to 18 per cent, largely because of low interest rates for sanitation and school loans. Unlike most government debt, however, debts from council mortgages and nearly all stock issues were repayable within defined timescales; by the end of the century, local authorities were repaying £6.5m a year to lenders.[41] These repayments account for the difference between the £515m spent and the £294m outstanding debt during this period.

Table 4. *Structure of local government borrowing*

	1800–39 (£m)	*1840–69 (£m)*	*1870–99 (£m)*	*Totals £m*
Mortgages	35	99	183	*317*
Stock issues	0	2	116	*118*
PWLB	5	10	65	*80*
Totals	*40*	*111*	*364*	*515*

Sources: Totals from unpublished research. PWLB from *Public Works Loan Board, Annual Reports (P.P. 1876, XXI-1900, XVII)*. Stock issues from *Investor's Monthly Manual (1870-99)*. The total for mortgages is therefore the remainder.

[40] Chapman, 'Infrastructure investment'.
[41] *Local taxation return*, (P.P. 1901, LXIII),

The municipal capital market was also important because it offered an alternative to accepting a much larger role for central government, either through direct funding or a greater reliance on lending from the PWLB. Both would have increased the national debt significantly and created a more centralized state with weaker local authorities. Direct funding by the government would also have seen the incidence of the costs and benefits of infrastructure investment fall on different groups. The benefits would have accrued to local populations, while the debt service costs would have been met by all national taxpayers. Even so, some European countries did provide state funding for infrastructure investment in the nineteenth century.[42] In post-1990 England, nearly all the external finance for local government investment comes either from government grants or PWLB loans.[43] The result is stronger central government, weaker local government, higher national taxes, and lower local taxes.[44]

Another alternative to a growing municipal capital market was to leave provision to the private sector. This was the route taken for gas and water supplies in London in the nineteenth century. The private sector also delivered these and other services elsewhere, but these companies were steadily being taken over by local authorities.[45] For Crafts, the private sector's low investment in public goods was a 'classic market failure', because companies incurred the costs while communities enjoyed the benefits.[46] Crafts' view is consistent with Williamson's judgement that social overhead investment was too little too late.[47] The municipal capital market therefore grew because the need for higher levels of investment was clear, and local authorities had

[42] Bogart, Drelichman, Gelderblom, and Rosenthal, 'State and private institutions', Tables 3.3, 3.4, 3.5.
[43] ONS, *Local government financial statistics*.
[44] Leach at al., *Centralisation*, pp. 58–72.
[45] Falkus, 'Municipal trading'.
[46] Crafts, 'Dimensions', p. 633.
[47] Williamson, *City growth*, pp. 270-84.

the motivation and the means to invest heavily. In contrast, the private sector and central government may have had the means, but they lacked the motivation.

How did local authorities raise finance in the market?

This section examines the changes local authorities made to how they accessed capital markets. These changes did not cause the growth in their debt; instead, they gave them better access to markets and reduced their costs of capital. Writing in 1904, Biddle paints a rosy picture of how councils borrowed: Tradesmen and others who are getting on well in business call at the office of the town clerk or borough treasurer when they have a little money to invest, and generally find no difficulty in placing it on loan with the corporation.[48] In practice, local authorities had to earn this apparent confidence placed in them by lenders by avoiding the risk of defaults. Doing so would then reduce the cost of capital. They also needed to reduce the high transaction costs of the way they raised money on mortgage. It was also necessary to widen access by issuing tradeable stock on a public market. It is possible to measure their success by charting the fall in the interest rate spread, looking at defaults, examining transaction costs, and looking for evidence of any inability of the market to supply capital.

The steps taken by authorities saw their capital costs fall faster than the yields on Consols. Table 5 shows that the interest rate spread between Consols and local authorities' cost of capital halved over the century. It also shows local authority transaction costs falling by 75 per cent as they moved from early mortgages to stock issues. By 1900, these savings were worth up to £2.3m a year, or around 6 per cent of authorities' annual rate income.[49] But not all authorities paid the same for their capital. Table 6 shows that larger authorities mostly enjoyed lower interest rates than

[48] Biddle, *Loans of local authorities*, p. 10. Biddle does not give a source. It may be apocryphal.
[49] See table 5, *Local taxation returns* (P.P. 1901, LXIII).

Table 5. *Average costs of local authority debt*

Panel A: Interest-rate spreads			
	Local authority interest rates	*Yield on Consols*	*Spread*
1820s	5.0%	3.7%	1.3%
1830s	4.7%	3.4%	1.3%
1840s	4.5%	3.3%	1.2%
1850s	4.3%	3.2%	1.1%
1860s	4.3%	3.3%	1.0%
1870s	4.3%	3.2%	1.1%
1880s	3.7%	3.0%	0.7%
1890s	3.1%	2.5%	0.6%

Panel B: Transaction costs			
	Early mortgages	*Stock issues*	
	One-off costs		
Initial costs	0.75%	0.25%	BoE issue costs
Commission	0.125%	0.1%	Redemption costs
Stamp duty	0.625%	0.063%	Stamp duty
	Annual costs		
Interest payments	0.05%	0.05%	
Life of mortgage	8 years	50 years	Life of stock issue
Average annual cost	*0.238%*	*0.058%*	*Average annual cost*

Notes: Local authority interest rates are weighted averages. Stamp duty was only paid on around 10% of stock issues.
Sources: Local authority interest rates from council mortgages, MDHB, and stock issues. Consol yields from Homer and Sylla, *Interest rates*. Stock issue costs from Nottinghamshire Archives, Nottingham City Council, finance committee minutes Jan. 1881 and March 1885.

Table 6. *Regional mortgage rates*

	Regional differences			*Differences by size*		
	L/SE %	*NW/WM* %	*E/SW/EM* %	*Large* %	*Medium* %	*Small* %
1820s		4.51	4.00	4.52	4.00	4.00
1830s	4.90	4.11		4.11	5.00	4.38
1840s	4.00	4.87		4.87	4.00	4.00
1850s	4.81	4.02	3.99	3.90	4.86	4.24
1860s	4.60	4.18	4.20	4.09	4.26	4.47
1870s	4.57	4.01	4.02	4.00	4.01	4.18
1880s	3.97	3.52	3.67	3.27	3.57	3.79
1890s	3.74	3.02	3.26	2.97	3.25	3.32
Averages	*4.25*	*3.62*	*3.89*	*3.62*	*3.83*	*3.90*

Notes: L= London, SE=south-east, NW=north-west, WM=west midlands, E=east, SW=south-west, EM=east midlands. There are no north-east or Welsh councils in the sample. Large, medium, and small authorities are based on the size of their outstanding debt at 1900.
Source: A full list of source, locations, and file reference can be found in online app. S1.

smaller authorities. The table also shows that mortgage interest rates were lowest for authorities in the north-west and west midlands regions, and highest for authorities in London. However, this is because larger borrowers attract lower rates, and vice versa.

The north-west and west midlands were dominated by larger borrowers, including Liverpool, Manchester, and Birmingham, while borrowers in London and the south-east were generally smaller. (There is no evidence of regional differences in interest rates for similar-sized authorities.)

Authorities could do three things to reduce interest rates and transaction costs. The first was to avoid defaults or late interest payments. Both had plagued turnpike trusts, who in 1834 owed lenders nearly £1m of unpaid interest on loans of around £8m.[50] Authorities' first action against defaults was to exercise restraint in their borrowing. By 1900, the total municipal debt was 3.8 times their annual income, and servicing that debt took 20 per cent of their annual income.[51] As a comparison, the national debt in 1900 was 4.4 times central government's income, and debt service costs consumed 18 per cent of annual income, so the figures were similar.[52] In contrast, if the troubled turnpike trusts had properly repaid their loans, and paid all the interest due, their debt service costs in 1834 would have used up more than 50 per cent of their income.[53] In practice, they only met half their annual debt service costs, and defaulted on the rest. So, given the desire of local authorities to invest, they exercised a reasonable degree of restraint to avoid over-borrowing.

A series of checks were in place to encourage borrowing restraint. First, opposition groups within individual authorities would often challenge borrowing proposals based on the impact they would have on the local rate. As an example, in 1880s Liverpool, A. B. Forwood - who later became the council leader-led a minority of councillors who

[50] *Returns from Turnpike Trusts* (P.P. 1836, XLVII).
[51] *Local Taxation Returns* (P.P. 1901, LXIII), Summary pp. 40–57.
[52] Mitchell, *Historical statistics*, pp. 583, 589, 602.
[53] Returns from *Turnpike Trusts* (P.P. 1836, XLVII).

objected to the £3m Vyrnwy reservoir scheme, believing that it was too expensive.[54] Once a council agreed a scheme, it often needed a local act of Parliament to grant the borrowing power. The parliamentary local bill committee would challenge the council's plans and its capacity to repay and service the loan. Applications to borrow under general acts would be subject to scrutiny by the Local Government Board or its predecessors.

The impact of borrowing on the future rate also provided a control against overspending, since over-borrowing would just force the rate higher, risking electoral damage. A combination of over-borrowing and a falling tax base could cause defaults; examples are Ireland in the 1840s, America in the 1840s and 1870s, and Latin America in the 1890s.[55] English councils avoided these problems. Since the era of turnpike trusts, there have been no local authority defaults, and this stability has contributed to the narrowing interest rate spreads against Consols.[56]

Local authorities aimed their second group of actions at standardizing mortgage processes to reduce transaction costs. Pre-1830 mortgage registers for the Liverpool Dock Trustees show clerks writing the details of each loan in a ledger. A senior officer would present the ledger at each committee meeting, where the chairman and two others would sign it.[57] Other 1830s mortgage registers show clerks writing out each unique, pages-long mortgage agreements in full in ledgers.[58] In both cases, each mortgage had a different term and a different interest rate. This approach implies that

[54] *Liverpool Mercury*, 22 January 1880, p. 3.
[55] *PWLB annual report* (P.P. 1888, XXXIII), p. 8. English, 'American state debts', pp. 259–275; Dove, 'Municipal debt', pp. 74–5. Marichal, *Debt crises in Latin America*.
[56] Three recent councils, Liverpool in the 1980s, Hackney in 2000, and Northamptonshire in 2018, had major problems but avoided defaults. The *Guardian*, 29 Jan. 2019.
[57] Mersey Docks and Harbour Board, Mortgage ledger volume 1, 1811–30.
[58] East Sussex record office, Hastings local board of health DHB 5/2. Hastings waterworks mortgage register, DH/B5/17.

the borrower and the lender negotiated each mortgage separately. These processes would have involved heavy initial transaction costs, and table 5 suggests these could have been as high as 0.75 per cent of a common loan value of around £100. Partly to reduce these transaction costs, and partly to broaden access, authorities began to advertise in local and national newspapers to attract lenders. Some also engaged brokers to manage the marketing of mortgages. As part of this, authorities increasingly adopted a restricted range of terms-sometimes three, five, or seven years-and fixed an interest rate for a period. They also gradually began to use a standard 20-line mortgage form.[59] Later, this shrank to 15 lines.[60] Not all authorities took these steps towards standardization at the same time, but Liverpool corporation's mortgage register of the 1840s shows standard rates and terms.[61] Later, Nottingham city council's finance committee agreed to accept loans only at a named rate and term.[62] As standardization became more common, transaction costs fell.

The third change came in 1869, with councils introducing tradable stock issues. Between 1865 and 1869, the Metropolitan Board of Works (MBW) was investing on average £1.4m a year for completing the north and south embankments and Joseph Bazalgette's drainage scheme.[63] This was a rare case where a local authority could not access enough capital using mortgages. Daunton reports that an early idea was for the Treasury to lend money direct to the MBW, but this was dropped.[64] Instead, between 1859 and 1869, the Bank of England made about 50 loans totalling £5m to the MBW, which the Treasury guaranteed.[65] The MBW and the Bank persuaded Acton

[59] 1847 Commissioners Clauses Act, schedule B.
[60] 1875 Public Health Act, schedule H.
[61] Liverpool central library, corporation mortgage register, 352/TRE/3/5/1.
[62] Nottinghamshire Archives, Nottingham City Council, Finance Committee minutes, 1891.
[63] *Metropolitan Board of Works, Annual Report and Accounts*, P.P. 1862 XLVII and annually until 1871, XLVII).
[64] Daunton, *Trusting leviathan*, p. 276.
[65] Clapham, *Bank of England*, vol. 2, p. 302.

Ayrton, the financial secretary to the Treasury, to introduce a bill to allow the MBW to issue stock. In doing so, Ayrton said that using 'unmarketable' mortgages was 'borrowing hand to mouth' and was perhaps 1 per cent more expensive than stock.[66] The long-term solution was for the MBW to make a stock issue, and Parliament passed an act giving it the power to do so. Ayrton's expectation was that MBW stock would be 'almost as good as [loans] raised by Her Majesty's government'. At first, the MBW issue raised £2.5m at 3.5 per cent for 60 years, but the MBW made many further stock issues, eventually raising £17m.[67] The price of the stock appeared in the *Investor's Monthly Manual* and in many national newspapers.[68] Homer and Sylla report that by 1881, the MBW was paying just 0.15 per cent over the yield on Consols.[69] The redemption period of 60 years allowed the MBW to borrow for much longer than was possible with mortgages. This also allowed the MBW to spread the initial costs over a longer period. The benefit to the MBW of using stock issues was to increase access to capital markets, and to reduce interest rates and transaction costs.

Between 1870 and 1899, nearly 90 of the largest cities made stock issues, and some made multiple issues.[70] These raised £118m, with the average size being around £0.75m. In the cases of Nottingham and Liverpool, the initiative came from leading members - Edward Goldschmidt in Nottingham and Forwood in Liverpool - rather than from the treasurer.[71] Goldschmidt was a local business leader who went on to chair the finance committee for 12 years, while Forwood went on to lead the city council before entering national politics.[72] Both council finance committees treated the

[66] House of Commons Journals, ser. 3, vol. 198, col 36–345, 20 July 1869.
[67] Burdett, *Burdett's official intelligence 1882*, p. 11.
[68] *Course of the Exchange*, December 1869.
[69] Homer and Sylla, *Interest rates*, p. 201, tab. 20.
[70] 1899 year-end copies of the *Investor's Monthly Manual*.
[71] Nottinghamshire Archives, Nottingham City Council Finance committee minutes, December 1880. *Liverpool Mercury* 22 Jan. 1880.
[72] Waller, 'Forwood'.

proposers as having made an entirely novel proposition. Details of Nottingham's discussions with the Bank of England governor and deputy governor, and the bank's advice and likely costs, appear in the council minutes.[73] These discussions make it clear that the Bank of England was controlling the listing strategy, not the authority. Local press coverage in Liverpool suggests that it took two meetings to persuade the council of the wisdom of making a stock issue.[74] Ultimately, the deciding factor was the saving of half a per cent on the interest rate. The lower cost of capital was also attractive to Nottingham, and the city quickly made three stock issues worth £3m in total. Michie writes that the growth of the national debt market depended on holders being able to buy and sell in an open market.[75] This was also true of the post-1870 municipal capital market, and stock issues gave cities access to the wider capital market and a cheaper source of capital.

The two drawbacks of stock issues were that they were unattractive to small authorities, and the Bank of England controlled the timing, terms, and size of issues. The Bank was reluctant to entertain issues under £100,000, feeling they would lack the liquidity to create an effective market. The *Investor's Monthly Manual* data also shows that smaller issues had capital returns that were 0.5 per cent a year lower than larger issues.[76] Sometimes an authority had to wait a year until the Bank thought conditions suitable for an issue. The Bank also effectively controlled the issue price and the coupon. There were significant one-off costs to a stock issue because until 1895, a council needed a local act of Parliament to make one. These costs, and the Bank's control of listing strategy made stock issues unattractive for smaller authorities,

[73] Nottinghamshire Archives, Nottingham City Council Finance committee minutes, Dec. 1880 and March 1881.
[74] *Liverpool Mercury*, 1 Dec. 1884, 2 March 1885.
[75] Michie, *London stock exchange*, pp. 18–19, 25.
[76] Analysis of quoted prices in year-end *Investor's Monthly Manual,* 1870-1899.

and to those who did not want to wait.[77] A consortium of smaller authorities could have formed to promote a single issue, but this did not happen.[78] Even so, by the end of the century, local authorities had managed to borrow huge sums, had halved the interest rate spread over Consols, and had significantly reduced the transaction costs of managing their debt.

The impact of municipal stock issues on investment levels was also significant. Indeed, the 90 stock-issuing authorities increased their debt by 81 per cent between 1884 and 1899, compared to a 52 per cent increase for all other authorities.[79] The *Economist* preferred stock issues both to mortgage borrowing and to borrowing from the government. The paper stated: 'it is certainly a move in the right direction that municipalities and local authorities should borrow direct from the public.'[80] It reasoned that stock issues were tradable, prices were public, and 'investors could make judgements on the relative security offered by different authorities'. The Treasury also supported the move in its little-used 1875 Local Loans Act.[81] The Local Government Board, however, continued to prefer mortgage lending, and the 1875 Public Health Act only mentioned mortgages, not stock issues.[82] Yet stock issues grew in spite of this; first, because the Bank of England saw a commercial opportunity to use its issue experience in municipal finance; and second, because investors' new appetite for corporate debt suggested that municipal stock issues were likely to be popular. The initiative and support for stock issues therefore came from the market rather than from government.

[77] Bellamy, *Central-local government relations*, pp. 86–7.
[78] The Municipal Bond Agency was formed to achieve this in 2014.
[79] Comparison of outstanding debt in *Local Tax Returns* (P.P. 1901, LXIII) and (P.P. 1886, LV).
[80] *Economist*, 2 Oct. 1880.
[81] Page, *Local authority borrowing*, p. 146, quoting Johnson and Griffiths.
[82] 38 & 39 Vict. c. 55, s. 233-244.

Improving investor protection in the municipal market

The previous section outlined the steps that local authorities took to avoid the risk of defaulting, thereby making it easier to raise capital. This section argues that the PWLB was the early driving force behind imposing lending conditions that reduced the risk of loss to investors in the municipal debt market. The conditions imposed by these large lenders were stronger than the weaker and often variable protections that appeared in legislation. It was the scale of lending by the PWLB and life assurance companies that allowed them to improve investor protection. Other parts of the capital market lacked institutional investors on this scale, and had to rely on borrowers offering better protection.

Lenders' bad experience with turnpike trusts could have prevented the municipal capital market from growing at all. Turnpike trusts often failed to repay loans, and some trusts could not pay the interest due on loans.[83] Eventually, many lenders lost money in the 1850s when the government allowed trusts to negotiate lower interest rates, write off unpaid interest, and write down outstanding loans.[84] This happened because of poor investor protection. Turnpike trust acts and most mortgage agreements failed to specify the period of a loan, when repayments should be made, how often interest would be paid, or what would happen in the event of a default, or to put any limit on the size of a loan.[85] In addition, lenders had little security since turnpike trusts owned few assets and their income was precarious. Even if creditors took control of the toll

[83] *Returns from Turnpike Trusts* (P.P. 1836, XLVII).
[84] Turnpike Trust Continuance Act 1849; Turnpike Continuance (No. 2) Act 1850; Relief of Turnpike Trust Debts Act 1851.
[85] Pawson, *Transport and economy*, p. 211.

gates, few recovered their money by this route.[86] This weak protection contributed to the 75 per cent fall in the number of new turnpike trust acts after 1826.[87]

The PWLB was the largest single lender to turnpike trusts and then to councils. Its approach to protecting its interests reflected the experience of its chairman, Charles Grant, and his fellow commissioners. Most had been members of the PWLB's predecessor bodies, lending money to commercial firms in difficult conditions, and recovering loans in full.[88] Their experience was clear in the 1817 Act establishing the PWLB, and in their mortgage agreements with borrowers. PWLB commissioners also insisted on their independence to decide the outcome of loan applications.[89] Loans would be for a maximum of ten years, only for capital works, with annual repayments of principal and interest, and the PWLB expected priority over other creditors.[90] In the case of turnpike trusts, the PWLB insisted that trustees should be individually liable in the event of a default. When lending money to municipal bodies, there was a cap on the maximum that could be lent, and the loan was secured against future rate income. These conditions ensured that over the next 60 years, the PWLB incurred bad debts of less than 0.5 per cent on loans where it used its discretion.[91]

Parliament was also imposing conditions on borrowing by local bodies. In the first three decades of the nineteenth century there were between 100 and 150 local acts each decade seeking to raise money for public bodies. In the 1820s, the committees of MPs

---

[86] *Public Works Loan Board Annual Reports* (P.P. 1851, XXXI), pp. 33–4; (P.P. 1888, XXXIII), pp. 134–9.
[87] Albert, *Turnpike road system,* pp. 222–3.
[88] Clapham, *Bank of England* vol. 1, p. 259; vol. 2, pp. 33–4.
[89] Public Works Loan Act 1817, s44, 57 Geo. IV c34; Advances for Public Works Act 1842, 5&6 Vic. c9.
[90] By the end of the century PWLB loans were mostly for much longer periods.
[91] In 15 cases, PWLB decisions were overruled by Parliament and the PWLB ordered to make loans. £1.8m was lost on these loans! *Public Works Loan Board Annual Reports* (P.P. 1876, XXI), (P.P. 1888, XXXIII).

who considered each bill increasingly inserted clauses to protect all lenders. Similar clauses also appeared in general acts relating to local government.[92] In doing so, they followed the lending conditions of the PWLB, rather than the approach of the turnpike trust acts. It also became usual to expect the borrower to record each loan's details in a register. While there were minor variations between the many acts, parliamentary bill committees were moving towards better legislative protection for lenders.

The 1834 Poor Law Amendment Act created about 650 poor law unions who would each have to borrow to build a new workhouse. The Act broadly adopted the PWLB's protections for lenders. The Act set a maximum loan size and period for loans, and specified that security for loans was future rate income; there was also a requirement for external audit of unions. The largest lenders where the PWLB and life assurance companies, and both demanded extra protection for lenders. Both wanted agreement from the majority of guardians to loans, annual repayments of principal and interest, a standard loan agreement and a standard rate of interest. The standard loan agreements for the PWLB and a variety of life companies were virtually identical.[93] In addition, the PWLB would have priority over other creditors. It was even possible for the Poor Law Commission to force a union to raise the poor rate to repay a loan. Lenders were so well protected that there was only ever a single default, and that was for under £4,000.[94]

The high volume of local bills seeking borrowing powers imposed a heavy burden on the Parliament's local bill committees. Parliament sought to reduce this burden by establishing a Select Committee on the Private Business of the House of Commons.[95]

[92] Examples include: 1823 Gaols Act; 1826 County Buildings Act; 1828 County Lunatic Asylums Act.
[93] A variety were examined in the Derbyshire Record Office files for individual Poor Law Unions.
[94] *Public Works Loan Board Annual Report (*P.P. 1888 XXXIII), p. 137.
[95] *Third Report of the S. C. on Private Bills* (P.P. 1847, XII).

The committee developed a series of 12 clauses acts with standard clauses that could be inserted into each relevant local act. The 1845 Companies Clauses Act and the 1847 Commissioners Clauses Act amounted to a standard list of nine investor protection measures for companies and public entities. Both acts established minimum standards of protection. In doing so, they were as important as the standard form of joint-stock companies emphasized by Johnson, and as important as the transition to standard weights and measures that Velkar described.[96] However, the Commissioners Clauses Act protections were materially less than those upon which the PWLB and the life assurance companies had been insisting. There was no limit on borrowing, no maximum loan period, no requirement for annual repayments of the principal, and no priority over other creditors. The Clauses Act did not therefore improve investor protection in the municipal capital market.

The 1848 Public Health Act adopted the weaker Clauses Act protections. The 1848 Act did not insist on annual loan repayments; instead, it allowed local boards to set up sinking funds to repay loans on maturity. Nor did the 1848 Act set a maximum sum that boards could borrow or give the lender priority over other creditors. As a result of these weaknesses the PWLB declined to lend on these terms, and life assurance companies preferred to lend to poor law unions under the tougher conditions of the 1834 Act.[97] In 1853, the government amended the 1848 Act and required annual loan repayments.[98] Even so, the PWLB and life companies made few loans under 1848 Act powers in the 1850s and 1860s, providing only 6 per cent of councils' borrowing. In sharp contrast, the PWLB and life assurance companies provided over 80 per cent of the lending to poor law unions between 1834 and 1869. The 1834 Act also had an

[96] Johnson, *Making the market*, pp. 105–28; Velkar, *Markets and measurement*.
[97] TNA, PWLB minute book, PWLB 2/25, Nov. 1852 to June 1854, 2 Dec. 1852, p. 1.
[98] The Public Works Loan Act 1853, 16 & 17 Vic. c. 40, section 1.

immediate impact, with more than 81 per cent of unions borrowing to build or refurbish local workhouses within ten years.[99] In contrast, in the ten years after 1848, local authorities borrowed little using 1848 Act powers. Instead, the larger cites continued to seek local act approval for public health investments. Comparison of the two acts shows that better investor protection encouraged larger lenders and investment, while weaker protection discouraged both investment and lending.

The case of municipal mortgages offers an insight on the law and finance debate. La Porta et al. hold that 'when investor rights […] are extensive and well enforced by regulators or courts […] investors are willing to finance firms'.[100] Acheson et al. argue that in nineteenth-century England, legislation provided too little protection for investors.[101] Companies therefore had to offer stronger protections to attract investors. In the case of the English municipal mortgage market, government legislation also offered only weak and variable protection for investors. In practice, larger lenders, like the PWLB and life companies imposed stronger protections on weaker and more numerous borrowers. Even though the PWLB was created by the government, it made independent lending decisions and was legally separate from the government. It therefore functioned as an institutional lender, not as part of the government.

Who lent to local authorities, and why?

Individuals and institutions could choose to invest in Consols, municipal debt, equities, or corporate bonds, and each had different patterns of risks and rewards. Determining who lent to councils, and why, involves analysing the mortgage and share registers of local bodies and looking at the returns from the various asset classes. They are both

[99] TNA, Poor Law Commission ledgers, MH34 1–3. Analysis of loan approvals.
[100] La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 'Investor protection', p. 5.
[101] Acheson, Campbell, and Turner, 'Private contracting'.

important because they tell us that local authority debt was seen as being as safe as Consols at a time when the yields and issues of Consols were falling. The evidence also shows that institutions found it attractive to invest in publicly owned infrastructure assets. This institutional interest pre-dated the inter-war surge in equity investments of Scott's 'Cult of the equity' by fifty years.[102] Attempts to recover this institutional interest in the twentieth century with the private finance initiative failed. Even so, the similarities of the ownership patterns and the risks and returns of the municipal capital market show that it was just a part of the wider capital market of the time.

Table 7. *Sources of finance, 1800–99*

	Individuals (%)	*Institutions (%)*	*PWLB (%)*
Mortgages			
Large authorities [a]	48	43	9
Medium authorities [a]	35	40	25
Small authorities [a]	21	29	50
Subtotal	*37*	*38*	*24*
Stock issues	87	13	0
All	*57*	*28*	*14*

Notes: (a) 'Large authorities' are those with debt of more than £1m at 1900. 'Small authorities' are those with debt of less than £0.1m. In the few cases where joint lenders are recorded, only the first name, location and occupation have been recorded. Where a group of individuals are acting as trustees, normally for a voluntary body, they have been treated as an institutional lender. Where an individual or group are acting on behalf of a dead person's estate, the occupation and location of the dead person have been recorded.
Sources: See tab. 1 and online app. S1 for sources. Sample size is also detailed in tab. 1

Table 7 shows that 28 per cent of the capital came from institutions. But mortgages were more popular, with institutions holding 38 per cent, while they 'only' held 13 per cent of stock issues. Both percentages are far higher than the 1-4 per cent that many studies have identified for institutional holdings of equities.[103] The pattern of institutional holdings of Consols is far from clear. This section therefore provides a rare

[102] Scott, 'Cult of the equity'.
[103] Davis and Huttenback, *Mammon*, p. 199; Cottrell, *Industrial finance*, p. 96; Rutterford , Green, Maltby, and Owens, 'Nation of shareholders', p. 166; Acheson, Campbell, Gallagher, and Turner, 'Independent women', tab. 3, p. 35.

analysis of institutional debt holdings. Table 7 also shows the major differences between the holders of large authority debt and those of small authority debt. Small authorities secured half of their mortgage borrowing from the PWLB, and just 21 per cent from individuals. Large authorities received less than 10 per cent of their mortgage lending from the PWLB, and much larger shares from individuals and institutions. Only large authorities issued stock, and 87 per cent of stock was held by individuals. An analysis of institutional lending to local government reveals why institutions held this debt, and why the pattern was different from holders of equities.

Table 8. *Performance of different asset classes, 1870–99*

	UK equities	*Corporate bonds*	*Council stock*	*Council mortgages*	*Consols*
Average annual return [a]	5.77%	5.15%	4.03%	3.41%	3.37%
Sharpe ratio	0.41	1.30	0.76	2.10	0.49
Liquidity ratio [b]	0.52	0.51	0.50	0.00	0.79

Notes: a Annual returns include capital gains/losses and interest/dividends.
b Liquidity ratios record the percentage of securities traded in a given month, measured by those where the price has changed in the month. Sharpe ratios are calculated following Sharpe, 'Adjusting for risk in portfolio performance measurement'. Liquidity ratios are calculated following Lesmond, Ogden, and Trzcinka, 'New estimate'.
Sources: Average returns: Equities: Campbell et al., 'Before the cult of the equity', tab. 8 panel C. Consols: Homer and Sylla, *Interest rates*, pp. 195–6. Corporate Bonds: Coyle and Turner 'Corporate debt', app. tab. 1b, p. 839. Council stock: *Investor's Monthly Manual* (1870-99). Council mortgages: interest rate analysis from tab. 2 data. Liquidity ratios: Equities: Campbell, Rogers, and Turner, 'Provincial Stock Markets', tab. 5, 1869–99. Corporate bonds: Campbell, Turner, and Ye, 'Liquidity 1825–70', tab. 2, p. 830, figure for 1861–70 only. Council stock and Consols calculated from *Investor's Monthly Manual* data. Sharpe ratios calculated from *Investor's Monthly Manual* data.

One of the main sources of information available to investors comes from the returns, liquidity, and volatility of the various asset classes. Table 8 shows these three results for municipal mortgages and stock, Consols, equities, and corporate bonds. In all cases, the information covers the period 1870 to 1900, since there were few municipal stocks or corporate bonds before then. Table 8 shows that after 1870, municipal mortgages had a similar return to Consols, but with less liquidity and volatility. Council stock had higher returns than both, but had less volatility and less liquidity than

Consols. Both equities and corporate bonds had higher returns than municipal debt and Consols, but also had higher risks of capital loss. The scale of this equity risk has been the subject of debate, but it is probably low enough not to have materially affected the returns shown in table 8.[104] These statistics help determine the motivations of the different groups of municipal debt holders.

Life assurance companies were the largest institutional holders of local authority mortgages. They were investing funds that belonged to policyholders and eventually the funds would need to be returned to them, with interest. Bailey, an insurance industry leader, said that safety was a priority for life companies, meaning that before 1850, most of their investments were in Consols.[105] After this, the yield on Consols continued to fall, and life companies found their price volatility unattractive. This led companies to move some funds into mortgage lending to individuals and local authorities. Speaking about life companies' investment strategies, Bailey insisted that they viewed mortgages as secure and less volatile than Consols, and with similar returns. Table 8 confirms this view: council mortgages offered similar returns to Consols without the volatility; they lacked liquidity, but Bailey said companies were willing to accept this.[106] Most life assurance company lending was to small and medium-sized authorities, in loans averaging less than £6,000, suggesting they were deliberately spreading their risks. Later, mortgages fell out of favour with life companies, as they chased the higher yields of equities and foreign holdings.[107] For the same reason, life assurance companies were not significant holders of municipal

[104] Coyle and Turner, 'Corporate debt', pp. 816, 823, 839. Grossman and Shore, 'Stock returns before World War 1', p. 278; Ye and Turner, 'Stock returns in an early stock market', p. 120.
[105] Their approach was spelt out by Bailey in 1861. Bailey became the head of the Institute of Actuaries. Quoted in Morecroft, *Asset management*, p. 44.
[106] Ibid., p. 44.
[107] *Returns from life assurance companies* (P.P. 1872, L) and (P.P.1900, LXXX). Scott, 'Cult of the equity', p. 79.

stock. When life companies put a premium on security, local authority debt was attractive, but when returns became more important, municipal debt was less popular.

Table 9. *Sources and destinations of institutional finance*

	Life assurance companies (£m)	*Bank of England (£m)*	*Trustees/ public bodies (£m)*	*Other banks (£m)*
Mortgages				
Large authorities [a]	1.2	12.2	1.0	0.1
Medium authorities [a]	6.0	0.5	6.1	0.4
Small authorities [a]	6.3	0.1	1.9	0.4
Subtotal	*13.5*	*12.8*	*9.0*	*0.9*
Stock issues	0.5	0.0	3.3	5.7
All	*14.0*	*12.8*	*12.3*	*6.6*
Average size of loan	£5,774	£112,281	£6,423	£17,899

Notes and sources: a 'Large authorities' are those with debt of more than £1m at 1900. 'Small authorities' are those with debt of less than £0.1m. Trustees/public bodies includes: Friendly Societies, voluntary bodies, councils, courts. Lending by companies is not shown as it only amounts to £1.1m and is nearly all in stock issues. See tab. 1 and text for sources. Sample sizes are detailed in tab. 1.

The Bank of England lent £12.8m to local authorities, with an average loan of over £100,000, so its motives were different from those of life assurance companies. As noted earlier, the Bank lent £5m to the MBW in the 1860s, when individuals, other institutions, or the PWLB could not finance the MBW's two major projects. The lack of market finance was also behind the Bank's decision to give a £1.1m loan to the Corporation of London in the 1860s. This was not a new role for the Bank. It lent £1.3m to the Corporation of London between 1829 and 1844, for the new London Bridge and for the Royal Exchange.[108] Even in the era of stock issues, the Bank continued lending to the MBW and to a few other large authorities. However, these were short term loans while these authorities were waiting to issue stock. Overall, the Bank of England was fulfilling two roles. It was following its own commercial instincts, making profitable

[108] Bank of England archive, Freshfields papers, Corporation of London, F11/103.

loans to clients with high levels of security. And occasionally it was the backstop lender for projects that were too large for either the market or the PWLB to finance.

Table 9 shows trustees and public bodies as major holders of municipal debt.[109] Like life assurance companies, trustees and public bodies acted as if municipal debt was as safe as Consols. In the decade before the Trust Investment Act 1889, trustees and public bodies were responsible for 45 per cent of institutional investment in local authorities. The act defined nearly all local authority debt as a safe investment which was suitable for holding by trustees.[110] In the decade after 1889, trustees and public bodies increased their share of institutionally held municipal debt to 67 per cent, so the Act made municipal debt more attractive to these bodies. Trustees included voluntary bodies and friendly societies. Among the public bodies were councils, who were investing police superannuation funds and sinking funds built up to repay debt. Law courts also invested in municipal debt with sums they held for litigating parties. Like trustees, public bodies were only temporary holders of these funds, and they needed to avoid capital losses. The emphasis on the safety and returns of municipal debt explains the many unsolicited offers of loans from councils in the Nottingham city council minutes.[111] For all such lenders, security was the most important characteristic of local authority debt.

Other commercial banks lent £6.6m to local authorities, but the average size of these loans was much smaller than the average Bank of England loan. Nearly all the local authority debt held by non-Bank of England banks was stock rather than mortgages.

---

[109] 'Trustees' excludes executors who were looking after the financial affairs of individuals.
[110] 52 & 53 Vict. c. 32, s. 3m, allows trustees to hold debt of authorities with a population of over 50,000. In the case of stock issues by these small authorities, they represent just 1% of the total issued.
[111] Nottinghamshire Archives, Nottingham city council finance committee minutes, 1890s.

During the 1880s, the *Economist* printed many balance sheets for provincial banks, and these often showed large holdings of local authority stock.[112] As Collins and Baker argue, banks needed to keep their money in 'readily marketable assets such as […] government securities'.[113] Banks must therefore have seen municipal stock issues in the same way: safe and liquid, but with a higher return than Consols. But municipal mortgages were not liquid assets and so were not popular with banks. The small volume of mortgages held by banks were short term only, held by local banks, and probably used to help council cash flows. Like trustees, life assurance companies, and the Bank of England, commercial banks were investing money they could not afford to lose. Banks might also need to access their money at short notice.

The pattern of women's holdings of local authority mortgages, shown in table 10, supports the view that lenders saw municipal mortgages as a low-risk investment. Women held 22 per cent of council mortgages, below the level of their holding of Consols, but double their holdings of equities. This is consistent with the findings in the literature that female investors were more risk-averse than male investors.[114] However, this theory suggests that women ought to have held a larger share of municipal stock. Table 8 shows that municipal stock was less volatile than Consols, and its lower liquidity was compensated by a higher return. Yet women held only 8 per cent of municipal stock—less than their share of equity holdings. Why did women not own more municipal stock? One explanation is that women saw the risk of holding municipal stock as higher than it really was. This may be because the relatively recent introduction of municipal stock left women uncertain about their long-term performance

[112] *Economist*, many issues throughout the mid-1880s (for instance, 17 May 1884, 16 May 1885, 22 May 1886, 19 May 1888.
[113] Collins & Baker, *Commercial banks*, p. 135.
[114] Acheson and Turner, 'Investor behaviour', p. 199; Rutterford and Maltby', 'Widow', p. 113; eisdem, 'Nesting instinct', pp. 306–7; Acheson et al., 'Independent women', p. 3.

Table 10. *Comparison of individual holders of securities*

Period	*Municipal mortgages* *1800–99* (%)	*Consols* *1840* (%)	*Municipal stock* *1870–99* (%)	*UK equities* *1853–1902* (%)
Gentlemen [a]	42	68 [d]	58	46
Males with occupations [b]	36		34	43
Women [c]	22	32	8	11
Average investment				
Gentlemen	£1,907	n.a.	£5,129	£626
Males with occupations	£685	n.a.	£1,077	£536
Women	£822	£4,894	£3,285	£281
Sample size	£58m	n.a.	£69m	£95m

Notes: a 'Gentlemen' includes those describing themselves as gentlemen, esquires, or having titles.
b 'Males with occupations' includes all those describing themselves as having an occupation.
c 'Women' includes spinsters, married women, and widows.
d Green & Owens only split by gender, not by occupation/social group.
Sources: Municipal mortgages and stock are detailed in online app. S1. Consols from Green and Owens, 'Gentlewomanly capitalism', figs. 4 & 5, pp. 525–6. UK Equities from Acheson, Campbell, and Turner, 'Expansion of the equity market', tab. 3, p. 615.

Table 11. *Home bias in individuals' municipal lending, 1800–99*

	Home region [b] *(%)*	*Rest of England* *(%)*	*Other countries* *(%)*
Mortgages			
Large authorities [a]	75	20	5
Medium authorities [a]	70	27	3
Small authorities [a]	81	19	0
Sub total	*75*	*20*	*5*
Stock issues	37	59	4
All	*46*	*50*	*4*

Notes and sources: *a* See tab. 7 for definitions of large, medium, and small authorities.
b 'Regions' are the 10 modern government-defined regions of England and Wales, that is, London, east, south-east, south-west, east midlands, west midlands, north-east, north-west, Yorkshire, and Wales. 'Other countries' include Scotland, Ireland, Channel Islands, and abroad. All percentages by value of loans, not by number of lenders.
See tab. 1 and text for sources and sample size. Lending by institutions is excluded.

and risk. The lack of advice on municipal debt holdings would have contributed to this. In the late nineteenth century there were many books advising individuals how to invest their savings. But none of the thirty books mentioned in the Library of Mistakes review covers municipal stock.[115] It is also possible that the belief that women were

[115] Crosthwaite, Knight. Marsh, Paul, and Taylor, *History of financial advice*, pp. 5–14.

risk-averse needs amending. Further research is necessary to resolve the conundrum of the low female holdings of municipal stock.

Otherwise, individual holdings of local authority debt followed a similar pattern to those for Consols and equities. 'Gentlemen' held the largest share of debt, and the average size of their holdings was larger than for women. The average size of local authority debt holding also fell over time, as investor numbers increased faster than the debt total.

Table 11 shows that 95 per cent of council mortgage borrowing for small authorities came from the local region. For large authorities, 75 per cent came from the local region. The degree of home bias in the municipal mortgage market was far higher than the 54 per cent of early rail finance that Reed found came from the areas that railway lines passed through.[116] It is also much higher than the 40 per cent that Rutterford et al. found that companies raised from near their headquarters between 1870 and 1913.[117] I speculate that the scale of home bias in municipal mortgage holdings reflects four things. The first is that councils enjoyed a high level of local support. The second is that locals enjoyed an information advantage over non-locals.[118] The local press had good news coverage of council decisions, meaning that local people could understand what the council was trying to achieve through its fundraising. Local investors were therefore taking a lower risk than outsiders.[119] For larger and medium-size authorities, the news coverage of councils' activities would spread further afield, even into the national press for the largest authorities. This greater geographical news coverage would explain the lower levels of home bias for larger authorities. Third, local

[116] Reed, *Investment in railways*, pp. 120, 128, 135, 141, 149, 154, 159, 171, 177, 186.
[117] Rutterford et al., 'Local bias', pp. 1292, 1299.
[118] Huberman, 'Familiarity breeds investment', pp. 676–7. Huberman makes a similar point about modern day US investors in companies.
[119] Rutterford et al., 'Local bias', pp. 1299, 1302.

investors in municipal debt enjoyed a social benefit from the better water supply, healthier air, and better schools that resulted from their investments. Fourth, they could vote out a council they judged to be borrowing too much. Over time, the level of home bias fell, as in other parts of the capital market.[120] Home bias in municipal stock holdings was much lower: close to the equity observations of Reed and Rutterford et al.

Conclusion

This is the first article on the development of the municipal capital market in nineteenth-century England. Apart from filling a gap in the local government literature, it adds to the literature on the wider capital market. This has focused on government debt, early rail, banks, corporate debt, and foreign stock. This article adds to these sectoral studies by analysing the performance, size, organisational structure, and investor base of the municipal capital market. It also enables comparisons to be made between the different asset classes. In doing so, this article contributes to the wider topics of institutional investment and home bias. In both cases, the experience of the municipal market is markedly different to that of the equity market. The high level of institutional investment came 50 years before the growth of institutional holdings of equities between the wars. Home bias was also higher than that seen in the equity markets of the time, because of the extra knowledge and social benefits that local lenders would have enjoyed. Finally, the municipal capital market's experience of investor protection develops our view of the law and finance debate. Better protection for investors was led by larger lenders imposing conditions on borrowers, and was not the result of legislation, court action, or borrower initiatives.

[120] Ibid., p. 1301.

This study of nineteenth-century borrowing by local government opens a number of avenues to broader issues of twentieth-century local government finance. Investment by institutions is one. Why did twentieth-century institutional investment in the municipal market eventually disappear, when institutional holdings in the equity market increased?[121] The second question is whether financial changes produce benefits for society. This would be a good way to examine the three abrupt changes in the financing of local government in the twentieth century. The first was in 1945, when local authorities were told to borrow only from the PWLB, and the second when this policy was reversed in the 1950s. After the 1959 Radcliffe report on the *Working of the monetary system,* there was a third change, back to predominantly PWLB financing.[122] The first and third changes marked a fundamental rejection of the nineteenth-century approach. Did these changes produce social benefits as compelling as the improvements in nineteenth century health and infrastructure?

[121] Rutterford and Hannah, 'Rise of institutional investors'; Morecroft and Turnbull, 'Institutional equity investing'.
[122] *Committee on the Working of the Monetary System (Radcliffe report)* (P.P. 1958-9, XVII), pp. 90–4, 596–600.

Chapter 5

Why did UK local government lose its independence in the twentieth century?

Why did UK local government lose its independence in the twentieth century?

Abstract

In the early part of the twentieth century, the UK central government provided 21 per cent of local government's current income and 19 per cent of its capital income. By the end of the century these figures were 65 per cent and 90 per cent respectively. In sharp contrast, the trend in other countries was of falling central government support for local government. What caused this change in the relationship between UK central and local government? This article shows that central government wanted to keep local tax increases at or below the level of spending increases, and increased grants to achieve this. Central government also increased capital loans to councils because it mistakenly believed that the alternative, of more borrowing from banks, harmed national monetary policy.

Introduction

There are two opposing views of the relationship between local and central government.[123] The first sees local authorities as independent bodies accountable to their electorates, acting with considerable autonomy from central government. The alternative sees local authorities as closely controlled agents of central government. The first view predominated in the UK in the nineteenth century and the early part of the twentieth century. But by the end of the twentieth century, the second view was

[123] Layfield, *Local government finance*, p. x.

more commonly held.[124] This shift is obvious from the increasing shares of current and capital income coming from central government. Early in the twentieth century, 21 per cent of current income came from central government; by the end of the century, it had grown to 65 per cent. For capital income, the change was greater, from 19 per cent to 90 per cent. This movement prompts two questions. First, why did the UK government increase its financing of local government? Second, how does this UK experience compare with that seen in other countries?

I address these questions by concentrating on successive UK governments' changing approach to financing local authorities' current and capital spending. Three lines of research were necessary for me to address the two questions. The first was to collect data on the changing patterns of UK local government capital financing in the twentieth century. Unlike the data on revenue sources of finance, data on capital finance must be collected from four different sources. The second was to examine why successive governments changed the financing of local government spending. Finally, it was necessary to collect comparative data from 20 high-income countries to allow a comparison of the UK's and other countries' trends in financing subnational governments. These three sets of data make it possible to examine the long-term changes in the UK and elsewhere, and so understand the causes of the loss of local independence in the UK.

These international comparisons show that UK central governments took an unusual view on financing local government spending. Councils in the UK have become increasingly dependent on grants and loans from central government. In other unitary

[124] Three parliamentary reports found that the central-local relationship was too skewed in favour of central government. Hunt Committee, 1995; Communities and local government select committee, 2008; Lyons report, 2007; Heseltine Review, 2012.

high-income countries, local governments have become less dependent on government grants and less reliant on government loans to finance capital. Instead, they have raised more from local taxes and borrowed more from capital markets. I have found that UK governments behaved like this because their focus was on protecting ratepayers from tax increases that were higher than current spending increases. In addition, councils increasingly financed local capital with government loans because central governments believed that the alternative, borrowing from banks, harmed national monetary policy. The contrast between the UK and other countries has become more marked since 1980.

The literature on UK central and local government relations has focused on political, legislative, and administrative controls, and rarely on financial relationships.[125] When finance has been key, the literature has often focused on the changing grant mechanisms and the marked lack of trust between central and local government in the 1980s and 1990s.[126] There is a more limited literature on the economics of local spending and central grants. In 1999, for instance, Jackson was critical of the Treasury view that high local spending had an adverse impact on inflation, the money supply, and interest rates.[127] He followed Pliatzky in arguing that central government should only aim to control that part of local spending financed by central government.[128] Travers took a longer term perspective on local government finance, but had nothing to say about capital finance.[129] There is therefore a gap in the literature, with little on long-term financing trends and less on capital finance.

[125] Loughlin, *Legality and locality*; Hennock, 'Central-local relations', pp. 43-45; Leach et al, *Future of local government*.
[126] Hughes, 'Fiscal federalism', p. 12; Midwinter and Carmichael, 'Central grants', pp. 69-70; Carmichael, *Glasgow and Liverpool compared*; Offer, *Property and politics*, but stops at 1914.
[127] Jackson, 'Central control of local expenditure', pp. 15-16.
[128] Pliatzky, *Getting and spending*, p. 138, talking about the mid 1970s and the move to cash limits.
[129] Travers and Esposito, *Local democracy.*

Internationally, there are three broad themes in the literature on subnational governments. The first is Ladner's work on the autonomy of local governments.[130] The second is the work of Ter-Minassian on the move from central government control over local government by administrative rules towards control by hard budget rules.[131] The third is the literature on financing local capital. This has covered some countries' creation of mutual bodies to issue bonds and to lend on to individual councils.[132] There has also been a growing literature on the market financing of local public investment in former Soviet states.[133] Finally, there is substantial literature on the extreme case of Chinese local government debt.[134] Even so, the OECD has described capital finance as 'the most neglected aspect of local government finance'.[135] This criticism could also apply to the lack of both quantitative data on local capital finance and of cross-country comparisons.

This article contributes to the literature on central and local government relations. It is the first examination of the changing pattern of holders of local government debt in a small group of countries over a long period. International financial organisations have argued for more market borrowing and less government lending.[136] Data collected here shows a trend in this direction, other than in the UK. It is also a first look at the changing patterns of financing UK local government capital investment in the twentieth century. Both datasets have begun to fill the gap identified by the OECD.[137] The article uses data on capital and current finance over a longer period, and for a wider group

130 Ladner et al, *Patterns of local autonomy*; Ladner and Keuffer, 'Index of local autonomy'.
131 Ter-Minassian and Craig, 'Subnational government borrowing'.
132 Anderson et al, 'Local government funding agencies'; Grant and Woods, 'Australia's fiscal federalism'.
133 Swianiewicz, *Local government borrowing.*
134 Grewal et al, 'Local government debt in China'.
135 OECD, United cites and local governments; Gold report II, p. 322.
136 Ter-Minassian and Craig, 'Subnational government borrowing'; Peterson, 'Local credit systems'; UC and LG, Gold report II, pp. 6, 327.
137 OECD United cities and local governments; Gold report II, p. 322.

of countries than has been available in the IMF dataset of government finance.[138] It therefore shows the changing international patterns of local financial autonomy. In doing so it challenges various UK governments' views that macroeconomic concerns are more important than local autonomy.[139] Finally, it examines the practice rather than the theory of public finance, recognising the importance of short-term political aims over long-term economic issues.[140]

The remainder of this article is structured in six parts. The next section outlines the sources of the data used. The second section briefly highlights the major changes in how UK local government has been financed. The third section shows how these UK trends compare with those in other countries. The fourth section explores why UK governments changed their approach to financing local government. The fifth section assesses four potential causes behind the loss of local independence: rejecting two and arguing that two others are consistent with century-long trends. The sixth section concludes the paper.

Data sources

The literature and available statistics reflect a surge of interest in central and local government relations since 1990. In 1990, Ter-Minassian examined the different methods central governments used to control subnational governments.[141] Page and Goldsmith compared the UK picture with that in other European countries.[142] Ladner and others developed this work with a comparative study of eleven elements of

---

[138] IMF, Government finance statistics database, downloaded from International Statistics from the UK Data Service (jisc.ac.uk) accessed 15 August 2021.
[139] Layfield, *Local government finance*, p. 238; Radcliffe, *Monetary system*.
[140] Musgrave and Musgrave, *Public finance*, deal mostly with the theory rather than the practice.
[141] Ter-Minassian and Craig, 'Subnational government borrowing'.
[142] Page and Goldsmith, *Central and local government relations*; Goldsmith and Page, *Changing government relations*, p. 8.

subnational autonomy.[143] Meanwhile, the IMF collected data on subnational government spending and debt in many countries.[144] Although the IMF data included over 40 countries, only six high-income countries had data for spending and income from 1972, and there was no debt data before 1990.[145] The six were: Switzerland, Austria, Australia, Finland, Denmark, and Ireland. The OECD had data for more countries, but only for the twenty-first century.[146] Literature and data on pre-1972 periods are rare, as is data on local government debt, and data on the holders of local debt is rarer still. It is therefore necessary to create two new datasets to cover most of the century, one for 20 countries and another for the UK.

For the UK, the standard set of data about local government spending, income, and debt comes from the annual Abstract of Statistics publications. Travers used this material to illustrate the increased share of local government current income coming from central government.[147] But there has been no similar comparison of the sources of local government capital finance. The data used to make the comparison is drawn from four sources, including the annual Abstract of Statistics and volumes of Financial Statistics published by the Office of National Statistics, the PWLB's annual reports, and from Stock Exchange Yearbooks.[148]

This UK data shows that the financing of local government capital by central government was increasing, but it does not shed any light on the reasons for this shift. UK governments usually justified the changes by referring to macroeconomic

[143] Ladner et al, *Patterns of local autonomy*; Ladner and Keuffer, 'Index of local autonomy'.
[144] IMF, Government finance statistics database, downloaded from International Statistics from the UK Data Service (jisc.ac.uk) accessed 15 August 2021.
[145] The 'high income' label is the OECD ranking of countries.
[146] OECD UCLG, 2019 report on SNG finance.
[147] Travers and Esposito, *Local democracy*, p. 29.
[148] Available at www.escoe.ac.uk/research/historical-data/ Editions before 1938 are called Statistical Abstracts; PWLB annual reports are available in Parliamentary Papers for early years, at the National Archives for mid periods, and the House of Commons library for late periods; *Stock exchange yearbooks*, published annually.

problems faced by the nation. However, the standard works on economic policy rarely mention local government financing.[149] The literature on monetary policy has even fewer mentions of financing local capital spending.[150] Instead, it is necessary to examine Treasury and PWLB files in the National Archives to get a clearer view of the reasons for the changes in local government capital financing policy. The exchanges between Treasury officials, ministers, and the PWLB offer deeper insights into the motives of governments.

A second approach to examining changing UK government policy is to compare the changes to those made in other countries. The IMF and OECD recognise the importance of this data but have only recently started to collect it. This means that both their datasets are inadequate for the task, covering too short a period, and with only 10 years' debt data at best. To expand the period covered, and fill in the gaps, it has been necessary to find the annual statistical yearbooks published by the national statistical offices of many countries.[151] These yearbooks contain the spending, income, and debt data for local and regional governments. Many countries have digitised these yearbooks and made them available on the websites of statistical offices or central banks, and sometimes for periods going back to 1935.

The focus in this paper is on three measures: subnational spending as a share of GDP; local debt as a share of annual spending; and the share of annual income coming from central government. This data has been collected for 20 countries by searching over

[149] Middleton, *Government versus the market*; Peden, *The Treasury*.
[150] Allen, 'Monetary policy'; Howson, 'Cheaper money'.
[151] https://researchguides.library.wisc.edu › yearbooks has links to yearbooks for many countries. For Ireland, the data is published in Mitchell, *Historical statistics*, and the US data is published by the Department of Commerce, census division.

a thousand volumes of statistical yearbooks. Collecting and presenting this data for many countries and covering a prolonged period is therefore a first.

Changes in local financing over 100 years

Table 1 shows that between 1900 and 1944, UK central governments provided 19 per cent of local government capital income. By the end of the century, this share had increased to 90 per cent. The fall in the market provision of capital was the result of five clear changes of policy by governments, rather than changes in the capital market. The periods chosen in table 1 emphasize the seven years – 1945, 1952, 1956, 1964, 1975, 1982, and 1991 – when government policy on financing local revenue and/or capital changed, and when PWLB's relative interest rates changed. In 1945, 1952, and 1964, the changes coincided with a change of government. In 1956, 1975, 1982, and 1991, governments made major changes to economic policy. The year-by-year data in appendix 2 shows the immediate impact of these changes. A decadal periodisation in table 1 would mute the visibility of these changes. Table 1 shows how government policy changes affected the sources of local investment finance as net lending from the PWLB increased and bond issues and borrowing from the private sector fell. Changing government policy also altered the relationship between the cost of PWLB loans and interest rates in the rest of the capital market. These interest rate changes affected the borrowing practices of council treasurers.[152]

The period dominated by market borrowing ended in 1945, when the new Labour government compelled all local authorities to borrow from the PWLB.[153] Between 1945 and 1951, 85 per cent of borrowing was from the PWLB, over four times the level in

---

[152] Doodson, *Local borrowing*, and Page, *Local authority borrowing*, were both written by local authority treasurers.
[153] Doodson, *Local authority borrowing*, p. 81.

Table 1. *Financing of UK local government*

	1900-44	1945-51	1952-6	1957-63	1964-74	1975-81	1982-90	1991-9
Share of income from central government								
Current income	21%	31%	36%	36%	37%	48%	43%	65%
Capital income	19%	80%	79%	13%	41%	54%	84%	90%
Structure of local government outstanding debt								
PWLB loans	15%	35%	64%	49%	37%	43%	57%	81%
Tradable bonds	30%	24%	10%	8%	8%	5%	2%	1%
Private sector loans	55%	41%	26%	43%	55%	52%	41%	18%
Borrowing costs								
PWLB average rates	4.1%	3.0%	4.0%	6.1%	7.5%	12.1%	10.6%	8.0%
Government bond yields	3.6%	2.9%	4.2%	5.6%	8.7%	13.6%	10.5%	7.6%

Notes: Periods are chosen to reflect major changes in government policy on financing revenue and/or capital, in 1945, 1952, 1956, 1964, 1975, 1982, and 1991. PWLB = Public Works Loan Board, a central government agency lending to local government. Government bond yields are for Consols until 1940, and for 20-year bonds afterwards. Capital income from central government includes both PWLB loans and capital grants. The raw annual data behind the percentages in table 1 is shown in full in appendix 2, in current sterling for each year in the century. All the percentages are unweighted averages of the percentages for each year in the period. The changing scale of UK local government spending is shown in figure 3, along with international comparators. The changing real terms increases (and decreases) in local government spending and receipts from central government are shown in table 3.

Sources: Local authority income and debt, government bond yields and PWLB lending all from annual Abstract of Statistics; PWLB interest rates from PWLB annual reports; local government bond issues from Stock Exchange Yearbooks pre-1964 and annual CSO publications afterward.

the period 1900-44. In 1952, the Conservative government removed the restrictions on market borrowing; then, in 1956, they compelled councils to borrow from the market unless they could prove that they were unable to do so.[154] Between 1957 and 1963, just 11 per cent of council borrowing came from the PWLB, with the rest coming from the market. Before leaving office in 1964, the Conservative government proposed a new regime which would allow councils to draw half their capital finance from the PWLB.[155] The new Labour government implemented the proposal without change in 1964. The two periods up to 1981 saw around 40 per cent of loans coming from the PWLB. The final change was in 1982, when the Conservative government encouraged greater use of the PWLB.[156] So great was the encouragement that local authorities took advantage by repaying early many of their market loans, replacing them with PWLB loans. This accounts for the net repayment of non-PWLB debt after 1982, shown in table 1. The result was that in this last period, the PWLB held well over 80 per cent of council debt.

Local authority treasurers made their borrowing decisions based on the interest rates payable. Before 1944, the PWLB's interest rates were 0.5 per cent higher than the government's cost of borrowing, and slightly above the yields on council bond issues.[157] Councils therefore borrowed mainly from non-PWLB sources, and bond issues were popular with the largest councils. This pattern changed between 1945 and 1956; for six of these twelve years, PWLB rates were below both market rates and the yield on 20-year gilts. Between 1957 and 1963, PWLB rates reverted to the pre-war pattern of 0.5 per cent above gilt yields. After 1964, PWLB rates were usually below

[154] Doodson, *Local authority borrowing*, p. 81.
[155] White paper, local authority borrowing, PP. 1962-3 (2162)
[156] Howe, HC 25-6-1982, col 191, and Bruce-Gardyne, HC 12-7-1982, S6 vol 27, col 651.
[157] See table 1.

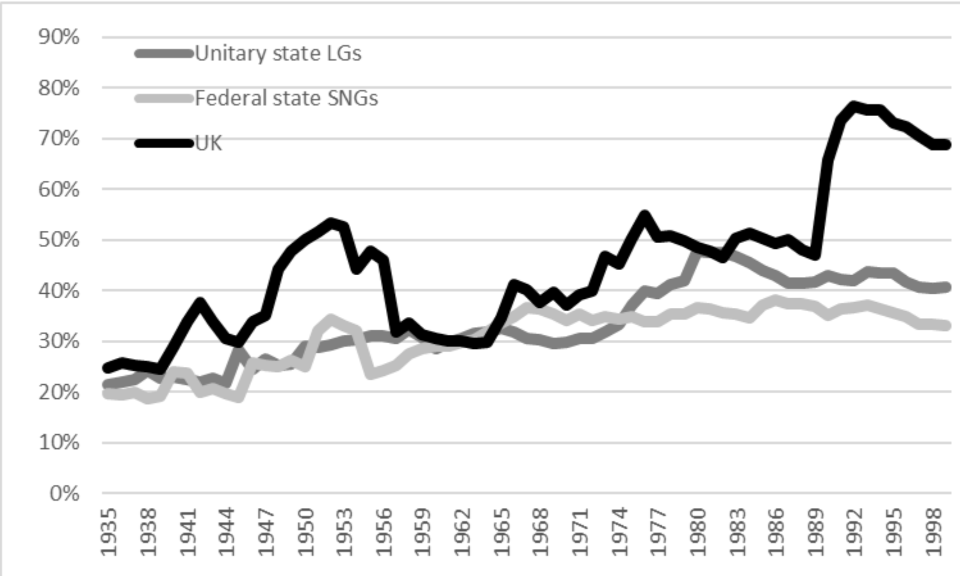
the government's cost of borrowing, and PWLB money was the cheapest available. Council treasurers therefore increased their borrowing from the PWLB, and bond issues fell further out of favour.

Table 1 also shows a similar shift in the sources of local current finance. Before 1944, an average of 21 per cent of local finance came from central government; by 1999, this had increased to 65 per cent. Although the transition was more gradual than for capital, there were three clear points of change. The first was in the late 1940s, when the government's share of local income increased to 31 per cent. This was a time when councils lost their gas and electricity undertakings and their income to newly nationalised industries, and lost their health services to the new NHS. The second major change was in 1975, when the government's share increased to 48 per cent at a time of rising inflation, higher public spending, and the IMF bailout. The third major shift was in the early 1990s, when the government's share rose to 65 per cent in a period of major changes in local government finance. Before asking why governments wanted to increase councils' reliance on government for their capital and current finance, it is useful to examine the international experience.

International comparisons

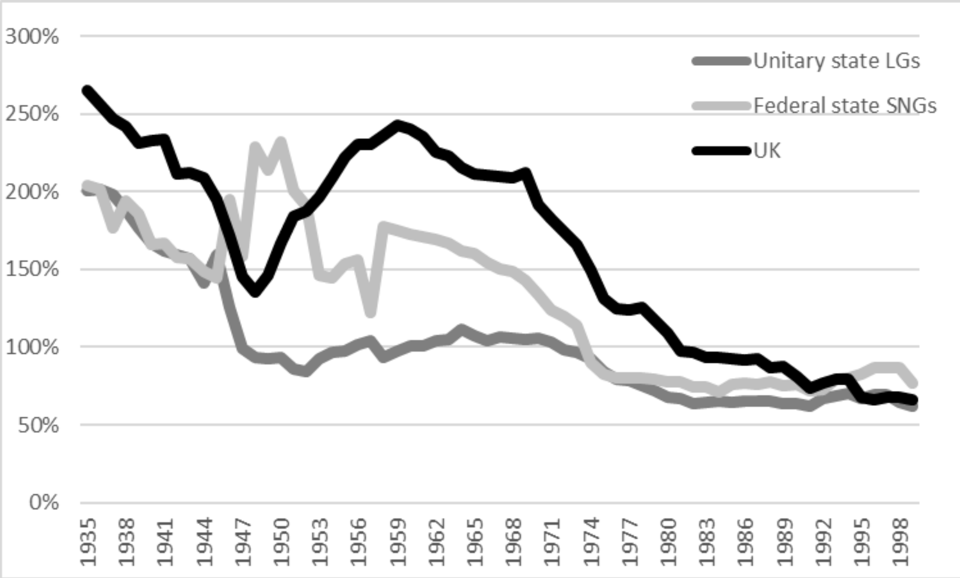
Central and local government relations in the UK should be compared with the experiences in other countries. Figures 1, 2 and 3, and table 2, make this comparison between the UK and 20 high-income countries. These include four in the IMF database with data from 1972: Denmark, Ireland, Austria, and Australia. The first two are unitary countries, and the second two are federal countries. Sixteen others have been added, with data sourced from the countries' statistical yearbooks. The ten added unitary countries are: Finland, France, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, and Sweden. The six added federal countries are: Belgium, Canada, Germany, Spain, Switzerland, and the United States. I have also used the yearbooks to source all the pre-1972 data. The graphs display federal and unitary countries separately, as spend and debt levels can be different in federal states. For ten countries, the data covers periods back to 1935 and, in 18 cases, back to 1954. Only one country, Israel, has no data for 1972. Appendix 3 contains the data for each country, and shows the sources of the data. Only three countries have data from 1900, and the graphs exclude this data as the results are volatile. The data combines current and capital spending because some countries did not record the two separately. The rest of this section highlights three major differences between the UK and other countries, and some trends which are common to all countries.

Figure 1. *Central government support as a share of local income.*



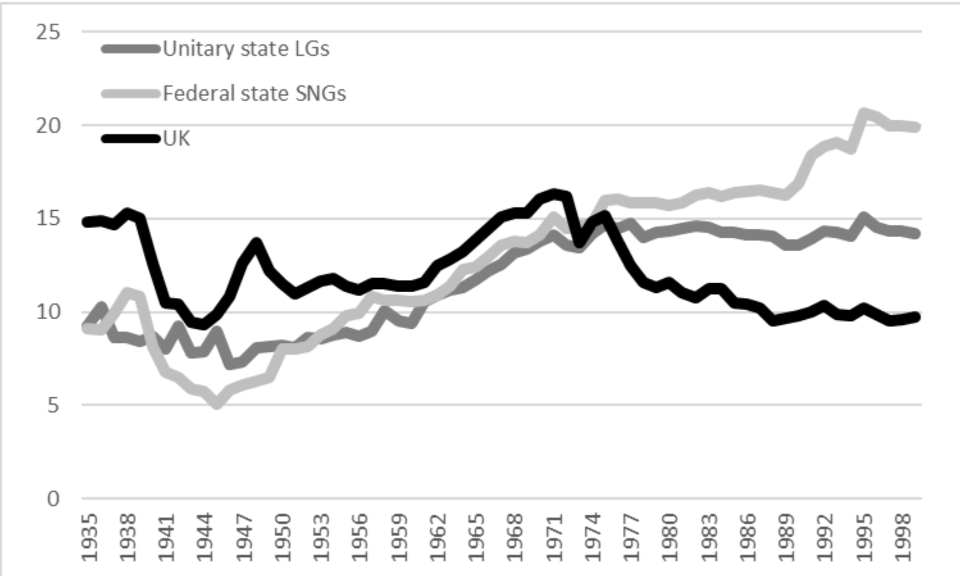
Notes and sources: LG= local government, SNG = subnational government, i.e. both state and local governments. Data covers current and capital spending in 20 countries, plus the UK. The unitary and federal lines are unweighted averages. See appendix 3a for data for individual countries, and sources.

Figure 2. *Local debt as a share of annual spending.*



Notes and sources: See figure 1, and appendix 3b.

Figure 3. *Annual local spending as a share of GDP.*



Notes and sources: See figure 1, and appendix 3c.

Figure 1 shows that local government has always been more reliant on central government funding in the UK than in other countries. Between 1935 and the mid-1970s, there was a trend in all countries of more local income coming from central government. Since the mid-1970s, the trend has levelled off, and in unitary states, central governments have reduced their contributions to local government income. The UK chose to increase central support for local government; and in the 1990s, nearly 70 per cent of council income came from central government. This is twice the average level of support provided in other unitary countries. Of the 20 countries, only Ireland provided higher levels of central government funding to local government. The UK is therefore an outlier among the 20 high-income countries.

For much of the twentieth century, UK local government debt was two or more times higher than international averages. However, figure 2 shows that debt levels rapidly fell after the 1950s, reaching 77 per cent of annual spending by 1999. This is not materially different to the average of 65 per cent in the 20 other countries. Other countries have also seen falls in local debt levels, albeit smaller and from a lower level. Of the 20 countries, only Switzerland and Japan have much higher local debt levels, at twice and three times the average respectively. Only between the mid-1950s and the mid-1970s was UK local debt large by international standards. Since 1990, debt in the UK and in unitary and federal countries has been at similar levels.

Since the mid-1970s, UK local government spending has been well below the unitary country average (see figure 3). Most countries saw subnational government spending grow as a share of GDP until the 1970s. After then, spending fell slightly in unitary countries as a share of GDP. The UK has followed this pattern, but the fall has been greater, with local spending reaching around 10 per cent of GDP, compared with close to 15 per cent for unitary countries. Denmark stands out among unitary countries, with post-1972 local spending twice the unitary average. Not surprisingly, average spending in federal states was higher than in unitary states, and the local government portion was lower. In the UK, local spending has therefore been unusually low since the mid-1970s.

Table 2. *Share of local government debt held by central government.*

	1950	1960	1970	1980	1990	2000
Germany	2%	29%	15%	13%	12%	6%
New Zealand	28%	30%	41%		2%	
Netherlands	16%	6%	34%	43%	36%	0%
Sweden		26%	34%	54%	18%	5%
Australia	26%	38%	4%	0%	0%	0%
Norway		4%	4%	1%	0%	0%
Denmark	16%		28%	24%	20%	19%
Average	18%	22%	23%	22%	13%	5%
UK	51%	49%	38%	52%	78%	87%

Notes: These are the only countries for which data is available. Germany excludes data for Lander, although the pattern of reduction is similar. Australia excludes state debt, where government loans were still common. 'Central government' includes public bodies which are government controlled. The US, Canada and Japan have always financed more than 80% of local capital from bond issues, and there is no sign of material lending by central governments. Denmark's data is for 1955, 1968, 1978, 1988 and 1999. For Sweden, the 1960 data is for 1963. Gaps indicate that data is not available.

Sources: For the five countries, the data is from Statistical Yearbooks. For the UK, see table 1.

UK local government is also unusual in relying chiefly on government loans to finance its capital investment. Table 2 shows that the UK local government has relied more on government loans than have other countries since 1950. It also shows that since 1970, the UK government's role as lender has increased, while in the other countries, the role of governments has diminished. This table covers a more limited range of countries – Germany, the Netherlands, Sweden, Denmark, Australia, Norway, and New Zealand – as only they have published data on holders of local debt. The table shows that by 2000, central governments held just 5 per cent of local government debt in these countries compared to 87 per cent in the UK. In addition, Brothaler has noted a similar trend in Austria, with government-held local debt falling from 47 per cent in

1992 to 21 per cent in 2000 and 12 per cent in 2010.[158] In the US and Canada, all borrowing has consistently been from market sources, with no loans from government.[159] In the late twentieth century, the UK's reliance on government loans appears unique.

Despite this difference, there are three common trends in the UK and other countries. The first is a reduction in borrowing to finance capital in favour of a greater reliance on capital receipts and revenue surpluses. Second, individual councils in these countries also raised less money from bond issues, as only the largest councils could make issues large enough to be attractive to capital markets.[160] Local authorities in many countries improved access to bond markets by setting up local government finance agencies (LGFAs).[161] These agencies issue bonds on domestic and international capital markets and then on-lend to individual local authorities. Sweden and Norway have long used these institutions, and in the last 40 years, Denmark, Finland, New Zealand, Australia, Japan, and Canada have also set up LGFAs. In 2014, UK councils set up a similar agency, but after seven years, just £350m has been lent, and to a single authority.[162] Third, an increasing share of local authorities' privately held debt is in the hands of commercial banks, rather than individuals.[163] This is also true of bondholders.[164] A volume of essays about local government borrowing in newly

[158] Brothaler, 'Austrian municipalities', pp. 530, 533.
[159] US federal, state, and municipal spend data shows no such loans. Nor do Canadian yearbooks.
[160] The average European and US bond issue is in the hundreds of millions of euros or dollars. Most councils have annual capital spending of less than $10m.
[161] Anderson et al, 'Local government funding agencies'; Grant and Woods, 'Australia's fiscal federalism'.
[162] www.ukmba.org accessed 7 November 2021.
[163] Vammalle et al, 'Public investment', p. 37.
[164] From the individual annual reports of LGFAs. Roos, *Why not default*, p. 12, notes the increasing share of both bond and loan debt held by banks.

independent eastern European states also describes how most borrowing comes from commercial banks.[165]

Understanding the changes in UK financing

This section will examine what governments said when making changes to the financing of local government and explore the consequences of those changes. Circumstances changed over time, as did the political objectives of governments. Even so, several drivers of government action kept reappearing. The changes in capital finance were generally caused by monetary policy worries about the holders of local debt and its maturity profile. The changes in revenue financing were more often caused by political concerns about the impact of local tax increases.

Before 1945, UK government policy on financing council capital was dictated by the generally agreed policy of the 'minimum balanced budget rule'.[166] This required annually balanced budgets, limited government borrowing, and minimised role for government. Councils were therefore expected to raise most of their capital finance from the markets, either by issuing bonds or by borrowing from individuals and institutions. The role of the PWLB was as the backstop lender to small authorities.[167] To reinforce this policy, the government set the PWLB's interest rates above the government's cost of borrowing, to avoid the risk of losses to the state.[168] There were minor exceptions to this market borrowing policy, when governments made extra PWLB loans available to finance smallholdings and council house building, but these

[165] Swianiewicz, *Local government borrowing.*
[166] Middleton, *Government versus the market*, p. 181.
[167] PWLB 1895 annual report.
[168] The 1875 select committee heard the Treasury set a target of avoiding losses.

loans were not at the subsidised rates used in the 1870s.[169] Councils therefore had considerable autonomy in financing their capital programmes.

Councils had a similar degree of freedom in setting their revenue budgets. Early in the century, governments did not try to control council spending; they only worried about the average 21 per cent that came from the government.[170] Even so, in 1887 Goschen had assigned some 'national taxes to local authorities in relief of the rates'.[171] These assigned revenues lasted until the 1920s, when they were abolished in favour of block grants.[172] Concern about the level of rates appeared again in 1928 when Churchill, as Chancellor of the Exchequer, said 'it is a matter of vital importance … that any taxation of industry is taken out of the hands of local bodies.'[173] This new concern led to a policy of largely exempting agricultural land and industrial property from paying local taxes. Adding to government concern, the 1929 and 1934 revaluations produced 'a flood of complaints about higher rate bills'.[174] Central government had begun to feel accountable for the impact of local government taxes, and this would have a long-term adverse effect on local autonomy.

The 1945 government adopted a very different macroeconomic policy aimed at full employment and the management of shortages of labour, materials, and capital.[175] The objective was to direct capital to investments that would increase exports and productivity, rather than expand public investment.[176] The government therefore virtually ended councils' access to capital markets, and compelled them to borrow from

[169] Parliament had agreed sub-market rates for school board and sanitation loans. The PWLB became the majority lender for these purposes, until rates were increased in the 1890s.
[170] Travers, and Esposito, *Local democracy*, p. 29.
[171] Offer, *Property and politics*, p. 201.
[172] Hennock, 'Central/local relations', pp. 44-45.
[173] Quoted in McConnell, *Local taxation*, p. 14.
[174] Travers and Esposito, *Local democracy*, p. 37.
[175] Peden, *The Treasury*, p. 362.
[176] Peden, *The Treasury*, p. 378.

the PWLB.[177] Writing in 1951, a senior Treasury civil servant said the government's aim was to stop councils competing with central government for the limited capital available.[178] Partly to compensate councils, and as part of the cheap money policy, the government reduced the cost of PWLB loans to 3 per cent.[179] Even in the limited circumstances when councils could borrow on mortgage, the 1945 change prohibited loan periods of less than seven years. Doodson reports that the Treasury was motivated by the concern that shorter term debt could, if not renewed, end up being refinanced by PWLB lending, 'embarrass(ing) the Treasury at a time of crisis'.[180] Doodson comments that this 'represented an excess of apprehension by the Treasury.'[181]

There are several reasons why the 'PWLB only' borrowing rule was curious. First, between 1946 and 1949 the government raised £10bn in gilts, national savings, and treasury bills, with around 20 per cent needed to finance nationalisations.[182] Against this, the £735m that councils borrowed was not much competition. Second, the desire to reduce council investment makes the decision to reduce PWLB rates of interest look contradictory. This decision gave council treasurers the opportunity to repay some of their earlier, more expensive market loans, and refinance with PWLB loans. Third, the impact on council investment was limited: its rise was only marginally less than the general post-war rise in investment. Finally, control over council investment was secured mainly by controlling council housing starts. In retrospect, the changes to

---

[177] In some limited cases they could still borrow from non-PWLB sources.
[178] TNA, file T229/530 Investment programme committee, local authority borrowing, note on renewing the 1945 Act, dated 29 March 1951.
[179] Howson, 'Cheaper money', p. 444, reports this as a suggestion from Keynes.
[180] Doodson, *Local authority borrowing*, pp. 97-8.
[181] Doodson, *Local authority borrowing*, p. 98.
[182] Pember and Boyle, *Government securities*, pp. 450-5; Peden, *The Treasury*, p. 407.

councils' patterns and costs of borrowing were driven by monetary policy, and not by a desire to limit public investment.

The 1945 government made three changes that reduced the revenue budget freedom of councils. It centralised the former localised services of gas, electricity, and health in new nationalised bodies, rather than transferring all these services to councils. Second, it continued the early pre-war shift to higher grants to provide uniformly high standards of service. Finally, it shifted responsibility for rating valuations from councils to the Inland Revenue, reducing councils' influence on their rateable capacity.[183] Together, these changes increased the share of council income that came from the government. The increase in current grants to equalise resources and fund higher standards was also common to other countries. But the impact on local autonomy was exacerbated in the UK by the switch to government loans to finance council capital.

The 1951 Conservative government allowed councils to borrow from the market again; it also raised the PWLB's interest rates. The government acted to reduce the government's deficit, and because they felt interest rates needed to rise.[184] Against expectations, PWLB advances to councils surged in 1952, 1953, and 1954, adding to the government's deficit.[185] The Bank of England financed the larger deficit by selling Treasury bills rather than gilts, thus adding to liquidity concerns.[186] Macroeconomic concerns also forced the 1956 changes. In mid-1955 the Treasury felt that the economy was overheating and wanted to restrict consumption.[187] In a second budget in October 1955, the Chancellor of the Exchequer asked banks to restrict credit to private sector firms. He also restricted access to PWLB loans, limiting them to smaller

[183] Travers and Esposito, *Local democracy*, p. 34.
[184] Middleton, *Government versus the market*, p. 546.
[185] PWLB annual reports.
[186] Peden, *The Treasury*, p. 469.
[187] Peden, *The Treasury*, p. 468.

councils that could not borrow in the market.[188] At the same time, he increased PWLB interest rates to reflect market rates to councils, rather than the government's cost of borrowing. The aim of both steps was to reduce councils' investment levels, reduce the government's deficit, and reduce borrowing. Instead, these PWLB changes had unintended consequences. Council treasurers reacted by increasing their temporary borrowing from banks, expecting that rates would eventually fall so that they could then switch to cheaper long-term loans.[189] But the Treasury worried that these temporary bank loans would further increase liquidity.

These difficulties with monetary policy were part of the reason for setting up the Radcliffe committee to examine the workings of the monetary system. The committee recommended giving councils greater access to PWLB loans, and at rates of interest reflecting the government's cost of borrowing rather than market rates.[190] The committee argued that the government could borrow more cheaply than councils, and that smaller councils would pay more than larger councils for market borrowing. They also argued that most council borrowing was for government service objectives, and, like the nationalised industries, councils should have access to government loans. The government rejected these recommendations, arguing that unlike nationalised industries, local authorities could borrow in the market without a government guarantee.[191] The government also argued that allowing councils to borrow at below the market rate of interest was in effect to subsidise them.

By 1963, as much as 20 per cent of council borrowing was short-term money from banks. The Treasury worried that this temporary borrowing was 'outside the control of

---

188 Doodson, *Local authority borrowing*, p. 84; Hansard HC, 5th series, vol 545, cols 212-6, Budget speech.
189 Radcliffe committee report, para 597.
190 Radcliffe committee report, para 596.
191 Hansard HC, 5th series, vol 614, col 574.

the government' and was 'interfering with monetary policy and debt management'.[192] Councils were willing to place a cap on temporary lending, but in exchange they wanted greater access to PWLB loans.[193] After much negotiation, the Treasury agreed that councils could secure 75 per cent of their borrowing from the PWLB, and councils in turn accepted a 20 per cent cap on each individual council's temporary borrowing. The Treasury also agreed that PWLB interest rates should reflect government borrowing costs, not market rates for council borrowing. Yet the chancellor worried about the impact of a large increase in PWLB lending on the budget deficit. The 1963 white paper therefore proposed a five-year transition and a maximum of 50 per cent of borrowing from the PWLB.[194] The new Labour government implemented the white paper unchanged.

Governments in the 1950s gave conflicting messages about the financial autonomy of local councils. In the 1950 and 1951 elections, the Conservative party promoted decentralisation with the slogan 'town hall not Whitehall'.[195] In 1952, the government increased councils' freedom by allowing them to borrow from the market again. But in 1956 they reduced council freedom again by closing the PWLB to most authorities. The government was still sensitive to the impact of higher rate bills. A rating revaluation was due in 1956, but the government feared a repeat of the 1934 complaints about higher rate bills and so based the revaluation on 20-year-old property values.[196]. In 1957 a White Paper outlined a wish to 'increase the independence of local authorities

[192] TNA file PWLB 10/16, Working group on LA borrowing. Draft paper EA(63)65 Proposal to cabinet committee, dated 10 April 1963.
[193] The negotiations can be followed in TNA file PWLB 10/16.
[194] Local authority borrowing, PP 1963 (2162), para 16.
[195] Cragoe, 'We like local patriotism', pp. 979-80.
[196] Travers and Esposito, *Local democracy*, p. 37.

in the raising and spending of their money'.[197] Not surprisingly, future actions did not live up to this objective.

There were three major macroeconomic events between 1964 and the late 1970s: the 1967 devaluation; the 1973 oil price shock; and the large IMF loan in 1976. The first did not have major consequences for local government financing, but the second two did. The IMF loan conditions demanded significant cuts to public spending, and there might have been an expectation that the government would reduce its support for local government. But in the short term, the reverse happened: government revenue support increased from 40 per cent in 1974 to 50 per cent in 1977. Indeed, Pliatzky comments that the government felt unable to cut local spending.[198] It also felt unable to reduce central government support, for fear of increasing rate bills. The late 1970s marked a peak for local spending as a share of GDP, both in the UK and in other countries.

In 1974 the Labour government set up the Layfield Committee as a response to 'high rate increases'.[199] The committee presented the government with a choice on central and local government relations; they could be based on central control or local accountability.[200] The committee favoured local accountability, but the government felt it needed more control over local budgets and rate bills. Introducing the 1977 green paper response to Layfield, the secretary of state said that 'local autonomy must be preserved and encouraged'. However, he immediately went on: 'but at the same time central government must fulfil its economic responsibilities and ensure that its policy

[197] Local government finance, PP 1957 (209) p. x.
[198] Pliatzky, *Getting and spending*, p. 155.
[199] Jones and Stewart, 'Central-local relations', p. 10. Both authors were members of the Layfield Committee.
[200] Layfield Committee report, 1976, p. x

interests in locally provided services are safeguarded.'[201] Commenting on the green paper, Stewart was clear that central government's interests would take priority over local autonomy in future.[202]

The new Conservative government in 1979 maintained this preference for control over autonomy. The 1981 budget responded to the macroeconomic problems of high inflation, high interest rates, a recession, and high borrowing. The budget therefore included a target for money supply growth and a medium-term financial strategy to reduce public sector borrowing. A year later, the chancellor felt that high bank lending was inflationary. In July 1982 he therefore made proposals to encourage company share issues rather than bank loans, and to encourage councils to borrow from the PWLB rather than from banks.[203]

This plan to increase PWLB lending was an unexpected move from a government committed to reducing the size of the state. But the chancellor judged it necessary to meet the government's monetary policy objectives. The chancellor therefore made three changes. First, councils could meet 75 per cent of their borrowing needs from the PWLB (rather than 50 per cent).[204] Second, he increased the PWLB's interest rates, even though they continued to be below the government's cost of borrowing. Third, he allowed the PWLB to compete with banks by offering variable rate loans and shorter maturity loans. In addition, the PWLB simplified its procedures to mirror more closely those of banks. The changes were aimed at increasing lending by the non-bank sector to councils.

[201] Hansard, HC 19 May 1977, vol 932, col 712-726.
[202] Stewart, 'The green paper', pp. 9-15.
[203] Hansard, HC, 12 July 1982, series 6, vol 27, col 654.
[204] TNA, file T532/47, Review of PWLB quota system. Memo dated 30 June 1983 from N Monck to the economic secretary.

These changes made PWLB loans so attractive that council treasurers chose to repay many of their bank loans and refinance them with PWLB loans.[205] The result was that by 1986, PWLB lending was four times larger than in 1981 as treasurers repaid private sector loans and took out cheaper PWLB loans. Bank holdings of council debt fell from 19 per cent of the total in 1975-81 to just 3 per cent by the late 1990s. Temporary borrowing from banks also fell to around 5 per cent of outstanding debt. By the end of the century, the PWLB held 90 per cent of councils' debt, doubling its share in 1980.

Besides these macroeconomic challenges, the government once again felt the need to protect ratepayers from increasing local tax bills and avoid the impact of higher rate bills on inflation.[206] The government replaced rates with the community charge in 1990, but this only made the problem worse. In 1991, the government increased its support for councils to finance a £140 per head reduction in councils' local tax bills. A year later, the government removed councils' ability to set the business rate by setting a national non domestic rate level. Replacing the community charge with the council tax in 1993 did not change the picture. As a result, the share of council revenue income coming from the government rose from 41 per cent in 1990 to 65 per cent in 1995. Overall, successive governments were more worried about the impact of higher rate bills than about the long-term impact of reduced local autonomy.

Why did local autonomy fall?

Governments' long-term success in keeping annual rate increases below the increase in local spending is shown in table 3. This shows the real terms changes in councils' current income, the changes in locally raised income from rates and charges for

[205] The change can be seen clearly in the annual CSO Financial statistics on net council borrowing by source.
[206] Jackson, 'Central control of local expenditure', p. 14.

services, and central government grant income.[207] The table divides the twentieth century into 20 five-year periods. Over the century, locally raised income rose by an average 2 per cent a year in real terms, while all revenue income (and hence spending), rose by an average of 3 per cent a year. The lower local increase was achieved because governments increased their grant income to councils by an average of 5 per cent a year above inflation. Annual budgeted current council spending must equal council income; and the differences between actual spending and income must be very small. This means that for practical purposes total income can be treated as a proxy for total spending. The higher increase in grant accounts for the transition from an early 19 per cent government grant to a late 65 per cent, and for the reduction in local autonomy in current account spending.

Table 3 shows the close relationship between increases in total spending and increases in local income.[208] In practice, central government set grant levels to achieve rate increases at, or below, the increase in local spending. In 10 of the 20 five-year periods, the difference was 1 per cent or less. In a further seven periods, grant increases were large enough to reduce local income increases to more than 1 per cent below spending increases. Three of these periods stand out. The previous section described the early 1990s experience, when government increased grants to reduce local rate increases. The same section also described how in the late 1970s, the government felt unable to cut local spending, or grants, and instead increased grants at a time of cuts to the rest of government spending. Table 3 also highlights the 1920-24 period, when spending increased substantially – mostly because of the massive post-war house building programme, and because government increased grants to

[207] Cash income totals have been deflated by the retail prices increase.
[208] Statistically, r squared is 0.84.

avoid larger rate increases.[209] There were four other periods when grant increases were more than 2 per cent a year above spending increases. This evidence is consistent with Lawson's view that the Department of the Environment 'consistently argued for higher grant to protect rates' and was successful, even in the face of Treasury opposition.[210]

Table 3. *Annual percentage real terms changes in councils' current income.*

	All income	Local income	Government income	Difference between increase in government and all income		
				Less than 1%	More than 1% above	More than 1% below
	%	%	%	%	%	%
1900-04	7	7	7	0		
1905-09	4	3	6		2	
1910-14	3	3	0			-3
1915-19	-10	- 10	-10	0		
1920-24	17	15	28		11	
1925-29	5	5	4	-1		
1930-34	3	2	9		6	
1935-39	2	3	1			-1
1940-44	-2	-3	3		5	
1945-49	-1	-1	0	1		
1950-54	1	0	3		2	
1955-59	5	5	6	1		
1960-64	6	6	6	0		
1965-69	5	5	6	1		
1970-74	7	7	8	1		
1975-79	1	-1	5		4	
1980-84	2	4	0			-2
1985-89	0	0	0	0		
1990-94	2	-7	13		11	
1995-99	1	1	1	0		

Notes. 'Local income' includes local rates and fees and charges for services. Capital income is excluded. Cash sums have been repriced to 1999 prices using the RPI.
Sources: Income figures, see table 1. RPI from BoE 1000 years of data.

Governments' desire to control local spending did not cause the loss of councils' financial autonomy in the twentieth century. But because local government spending represents over a quarter of all public spending, governments have increasingly

[209] Mitchell, *Historical statistics*, pp. 610, 613.
[210] Lawson, *View from No.11*, p. 564. Lawson was chancellor of the exchequer 1983-89.

accepted responsibility for setting the total of local spending.[211] Barnett writes that in the 1970s the Treasury wanted to control local spending by varying the grant levels to local government.[212] Figure 1 shows that after 1980, other unitary countries put this theory into practice and reduced grant percentages. Table 3 shows that in the UK, this only happened in three out of 20 five-year periods in the twentieth century. Two of these periods were the years immediately before world wars. The third was 1980-4, when the government made a real attempt to use the grant regime to reduce local spending.[213] Midwinter and Carmichael point to some short-term evidence of lower grant percentages reducing spending, but argue that the success has not been sustainable.[214] High-income countries' use of hard budget rules, suggest that these rules have contributed to local spending's falling share of GDP in both the UK and in other countries.[215] Central government's attempts to control spending are not, therefore, an explanation of the loss of local autonomy. Instead, the evidence supports Lawson's view that Treasury attempts to control local spending failed in the face of Department of the Environment concerns about local rate levels.

Musgrave's distribution function is a second unconvincing reason for councils' loss of local autonomy.[216] Musgrave argues that central government must distribute resources fairly between rich and poor areas. It is possible that increased grants to poor councils in the twentieth century UK caused the loss of local autonomy. However, only in 1930-34 is there evidence of the government providing large extra sums of

[211] Mitchell, *Historic statistics*, p. 593 for local government spending; BoE 1000 years of data for total public spending.
[212] Barnett, *Inside the Treasury*, p. 76. Barnett was chief secretary to the Treasury 1974-79. Gibson, 'The grant system'; Rhodes, 'Continuity and change'; Page, 'Fiscal pressure', p. 135.
[213] Stewart and Jones, 'Central-local relations', pp. 70-1.
[214] Midwinter and Carmichael, 'Central grants', p. 70.
[215] OECD data in 2016 shows that of 35 high-income countries, 29 imposed balanced budget rules, and 24 imposed borrowing only for capital purposes rules on their SNGs. OECD-UCLG World observatory data.
[216] Musgrave and Musgrave, *Public Finance*, pp. 7, 9.

general grants, redistributing money from national taxpayers to poorer councils. In all other periods, the evidence is that government redistributed grants from richer councils to poorer councils without affecting the total value of grants to local government. Equally, the allocation argument is unconvincing because it implies an increase in the value of grants aimed at specific services, rather than increases in general grants. While minor examples of specific grant increases exist in the UK, there has been an overall long-term trend away from specific grants to general grants. Musgrave's distribution and allocation functions are not, therefore, a cause of lost autonomy.

The increasing proportion of council capital coming from government was also the result of government action. The change was not simply the result of councils preferring to borrow from the PWLB, or of changes in the capital market making market borrowing less attractive. Instead, in the late 1950s the Treasury worried about the increase in council temporary borrowing, mostly from banks. Then, in the early 1980s, it worried again about the rising share of council borrowing from banks. At the time, the Treasury saw short term debt and debt held by banks as 'bad', disrupting monetary policy, and debt held by individuals, pension funds, or insurance companies as 'good'.[217] On both occasions, the Treasury acted to reduce borrowing from banks by making PWLB loans more attractive to councils. In the 1990s, economists changed their views, and accepted that the identity of public debt holders and the maturity profile of public debt had little impact on monetary policy.[218] At the same time, the main objective of public debt management in the UK and elsewhere changed to delivering the cheapest debt possible.[219] Central banks and national treasuries therefore came

[217] Goodhart, 'Monetary policy', p. 63.
[218] Chrystal, Haldane and Proudman, 'Government debt structure', pp. 393-6.
[219] The annual reports of most national DMOs include this cost minimisation objective, as do their local government equivalents, the LGFAs.

to see debt management and monetary policy as unconnected. These changes of view meant that the government's reason for switching from market to PWLB borrowing now looks mistaken. The 1945 switch to PWLB lending, and its reversal in the 1950s, was made partly for monetary policy reasons and partly for reasons of political ideology. Both were short lived compared to the 1964 and 1982 changes. The preference for PWLB loans has largely continued into the twenty-first century, unlike the pattern in other countries, where the new view of debt management has encouraged further moves toward market finance.

Conclusion

There were two causes of the century-long decline in local autonomy in the UK. First, central government increased its current funding of local government at a faster rate than local spending increases. It did this to ensure smaller local tax increases; but it also reduced the share of spending financed locally. Second, central government increased its capital lending to councils because it believed that growing bank lending had a harmful impact on monetary policy. This belief led governments to encourage borrowing from the PWLB, further reducing local autonomy. The Bank of England and the Treasury no longer hold this view of bank lending.[220] Central government's desire to reduce local spending, and its wish to equalise resources between rich and poor councils, did not have a material impact on local autonomy. Nor did central government's wish to control local authorities dictate reductions in local autonomy. Central governments had sufficient hard budget rules and administrative controls to make control through grant finance largely unnecessary.

[220] Chrystal, Haldane and Proudman, 'Government debt structure', pp. 393-6.

For both capital and current spending, UK central governments acted differently to a group of 20 other high-income countries. These countries have moved increasingly towards market financing of local capital spending and have reduced their central governments' share of current local income. Central government actions in other countries have therefore increased local autonomy, while in the UK local autonomy has fallen.

For both current and capital financing, UK central and local governments have put their short-term interests ahead of their long-term interests. Central government has avoided the short-term pain of being blamed for higher local rates to pay for spending increases. But the pain has been greater over the century because grant costs have been higher, and more PWLB lending has made central government borrowing higher. And governments did not achieve their purported aim of increasing local autonomy. At the same time, local authorities benefited from the short-term gain of higher grants and lower rates and greater access to cheap PWLB loans. But they sacrificed their longer-term independence. It is easy to see how both sides found themselves in this position, but it is not easy to see how they might get out of it.

There are two potential further lines of research. Research in national statistical offices and central banks would extend the database on lenders to subnational governments. This would give a clearer view of the speed of the moves towards market borrowing and the growing importance of bank lending. It would also be useful to divide bank funding between commercial, state owned, and development banks. A second area of research would be to investigate the reasons why central governments in other countries reduced their grants and loans to local government, and so increased local autonomy. This would develop Lander et al's research on local autonomy in a range of countries, although, like that work, this would need to be undertaken by an expert in each state.[221]

[221] Ladner et al, *Autonomy in Europe.*

Chapter 6

Conclusion

Conclusion

The link between the four articles in this dissertation is the changing ways in which local government financed its capital spending. Over two centuries, these changes reflect a transformation in the standing of local government. Local government started as independent and innovative – developing new services, and new ways of financing those developments. After 1945 it had become dominated, and increasingly financed, by central government. These four articles show the four major changes that created this long-term transformation. The first change occurred in the mid-nineteenth century, when central government started to impose on councils the legal obligation to provide individual services. To match these duties, councils were given access to low-cost PWLB loans to finance the necessary investments. Later in the same century, councils became heavy investors in utilities, schools, and hospitals. To finance these investments, councils needed to use the rapidly expanding municipal capital market, drawing most of their loans from private individuals and institutions. These patterns continued, with little change, until the Second World War. The final change started in 1945, as central government supplied an increasing share of councils' current and capital finance. The impact was to reduce councils' financial autonomy.

These papers contribute to four important strands of economic and business history. The first paper, on the PWLB, contributes to the debate on the growth of government. It shows how and why central government became more interventionist, despite a general preference for minimalist central government. It shows that the spending increases were in local rather than central government. The second article, on the transition from private to public provision, contributes to the state-owned enterprise literature on why governments take over private sector undertakings, and how their aims differ. The third article adds the municipal capital market to the literature on the growth of nineteenth-century capital markets. The article also contributes to the law and finance debate on improving protection for creditors. The fourth paper contributes to the literature on the autonomy and control of local governments, comparing the UK and international experience. Taken together, these four articles engage in the wider discussion on central and local government relationships.

Together these four papers chart the shift of power from local to central government over 200 years and reveal the long-term reduction in local autonomy. Council freedoms were greatest before 1870, and central government's role was at its most modest. Central government gave councils permissive powers, rather than duties, and via the PWLB only provided a fraction of councils' capital. There were few revenue grants to councils in the nineteenth century. This pattern remained broadly in place until the Second World War. After 1945 the relationship between central and local government changed markedly. Central government grew and local government shrank as a share of general government and GDP, and central government began to provide a larger share of both revenue and capital finance to councils. In the UK, this trend quickened in the late twentieth century. In other high-income countries, the trend ran in the opposite direction: central governments reduced their share of local government revenue and capital income.

These papers argue that change was often driven by central government's short-term political concerns. The earliest was in 1817, when the government responded to pressure for a post-war economic boost by creating the PWLB and gave it a life of just five years.[1] Then, in the 1870s, Parliament rejected the 1870 Elementary Education

[1] Flinn, 'Poor employment act'.

bill because of the potential cost to local ratepayers.[2] To get the bill passed, the government reduced the interest rate on PWLB loans to below market levels, to reduce local debt service costs.[3] At the same time, grants to school boards increased. Both changes resulted in increased government funding of councils. This trend continued in the twentieth century, when governments increased their revenue grant payments to reduce the impact on ratepayers of council spending increases. For capital financing, governments moved from encouraging councils to borrow in the market to encouraging them to borrow from the PWLB to reduce the short-term monetary policy impact of councils borrowing from banks. These two causes were responsible for the century-long loss of financial autonomy by councils.

All four papers contribute original research to economic and business history literature. The PWLB paper is the first to chart the changing role of the PWLB in the nineteenth century. The changing demands made on the PWLB illustrates the developing role of central government in the nineteenth century, as it became increasingly involved in welfare, public health, and education provision. The second paper is original in arguing that councils became utility providers to expand the availability of these services. This contrasts with the common view that councils wanted to make profits to keep rate demands down. The paper on the municipal capital market is again a first exploration of the topic. It shows that council debt was attractive to institutions 50 years before their move into equities. Local lenders also held a higher share of council debt than local investors held in equities. The article offers a new perspective on the law and finance debate, arguing that it was the largest lenders who imposed better protection from defaulting borrowers. The final paper challenges the common view that UK

[2] Bellamy, *Central-local relations*, p. 82.
[3] Bellamy, *Central-local relations*, p. 82.

central governments have reduced councils’ financial autonomy to control council spending for macroeconomic reasons. Instead, it argues that they have sought to do so for short-term electoral reasons, and in this way have acted differently from central governments in other countries.

There are three areas where further research would be useful. The first would be to understand why central governments in other countries chose to increase local autonomy in recent decades. However, this research needs to involve experts in individual countries if the results are to be credible. A second area of future research would be to increase the number of countries where the identity of local debt holders is known. This would show the scale of the switch to market borrowing and reveal whether commercial banks were increasing their lending. These further areas of research would contribute to understanding debt markets and general government debt management. In both cases, the research could be extended to the years after 2000 to examine the impact of the 2008 and 2020 crises on local autonomy and borrowing. A third area for research would be to examine the post-war rise and fall, and potential second rise, in local-government owned enterprises in high-income countries. The focus would be on the causes of the changes, and how the UK experience compares with other countries.

Appendix 1

Sources of data for chapter 4, table 1

Supplementary online appendix, Source of data for table 1

Panel A: Scale of borrowing/investment by local bodies

service/body	Name	ref	period
Parliamentary papers			
MBW	Metropolitan Board of Works, annual accounts	PP 1857–8 (515) to PP 1884 (86)	1857-84
London sewers	Metropolitan Commissioners of Sewers, annual accounts	PP 1850 (201) to PP 1854–5 (175)	1850-54
City of London	Corporation of London, annual accounts	PP 1842 (467) to PP 1884–5 (318)	1842-84
City sewers	London Commission for sewers	PP 1847–8 (112) to PP 1879 (318)	1847-79
Police, London	Metropolitan police, annual accounts	PP 1830 (90) to PP 1884 (155)	1830-84
Health	1848 Public Health Act, borrowing approvals	PP 1857 (328)	1848-57
Health	1848 Public Health Act, borrowing approvals	PP 1859 (2585) to PP 1884 (4166)	1858-84
Board schools	Committee of Council for Education, annual reports	PP 1870 (165) to PP 1883 (3706)	1870-84
All services, boroughs	Salt's return	PP 1873 (381)	1800-73
All services,	Smith's return	PP 1874 (396)	1800-74
All services, county bodies	County treasurers' annual returns	PP 1839 (562)	1800-38
All services, county bodies	County treasurers' annual returns	PP 1874 (318) to PP 1883 (73)	1873-83
Turnpikes	Turnpike trust annual returns	PP 1821 (747), PP 1824 (470), PP 1833 (733)	1800-35
Turnpikes	Turnpike trust annual returns	PP1836 (2) to PP 1883 ()	1836-83
Libraries	Libraries returns	PP 1876 (439), PP 1877 (277), PP 1884–5 (106)	1848-83
Goals	Goals	PP 1831 (316)	1800-31
All services, all bodies	Local taxation returns	PP 1886 (222) to PP 1901 (302)	1884-99
Burial boards	Burial boards	PP 1871 (452) to PP 1886 (222)	1871-83
Lancashire authorities	Public works (manufacturing districts)	PP 1872 (417)	1863-70
Archives			
National Archives, Kew	Poor Law Commission sanctions ledgers	MH34 1–3	1835-83
Maritime museum, Liverpool	Maritime museum, Liverpool	Accounts	1800-34
Publications			
Sewers	Sunderland, *A monument to defective administration: the London commission for sewers*, p. 369		1800-42
Workhouses	Morrison, *The workhouse*.		1800-33
Bridges	Mitchell, *British historical statistics*, p. 607.		1817-71
Baths	R Metcalfe, Sanitas sanitorium et omina sanitas, 1877 on www.archive.org		1848-77
Docks	Kenwood, 'Fixed capital formation in Merseyside 1800–1913', *EHR*, 32, 2, pp. 214–237.		1800-34
All services, all bodies	Statutes at Large: local and personal acts, 1–3 volumes per year.		1800-84

Panel B: Who local bodies borrowed from

where	what	name	file ref
Archives			
Suffolk record office	Council mortgage registers	Bury St Edmunds	EF/506/1/15
Southampton record office	Council mortgage registers	Southampton	SC/AH4/2/1
Cheshire record office	Council mortgage registers	Macclesfield	LBM/2261/20
Cheshire record office	Council mortgage registers	Runcorn	LBM/LUR/3514/2/1
Plymouth record office	Council mortgage registers	Plymouth	1645/18/1/1
Plymouth record office	Council mortgage registers	Plymouth	1648/224
East Sussex record office	Council mortgage registers	Hastings	DHB/B5
Lancashire record office	Council mortgage registers	Lancashire county council	CCR/1
Lancashire record office	Council mortgage registers	Padiham	UDPa26/3
Lancashire record office	Council mortgage registers	Fulwood	UDFu19/1-3
Lancashire record office	Council mortgage registers	Accrington	MBAC 18/1-3
Lancashire record office	Council mortgage registers	Nelson	MBNe26/1
Liverpool central library	Council mortgage registers	Liverpool city council	352 TRE 3/7/1
Liverpool central library	Council mortgage registers	Liverpool city council	352 TRE 3/5/1
Norfolk record office	Council mortgage registers	Great Yarmouth	Y/TC 73/17
Norfolk record office	Council mortgage registers	Great Yarmouth	Y/TC 27/2
Birmingham central library	Council mortgage registers	Birmingham	BCCI/AH/D/1/2/3
Walsall record office	Council mortgage registers	Walsall	352/353
London metropolitan archives	Council mortgage registers	Metropolitan Board of Works	MBW/1989
Enfield record office	Council mortgage registers	Enfield	C/Z/2/1
West Sussex record office	Council mortgage registers	Worthing	BO/WO/43/1
West Sussex record office	Council mortgage registers	Bognor	UD/BR/43/1
West Sussex record office	Council mortgage registers	Horsham	RD/HO/43/1
West Sussex record office	Council mortgage registers	Steyning West	UD/LH/43/1
West Sussex record office	Council mortgage registers	Littlehampton	UD/LH/43/1
West Sussex record office	Council mortgage registers	Shoreham	UD/SH/43/1
West Sussex record office	Council mortgage registers	Burgess Hill	UD/BH/43/1
Nottingham record office	Council mortgage registers	Nottingham city	CA/TC/14/4/1-6
Nottingham record office	Council mortgage registers	Nottingham city	CA/TR/19/2/1-3
Manchester central library	Council mortgage registers	Manchester	GB127.M610/4/9,15,19,3,10,17,1
Maritime Museum, Liverpool	Bonds registers	Mersey Docks and Harbour Board	volumes 1-12
National Archives, Kew	Poor Law Commission sanction ledgers	All poor law unions	MH34 1-7

Panel B (continued)

where	what	name	file ref
Manchester central library	School board mortgage registers	Manchester	GB127 M610/4/52
Derbyshire record office	School board mortgage registers	Ashover	680 C
Derbyshire record office	School board mortgage registers	Beighton	697 C
Derbyshire record office	School board mortgage registers	Swadlincote	D726
Derbyshire record office	School board mortgage registers	Little Eaton	D590
Derbyshire record office	School board mortgage registers	Brampton	D730
Derbyshire record office	School board mortgage registers	Alvaston	715 C
Beverley record office	School board mortgage registers	Broomfleet	SB/5/1
Beverley record office	School board mortgage registers	Eastrington	SB/11/1
Beverley record office	School board mortgage registers	Newport Wallingfen	SB/25/2
Beverley record office	School board mortgage registers	Hedon	SB/15/10
Beverley record office	School board mortgage registers	Cottingham	SB/9/14
Beverley record office	School board mortgage registers	Skerne	SB/31/9
Beverley record office	School board mortgage registers	Wold Newton	SB/39/12
Beverley record office	School board mortgage registers	Atwick	SB/1/9
Beverley record office	School board mortgage registers	Preston	SB/27/10
Beverley record office	School board mortgage registers	Walkington	SB/36/13
Beverley record office	School board mortgage registers	Rillington	SB/29/8
Beverley record office	School board mortgage registers	Reighton	SB/28/9
Beverley record office	School board mortgage registers	Owthorne	SB/26/8
Beverley record office	School board mortgage registers	Melbourne	SB/24/8
Beverley record office	School board mortgage registers	Willerby	SB/37/10
Beverley record office	School board mortgage registers	Thwing	SB/35/9
Plymouth record office	School board mortgage registers	St Budeaux	1598/1
Plymouth record office	School board mortgage registers	Sampford Spinney	1598/29
Plymouth record office	School board mortgage registers	St Mary Tarry	1598/15
Plymouth record office	School board mortgage registers	Whitchurch	1598/73
Exeter record office	School board mortgage registers	Brixham	640C/EAM
Exeter record office	School board mortgage registers	Inwardleigh	683C/EAM
Exeter record office	School board mortgage registers	Drewsleighton	35/4
Exeter record office	School board mortgage registers	Exminster	71/4
Exeter record office	School board mortgage registers	Lustleigh	SB/58/2-3
Exeter record office	School board mortgage registers	Ottery St Mary	SB/67/15

Panel B (continued)

where	what	name	file ref
Exeter record office	School board mortgage registers	Slapton	SB/75/7
Exeter record office	School board mortgage registers	Stoke	SB/80/2
Exeter record office	School board mortgage registers	Uffculm	SB/90/6
Exeter record office	School board mortgage registers	Woolardisworth	SB/94/3
Exeter record office	School board mortgage registers	Exeter	SB/39/51
London metropolitan archives	School board mortgage registers	London Schools Board	SBL/1712
Bank of England Archives	Stock issue ledgers	Metropolitan Board of Works	AC27/4531-2
Bank of England Archives	Stock issue ledgers	Metropolitan Board of Works	AC27/4533
Bank of England Archives	Stock issue ledgers	Kingston upon Hull	AC27/3665
Bank of England Archives	Stock issue ledgers	Birmingham	AC27/661
Bank of England Archives	Stock issue ledgers	Nottingham city	AC27/6424
Bank of England Archives	Stock issue ledgers	Birmingham	AC27/668
Bank of England Archives	Stock issue ledgers	Swansea	AC27/7417
Bank of England Archives	Stock issue ledgers	Swansea	AC27/7418
Bank of England Archives	Stock issue ledgers	Manchester	AC27/4493
Bank of England Archives	Stock issue ledgers	Liverpool city council	AC27/4125
Hull history centre	Stock issue ledgers	Kingston upon Hull	CTFB/1/1/1-4
Huddersfield record office	Stock issue ledgers	Huddersfield	CBH165
Manchester central library	Stock issue ledgers	Manchester	GB127 M610/12/1
Parliamentary papers			
Return by local bodies		Various	PP 1874 LVI
School board loans		PWLB annual reports	Annual from 1876

Appendix 2

Data for table 1 in chapter 5

Appendix 2 Data for Table 1 in chapter 5, Financing of UK local government

	Local gov't income		Income from gov't			Local government outstanding debt at year end				Local government borrowing costs	
	Current	Capital	Current	Capital							
				Grants	Loans	Total	PWLB	Tradable stock	Pvte sector loans	PWLB average rates	Government bond yields
	£m	£m	£m	£m	£m	£m	£m	£m	£m	%	%
1900	77	25	12	0	7	341	50	154	137	2.85	2.55
1901	82	28	13	0	6	367	54	156	156	3.09	2.69
1902	87	34	13	0	7	397	59	164	173	3.18	2.68
1903	94	36	13	0	6	426	63	166	197	3.25	2.79
1904	102	31	16	0	6	452	68	166	218	3.29	2.86
1905	113	66	20	0	4	524	69	173	283	3.46	2.81
1906	117	25	20	0	2	543	69	175	299	3.65	2.86
1907	121	23	21	0	2	553	68	187	298	3.68	3.00
1908	122	19	21	0	2	564	68	190	307	3.58	2.93
1909	125	18	21	0	3	572	68	191	313	3.53	3.02
1910	126	41	21	0	3	602	68	191	342	3.53	3.12
1911	131	18	21	0	4	606	70	190	347	3.54	3.19
1912	136	17	22	0	4	623	71	188	364	3.56	3.32
1913	140	18	22	0	5	624	72	187	364	3.55	3.43
1914	149	21	23	0	5	630	74	187	369	3.54	3.48
1915	153	22	23	0	5	639	76	185	378	3.69	3.86
1916	160	12	23	0	2	632	75	184	374	3.99	4.32
1917	160	6	23	0	1	621	72	183	366	4.48	4.58
1918	173	4	26	0	0	612	69	182	362	4.60	4.43
1919	195	5	29	0	0	605	66	182	358	4.48	4.64
1920	258	24	48	0	2	617	65	220	333	5.78	5.37
1921	341	95	63	0	31	727	92	230	405	6.49	5.20
1922	374	129	77	0	51	855	139	226	489	6.19	4.39
1923	361	72	76	0	14	897	149	221	527	5.36	4.30
1924	349	50	78	0	7	918	151	225	542	4.78	4.37
1925	355	70	82	0	16	968	162	264	542	4.78	4.44
1926	372	101	85	0	29	1046	186	310	549	4.79	4.52
1927	396	117	87	0	37	1147	205	324	618	4.97	4.56
1928	416	120	90	0	40	1251	239	333	679	5.00	4.47

	Local gov't income		Income from gov't			Local government outstanding debt at year end				Local government borrowing costs	
	Current	Capital	Current	Capital							
				Grants	Loans	Total	PWLB	Tradable stock	Pvte sector loans	PWLB average rates	Government bond yields
1929	424	103	92	0	21	1312	254	329	729	5.01	4.57
1930	429	109	108	0	21	1368	268	342	757	5.05	4.45
1931	449	111	130	0	18	1452	279	346	828	4.90	4.40
1932	447	117	127	0	20	1512	291	349	873	4.76	3.75
1933	442	85	121	0	10	1555	292	364	899	4.46	3.38
1934	440	89	122	0	8	1570	291	386	893	3.63	3.08
1935	461	81	125	0	9	1591	289	413	888	3.37	2.90
1936	481	97	133	3	14	1625	293	459	874	3.25	2.94
1937	503	117	136	4	17	1660	298	484	878	3.26	3.30
1938	518	142	136	5	23	1769	309	516	944	3.50	3.41
1939	544	151	140	7	23	1787	323	522	942	3.63	3.73
1940	602	117	182	13	13	1829	327	515	986	3.82	3.38
1941	663	62	226	14	4	1823	324	539	961	3.91	2.95
1942	740	47	278	17	2	1784	317	535	932	3.43	2.90
1943	731	38	248	10	1	1743	310	529	904	3.30	3.02
1944	739	25	228	5	1	1696	303	526	867	3.26	3.02
1945	762	24	230	3	1	1647	295	513	839	3.25	2.99
1946	796	47	236	2	46	1598	296	500	803	3.03	2.55
1947	872	162	252	4	108	1693	394	473	826	2.53	2.67
1948	963	304	270	11	278	1921	627	446	848	2.97	2.79
1949	878	330	285	21	270	1959	863	414	682	2.97	2.83
1950	866	331	294	12	293	2213	1135	399	678	2.96	2.99
1951	889	369	305	9	335	2562	1451	385	726	2.96	3.59
1952	1003	427	350	9	402	2943	1823	370	750	3.36	4.25
1953	1067	498	375	10	436	3410	2221	371	818	4.19	3.95
1954	1176	544	414	19	328	3889	2501	371	1017	4.07	3.55
1955	1257	526	453	13	386	4333	2834	360	1139	3.68	4.24
1956	1352	541	500	8	364	4807	3132	407	1267	4.57	5.13
1957	1556	555	568	10	95	5253	3183	425	1645	5.59	5.46
1958	1685	529	616	12	117	5647	3215	463	1969	6.01	5.54
1959	1789	512	659	16	44	6031	3175	491	2364	6.04	5.09
1960	1949	572	706	17	45	6444	3133	510	2802	5.79	5.77

	Local gov't income		Income from gov't			Local government outstanding debt at year end				Local government borrowing costs	
	Current	Capital	Current	Capital							
				Grants	Loans	Total	PWLB	Tradable stock	Pvte sector loans	PWLB average rates	Government bond yields
1961	2091	621	756	19	40	6854	3089	506	3259	6.11	6.29
1962	2268	741	831	19	54	7381	3053	653	3674	6.67	5.90
1963	2492	794	907	23	39	7944	3011	729	4204	6.29	5.43
1964	2772	979	1022	29	68	8645	2989	772	4885	5.78	5.98
1965	2994	1226	1103	36	320	9564	3218	853	5494	5.79	6.56
1966	3394	1289	1260	35	630	10568	3750	967	5851	5.83	6.94
1967	3743	1412	1389	45	640	11617	4280	1158	6179	6.41	6.80
1968	4101	1563	1591	79	466	12742	4633	1236	6873	6.99	7.55
1969	4440	1597	1713	86	597	13908	5101	1261	7546	7.81	9.05
1970	5628	1708	1955	94	677	14898	5626	1225	8048	8.91	9.25
1971	6259	2050	2284	111	855	16305	6296	1180	8829	8.11	8.90
1972	7293	2232	2654	122	1038	17608	7103	1113	9391	6.87	8.97
1973	8215	2795	3135	130	1225	19584	8031	1116	10437	8.44	10.78
1974	9830	3739	3897	155	1381	22217	9025	1057	12135	11.62	14.77
1975	11842	4076	5652	140	1834	23113	10104	1164	11845	12.50	14.39
1976	15463	4351	7666	193	2113	26532	11267	1231	14034	11.50	14.43
1977	17429	4338	8640	269	1679	29747	11893	1498	16356	12.21	12.73
1978	19022	4039	9138	214	2273	31790	12931	1589	17270	10.13	12.47
1979	21393	4230	10104	380	1747	33542	13214	1516	18812	12.00	12.99
1980	24979	4838	11684	412	2361	26666	13994	1348	11324	12.88	13.79
1981	30360	5176	13784	525	2863	39261	15259	1312	22690	13.38	14.74
1982	33822	4903	13999	509	496	41740	14111	1287	26342	14.62	12.88
1983	35311	6112	14247	457	4510	41317	16846	1201	23270	11.25	10.80
1984	37011	6918	16106	424	5674	47474	20262	1033	26179	10.25	10.69
1985	39242	7229	17165	374	5732	49269	23565	873	24831	11.38	10.62
1986	38091	6443	16386	402	10793	49897	29284	705	19908	10.38	9.87
1987	42314	6666	18832	373	9046	53330	35245	537	17548	9.13	9.47
1988	44673	6718	19614	334	6346	53400	39349	369	13682	9.00	9.36
1989	47903	7719	20322	304	7538	58741	44324	201	14216	9.25	9.58
1990	51619	10463	21379	483	7965	59881	46499	206	13176	10.13	11.08
1991	58466	7577	35035	1024	3654	57862	48001	211	9650	12.00	10.11
1992	64074	7193	42308	1179	4171	56192	48717	216	7259	10.50	9.06

	Local gov't income		Income from gov't			Local government outstanding debt at year end				Local government borrowing costs	
	Current	Capital	Current	Capital							
				Grants	Loans	Total	PWLB	Tradable stock	Pvte sector loans	PWLB average rates	Government bond yields
1993	66871	6567	43036	1356	6039	55786	41447	221	14118	8.63	7.86
1994	67537	7124	44032	1279	4269	55694	40803	506	14385	7.25	8.02
1995	69945	6950	45425	1176	5565	49370	40388	631	8351	7.13	8.18
1996	73359	6910	48624	1484	6979	50184	40445	636	9103	7.13	8.05
1997	75318	6420	49791	1388	6575	50969	41683	641	8645	7.25	7.06
1998	77300	6913	51923	1440	6395	51502	42901	646	7955	6.75	5.44
1999	81133	7194	53110	1338	6144	52442	44701	651	7090	5.00	4.71

Notes : This is the annual data used to derive the period averages used in table 1. 'PWLB = Public Works Loan Board'. In four years, 1986, 1987, 1996 and 1997, the published PWLB borrowing by councils exceeds their capital spending. In another three years, PWLB borrowing plus capital grants, exceeds capital spending. There are several explanations for this. First, and particularly for the 1986 and 1987, councils borrowed more from PWLB to allow non-PWLB loans to be repaid. In other cases, councils were receiving loan income and grants in an earlier year than spending was occuring. In each of these cases, government financing of capital spending has been treated as being 100%, rather than as high as 174% in 1986, 141% in 1987, and smaller excesses over 100% in other years. Government bond yields are for Consols until 1940, and for 20-year bonds afterwards.

Sources : Local authority income and debt, government bond yields and PWLB lending are all from Annual Absract of Statistics volumes; PWLB interest rates are from PWLB annual reports; local government bond issues are from Stock Exchange Yearbooks. For 1964 and after, stock issues can be checked against annual CSO publications.

Appendices 3a, 3b and 3c

Data for figures 1, 2 and 3 in chapter 5

Appendix 3a. Data for Figure 1 in chapter 5. Percentage of local income from central government.

	Unitary countries													Federal countries							
	UK	Denmark	Finland	France	Ireland	Israel	Italy	Japan	Netherlands	New Zealand	Norway	Portugal	Sweden	Australia	Austria	Belgium	Canada	Germany	Spain	Switzerland	United States
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1935	25	55	1		36					3	16	17		13							14
1936	26	56	2		36					3	18	17		13							13
1937	25	54	2		38					2	22	17		13							14
1938	25	55	2		40					2	25	21		13							14
1939	24	54	2		38					2	24	17		12							14
1940	29	54	1		39					2	0	19							21		14
1941	34	52	1		38					2	0	20							21		15
1942	38	53	2		34					2	0	20							22		14
1943	34	52	1		35					7	0	19							22		17
1944	31	50	1		34					5	0	18							21		14
1945	30	48	2		33			65		5	0	18							22		13
1946	34	54	1		33			44		6	20	15					40		30		13
1947	35	57	1		41			46		7	23	12					36		29		15
1948	44	57	1		44			35		7	21	12		30			27		28		16
1949	48	58	14		44			23		8	20	12		31		37	26		26		17
1950	50	59	17		45			12	57	9	20	13		34		33	25		25	16	17
1951	52	61	15		45			11	57	7	21	13		38		36	22	72	25	15	16
1952	53	60	15		46			11	60	8	21	13		37		38	37	71	24	17	15
1953	52	60	16		45			16	60	7	23	13				37	34	70	25	16	15
1954	44	61	16		45			18	60	7	23	13				33	34	69	24	17	15
1955	48	61	16		46			18	60	11	23	13				24	34	28	21	18	15
1956	46	62	13		45			17	62	13	25	13				32	30	29	21	19	15
1957	32	62	15		43			15	57	13	25	13				39	28	31	20	19	15
1958	34	61	15		45			31	57	12	25	12		41		37	28	30	19	20	17
1959	31	67	15		43			19	60	12	18	12		41		41	30	28	20	20	20
1960	30	55	15		43			18	60	11	17	11		42		44	31	26	21	20	19
1961	30	55	16		43			20	65	11	16	11		43		46	28	26	22	20	18
1962	30	59	17		44			26	61	12	17	11		45		58	18	24	22	24	19
1963	30	58	17	40	47			27	63	12	18	10	22	44		60	15	29	23	22	19
1964	30	63	16	41	46			25	63	10	20	10	22	43		60	26	30	20	23	20
1965	35	67	15	41	49			25	65	10	20	11	21	43		61	31	31	26	23	20
1966	41	64	15	40	50			23	65	11	19	9	21	44		64	31	30	30	23	21
1967	40	63	16	41	50		15	22	66	11	20	9	24	45		63	31	31	39	22	25
1968	38	68	16	43	50		16	21	64	10	20	8	16	47		59	31	30	39	23	26
1969	40	63	16	43	52		15	20	64	10	20	8	16	46		56	31	26	40	22	26
1970	37	64	15	41	53		15	18	65	10	22	9	16	46		46	31	26	43	23	23
1971	39	64	15	41	54		16	19	70	10	24	8	16	48		47	33	28	44	24	25
1972	40	*50*	16	41	*55*		14	20	71	9	35	8	17	*49*	*19*	49	33	28	42	26	26
1973	47	*50*	16	42	*60*		24	16	74	9	34	8	16	*48*	*28*	46	32	30	44	24	27
1974	45	*51*	18	41	*63*		31	17	75	12	34	8	16	*49*	*28*	46	32	*24*	46	24	26
1975	50	*51*	19	41	*66*		26	54	79	13	34	9	17	*47*	*28*	50	31	*25*	46	24	27

	UK	Denmark	Finland	France	Ireland	Israel	Italy	Japan	Netherlands	New Zealand	Norway	Portugal	Sweden	Australia	Austria	Belgium	Canada	Germany	Spain	Switzerland	United States
1976	55	*51*	17	41	*65*	*71*	31	53	78	13	35	6	17	*49*	*28*	50	31	*24*	35	25	27
1977	51	*51*	17	40	*68*	*70*	30	54	78	9	33	5	16	*54*	*28*	54	32	*23*	32	23	26
1978	51	*52*	18	*44*	*74*	*69*	35	55	75	9	34	4	*26*	*55*	*29*	61	30	*23*		23	26
1979	50	*51*	18	*44*	*75*	*74*	42	53	70	10	35	4	*27*	*55*	*29*	61	31	*24*		23	25
1980	49	*53*	18	*42*	*77*	*71*	52	52	*82*	9	*36*	55	*27*	*54*	*29*	64	29	*24*		23	*34*
1981	48	*52*	18	*42*	*79*	*67*	56	51	*82*	9	*36*	53	*27*	*54*	*28*	64	30	*24*		22	*34*
1982	46	*52*	19	*42*	*80*	*68*	53	49	*82*	10	*37*	52	*25*	*52*	*29*	61	31	*23*		22	*31*
1983	50	*50*	19	*41*	*78*	*65*	50	48	*83*	10	*38*	53	*25*	*52*	*28*	62	31	*22*		22	*30*
1984	51	*49*	21	*35*	*76*	*60*	52	46	*81*	12	*40*	50	*25*	*53*	*28*	59	31	*22*		21	*29*
1985	50	*47*	21	*35*	*77*	*46*	48	44	*81*	12	*39*	55	*23*	*52*	*22*	59	31	*21*	*46*		*29*
1986	49	*45*	22	*35*	*76*	*38*	46	43	*81*	11	*38*	60	*22*	*50*	*23*	59	30	*21*	*55*		*29*
1987	50	*43*	22	*35*	*75*	*36*	38	41	*77*	10	*37*	60	*22*	*49*	*23*	57	29	*21*	*54*		*28*
1988	48	*42*	22	*35*	*74*	*37*	46	37	*78*	9	*37*	59	*21*	*46*	*29*	56	29	*21*	*54*		*28*
1989	47	*43*	21	*36*	*73*	*37*	47	37	*76*	10	*39*	59	*21*	*43*	*28*	56	28	*21*	*53*		*28*
1990	66	*44*	22	*35*	*77*	*39*	48	37	*77*	9	*40*	66	*21*	*43*	*28*	57	*27*	*21*	*57*	20	*28*
1991	74	*43*	23	*36*	*78*	*40*	44	38	*74*	12	*40*	60	*19*	*43*	*27*	55	*27*	*30*	*59*	21	*29*
1992	76	*44*	24	*36*	*79*	*41*	40	41	*75*	*11*	*41*	56	*17*	*43*	*28*	54	*29*	*28*	*61*	21	*29*
1993	76	*44*	35	*36*	*81*	*43*	38	43	*74*	*11*	*40*	58	*22*	*43*	*28*	59	*28*	*28*	*62*	20	*30*
1994	76	*45*	39	*35*	*81*	*44*	32	45	*73*	*10*	*39*	59	*21*	*41*	*28*	57	*27*	*26*	*62*	20	*30*
1995	73	48	36	34	73	*43*	38	44	*74*	*11*	*39*	60	*20*	*39*		46	*27*	*25*	*62*	20	*30*
1996	72	45	29	34	72	*44*	40	44	*67*	*10*	*38*	56	*19*	*38*		44	*24*	*25*	*62*	21	*29*
1997	71	42	23	33	73	*42*	38	42	*67*	*10*	*38*	60	*18*	*36*		43	*22*	*24*	*58*	21	*29*
1998	69	42	21	33	74	*42*	32	44	*67*	*11*	*40*	58	*22*	*35*		43	*24*	*24*	*58*	22	*28*
1999	69	43	21	34	75	*42*	32	47	*67*	*11*	*40*	54	*22*	*34*		43	*24*	*23*	*58*	21	*29*
2000	69	42	21	37	78	*43*	32	46	*67*	*11*	*40*	53	*21*	*34*		46	*22*	*23*	*59*	22	*29*

Notes : Data in italics is from IMF government finance data set. Underlined data is from other sources. All other data from country yearbooks. Blank cells indicates no data available.

Sources : UK, Annual Abstract of Statistics. Denmark, www.dst.dk/da/Statistik/nyheder-analyser-publ/Publikationer/VisPub?cid=016217 . Finland, www.doria.fi/handle/10024/67152 . France, https://gallica.bnf.fr/ark:/12148/cb34349577d/date.r=+Annuaire+statistique+de+la+France . Ireland, *Mitchell, British Historical Statistics* , pp 636-8, 644 for pre 1980, online version for later years. Italy, www.istat.it/it/archivio/annuario+statistico+italiano?page=2 . Japan, www.stat.go.jp/english/data/nenkan/index.html . Netherlands, https://opendata.cbs.nl/#/CBS/en/dataset/81206ENG/table?ts=1632869678930 . New Zealand, www.stats.govt.nz/indicators-and-snapshots/digitised-collections/yearbook-collection-18932012/ . Norway, www.ssb.no/a/histstat/aarbok/. Portugal, https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_publicacoes&PUBLICACOESpub_boui=262245114&PUBLICACOESmodo=2 . Sweden, http://archive.riksbank.se/sv/Webbarkiv/Publicerat/Ovriga-rapporter/Statistisk-ArsbokStatistical-Yearbook/index.html@all=1.html . Australia, www.abs.gov.au/AUSSTATS/abs@.nsf/second+level+view?ReadForm&prodno=1301.0&viewtitle=Year%20Book%20Australia~2012~Latest~24/05/2012&&tabname=Past%20Future%20Issues&prodno=1301.0&issue=2012&num=&view=& . Belgium, https://statbel.fgov.be/en/search?search_api_fulltext_block=statistical+yearbooks . Canada, https://www66.statcan.gc.ca/acyb_000-eng.htm . Germany, https://digi.bib.uni-mannheim.de/statistische-jahrbuecher/uebersicht/ . Spain, www.ine.es/inebase_historia.htm . Switzerland, https://www.bfs.admin.ch/bfs/en/home/statistics/catalogues-databases/publications/overviews.html . United States, www.census.gov/programs-surveys/gov-finances.html .

Appendix 3b. Data for Figure 2 in chapter 5. Local debt as a percentage of annual spending

	Unitary countries													Federal countries							
	UK	Denmark	Finland	France	Ireland	Israel	Italy	Japan	Netherlands	New Zealand	Norway	Portugal	Sweden	Australia	Austria	Belgium	Canada	Germany	Spain	Switzerland	United States
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1935	265	115	66	108					323	381	353	61								205	202
1936	256	108	97	128					330	365	323	58								213	190
1937	247	109	128	148					314	339	293	57								213	141
1938	241	97	120	169					315	309	240	68								259	128
1939	231	100	122	160					312	272	218	50								253	119
1940	233	98	119	150					304	270		61							150	230	119
1941	234	98	116	140					277	275		65							143	217	140
1942	211	90	102	130					292	277		66							134	202	138
1943	212	87	88	120					296	281		70							124	209	136
1944	208	88	80	110					253	267		48							127	192	129
1945	195	90	72	98				376	193	243		44							123	189	121
1946	172	81	64	57				261	190	219	84	45					389		110	174	107
1947	146	60	50	45				108	176	250	72	34					271		105	168	91
1948	136	54	34	35				56	165	295	65	41		537			266		113	151	80
1949	146	50	33	30				37	204	271	62	52		492			258		88	156	76
1950	167	51	35	36				37	209	247	73	62		463			377		92	157	70
1951	184	51	33	43			50	30	203	233	68	64		445			349	85	97	154	76
1952	187	51	35	40			65	23	184	231	64	66		409			326	82	99	151	77
1953	196	58	39	46			79	20	240	224	64	65					325	87	97	141	79
1954	209	56	40	57			93	20	241	234	64	64					333	76	89	143	82
1955	222	56	43	63			109	25	243	243	64	60	71				368	58	84	174	85
1956	231	66	40	70			127	25	248	243	70	58	71				345	79	101	163	92
1957	230	63	39	67			140	26	261	254	73	54	64				183	81	94	165	89
1958	236	61	41	51			154	21	281	134	76	51	64	455			186	78	98	165	85
1959	243	61	42	67			161	23	291	138	81	50	63	456			192	79	71	167	85
1960	240	57	42	72			166	22	302	146	88	43	66	450			189	80	72	158	89
1961	236	59	35	75			170	21	299	153	85	41	67	443			196	75	79	145	88
1962	226	60	36	79			167	27	297	147	85	81	63	444			192	65	96	130	91
1963	223	58	35	80			164	32	295	152	88	77	66	448			188	66	86	124	89
1964	215	58	33	123			172	36	283	144	96	98	67	438			176	66	81	122	89
1965	211	60	35	110			173	44	287	142	96	65	65	436			165	69	78	124	89
1966	210	60	34	96			179	50	279	140	92	48	66	428			137	71	76	126	86
1967	210	58	35	96			214	48	272	138	92	44	64	421			124	76	71	130	81
1968	208	56	37	102			222	45	280	133	92	44	48	422			111	77	75	127	78
1969	212	52	38	93			217	44	296	123	93	42	47	408			115	71	68	120	76
1970	192	51	36	122			223	45	281	121	89	39	45	383			107	70	62	110	72
1971	182	56	36	118			211	47	279	117	86	38	47	342			96	69	64	102	70
1972	174	50	37	105			197	51	268	110	81	40	46	320			99	68	67	97	69
1973	166	47	37	93			182	52	274	121	79	36	45	288			99	65	72	93	69
1974	150	37	36	87			177	53	246	135	77	40	41	158			95	59	73	90	69
1975	131	25	35	81			153	55	224	119	75	38	39	121			87	66	68	89	63

	UK	Denmark	Finland	France	Ireland	Israel	Italy	Japan	Netherlands	New Zealand	Norway	Portugal	Sweden	Australia	Austria	Belgium	Canada	Germany	Spain	Switzerland	United States
1976	124	25	29	76			143	60	207	115	76	24	35	89			88	72		89	61
1977	124	25	26	77			155	69	190	113	82	19	31	84			87	72		95	63
1978	125	27	25	88			145	63	184	98	83	10	29	80			86	72		100	64
1979	117	28	23	89			112	73	177	92	92	9	26	78			83	74		102	62
1980	109	29	23	87			80	67	176	83	91	12	28	72			79	78		101	59
1981	97	30	22	86			70	70	179	78	92	20	27	67			81	86		97	57
1982	96	30	22	87			64	74	174	72	61	27	27	50			84	84		95	59
1983	93	30	22	88			61	79	173	70	61	36	24	41			89	89		93	61
1984	93	30	21	97			59	82	171	69	63	34	23	35			70	93		94	65
1985	92	30	22	101			53	82	173	68	61	34	21	29			97	93		95	67
1986	92	30	22	98			61	84	179	59	61	42	22	23			104	95		90	72
1987	93	29	22	106			72	84	178	54	61	23	21	17			106	98		88	72
1988	87	29	23	102			71	82	186	50	61	32	19	16			115	101		85	71
1989	87	29	23	98			68	77	186	45	64	29	20	19			118	93		75	70
1990	81	30	24	97			68	79	181	44	65	31	20	19			109	90		*93*	69
1991	73	30	27	94			66	81	176	43	59	22	19	20			108	72		*92*	68
1992	77	31	31	94			68	90	162	94	58	21	17	20			107	72		*99*	67
1993	79	32	30	97			72	99	155	92	64	26	19	18			129	76		*106*	68
1994	80	31	30	95			79	*119*	150	88	63	30	20	15			126	82		*111*	69
1995	68	31	28	95			80	*130*	108	82	64	32	22	16		*102*	*129*	85	*63*	*113*	70
1996	66	31	25	92			77	*147*	113	80	68	41	*24*	14		*105*	*149*	92	*66*	*114*	66
1997	68	31	28	86			77	*161*	110	73	61	39	*25*	13		*101*	*143*	105	*65*	*118*	65
1998	67	31	*26*	*85*	*13*		77	*169*	104	77	62	*36*	*24*	14		*97*	*140*	109	*63*	*119*	64
1999	66	31	*24*	*81*	*10*		76	*175*	102	59	63	*35*	*24*	12	*34*	*90*	*131*	110	*59*	*114*	65
2000	66	31	*22*	*76*	*13*		76	*190*	97	60	60	*38*	*24*	15	*33*	*87*	*129*	111	*54*	*112*	65

Notes and Sources : See appendix 3a.

Appendix 3c. Data for Figure 3 in chapter 5. Annual local spending as a share of GDP.

	Unitary countries													Federal countries							
	UK	Denmark	Finland	France	Ireland	Israel	Italy	Japan	Netherlands	New Zealand	Norway	Portugal	Sweden	Australia	Austria	Belgium	Canada	Germany	Spain	Switzerland	United States
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1935	15	15		10	9				27	2	9	2								8	10
1936	15	16		8	9				26	2	8	2								9	9
1937	15	15		7	9				25	2	8	2								8	12
1938	15	16	1	6	8				25	2	9	2								8	14
1939	15	15	1	5	9				24	2	9	2								8	13
1940	13	16	1	4	9				27	3		2							5	8	12
1941	11	14		3	8				27	3		2							4	7	9
1942	10	14		2	9				27	2		2							4	7	8
1943	9	14		1	9				27	2		2							4	7	6
1944	9	12		1	9				28	2		2							4	8	6
1945	10	12		1	9			9	27	2		2							2	8	6
1946	11	12		1	9		2	7	27	2	8	3				7	4		3	8	6
1947	13	14		2	10		2	7	23	2	9	3				8	5		3	7	7
1948	14	15	1	3	12		2	8	23	3	10	4		6		8	5		3	8	8
1949	12	16	1	4	12		3	10	18	3	10	4		6		7	5		3	8	9
1950	12	15	1	4	11		3	11	17	3	10	4	11	6		8	5		3	15	11
1951	11	15	1	5	11		3	10	18	3	9	3	11	6		7	5	14	3	13	10
1952	11	16	1	5	11		3	11	20	3	10	3	12	6		6	5	14	3	13	10
1953	12	16	1	5	11		3	11	16	3	11	3	13			7	5	15	3	13	10
1954	12	17	1	5	12		3	12	16	4	11	3	13			7	6	15	3	13	11
1955	11	18	1	6	12		4	11	16	4	12	3	13			10	5	18	3	12	11
1956	11	14	1	6	12		3	10	16	4	12	3	14			8	5	19	3	13	12
1957	12	15	1	6	12		4	12	17	4	12	3	14			7	10	19	3	13	13
1958	11	15	1	7	11		4	16	17	8	13	4	15	6		7	10	20	3	14	14
1959	11	14	1	6	10		4	14	17	9	12	4	15	6		8	11	19	3	14	14
1960	11	14	1	6	10		4	14	16	9	12	4	14	6		8	11	19	3	13	14
1961	12	14	12	6	10		4	14	17	9	13	4	14	6		7	11	19	3	13	15
1962	13	14	13	6	10		4	15	17	9	13	4	15	6		6	11	21	3	14	15
1963	13	15	13	7	10		5	16	18	9	13	4	15	6		8	11	22	2	15	15
1964	13	15	13	9	9		5	15	18	9	13	4	15	13		7	11	22	3	16	15
1965	14	15	14	9	11		5	15	19	9	13	4	16	12		7	12	22	2	16	15
1966	14	16	14	9	11		5	14	19	10	13	5	17	13		8	15	21	2	17	15
1967	15	18	14	9	11		5	13	21	10	13	5	19	12		8	18	22	3	18	15
1968	15	19	14	9	11		5	13	20	9	14	5	25	12		8	19	21	3	18	16
1969	15	23	14	9	11		5	13	19	9	14	5	26	12		7	20	21	3	18	16
1970	16	24	14	8	12		5	14	19	8	15	5	27	12		7	21	20	3	18	18
1971	16	26	14	8	11		5	15	19	8	16	5	28	13		7	24	21	3	19	19
1972	16	*24*	*14*	8	*11*		5	14	19	8	14	5	29	*12*	*12*	7	24	21	3	18	19
1973	*14*	*25*	*14*	8	*12*		6	13	18	6	14	5	28	*12*	*14*	7	22	22	3	19	18
1974	*15*	*28*	*14*	8	*13*		6	15	19	6	14	5	28	*12*	*14*	7	22	*21*	3	20	19
1975	*15*	*28*	*16*	8	*14*		7	13	21	6	15	4	28	*14*	*15*	8	24	*22*	3	21	20

	UK	Denmark	Finland	France	Ireland	Israel	Italy	Japan	Netherlands	New Zealand	Norway	Portugal	Sweden	Australia	Austria	Belgium	Canada	Germany	Spain	Switzerland	United States
1976	14	29	17	9	13	7	8	14	21	6	15	6	29	15	15	8	24	21	2	22	21
1977	12	28	18	9	13	7	7	14	22	6	15	5	32	16	15	8	25	21	3	21	19
1978	12	29	17	7	13	7	6	15	21	7	16	7	23	16	16	7	26	21	2	20	18
1979	11	30	17	7	14	7	7	15	22	7	15	7	23	15	16	8	27	21	2	20	18
1980	12	33	17	7	15	7	9	15	16	7	17	5	23	15	16	8	26	22	3	19	17
1981	11	32	18	8	15	6	10	15	16	7	17	6	24	15	16	8	26	22	4	19	17
1982	11	32	18	8	15	7	10	15	17	7	17	6	24	15	16	8	27	22	5	20	17
1983	11	31	18	8	15	7	11	15	18	8	17	5	23	16	16	8	27	21	6	20	17
1984	11	29	19	8	15	8	11	15	17	8	16	5	23	16	16	7	27	20	7	19	16
1985	10	29	20	8	15	6	12	14	17	7	16	4	23	17	16	7	26	20	8	19	17
1986	10	28	20	8	15	6	12	14	16	7	17	3	22	17	16	7	26	20	9	19	17
1987	10	29	20	8	14	6	12	15	15	7	18	2	21	17	16	7	26	20	9	19	18
1988	10	30	19	8	11	6	13	15	15	7	20	3	21	16	16	6	27	20	10	19	17
1989	10	30	19	8	11	6	13	16	14	3	19	3	21	15	16	6	27	20	10	19	17
1990	10	30	20	8	10	6		16	14	4	19	3	21	16	16	6	29	19	13	18	17
1991	10	30	22	9	11	5		16	14	4	19	3	21	18	16	6	34	21	14	19	18
1992	10	30	23	9	11	6		16	15	4	19	3	22	18	17	6	36	21	15	20	18
1993	10	31	22	9	12	7		16	15	3	19	3	21	18	18	6	35	22	15	20	19
1994	10	32	21	10	11	6		17	14	3	18	3	20	18	18	6	34	22	15	20	18
1995	10	33	20	10	13	7	12	18	21	3	18	5	23	18	19	20	33	21	16	20	19
1996	10	32	20	10	12	7	13	17	15	3	17	5	23	18	19	20	31	22	16	21	18
1997	10	32	19	10	12	7	13	17	14	3	17	6	23	17	17	20	30	21	16	20	18
1998	10	32	18	9	12	7	13	17	14	3	18	6	23	16	18	19	30	21	17	20	18
1999	10	32	17	9	12	6	13	18	14	2	18	6	23	17	18	20	29	21	17	20	18
2000	10	31	17	10	12	6	13	17	14	3	15	6	22	16	17	19	28	21	17	20	19

Notes and Sources : See appendix 3a.

Bibliography

Abel-Smith, B., *The hospitals 1800–1948* (London, Heinemann, 1964).

Acemoglu, D., Naidu, S., Restrepo, P. and Robinson, J. A., ‘Democracy does cause growth’, National Bureau of Economic Research working paper 20004 (2014).

Acheson, G. G., Campbell, G., Gallagher, A., and Turner,]. D., 'Independent women: investing in British railways, 1870-1922', *Economic History Review,* 74(2) (2021), pp. 471-95.

Acheson, G. G., Campbell, G., & Turner, J. D. (2017). ‘Who financed the expansion of the equity market? Shareholder clienteles in Victorian Britain’, *Business History*, 59(4) (2017), pp. 607–637.

Acheson, G. G., Campbell, G., and Turner, J. D., 'Private contracting, law and finance', *Review of Financial Studies,* 32(11) (2019), pp. 4156-95.

Acheson, G. G. and Turner, J. D., 'Investor behaviour in a nascent capital market: Scottish bank shareholders in the nineteenth century', *Economic History Review,* 64(1) (2011), pp. 188-213.

Aidt, T. S., Daunton, M., and Dutta, J., ‘The retrenchment hypothesis and the extension of the franchise in England and Wales’, Economic Journal, 120(547) (2010), pp.990-1020.

Albalate, D., Bel, G. and Reeves, E., ‘(Re)municipalisation: a new era for ownership and control of local public service delivery?’, in L. Bernier, M. Florio, and P. Bance (Eds) *The Routledge handbook of state-owned enterprises*, pp. 568-584 (London, Routledge, 2021).

Albert, W., *The turnpike road system in England 1663–1840* (London, Cambridge University Press, 1972).

Allen, W. A., ‘Government debt management and monetary policy in Britain since 1919’, *Oxford Review of Economic Policy*, 28(4) (2012), pp. 804-836.

Allison, K. J., (Ed.), *A history of Yorkshire East Riding. Vol 1: The city of Kingston upon Hull* (Oxford, Oxford University Press, 1969).

Amatori, F., & Colli, A. (2011). *Business history: Complexities and comparisons* (London, Routledge, 2011).

Amery, L. S., *My political life, vol III, The unforgiving years, 1929-40* (London, Hutchinson, 1955).

Anderson, N., Bailey, S. J. and Pautz, H., ‘Local government funding agencies: lessons from success and failure’, in S. J. Bailey, P. Valkama, P. and A-V Anttiroiko (Eds) *Innovations in financing public services, country case studies*, pp. 114-135 (Basingstoke, Palgrave Macmillan, 2010).

Armstrong, J., ‘From Shillibeer to Buchanan: Transport and the urban environment’, in M. Daunton, (Ed.), *Cambridge urban history. Vol. 3: 1840–1950* (pp. 229–260) (Cambridge, Cambridge University Press, 2012).

Ayers, G. M., *England’s first state hospitals 1867–1930* (London, Welcome Institute, 1971).

Ball, M., & Sunderland, D. (2006). *Economic history of London 1800–1914* (London, Routledge, 2016).

Balmforth, O., *Jubilee history of the Corporation of Huddersfield 1868–1918* (Huddersfield, Alfred Jubb, 1918).

Barber, B. J., *Leeds corporation, 1835–1905: A history of its environmental, social and administrative services*, [PhD thesis], University of Leeds, 1975.

Barber, B. J., ‘Aspects of municipal government 1835–1914’, in D. Fraser [Ed.], *A history of modern Leeds* (pp. 301–326) (Manchester, Manchester University Press, 1980).

Barker, T. C., & Harris, J. R., *A Merseyside town in the Industrial Revolution, St Helens 1750–1900* (Liverpool, Liverpool University Press, 1954).

Barnett, J., *Inside the Treasury* (London, Harper Collins, 1982).

Beattie, D., *Blackburn, a history* (Lancaster, Carnegie, 2007).

Bellamy, C., *Administering central-local relations 1871–1919: the Local Government Board in its fiscal and cultural context* (Manchester, Manchester University Press, 1988).

Bennett, W., *History of Burnley 1650–1850* (Burnley, Burnley Corporation, 1949).

Bernier, L., Florio, M. and Bance, P., ‘Introduction’, in L. Bernier, M. Florio and P. Bance, (Eds.), *The Routledge handbook of state-owned enterprises*, pp. 1-22 (London, Routledge, 2021).

Biddle, G., *Loans of local authorities (England and Wales)* (London, Knight & Co., 1904).

Binns, H. B., *A century of education: Being the centenary history of the British and Foreign School Society, 1808–1908* (London, Dent, 1908).

Bird, M., ‘State-owned enterprises. Rising, falling and returning? A brief overview’, in L. Bernier, M. Florio and P. Bance (Eds) *The Routledge handbook of state-owned enterprises*, pp. 60-72 (London, Routledge, 2021).

Blake, R., *Disraeli*, (London, Faber & Faber, 1966).

Bogart, D., Drelichman, M., Gelderblom, 0., and Rosenthal, J.-L., 'State and private institutions', in S. Broadberry and K. H. O'Rourke, (Eds.), *The Cambridge economic history of modern Europe,* I: 1700-1870 (Cambridge, Cambridge University Press, 2010), pp. 70-95.

Briggs, A., *Victorian cities* (London, Penguin, 1963).

Brothaler, J., Getzner, M. and Haber, G., 'Sustainability of local government debt: a case study of Austrian municipalities', *Empirica*, 42(3) (2015), pp. 521-546.

Burdett, H. C., *Burdett's official intelligence for 1884* (London, Stock Exchange, 1884).

Byatt, I. C. R., *The British electrical industry 1875–1914: The economic returns to a new technology* (Oxford, Oxford University Press, 1979).

Cairncross, A. K., *Home and foreign investment 1870-1913* (Cambridge, Cambridge University Press, 1953).

Campbell, G., Grossman, R. S., and Turner, J. D., 'Before the cult of equity: new monthly indices of the British share market, 1829-1929', *Centre for Economic Policy Research discussion paper* no. 13717 (2019).

Campbell, G., Rogers, M., and Turner, J. D., 'The rise and decline of the UK's provincial stock markets, 1869-1929', Queen's University Centre for Economic History working paper (2016-03).

Campbell, G., Turner, J. D., and Ye, Q., 'Liquidity of the London capital markets, 1825-70', *Economic History Review,* 71(3) (2018), pp. 823-52.

Carmichael, P., *Central-local government relations in the 1980s: Glasgow and Liverpool compared* (London, University of Strathclyde, 1992).

Casson, P., 'Grant, Charles (1746-1823)', *Oxford Dictionary of National Biography* (Online edition, 2008), www.oxforddnb.com/viwe/article/11248 (accessed on 5 May 2016)

Chadwick, E., *The sanitary conditions of the labouring population of Great Britain* ([1842] Edinburgh, Edinburgh University Press, 1965).

Chandler, A. J. *The visible hand: The managerial revolution in American business* (Cambridge MA, Harvard University Press, 1977).

Chapman, J., 'The contribution of infrastructure investment to Britain's urban mortality decline, 1861-1900', *Economic History Review,* 72(1) (2019), pp. 233-59.

Clapham, J. H., *The Bank of England: a history,* vols. 1 and 2 (Cambridge, Cambridge University Press, 1944).

Checkland, S. G. and Checkland, E. O. A., (Eds.), *The poor law report 1834,* (Harmondsworth, Penguin, 1974).

Chrystal, K. A., Haldane, A. and Proudman, J., 'Government debt structure and monetary conditions', *BoE Quarterly Bulletin*, 39(4), (1999): 393-6.

Clifford, F., *History of private bill legislation* (Vol. 1) (London, Butterworths, 1885).

Collins, M. and Baker, M., *Commercial banks and industrial finance in England and Wales 1860-1913* (Oxford, Oxford University Press, 2003).

Cookson, J. E., *Lord Liverpool's administration 1815–22* (Edinburgh, Scottish Academic Press, 1975).

Cottrell, P. L., *Industrial finance 1830-1914: the finance and organization of English manufacturing industry* (London, Methuen, 1979).

Council of Europe, *Local authorities' budgetary deficits and excessive indebtedness* (Strasbourg, Council of Europe, 1996).

Coyle, C. and Turner, J. D., 'Law, politics, and financial development: the great reversal of the UK corporate debt market', *Journal of Economic History*, 73(3) (2013), pp. 810-45.

Crafts, N. F. R., 'Some dimensions of the "quality of life" during the British industrial revolution', *Economic History Review,* 50(4) (1997), pp. 617-39.

Cragoe, M., 'We like local patriotism. The Conservative party and the discourse of devolution 1947-51', *English History Review*, 122(498), (2007), pp. 965-85.

Crosthwaite, P., Knight, P., Marsh, N., Paul, H., and Taylor, J., *The history of financial advice: a finder's guide to the collection at the Library of Mistakes* (Edinburgh, Library of Mistakes, 2018).

Cruickshank, M., *Church and state in English education, 1870 to the present day* (London, Macmillan 1963).

Daunton, M. J., *House and home in the Victorian city: Working-class housing 1850–1914* (London, Edward Arnold, 1983).

Daunton, M. J., *State and market in Victorian Britain: war, welfare and capitalism* (Woodbridge, Boydell Press, 2008).

Daunton, M. J., *Trusting Leviathan: The politics of taxation in Britain, 1799–1914* (Cambridge, Cambridge University Press, 2001).

Davey, E. (2013). *Birkenhead, a history* (Stroud, History Press, 2013).

Davis, L. E. and Huttenback, R. A., *Mammon and the pursuit of empire: the political economy of British imperialism 1860-1912* (Cambridge, Cambridge University Press, 1986).

Derby City Council, *Centenary of local government in Derby 1835–1935* Derby, Willmer Brothers, 1935).

Dewhirst, I., *History of Keighley* (Keighley, Keighley Corporation, 1974).

Dickson, P. G. M., *The financial revolution in England: a study in the development of public credit 1688-1756* (London, Macmillan, 1967).

Doodson, N., Chisholm, R. H. A., Cottam, G., Lloyd, E. J. D. and Nuttall, W., *Local authority borrowing* (Southport, IMTA, 1962).

Dove, J. A., 'Financial markets, fiscal constraints, and municipal debt: lessons and evidence from the panic of 1873', *Journal of Institutional Economics,* 10(1) (2014), pp. 71-106.

Driver, F., *Power and pauperism, the workhouse system 1834–84* (Cambridge, Cambridge University Press, 1993).

English, H., *A complete view of the joint stock companies formed in 1824 and 1825* (London, Boosey & Sons, 1827),

English, W. B.,'Understanding the costs of sovereign default: American state debts in the 1840s', *American Economic Review,* 86(1) (1996), pp. 259-75.

Everard, S., *History of the gas light and coke company 1812–1949* (London, A & C Black, 1992).

Falkus, M. E., 'Development of municipal trading in the nineteenth century', *Business History*, 19(2) (1977), pp.134-162.

Feinstein, C. H., and Pollard S., (Eds), *Studies in capital formation in the United Kingdom 1750-1920* (Oxford, Clarendon Press, 1988).

Fletcher, J. G., *Historical and statistical account of supplying the metropolis with water* (London, Statistical Society of London, 1845).

Flinn, M. W., 'The Poor Employment Act of 1817', *Economic History Review*, 2nd ser., XIV(1) (1961), pp. 82-92.

Freeman, M., Pearson, R., & Taylor, J., *Shareholder democracies? Corporate governance in Britain and Ireland before 1850* (Chicago IL, University of Chicago Press, 2012).

Garcke, E., *Manual of electricity undertakings* (Vols. 1–4) (London, P. S. King, 1897-1900).

Gash, N., *Aristocracy and people: Britain 1815–1865* (London, Edward Arnold, 1979).

Gent, J., *Croydon, the story of 100 years* (Croydon, Croydon Natural History Society, 1980).

Gibson, J. G., 'The block, and target, grant system and local authority expenditure – theory and evidence', *Local Government Studies*, 8(3) (1982), pp. 15-31.

Ginarlis, J., and Pollard, S., 'Roads and waterways 1750-1850', Feinstein, C. H., and Pollard S., (Eds), *Studies in capital formation in the United Kingdom 1750-1920* (Oxford, Clarendon Press, 1988), pp. 182-224.

Goldsmith, M. J. and Page, E. C. (Eds), *Changing relations in Europe: from localism to intergovernmentalism* (London, 2010).

Goodhart, C. 'Monetary policy and debt management in the UK: some historical perspectives', in K. A., Chrystal (Ed) *Government debt structure and monetary* *conditions: a conference organised by the Bank of England 18-19 June 1998*, pp. 43-101 (London, Bank of England, 1999).

Gough, R., With a little help from our friends: international lessons for English local government (The Localis report) (London, Localis, 2009).

Gramlich, E. M., 'New York, ripple or tidal wave. The New York city fiscal crisis, what happened and what is to be done', *American Economic Review*, 66(2) (1976), pp. 415-429.

Grant, B. and Woods, R., 'Reforming Australia's fiscal federalism: should municipal bond banks play a greater role', *Australasian Journal of Regional Studies*, 22(2) (2016), pp. 243-262.

Gray, D., *Nottingham through 500 years* (Nottingham, Nottingham City Council, 1960).

Gray, P., 'Conceiving and constructing the Irish workhouses 1836-1845', *Irish Historical Studies* 38 (2012), pp. 22-35.

Green, D. R. and Owens, A., 'Gentlewomanly capitalism? Spinsters, widows, and wealth holding in England and Wales, *c.* 1800-1860', *Economic History Review,* LVI(3) (2003), pp. 510-36.

Grewal, B., Cheng, E. and Rasmussen, B., 'Local government debt in China: implications for reform', *Public Finance and Management*, 15(4) (2015), pp. 358-377.

Grossman, R. S. and Shore, S. H., 'Cross section of stock returns before World War I', *Journal of Financial and Quantitative Analysis,* 41(2) (2006), pp. 271-94.

Hamer, H., *Bolton 1838-1938* (Bolton, Bolton Corporation, 1938).

Hannah, L., *Electricity before nationalisation: A study of the development of the electricity supply industry in Britain to 1948* (London, Macmillan 1979).

Hastings, C. W., *Water works statistics 1881–93* (London, C. W. Hastings, 1881-93).

Hawkins, A., *The forgotten prime minister: the 14th Earl of Derby,* vol. 2, (Oxford, Oxford University Press, 2008).

Hawson, H. K., *Sheffield, the growth of a city 1893–1926* (Sheffield, J. W. Northend, 1968).

Helm, D., 'Infrastructure and infrastructure finance: the role of the government and the private sector in the current world', EIB papers, 15(2) (2010), pp. 8-27.

Hennock, E. P., *Fit and proper persons: ideal and reality in nineteenth-century urban government* (Montreal, McGill-Queens University Press, 1973).

Hennock, E. P., Central/local government relations in England: an outline 1800-1950, *Urban History Yearbook*, 9 (1982), pp. 38-49.

Hilton, B., *Corn, cash, commerce: the economic policies of the Tory governments 1815–30* (Oxford, Oxford University Press, 1977).

Hilton, B., 'The political arts of Lord Liverpool', *Transactions of the Royal Historical Society*, 38 (1988), pp. 147–70.

Homer, S. and Sylla, R., *History of interest rates* (Hoboken, NJ, Wiley, 4th edn., 2005).

Howson, S. K., *Domestic monetary management in Britain, 1919-38* (Cambridge, Cambridge University Press, 1975).

Howson, S. K., 'The origins of cheaper money 1945-7', *Economic History Review*, XL(3) (1987): 433-52.

Hughes, G. A., 'Fiscal federalism in the UK', *Oxford Review of Economic Policy*, 3(2) (1987), pp. 1-23.

Huberman, G., 'Familiarity breeds investment', *Review of Financial Studies,* 14(3) (2001), pp. 659-80.

Hunt, D., *A history of Preston*. (Preston, Carnegie, 2009).

IMF, 'Lessons from the crisis in Argentina', 2003, pp. 1-87.

Jackson, P. M., 'Central control of local exp: central/local relations: the macroeconomic dimension'. *Public money and management*, 19(3) (1999), pp. 11-16.

Janssen, N., Nolan, C. and Thomas, R., 'Money, debt and prices in the UK 1705-1996', *Economica*, 69(275) (2002), pp. 461-479.

Jarvis, A., *Liverpool, a history of 'the great port'*. (Liverpool, Liverpool History Press, 2014).

Johnson, P., *Making the market: Victorian origins of corporate capitalism*. (Cambridge, Cambridge University Press, 2010).

Jones, G. and Stewart, J., 'Central-local relations since the Layfield report, in P. Carmichael and A. Midwinter (Eds) *Regulating local authorities: emerging patterns of central control*, pp. 7-28 (London, Frank Cass, 2003).

Ladner, A., Keuffer, N., Baldersheim, H. Hlepas, N., Swianiewicz, P., Steyvers, K. and Navarro, C., *Patterns of local autonomy in Europe* (Switzerland, Palgrave Macmillan, 2019).

Ladner, A. and Keuffer, N., 'Creating an index of local autonomy – theoretical, conceptual, and empirical issues', *Regional and Federal Studies*, 31(2) (2018), pp. 209-234.

Lambert, R., *Sir John Simon 1816–1904* (London, MacGibbon & Kee, 1963).

Lang, S., *Parliamentary reform 1785–1928* (Abingdon, Routledge, 1999).

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. W., 'Investor protection and corporate governance', *Journal of Financial Economics*, 58(1) (2000), pp. 3-27.

Lawson, N., *The view from no. 11: memoirs of a Tory radical* (London, Corgi, 1992).

Leach, S., Stewart, J. and Jones, G., *Centralisation, devolution and the future of local government in England* (Abingdon, Routledge, 2018).

Lee, G. A., The concept of a profit in British accounting 1760–1900. *Business History Review*, *49*(1) 1975, pp. 6–36.

Lee, J., 'The provision of capital for early Irish railways 1830–1853', *Irish Historical Studies*, 16(61) (1968), pp. 33–63.

Lesmond, D. A., Ogden, J. P., and Trzcinka, C. A., 'A new estimate of transaction costs', *Review of Financial Studies,* 12(5) (1999), pp. 1113-42.

Lindert, P., 'The rise of social spending, 1880-1930', *Explorations in Economic History*, 31(1) (1994), pp. 1-37.

Lizzeri, A., & Persico, N., 'Why did the elites extend the suffrage? Democracy and the scope of Government, with an application to Britain's 'age of reform'. *The Quarterly Journal of Economics*, *119*(2) 2004, pp. 707–765.

Louden, L., *Distinctive and inclusive, the National Society and Church of England Schools 1811– 2011*. (London, National Society, 2012).

Loughlin, M., *Legality and locality: the role of central-local government relations* (Oxford, Clarendon, 1996).

Lybeck, J. A., 'Comparing government growth rates: the non-institutional and the institutional approach' in J. A. Lybeck and M. Henrekson (Eds) *Explaining the growth of government*, pp, 29-48 (Amsterdam, North-Holland, 1988).

MacDonagh, O., *Early Victorian government* 1830–1870 (London, Weidenfeld and Nicholson, 1977).

MacDonagh, O., 'The nineteenth century revolution in government: a reappraisal', *Historical Journal*, 1(1) (1958), pp. 52-67.

Marichal, C., *A century of debt crises in Latin America from independence to the great depression, 1820-1930* (Princeton NJ, Princeton University Press, 1989).

Martinez-Vazquez J. and Vulovic V., 'How well do subnational borrowing regulations work?', ADBI Institute working paper no. 563, 2016.

Matthews, D. (1986). Laissez-faire and the London gas industry in the nineteenth century. *Economic History Review*, *XXXIX*(2) (1986) pp. 244–263.

McConnell, A., *The politics and policy of local taxation in Britain* (Bromborough, Tudor, 1999).

McKay, J. P., *Tramways and trolleys: The rise of urban mass transport in Europe* (Princeton NJ, Princeton University Press, 1976).

Michie, R., *The London Stock Exchange: a history* (Oxford, Oxford University Press, 1999).

Middleton, R., *Government versus the market: the growth of the public sector, economic management and British economic performance, c. 1890-1979* (Cheltenham, Edward Elgar, 1996).

Midwinter, M. and Carmichael, P., 'Central grants and local spending', in P. Carmichael and A. Midwinter (Eds) *Regulating local authorities: emerging patterns of central control*, pp. 49-73 (London, Frank Cass, 2003).

Millward, R., 'The growth of the public sector', in R. Floud, J. Humphries and P. Johnson (Eds.) *Cambridge economic history of Modern Britain*, pp. 387-415 (London, Cambridge University Press, 2014).

Millward, R., *The state and business in the major powers* (Abingdon, Routledge, 2013).

Millward, R., *Private and public enterprise in Europe: energy, telecommunications and transport 1830-1990* (Cambridge, Cambridge University Press, 2005).

Millward, R., & Ward, J., From private to public ownership of gas undertakings in England and Wales, 1851–1947: Chronology, incidence and causes. *Business History*, 35(3) (1993), 1–21.

Millward, R. and Sheard, S., 'The urban fiscal problem, 1870–1914: government expenditure and finance in England and Wales', *Economic History Review*, XLVIII(3) (1995), pp. 501–35.

Mitchell, B. R., *British historical statistics* (Cambridge, Cambridge University Press, 2011).

Moody's US municipal bond defaults and recoveries 1970-2019, accessed on 28-8-2021 at moodys-investors-service-data-report-us-municipal-bond.pdf (fidelity.com).

Morecroft, N. E., *The origins of asset management from 1700 to 1960: towering investors* (Switzerland, Palgrave Macmillan, 2017).

Morecroft, N. E. and Turnbull, C., 'Institutional equity investing in Britain from 1900 to 2000', *Financial History Review,* 26(1) (2019), pp. 1-19.

Mulroy, J. J., *Halifax, the town that bred us.* (Halifax, J. J. Mulroy, 1947).

Munford, A. P., *History of Rotherham* (Stroud, Sutton, 2000).

Municipal Bond Agency, www.ukmba.org (accessed on 24 Nov. 2016).

Newton, R., *Victorian Exeter 1837–1914* (Leicester, Leicester University Press, 1968).

Nicholls, Sir G., *A history of the English poor law* (London, P. S. King, 1904).

OECD-UCLG, *2019 Report, world observatory on subnational government finance and investment, country profiles* (Paris, OECD, 2019).

Offer, A., *Property and politics 1870-1914: Landownership, law, ideology and urban development in England* (Cambridge University Press, Cambridge 1981).

Page, E., 'Fiscal pressure and central-local relations in Britain', in M. Goldsmith and S. Villadsen, (Eds) *Urban political theory and the management of fiscal stress*, pp. 71-95 (Aldershot, Gower, 1986).

Page, E. C. and Goldsmith, M. J. (Eds), *Central and local government relations: a comparative analysis of west European unitary states* (London, Sage, 1987).

Page, H., *Local authority borrowing: past, present and future* (London, George Allen and Unwin, 1985).

Pawson, E., *Transport and economy: the turnpike roads of eighteenth-century Britain* (London, Academic Press, 1977).

Peden, G. C., *The Treasury and British public policy 1906-1959* (Oxford, Oxford University Press, 2000).

Pember and Boyle, *British government securities in the twentieth century* (London, Pember and Boyle, 1950).

Peterson, G., 'Building local credit systems', World Bank, municipal finance, background series, 2000.

Pinker, R., *English hospital statistics 1861–1938* (London, Heinemann, 1966).

Pliatzky, L., *Getting and spending, public expenditure, employment and inflation* (Oxford, Blackwell, 1984).

Pollard, S., *The genesis of modern management, a study of the Industrial Revolution in Great Britain* (Harmondsworth, Penguin, 1965).

Pollard, S., *Britain's prime and Britain's decline: The British economy 1870–1914.* (London, Edward Arnold, 1989).

Redford, A., *History of local government in Manchester* (Vol. 1) (London, Longmans, 1939).

Pollard, S., 'Coal mining', in C. H. Feinstein and S. Pollard, eds., *Studies in capital formation in the United Kingdom 1750–1920* (Oxford, Clarendon Press, 1988), pp. 35–72.

Presnell, L. S., *Country banking in the industrial revolution* (Oxford, Clarendon Press, 1956).

Prest, J., *Liberty and locality: Parliament, permissive legislation and ratepayers' democracies in the nineteenth century* (Oxford, Clarendon Press, 1990).

Reed, M. C., 'Railways and the growth of the capital market', in M. C. Reed (Ed) *Railways in the Victorian Economy*: *studies in finance and economic growth*, pp. 162-83 (Newton Abbott, David & Charles, 1969).

Rhodes, R. A. W., ‘Continuity and change in British central-local relations: ‘the Conservative threat’ 1979-83, *British Journal of Political Science*, 14(3) (1984), pp. 261-83.

Roos, J., *Why not default? The political economy of sovereign debt* (Princeton NJ, Princeton University Press, 2019).

Rutterford, J., Green, D. R., Maltby, J., and Owens, A., 'Who comprised the nation of shareholders? Gender and investment in Great Britain, *c.* 1870-1935', *Economic History Review,* 64(1) (2011), pp. 157-87.

Rutterford, J., and Hannah, L., ‘The rise of the institutional investors’, in D. Chambers and E. Dimson (Eds) *Financial market history, reflections on the past for investors today*, pp. 242-64 (Cambridge, CFA Institute Research Foundation, 2017).

Rutterford, J., and Maltby, J., '"The widow, the clergyman and the reckless": women investors in England 1830- 1914', *Feminist Economics,* 12(1/2) (2006), pp. 111-38.

Rutterford, J., and Maltby, J., '"The nesting instinct": women investors and risk in England 1700-1930', *Accounting History,* 12(3) (2007), pp. 305-27.

Rutterford J., Sotiropoulos, D. P. and van Leishout, C., ‘Individual investors and local bias in the UK, 1970-1935’, *Economic History Review*, 70(4) (2017), pp.1291-320.

Scott, P., ‘Towards the “cult of the equity”? Insurance companies and the interwar capital market’, *Economic History Review*, LV(1) (2002), pp. 78-104.

Shah, A. (Ed.), Local governance in industrial countries (Washington DC, World Bank, 2006).

Sharpe, W F., 'Adjusting for risk in portfolio performance measurement', *Journal of Portfolio Management,* 1(2) (1975), pp. 29-34.

Silverthorne, A., *The purchase of gas and water works, with the latest statistics of municipal gas and water supply* (London, Crosby Lockwood, 1881).

Silverthorne, A., *London and provincial water statistics* (London, Crosby Lockwood, 1884).

Singleton, J., *Central banking in the twentieth century* (Cambridge, Cambridge University Press, 2011).

Smart, W., *Economic annals of the nineteenth century 1801–20* (London, Macmillan, 1910).

Sorrentino, M., ‘State-owned enterprises and the public mission. A multidimensional lens’, in L. Bernier, M. Florio and P. Bance (Eds) *The Routledge handbook of state-owned enterprises*, pp. 73-90 (Abingdon, Routledge, 2021).

Spalding, T. S., *The work of the London School Board.* (London, P. S. King, 1900).

Stern, W. M., ‘United Kingdom expenditure by votes of supply 1793–1817’, *Economica*, n. s. XVII(66) (1950), pp. 196–210.

Stevens, R. (1989). *In sickness and in wealth, American hospitals in the twentieth century* (Baltimore MD, John Hopkins University Press, 1989).

Stewart, J. D., ‘The green paper on local government finance – a viewpoint’. *Local Government Studies*, 3(4) (1977), pp. 9-15.

Storey, J., *Historical sketch of the works of the borough of Leicester* (Leicester, W. H. Lead, 1895).

Sutherland, G., *Policy-making in elementary education 1870–1895* (London, Oxford University Press, 1973).

Swianiewicz, P. (Ed.), *Local government borrowing: risks and rewards* (Budapest, LGI Books, 2004).

Taylor, J. R. B., *Hospital and asylum architecture in England 1840–1914* (London, Mansell, 1991).

Temel, J. W., *The fundamentals of municipal bonds*, 5th ed. (New York, John Wiley, 2001).

Ter-Minassian, T. and Craig, J., ‘Control of subnational government borrowing’, in T. Ter-Minassian (Ed) *Fiscal federalism in theory and practice*, pp. 156-174 (Washington DC, IMF, 1997).

Travers, T. and Esposito, L., *The decline and fall of local democracy: A history of local government finance* (London, Policy Exchange, 2003).

United Cities and Local Governments, *Local government finance: the challenges of the 21st century, Gold II* (Cheltenham, Edward Elgar, 2011).

Upton, C., *History of Wolverhampton* (Chichester, Phillimore, 1998).

US Government, Advisory Commission on intergovernmental relations, *Bankruptcies, deficits and other local government financial emergencies* (Washington DC, ACIR, 1985).

Vammalle, C., Ahrend, R. and Hulbert, C., ‘A sub-national perspective on financing investment for growth II – creating fiscal space for public investment: the role of institutions’, OECD working paper 2014/06, (Paris, 2014).

Velkar, A., *Markets and measurement in nineteenth-century Britain* (Cambridge, Cambridge University Press, 2012).

Van Houwelingen, P., ‘Local autonomy, municipal size and local political participation in Europe’, *Policy Studies*, 39(2) (2018), pp. 188-203.

Waller, P., 'Sir Arthur Bower Forwood', *Oxford Dictionary of National Biography* online.

Waddington, K., *Charity and the London hospitals 1850–1898*. (Woodbridge, Boydell Press, 2000).

Williams, F. S., *Midland railway: Its rise and progress* (Newton Abbott, David & Charles, 1868).

Webster, I., 'Making the municipal capital market in nineteenth-century England', *Economic History Review*, 75(1) (2022), pp. 56-79.

Webster, I., 'The decline of companies and voluntary organisations as infrastructure providers in nineteenth-century England', *Business History*, published online 7 June 2021.

Webster, I., 'The Public Works Loan Board and the growth of the state in nineteenth-century England', *Economic History Review*, 71(3) (2018), pp. 887-908.

Webster, I., 'The Public Works Loan Board 1817–76 and the financing of public infrastructure', unpub. Ph.D. thesis, Sheffield Hallam University (2015), http://shura.shu.ac.uk/9939/ (accessed on 13 Dec. 2017).

Williams, F. S., *Midland railway. Its rise and progress,* (Newton Abbott, David & Charles, 1968, originally 1876)

Williamson, J. G., *Coping with city growth during the British industrial revolution* (Cambridge, Cambridge University Press, 1990).

Wohl, A. S., *Endangered lives, public health in Victorian Britain* (London, Methuen, 1983).

Wilson, J. F., 'The finance of municipal capital expenditure in England and Wales 1870-1914', *Financial History Review*, 4(1) (1997), pp. 31-50.

Wilson, J. F. (1991). *Lighting the town: A study of management in the north-west gas industry*. (London, Paul Chapman, 1991).

Wright, D. G., & Jowitt, J. A., (Eds.), *Victorian Bradford* (Bradford, Bradford Council, 1982).

Wright, T. F., *History of Chesterfield 1851–1939* (Vol. 4) (Chesterfield, Borough of Chesterfield, 1992).

Wright, M., 'Treasury control 1854–1914', in G. Sutherland, (Ed.), *Studies in the growth of nineteenth century government* (London, Routledge, 1972), pp. 195–226.

World Bank, *Lessons for the urban century: decentralized infrastructure finance in the World Bank* (New York, World Bank, 2008).

Ye, Q. and Turner, J. D., 'The cross-section of stock returns in an early stock market', *International Review of Financial Analysis,* 34 (2014), pp. 114-23.

Zingales, L., 'Does finance benefit *society?', Journa1 of Finance,* 70(4) (2015), pp. 1327-63.

Official publications

Balfour Committee, *Part II, Further Factors in Industrial and Commercial Efficiency*, London, HMSO, 1928.

Central Statistical Office, Annual *Financial Statistics,* from 1962*.*

Committee of the Council on Education Annual Reports appear in Parliamentary Papers from 1839 (284) to 1883 (3706).

Committee on the workings of the monetary system (Radcliffe report). PP 1958 (827).

Department for Business, Innovation and Skills. *No stone unturned: in pursuit of growth*, (Heseltine report) October 2012.

Education Department Annual Report, PP 1900 (330).

Gas undertakings, P.P. 1883 (300) and (301), P.P. 1889 (97) and (98), P.P. 1900 (143) and (144).

HM Government, *Levelling up: Levelling up the United Kingdom*, CP 604, (2022).

HM Treasury, *Transfer of Functions from the Public Works Loan Board* (2016), www.gov.uk/government/consultations/transfer-of-functions-from-the-public-works-loan-board-new-governance-arrangements (accessed on 5 Jan. 2017).

House of Commons, Communities and local government committee. *The balance of power: central and local government,* sixth report of session 2008-09, HC 33-1, 2009.

House of Lords Select Committee on Relations Between Central and Local Government, *Rebuilding Trust* (Hunt report) Session 1995-96, HL Paper 97.

Layfield Committee, *Report of the committee of enquiry into local government finance,* HMSO, 1976.

Local Authority borrowing, White Paper, PP. 1962-3 (2162).

Local Authority Borrowing and Investments, 2014–5 (2015), www.gov.uk/government/statistics/local-authority-borrowing-and-investments-2014-to-2015 (accessed on 5 Jan. 2017).

Local Boards of Health Return (P.P. 1857, s2, XLI).

Local government finance, Green Paper, P.P. 1957 (209).

Local government Act 2003.

Local Taxation Returns (P.P. 1870 LV; PP 1880 LXI; P.P. 1886, LV; P.P. 1890 196, 364; PP 1895 329; P.P. 1901 LXIII), and annually from 1882.

Lyons Inquiry, *Final report*, (London, 2007).

Metropolitan Board of Works, Annual Report and Accounts (P.P. 1862 XLVII and annually until 1871, XLVII).

Municipal Corporations (Reproductive undertakings) P.P. 1899 (88).

NAO (National Audit Office), *Lessons from PFI and other projects,* HC 290 (2010-12).

ONS (Office for National Statistics), *Local Government Financial Statistics* (Annually 1989-2000).

Public Health Act 1848 borrowing approvals appear in Parliamentary Papers 1858 (328) to 1884 (4166).

Public Works Loan Board Annual reports, 1876 to 1930 in Parliamentary Papers, including (P.P. 1831 XIII; P.P. 1843 XXX; P.P. 1851 XXXI; P.P. 1872 XXXVI; P.P. 1876 XXI; P.P. 1888 XXXIII; 1900 XVII); 1930 to 1989 in TNA, 1990 to 2000 in House of Commons library.

PWLB Annual reports 2011-12, 2015-16 and 2018-9, www.dmo.gov.uk.

Report from the Commissioners for the 1793 Act (P.P. 1810–11, IV).

Report on the Public Works (Manufacturing Districts) Acts 1863–4 (P.P. 1868, LIII).

Report of the Select Committee 011 Private Bills (P.P. 1847, XII)

Returns from Life Assurance Companies (P.P. 1872, L; P.P. 1900, LXXX).

Returns of Money Borrowed by Local Bodies (P.P. 1874, LVI).

Return of public and private secondary schools in England, P.P. 1897 (8634).

Returns to Parliament of the Income and Expenditure of Turnpike Trusts (P.P. 1821, IV); (P.P. 1836, XLVII).

Royal Commission on Railways in Ireland (P.P. 1867–8, XXXII).

Royal Commission on the State of Large Towns, P.P. 1845 (602, 610).

Select Committees on Municipal Trading, 1900 and 1902, P.P. 1900 (305) and 1903 (270).

Select Committee on Hospitals in the Metropolis, P.P. 1890 (392).

Select Committee on the Public Works Loan Act Amendment Bill (P.P. 1875, XIV).

Statutes at Large: Local and Personal Acts (London, Eyre & Spottiswood, Annually 1797-2018).

Trams investment appears annually in Parliamentary papers from 1877 (69) to 1900 (315).