

GOVERNMENT REVENUE, 1793-1815 -
A STUDY IN FISCAL AND FINANCIAL
POLICY IN THE WARS AGAINST FRANCE

P.K. O'BRIEN

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TABLE OF CONTENTS

	<u>Page</u>
A Letter to William Pitt	
Acknowledgements	
Abstract	
A Note on Sources, Footnotes and Bibliography	
List of Tables	
<u>Part 1. Introduction</u>	
Chapter 1: Introduction	1
The Facts	1
The Decisions	18
<u>Part 2. Debt Management and Monetary Policy</u>	
Chapter 2: Functions and Organisation of Government Borrowing	34
The Functions of Funded and Unfunded Borrowing	34
Forms of Bills and Bonds	45
The Marketing of and Market for Bonds and Bills	48
Chapter 3: The Essentials of Debt Management	61
The Issue and Redemption of Public Securities	61
The Timing and Arrangements for the Issue of Public Securities	66
The Selection of Stocks	76
The System of Competitive Tender	77
Chapter 4: Government Borrowing, the Bank of England and the Money Supply	81
The Bank as an Intermediary	81
The Control of the Money Supply	82
The Principles of Control	92
Chapter 5: Debt Management, 1793-1815	99
Chapter 6: Monetary Policy and its Critics, 1793-1815	169
Introduction	169
The Expansion of the Money Supply	170
Government Borrowing, The Money Supply and the Bullion Controversy	174
Why the Government Tried to Refute its Critics	187
The Government, the Bank and the Private Sector	194
Conclusion	216

Chapter 7: An Appraisal of Debt Management	221
Introduction	221
The Flow of Securities	223
Competition	225
The Denomination of Bonds	226
The Sinking Fund	229
Chapter 8: Monetary Policy and the Price Level	242
The Causes of Price Inflation	242
Some Consequences of Price Inflation	259
Chapter 9: Monetary Policy and the Balance of Payments	271
The Argument Presented	271
Trade with Europe	280
Trade with the United States	289
Trade with South America	292
Foreign Trade and the Domestic Economy	298
Conclusion	307
<u>Part 3. Taxation</u>	
Chapter 10. The Tax Structure and the Administration of Taxes Before 1793	313
Introduction	313
Direct Taxes Levied Upon Incomes and Property	316
The Administration of Direct Taxes	318
Indirect Taxes Upon Outlay	328
Cannons of Taxation and Pressure Groups	351
The Administration of Taxes Upon Outlay	359
Chapter 11: Taxation, 1793-1815	383
Sources of War Taxation	383
The Income Tax and Other New Taxes	388
The Influence of Pressure Groups and Cannons of Taxation on Policy	426
Economic Development and Tax Revenue	440
Tax Administration and War Finance	471
Chapter 12: Summary and Conclusions	482
Appendix 1: Price Data	488
Appendix 2: Taxation Data, 1788-1815	489
Tables	492
Bibliography	534

Leeds, March 19, 1795.

Mr. Pitt,

You are one of damn'd scoundrel rascals that ever trode upon English ground, and but to only look at the Taxes and see to what an enormous height they are raised. I myself the writer of this paper can make it plainly appear that for every shilling a Poor Man in the country earns you and your comrades gets tenpence out of it, to keep up your great Belly's and your powdered wigs. And know you have laid more taxes on them that they cannot maintain themselves at all, and Provisions are so dear that it is not in their power to maintain themselves and their families and you and your powdered wigs.

And for these reasons that I have shown and other similar ones which I could show, a company of men in this town and neighbourhood (with me at their head) to the amount of Ten Thousand all well armed, and are sworn to rise at a moments warning (which will be in the course of a very few months) and are sworn to stand true to their cause until they have made Old England a (?torn) Habitation by ridding of such monsters as you, and by sending you and your comrades to the lowest region in Hell there to be Damn'd to all Eternity.

So good morning

Cited by K. Feiling, The Second Tory Party, p.209.

ACKNOWLEDGEMENTS

I wish to record my gratitude for the help they have given me in the preparation of this thesis to my University Supervisor, Professor H.G. Habakkuk and my College Supervisor, Dr. R.M. Hartwell and to Miss Judy Howey and Miss Valerie Lowenhoff who typed the final draft, and to my wife for forbearance.

ABSTRACT

This thesis began as a study and evaluation of the methods employed by the British Government to finance the wars against France from 1793-1815. Public finance of the late 18th and early 19th centuries is such a neglected field by economic historians that secondary sources on the operation of the financial system hardly exist. Yet in order to understand the finance of war it is essential to comprehend the whole financial system. Thus a large part of the thesis will be concerned simply to analyse public finances as they operated at the outbreak of war. With this context in place the thesis will proceed to outline the methods employed and the problems encountered by the Government in raising revenue to pay for the war. Finally, the thesis endeavours to appraise and criticise the techniques utilised mainly within the context of the constraints and nature of the financial system, but to some extent for their effects on the population and the course of economic growth over the period.

It is written primarily from the discipline of economic history but inevitably and frequently passes into political and administrative history. The questions raised could not be answered within the confines of a single discipline.

My research cannot be offered as answers to a single question or set of hypotheses. The questions which underlie it are already stated. In so far as I have a single thesis or conclusion it is that, given the nature and constraints of the financial system, the Ministers, civil servants and their advisers responsible for providing the indispensable monetary means to obtain resources to prosecute the war, on the whole performed their task with commendable efficiency.

Notes on Sources, Footnotes and Bibliography

1. Sources

The sources used in this thesis were made available to me at the following libraries: Bodleian, Oxford; British Library of Political and Economic Science, London School of Economics; Guildhall Library, City of London; British Museum; Public Record Office; Bank of England; Library of the Board of Customs and Excise; Library of the Board of Inland Revenue; Senate House and Goldsmiths Library, University of London.

2. Footnotes

My footnoting system is designed primarily to enable the reader to appreciate at a glance the nature of the source used as evidence, (primary, secondary, book, pamphlet, newspaper or article, modern or contemporary, manuscript or published) and, secondarily, to enable him to check any sources cited. I have also attempted to abbreviate footnotes wherever possible and to leave more detailed references to the bibliography. The nature of the sources used can be recognised as follows:

- (a) Modern Books: The name of the author followed by an abbreviated title.
- (b) Modern Articles: The name of the author followed by an abbreviated title in single quotation marks.
- (c) Books Written During the Period Under Study: The name of the author, an abbreviated title and the year of publication.
- (d) Pamphlets and Articles Written During the Period Under Study: the name of the author, an abbreviated title in single quotation marks and the year of publication. Most contemporary pamphlets and articles were written to plead a case and must be used cautiously as evidence.
- (e) Newspapers: The name of the paper and day of publication.
- (f) Directories and Dictionaries: The name of the publication in brief form.
- (g) Statesmen's Unpublished Papers and Manuscripts: The statesman's name followed by the word "Papers", the relevant volume number, the name of the author of the memorandum or letter under citation and its date. Often these letters and memoranda are

not numbered carefully and it is easier to trace a paper through its date, than through a folio number. Moreover this system reveals immediately the relevance of the source being cited. It was unfortunately sometimes not possible to trace either a date, an author or a folio number for some letters and memoranda. The papers of William Pitt and J.C. Herries were particularly deficient in this respect.

(h) Records of Government Departments: In most cases these records can be traced through the numbering system adopted by the departments at the time or alternatively by the classification of the Public Record Office. I adopted the practice of citing the number of the document preceded by the name of the department. The following abbreviations were used: Exch. for Exchequer, Inland Rev. for Board of Inland Revenue and Treasry. for Treasury.

(1) Parliamentary Records:

1. Reports of Select Committees and Commissioners: the number of the report followed by the abbreviated title, Cttee. for Committee or Comms. for Commissioners, an abbreviated title for the report and its date of publication.
2. Accounts and Papers: Accounts and Papers followed by their date of publication.
3. Commons Jnls. means Journals of the House of Commons.
4. Debates of both Houses of Parliament: Parly. Hist. means Cobbett's Parliamentary History; Parly. Debs., means Cobbett's Parliamentary Debates; Parly.Reg. means Parliamentary Register and Hansard means Hansard's Parliamentary Debates.
5. Statutes and Bills: I cite the number, the King and the chapter number.

3. Bibliography

Detailed references to all sources cited in the text can be found in the bibliography. For pamphlets and occasionally for Parliamentary Papers I give a slightly abbreviated title, but in general the sources are quoted in full. Parliamentary Accounts, Papers and Reports are listed chronologically according to their year of publication, which is cited in the footnotes. The location of manuscript sources is given. All other sources can be traced at the libraries cited under (1) above. Most of the pamphlets used are from the Goldsmiths Collection at the University of London. The page numbering in Parliamentary Papers are, wherever possible, the page references to the volume.

LIST OF TABLES

<u>No.</u>	<u>Title</u>	<u>Page</u>
1	Government Revenue, 1700-1815	2
2	War and Public Revenue 1708-12 to 1812-15	3
3	Changes in the Share of National Output Appropriated by the State, 1700-1810	4
4	The Public Revenue of Great Britain, 1793-1815	9
5	Interest Payments on the National Debt and War Finance, 1793-1815	17
6	War Finance, 1700-1815	19
7	Major Direct Taxes on Income and Property, circa 1792	316
8	Major Indirect Taxes on Outlay circa 1792	330
9	The Contribution of Individual Taxes to War Finance	386
10	Gross Income Assessed to Tax 1800-14 and Revenue Received from the Income Tax and Aid and Contribution Act, 1798-1815	422
11	Rates of Tax in 1792 and 1814	435
12	Indices of Economic Development, 1700-1815	441
13	Nominal Capital of the Unredeemed Funded Debt of G.B., 1788-1815	492
14	Nominal Capital of Stocks Issued on Loan and Funding Operations, 1793-1815	493
15	Issues and Redemption of Exchequer Bills, 1793-1815	494
16	Unfunded Debt of G.B., 1788-1815	495
17	Estimates and Expenditure of Military Forces, 1793-1815	497
18	The Rate of Interest on Borrowing and Funding Operations, 1793-1815	499
19	Bond Prices, 1793-1815	501
20	Short Term Interest Rates, 1792-1815	505
21	Premiums and Discounts on Exchequer and Navy Bills, 1793-1815	507
22	Liabilities and Assets of the Bank of England, 1720-1815	510
23	Unfunded Debt Held by the Bank of England, 1788-1815	515
24	Profits of the Bank of England, 1790-1815	517
25	Inch's Volumes and Values for Exports, Imports and Re-exports, 1796-1815	518
26	Regional Distribution of British Trade, 1788-1815	519
27	Official Values of British Exports and Re-exports to Europe, 1784-1815	521
28	Official Values of British Products Exported to Europe, 1784-1815	522
29	Official Values of Re-exports from Britain to Europe, 1784-1812	523
30	Official Values of Selected British Imports, 1792-1812	524

31	Imports and Re-exports of Coffee, Sugar and Tea, 1792-1815	525
32	Imports of Raw Materials, 1792-1815	526
33	Price Indices of Exports, Imports and Domestic Products, 1790-1815	527
34	Annual Average Quotations of the London Exchange on Hamburg, 1792-1815	528
35	Annual Average Prices of Spanish Dollars, 1790-1815	529
36	Indicators of Capital Formation, 1750-1815	530
37	Government Expenditure Abroad, 1793-1815	531
38	The Inflationary Impact of Public Expenditure, 1793-1815	532

INTRODUCTION

The Facts

Between February 1793 and November 1815, Great Britain was almost continuously at war with France and her allies apart from short intervals of peace between March, 1802 and May, 1803 and again from May, 1814 to March, 1815. From June, 1812 to December, 1814 the country conducted a separate war with the United States. In order to prosecute war the Government borrowed and appropriated as taxes vast sums of money. Just how vast cannot be expressed in the most revealing terms, namely as a proportion of the national income over time, because runs of social accounts are not available for the period. Some notion of the magnitudes involved can, however, be obtained from Deane and Cole's estimates of the national income which show that the proportion appropriated by the State increased from 26% in 1801 to 28% in 1811.¹ Another indication of relative magnitude can be elucidated by comparing the amount of revenue collected by the State over the 18th century by deflating receipts at the Exchequer by Elizabeth Schumpeter's price index for consumers' goods. Perhaps a more revealing formulation is to divide this total by the population estimates in order to measure public revenue per head of the population in real terms.

Given the imperfections of the price index and the estimates of population the data in Table 1 suggests that at the height of the French Wars (1812-15) the level of public revenue in real terms stood at 234% above the level for the preceding period of peace, 1788-92 and amounted to over ten times the amount collected at the beginning of the 18th century. For the same periods of comparison the contribution per head of the population to the Exchequer had risen by 146% above the pre-war level and 580% above the sum appropriated at the turn of the century. Comparisons with previous wars are also interesting.

1. Deane and Cole, *British Economic Growth*, pp.159-160.

Table 1. Government Revenue, 1700-1815

<u>Years circa</u>	<u>Amount Collected £ million in Current Prices</u>	<u>Amount Collected in constant 1701 prices £ million</u>	<u>Revenue Per Head in Constant 1701 Prices £</u>
1700	4.1	3.6	0.52
1705	6.5	6.9	0.99
1710	10.0	9.0	1.26
1715	6.4	6.4	0.90
1720	6.4	6.7	0.94
1725	5.5	5.7	0.81
1730	5.6	6.0	0.85
1735	5.9	6.7	0.95
1740	6.2	6.4	0.92
1745	9.7	10.9	1.51
1750	9.3	9.9	1.34
1755	8.0	8.4	1.10
1760	17.5	17.9	2.29
1765	10.2	9.7	1.20
1770	9.4	8.9	1.06
1775	11.9	10.4	1.20
1780	23.1	20.3	2.27
1785	22.4	18.4	1.97
1790	17.0	14.0	1.44
1795	39.4	27.7	2.72
1800	52.2	27.2	2.55
1805	58.1	33.8	2.96
1810	75.6	37.2	3.07
1815	102.8	46.7	3.54

Notes and Sources:

1. "Total Collected" is from Chisholm Report, 1868-69. Total collected is total receipts of taxes and other revenue at the Exchequer plus the net amount borrowed. This is net revenue throughout the period. I corrected Chisholm's figures for the years after 1802, which are statistics of gross revenue in order to obtain a consistent definition of revenue over time. The problems of using these totals are discussed on pp.6-8.
2. "Amount Collected in Constant Prices" is column 1 deflated by Schumpeter's price index - see K. Schumpeter, 'English Prices and Public Finance'. Her

prices were contract prices and the base year used was 1701. For a discussion of the index see Mitchell, Abstract of Historical Statistics, pp. 466 and 469.

3. "Revenue Per Head in Constant Prices" is column 2 divided by the estimated population for Great Britain. I used Brownless estimates for England and Wales and extrapolated for Scotland on the assumption that the Scottish population grew at the same rate as the English. Estimates are available for Scotland for 1701, 1751, 1791 and 1811 - see Deane and Cole, British Economic Growth, p.6.
4. The years are 5 year averages centering on the quoted year. 1815 is average for 1812-15.

Table 2. War and Public Revenue

<u>War Period</u>	<u>Annual Average of Public Revenue in 1701 prices.</u>	<u>Revenue Per Head in 1701 prices</u>
	£ m.	£
1708-12	9.0	1.26
1743-47	10.9	1.51
1758-62	17.9	2.29
1778-82	20.3	2.27
1812-15	46.7	3.54

Sources: See Table 1

This table shows that in absolute terms the wars of the 18th century imposed an increasing burden on the population and the economy and that the wars against France from 1753-1815 were far more costly than any previous war.

Of course the absolute figures are not as illuminating as comparisons of the share of total output appropriated by the State over time. Although national accounts are not available, if we utilise Deane and Cole's index of real output for the 18th century, it is possible to give a rough indication of changes in the share of national income appropriated by the State between 1700 and 1810.

Table 3. Changes in the Share of National Output Appropriated by the State
1700 to 1810

Years circa	1 Index of Real Output	2 Index of Revenue in Constant 1701 Prices	Index of Share of Output Appropriated by the State (2:1)
1700	100	100	100
1710	108	250	232
1720	108	186	172
1730	110	167	152
1740	115	178	155
1750	125	275	220
1760	147	497	339
1770	144	248	172
1780	167	564	338
1790	190	389	205
1800	251	756	301
1810	306	1033	338

Notes and Sources:

The index for changes in real output is from Deane and Cole, *British Economic Growth*, p.78. The change between 1800 and 1810 is based on their national product estimates - see p.282.

Revenue at constant prices is from Table 1.

In relative terms the index suggests that the share of national income appropriated by the State rose rapidly in periods of war and fell again in peace time, but never to the previous level. Wars in the first half of the century (1703-13 and 1740-48) absorbed a far smaller proportion of the nation's resources than wars thereafter. Nevertheless, the share of national output absorbed by the 7 Years War, the American War of Independence and the Revolutionary and Napoleonic Wars appears to have remained roughly constant.

This thesis is a study and an appraisal of the methods employed by the Government to finance the Revolutionary and Napoleonic Wars. I also propose to treat the financial years 1793-1815 as a continuous span of war finance despite the Peace of Amiens and the short interval of peace between the Treaty of Paris and the battle of Waterloo. Strictly speaking, the period of war finance persisted into the 1820's because the problems of taxation and debt management which had emerged as a result of the conflict with France continued to exercise the Treasury for several years after Waterloo. Moreover, it is difficult to select a date when the military establishment reverted to its normal peace time level again. Perhaps, however, the attempt to distinguish war from peace finance is relevant only for calculations of the total cost of the wars against France.¹ But my central interest is the methods used and the problems encountered by the Government in its endeavours to obtain finance for the prosecution of the war. For this purpose 1793 and 1815 are the relevant terminal dates and the years immediately after Waterloo might be regarded as a period of the reversion and reconstruction of the British financial system to a peace establishment.²

Throughout the thesis the geographical reference for public income will be Great Britain and not the United Kingdom of Britain and Ireland, although legally both countries were united in 1801. Britain is the relevant area for this study because the British Government raised most of the finance required to prosecute the war in Britain from British citizens. Moreover, for 16 years after the Act of Union the financial systems of both countries remained separate and the administration in Dublin retained responsibility for the collection and expenditure of revenue in Ireland. Under the articles of the Act of Union defence and several other minor items of public expenditure became a joint concern and the agreement fixed Ireland's contribution to their finance at two seventeenths but in practice the Dublin administration began to transfer money into the British Exchequer in 1811. Even then the sums passed over fell below the stipulated proportion and amounted in total to about £9 million between 1811-15.³

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1. On this see Chisholm Rept., 1868-69, Appdx.13, p.1191 and Lowe, The Present State of England, 1822, pp.22-25, 35-36 and Appdx. Ch.2.
 2. Acworth, Financial Reconstruction, 1815-22.
 3. Chisholm Rept., 1868-69, Appdx:5.

But from 1797 to 1815 the Treasury transferred £64 million raised in Britain to the Irish administration largely to assist in the build up of the military forces in Ireland.¹ About 14% of the money borrowed by the Government on the London capital market between 1793 and 1815 was later transferred to Dublin and the Irish Government assumed responsibility for the interest and sinking fund payments.² It appears logical, however, to define all money borrowed by the British Government as the public revenue of Great Britain, regardless of where and by whom the money was subsequently spent. There seems to be no essential difference between the transfer of British revenue to Ireland and its remittance as loans and subsidies to allied powers in Europe to assist in their military endeavours against France. For a study of public finance during the period 1793-1815 Ireland can conveniently and logically be regarded as a foreign country.

Public or Government revenue in the late 18th century can neither be easily defined nor measured. Finance accounts presented annually to Parliament during the period are a confusing mixture of net and gross revenue and are not made up with reference to a consistent series of financial years.³ Historians of public finance normally utilise Chisholm's massive report on public income and expenditure from 1688 to 1868 based upon original Treasury and Exchequer records. This work has the great merit of stating clearly what is included in the annual accounts and of employing a consistent definition of public revenue throughout the study. For comparisons of broad trends over long periods of time it is an invaluable document, but as an accurate measure of the public revenue for particular financial years or a short span of years Chisholm's accounts are open to serious objections.⁴

Chisholm defined public revenue as "receipts at the Exchequer", but recognised that a small but significant proportion of the Government's income never entered the Exchequer but was spent by the departments which collected it. All departments responsible for the assessment of taxes paid their management charges from the taxes collected before remitting the balance to London. In addition Parliament had devolved onto the Revenue departments responsibility for

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1. Accounts and Papers, 1822, p.138. I calculated the "cash equivalent" of loans set out in the above account - see pp 12-13.
 2. Chisholm Rept., 1868-69, Appdx.5.
 3. Ibid, Appdx.13; Binney, British Public Finance, Appdx.V and Annual Finance Accounts, 1801-1815 in Parly.Papers.
 4. I used Chisholm's figures for the construction of Table 1.

the payment of a variety of public services, which they met directly from the taxes they collected. For example, the Board of Customs disbursed bounties or subsidies to producers of corn, silk, gunpowder, sail cloth, linen, cordage, fish and refined sugar. From the revenues under its jurisdiction the Board of Taxes paid part of the costs for the militia, the Army reserve and recruitment for the armed services. It also transferred subsidies to selected industries and towards the maintenance of civil Government in Scotland.¹

Apart from the disbursements of departments responsible for the collection of revenue, the military services financed a small part of their expenditure from the sale of redundant stores and equipment. More important, they financed, also without reference to the Exchequer, a far larger share of their activities through short term borrowing. If the services found themselves without the necessary finance to meet current needs their accountants obtained goods and services on credit by issuing bills of exchange drawn on the Treasurers of the Navy, Army or Ordnance. As funds became available from the Exchequer their debts were redeemed but over any given financial year or span of years if, for reasons discussed below, the Exchequer did not make sufficient funds available to meet all the current expenditure incurred by the services, they raised their own finance.²

In Chisholm's Report the accounts up to 1801 omit from total revenue disbursements by tax departments and short term borrowing by the military services. After that date the accounts include the former but not the latter.³ Of course over time the debts of the Army, Navy and Ordnance were redeemed by funds issued to them from the Exchequer, but in the short run the totals of revenue described by Chisholm as "gross" omit this source of public finance.

Far more serious objections to the use of the accounts prepared by Chisholm as a record of public revenue can be found in his treatment of income from borrowing. As Elizabeth Schumpeter noticed, to measure the income derived by the State from borrowing it is necessary to deduct from the gross sums borrowed repayments made by the Treasury to its creditors. Unfortunately she failed to observe that the figures included by Chisholm under the headings of

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1. State of Navigation Revenue and Commerce of Great Britain, Customs 17/10-30, 1788-1808.
 2. See pp.42-45.
 3. Chisholm Rept., 1868-69, pp.

"Total Raised by the Creation of Funded and Unfunded Debt" and on the other side, "Total Applied to the Reduction of Debt" do not constitute a complete or unambiguous record of gross income from loans or of expenditure for the redemption of public debt.¹ Chisholm omitted the borrowing operations of the military services and redemption of debt raised by the British Government for the Irish administration. More seriously his accounts confuse transactions designed to obtain cash for the Government with operations for the renewal of loans and the conversion of short term into long term forms of public debt. He failed to understand that transactions which simply altered the structure of assets which composed the National Debt did not provide the State with revenue and should be distinguished from the borrowing and repayment of loans.²

If we define public revenue as the net transfer of cash to the central Government and its agencies either in the form of the gross amount collected as taxes, the net amount received from loans, as the net income from goods and services sold by the State and other miscellaneous items of revenue, then neither the Finance Accounts published at the time nor Chisholm's far superior but nevertheless defective presentation, provide an accurate or unambiguous statement of public revenue of Great Britain for the period 1793 to 1845. I preferred, therefore, to build up my own picture from original sources and to present the results in the following table, which is also designed to reveal that part of the total revenue which can be defined as war finance.

Before commenting in general terms upon the figures themselves, it is necessary to define in some detail the concepts employed in their presentation. Column 1, "Total Taxes Collected", includes all taxes collected over the financial year ended 5 January by all departments of State responsible for their assessment minus discounts, overcharges and drawbacks repaid to the private sector. Overcharges are self-explanatory; discounts were paid for the prompt payment of tax obligations and drawbacks consist of the repayments made by the Revenue departments of the entire or a part of the taxes levied upon commodities subsequently exported. Drawbacks were repaid at the point of export and were sometimes allowed on the taxed raw materials used in the manufacture of commodities sold overseas. My total includes expenditures made by the revenue

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1. Schumpeter, 'English Prices and Public Finance', pp.27-29.
 2. Chisholm Rept., 1868-69, annual accounts under the headings of "Total Raised by the Creation of Funded and Unfunded Debt" and "Total Applied to the Reduction of Debt."

Table 4. The Public Revenue of Great Britain, 1793-1815

(in £. Millions)

Year	TAXES			OTHER				BORROWING				TOTALS		
	1 Total Taxes Collected	2 Peace Taxes	3 Total War Taxes (1-2)	4 Other Revenue	5 Funded Borrowing	6 Sinking Fund Payments	7 Net Funded Borrowing (6-5)	8 Bills Funded	9 Total Funded Borrowing (7+8)	10 Total Unfunded Borrowing (7+10)	11 Total Loans	12 Total Revenue (1+4+11)	13 Total War Revenue (3+11)	
1793	18.8	17.6	1.2	0.6	4.4	1.6	2.8	-	2.8	3.9	26.1	7.9		
1794	18.5	17.6	0.9	0.7	10.5	1.9	8.6	1.9	10.5	3.8	31.6	13.3		
1795	19.7	17.6	2.1	0.7	17.0	2.1	14.9	1.5	16.4	7.9	43.2	24.9		
1796	20.6	17.6	3.0	0.9	17.3	2.6	14.7	24.1	38.8	17.8	54.0	35.5		
1797	22.6	17.6	5.0	1.9	31.1	3.4	27.7	-	27.7	0.6	52.8	33.3		
1798	28.1	17.6	10.5	1.6	16.4	4.0	12.4	-	12.4	2.9	45.0	25.8		
1799	33.1	17.6	15.5	2.1	18.0	4.4	13.6	-	13.6	6.1	54.9	35.2		
1800	31.9	17.6	14.3	2.2	19.7	4.8	14.9	-	14.9	8.6	57.6	37.8		
1801	33.8	17.6	16.2	2.4	26.5	5.3	21.2	8.9	30.1	1.4	58.8	38.8		
1802	35.0	17.6	17.4	2.7	27.7	5.9	21.8	-	21.8	-8.8	50.7	30.4		
1803	35.0	17.6	17.4	2.6	11.8	6.3	5.5	-	5.5	5.1	48.2	28.0		
1804	43.3	17.6	25.7	3.0	13.9	6.9	7.0	-	7.0	7.8	61.1	40.5		
1805	48.3	17.6	30.7	3.6	23.0	7.6	15.4	-	15.4	2.3	69.6	48.4		
1806	51.8	17.6	34.2	3.4	19.2	8.3	10.9	-	10.9	0.1	66.2	45.2		
1807	56.9	17.6	39.3	3.7	15.5	9.4	6.1	-	6.1	5.1	71.8	50.5		
1808	60.7	17.6	43.1	3.9	10.3	10.2	0.1	3.9	4.0	12.4	77.1	55.6		
1809	61.8	17.6	44.2	4.2	14.3	10.9	3.4	7.8	11.2	8.2	77.6	55.8		
1810	65.0	17.6	47.4	4.7	13.2	11.6	1.6	8.2	9.8	8.2	79.5	57.2		
1811	62.9	17.6	45.3	4.6	11.9	12.4	-0.5	11.8	11.3	15.3	82.3	60.1		
1812	61.5	17.6	43.9	5.9	19.6	13.4	6.2	11.9	18.1	15.9	89.5	66.0		
1813	65.0	17.6	47.4	5.8	26.6	15.4	11.2	15.5	26.7	19.1	101.1	77.7		
1814	67.7	17.6	50.1	6.3	44.6	13.9	30.7	-	30.7	8.8	113.5	89.6		
1815	69.7	17.6	52.1	6.2	34.9	13.3	21.6	17.9	39.5	-3.0	94.5	70.7		
Totals 1793-1815	1011.7	404.8	606.9	73.7	447.4	175.6	211.8	113.4	382.2	149.5	1506.7	1028.2		

departments for their management charges, subsidies to producers, payments to the militia and the Scottish administration etc. listed above. My source for the figures for 1708-1808 can be found among the records of the Customs Department entitled a "General Abstract of the State of Navigation, Revenue and Commerce of Great Britain." Apparently the purpose of this abstract was "to present to the Government at one view the gross sum collected from the subject and various deductions therefrom until the net produce is paid into the Exchequer."¹ From 1809-15 similar accounts can be found in Parliamentary Papers.²

Column 2, "Peace Taxes" is the annual average of taxes collected by the State over the period 1708-52. Column 3, "War Taxes" is the difference between columns 1 and 2. I define as "War Taxes" taxes employed to finance the additional expenditure incurred as a result of war and not met from loans or other sources of finance. The definition rests upon the not implausible assumption that, in the absence of war, public expenditure would have remained constant between 1753 and 1815.³ Thus increments to tax revenue collected after 1753 provided the finance required to meet additional military expenditure, interest on money borrowed to pay for the war, increments to civil expenditure which inevitably rose in wartime and any extra expenditure in money terms which arose as a result of the wartime inflation.

Column 4, "Other Revenue" is an aggregation of the following items, interest on loans made by the British Government to the administration of Ireland, the private sector and other Governments, net profits from the postal service and the State lottery. These three items contributed the bulk of revenue listed under this heading but the following minor sources of revenue are also included: first fruits and tenths, hereditary revenues, imprest money repaid, exchequer fees, conscience money, voluntary contributions, sales of public goods and property, income from Crown lands, seizures, fines and sales of war prizes.⁴ Since taxation and borrowing together provided most of the finance required for the war I propose to ignore all other sources of revenue. Further descriptions of the items referred to above can be found in Chisholm's study of the public accounts.

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1. Customs 17/15-30.
 2. Accounts of Revenue, 1814-15, pp.121 and 127 and 1816, pp.5-42. These figures are Annual Finance Accounts and link up with the manuscript source in footnote 1.
 3. See Cttees. on Public Income and Expenditure, 1786 and 1791.
 4. Customs 17/10-30 and Chisholm Rept., 1868-69, pp.505-595.

The next seven columns all refer to revenue derived from borrowing. Transactions between the State and the private sector for loans are described in detail in Chapter 2 and here only brief definitions will be set out. Basically I have attempted to simplify a complicated range of transactions which involve two distinct types of borrowing, the repayment or redemption of debt and conversion of one kind of public debt into another.

During the war years the Government borrowed money in two distinct ways, called at the time funded and unfunded borrowing. Funded borrowing (the gross amount raised is tabulated in column 5) involved the transfer of funds from the private sector to the State in exchange for paper securities or promises by the Government to pay its creditors an annual sum in perpetuity. Under the terms of the contract with its creditors the State entered into no obligation to repay the principal of the loan but simply promised to pay interest until such time as it opted to redeem the debt. Unfunded borrowing (the net amount is tabulated in column 10) also involved loans from private citizens to Government but in this case the State contracted to pay not only interest but to repay the principal of the loan after an agreed and usually short period of time.

Unfunded borrowing conducted through the exchange of cash for public securities called bills can also be distinguished from funded borrowing in terms of the functions it performed within the 18th century system of finance. Funded borrowing was used principally in wartime to provide finance for the increased military expenditure. On the other hand Chancellors used bill finance as an expedient to provide the Treasury with funds whenever some regular forms of finance from loans and taxes were not available to meet day to day expenditures. The Exchequer might be short of funds either because the Chancellor had not provided fully for all expenditure over the financial year in his budget statement or because receipts from taxes and loans lagged behind expenditure. But the Chancellor of the Exchequer also employed unfunded borrowing to anticipate income from loans and taxes expected to accrue to the Government outside any given financial year. In this case they opted to use bill finance in order to obtain current revenue.

Not only did the Government borrow money, it also repaid loans or redeemed

1. Borrowing is dealt with in detail in Ch.2.

debt. Revenue from borrowing should, therefore, be defined as the amount borrowed less the sum repaid. Although the State entered into no obligation to repay the principal of loans issued on the security of perpetual annuities it could, however, opt to redeem them and throughout the war period Commissioners for the Sinking Fund redeemed funded debt through the purchase of perpetual annuities in the capital market.¹ Column 6 "Sinking Fund Payments" is a record of the amount spent by the Government in order to repay funded debt, and column 7 (the difference between columns 5 and 6) "Net Funded Borrowing" is the contribution made by this form of borrowing to public revenue.

My figures of the gross sum borrowed (column 5) tabulated with reference to particular years are not quite a record of the cash transferred from the private sector to the Government within the year. Occasionally payments on loans commenced before the beginning of the year or continued after its close. For example, in 1813 Vansittart raised a loan to finance expenditure for 1814 and the contract provided for payments to be made over the period November, 1813 to April, 1814 and the contract for the loan for the year 1815 provided for payments over the period June, 1815 to March, 1816.² Payments on most loans negotiated between 1793 and 1815 were usually completed before the end of January after the years in which they were negotiated. Expenditures by the Commissioners for the Sinking Fund (column 6) related to a financial year which ended on 1 February.³ I propose, however, to refer the figures of revenue collected and repayments on loans to the tax year, namely the year ended 5 January annually.⁴

Income received at the Exchequer from loans invariably fell short of the original amount specified in the contract between the Treasury and loan contractors because subscribers were allowed discounts for prompt payment on their instalments. Some subscribers defaulted and the Bank deducted charges for its services in the administration of loans. For example, the contract for the loan of February, 1794 mentions a sum of £11 million but eventually the Exchequer received £10,806,671.⁵

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1. On the Sinking Fund see pp.63-64 and 229-230.
 2. *Fairy Debs.*, vol.27, pp.126-127 and *Commons Jnl.*, vol.70, p.396.
 3. *Sinking Fund Accounts in Commons Jnl.*, vol. 69, p.656 and *Accounts and Papers*, 1890-91, p.39.
 4. This is the year used in *Customs - 17/10-30*.
 5. *Bank Minutes*, 3.2.94. and *Commons Jnl.*, vol.49, p.136. My sources for loan contracts included *Acts of Parliament*, *Ways and Means Resolutions in Commons Journals*, *Bank Minutes* and newspapers.

Furthermore, almost all loan contracts provided for an interest bonus. That is interest on loans to the State often commenced well before subscribers transferred cash into the Bank of England. A summary of the contract for the loan of £12 million for 1803 will elucidate the point. On 13 June, 1803 the Chancellor settled terms with the contractors who agreed to pay the required sum into the Bank of England in 7 instalments over a period which ran from 17 June, 1803 to 23 December, 1803. In return they received £80 in 3% Consols, interest to commence from 5 July, 1803 and £80 3% Reduced Stock, interest to commence from 5 April, 1803 and a Long Annuity of 6/5.¹ It is apparent from a review of the contracts that subscribers to the loans negotiated during the war years normally received interest prior to their payments to the Government. Some contracts also allowed them to receive one or two payments of dividends on their investments, free of income tax. To arrive at the "real" amount of the loan to the Government I have deducted the value of the interest bonus and tax concession allowed under the contract from receipts from loans. Thus column 5, "Funded Borrowing" represents loans net of administration charges, discounts for prompt payment, interest bonus, tax concessions and default on payments.

My sources for the figures tabulated in columns 5 and 6 are Accounts and Papers presented to Parliament; for payments of loans into the Exchequer, Resolutions of the Committee of Ways and Means and Statutes of the Realm and Report Book of the Bank of England for details of the interest bonus and other concessions given in loan contracts for the period.² Accounts of the Commissioners for the Sinking Fund can be found in the Journals of the House of Commons.³

Ideally to calculate the net sum raised through the medium of unfunded borrowing, figures are required of gross receipts from the issue of bills and gross repayments of bills. Except for a part (albeit a major part) of unfunded borrowing, namely borrowing conducted by the Exchequer, such figures do not appear to be available. Accounts of the receipts and payments for other departments of State such as the Treasury and the military services, who also borrowed short term, could not be traced and I resorted therefore to accounts of

1. Bank Minutes, 13.6.03.

2. Accounts and Papers, 1822, pp.131-145; 1813-14, p.107; Resolutions of the Committee of Ways and Means are printed in Commons Jnl.

3. Commons Jnl., vol. 69, p.696 and Accounts and Papers, 1890-91, p.39.

the total unfunded debt outstanding. Over any given financial year the unfunded debt rose as the State borrowed on the security of bills and fell as it redeemed or paid off matured bills. Thus the change in the amount of unfunded debt outstanding between any two dates is the net amount borrowed or repaid over that period.

Unfortunately complete statements of the unfunded debt at 5 January, in each year from 1794 to 1816 are also not published. Accounts of the unfunded debt for the years after 1799 when detailed information became available in the Annual Finance Accounts show that it consisted of bills issued by the Exchequer, Treasury, Navy, Ordnance and Barrack Departments and the Paymaster General of the Army. Figures of the debt outstanding in Treasury bills, Barrack debentures and the bills of the Paymaster General were, however, not published until 1799. Nevertheless the absence of these figures is not serious because they comprised only a very small proportion of the unfunded debt, and it is possible to estimate a large part of the debt of the Treasury by including figures of the amount of Treasury bills held at the Bank of England. Treasury bills were cashable at the Bank and it is likely that the majority issued for any financial year found their way into its portfolio.¹

Another problem with the statistics of unfunded debt is that departments struck balances in their accounts at different times of the year - the Exchequer, Army and Ordnance at 5, January, the Navy at 31 December and the Bank of England accounts of Treasury Bills at 25 February. But the dates are sufficiently close to make it possible to aggregate the debts of individual departments without seriously distorting the accuracy of the total.²

One final complication with unfunded borrowing is that for 11 of the 23 years of war the Treasury converted matured bills directly into perpetual annuities, through transactions referred to at the time as funding operations. As the short term loans to the Government fell due for repayment the Chancellor could either redeem the bills with funds acquired from loans or taxes, he could persuade creditors to renew their loans for a further period of time or he could induce creditors to exchange their bills for perpetual annuities. Only the first transaction involves a flow of funds between the public and private

1. See p. 48.

2. See Table 16.

sectors. The renewal of loans or the conversion of unfunded into funded debt are not, strictly speaking, operations which are concerned to raise revenue, since they do not provide the State with finance for current expenditure.¹ But funding operations do complicate the task of calculating the amount of revenue raised through unfunded borrowing over the year. Between any two dates the amount of unfunded debt outstanding might decline not because the Treasury had redeemed short term debt, but because it had converted bills into perpetual annuities. With funded borrowing the Treasury became involved in two transactions, loans or repayments of loans. With unfunded borrowing it conducted four kinds of operations - borrowing, repayment, renewal and conversion of debt. Only if the amount of outstanding bills converted into funded debt over the financial year are added back to the total of unfunded debt outstanding at the close of the year will it be possible to determine the amount of revenue raised through the medium of unfunded borrowing.

Perhaps if this point is presented algebraically it can be clarified further.

Let x = unfunded debt outstanding at 5 January in year n .

Let y = unfunded debt outstanding at 5 January in year $n + 1$

Let a = gross amount borrowed on bills over the year n to $n + 1$

Let b = gross amount of bills redeemed in cash over the year

Let c = the amount of unfunded debt converted into funded debt over the year.

In the absence of conversion operations the contribution made by unfunded borrowing to the finance of public expenditure would be:

$$y - x = a - b$$

With conversion operations the contribution is:

$$y + c - x = a - b$$

Fortunately the value of bills converted into funded debt has been recorded in accounts presented to Parliament (column 8 "Bills Funded").² From time to time when the Treasury attempted but failed to persuade its creditors to exchange bills for perpetual annuities it was compelled to raise a loan in order

1. For a full discussion of funding operations see pp.

2. Accounts and Papers, 1822, pp.131-137. Details of the funding operations can be found in Commons Jnls. and Report Book of the Bank of England.

to redeem matured short term debt. I have treated loans raised for the sole purpose of repaying unfunded (as the Treasury did at the time) as equivalent to conversion operations and included the figures in column 8.¹ No problem of time reference arises with funding operations because bills were converted into funded debt on specific dates within a given financial year. Given figures for bills funded and the somewhat imperfect accounts of the total unfunded debt outstanding at or about 5 January in each year, I have calculated total unfunded borrowing over the years 1793 to 1815.² Negative figures imply that total repayments of unfunded debt exceeded total receipts from the issue of new bills.

Column 12 "Total Revenue" is the sum of all revenue collected over the year, namely the aggregation of columns 1, 4 and 11. Column "Total Loans" is the receipts from net funded and net unfunded borrowing. "Total War Revenue" tabulated in column 13 is the total additional revenue raised as a consequence of the wars against France. It includes "War Taxes" already defined plus "Total Loans". In peace time the Government normally financed expenditure with tax revenue. The public accounts for the 18th century show that loans made little contribution to public revenue in times of peace. Of course borrowing occurred, particularly unfunded borrowing, but normally gross receipts were exceeded by the amount of debt redeemed, and, in general, additions to the National Debt came in wartime. I have, therefore, defined receipts from loans as war finance.³

Given the definitions of the column headings and the limitations of the figures set out in Table 4 we can now comment in general terms upon the sources of revenue raised to finance the wars against France. 58% of this revenue came from taxation. On other definitions of "War Revenue" this proportion tends to exaggerate the contribution of taxes. If, for example, "War Revenue" is redefined as revenue collected to finance real expenditures which arose as a result of the conflict with France, the contribution of taxes collected to meet the interest on loans raised to pay for the war should be excluded. It is certainly instructive to juxtapose interest payments made by the State with the sums it raised in loans and taxes to finance the war.

1. Loans specifically to redeem bills were raised in 1796, 1801, 1811, 1812 and 1815. The figures in column 8 are also net of discounts for prompt payment and interest bonus given to bill holders.

2. See Table 16.

3. See Accounts of the National Debt, 1857-58, pp.235-243.

Table 5. Interest Payments on the National Debt and War Finance, 1793-1815

Year	Total Interest Payments £m.	Interest on Debt Incurred 1793-1815 £m.	Total Borrowed £m.	Total War Taxes £m.
to 10 October				
1793	9.0	0.8	6.7	1.2
1794	9.7	0.5	12.4	0.9
1795	10.2	1.0	22.8	2.1
1796	11.1	1.9	32.5	3.0
1797	13.2	4.0	28.3	5.0
1798	17.1	7.9	15.3	10.5
1799	17.7	8.5	19.7	15.5
to 5 January				
1800	3.3	1.0	-	-
1801	16.4	7.2	23.5	14.3
1802	17.2	8.0	22.6	16.2
1803	19.4	8.2	13.0	17.4
1804	19.7	10.5	10.6	17.4
1805	19.5	10.3	14.8	25.7
1806	21.0	11.8	17.7	30.7
1807	21.7	12.5	11.0	34.2
1808	22.5	13.3	11.2	39.3
1809	22.0	12.8	12.5	43.1
1810	23.1	13.9	11.6	44.2
1811	23.5	14.3	9.8	47.4
1812	23.6	14.4	14.8	45.3
1813	25.2	16.0	22.1	43.9
1814	26.0	17.8	30.3	47.4
1815	28.3	19.1	39.5	50.1
1816	31.1	21.9	18.6	52.1
Total	451.5	236.0	421.3	606.9

Notes and Sources: Interest on Debt Incurred 1793-1815 is the increment to the Government's interest bill after 1792. The interest bill includes interest paid on the funded and unfunded debt and annuity payments. The figures are issues from the Exchequer recorded in Chisholm Rept., 1868-69. Total Borrowed and Total War Taxes are columns 11 and 3 from Table 4.

Table 5 shows some £236 million of additional tax revenue collected between 1793 and 1815 went to pay interest on the National Debt accumulated as a consequence of the war. Thus on the alternative definition it would be the case that only 47% of "War Revenue" came from taxation. The table also shows that the total interest payments on the National Debt between 1793 and 1815 exceeded the amount borrowed by £30 million. Even the interest paid on loans raised to finance the war amounted to 56% of the sum borrowed. Comparisons of this kind are, however, relevant to the measurement of the volume of real resources transferred from the private sector to the State, but my central concern is with the Government's problem of raising revenue to cover all increments to expenditure between 1793 and 1815, including additions to the interest bill, and my definition of "War Revenue" is relevant to this concern.

Another general observation concerns the amounts raised by funded and unfunded borrowing respectively. A comparison of columns 7, 10 and 11 indicates that the latter contributed 35% of the money borrowed throughout the war period. If, however, unfunded borrowing is regarded (as it was at the time) not as an independent technique for obtaining revenue, but as a temporary expedient to meet the needs of the Exchequer until such time as the Treasury converted bills issued to obtain the necessary funds into perpetual annuities, the contribution to War Revenue as measured by the aggregate amount raised by unfunded borrowing considerably overstates its significance.

If the contribution of funded borrowing is taken to include loans and bills funded (column 9 in Table 4) then the contribution of unfunded borrowing to the finance of war shrinks to a mere 9% of the total sum borrowed. But in the short run unfunded borrowing did provide revenue. For particular years, namely 1793, 1796, 1803 and 1808-12 it provided the Government with more revenue than funded borrowing. Only if the finance of the French Wars is looked at in aggregate terms is it correct to conclude that the revenues required came basically from two sources: taxes and loans.

The Decisions

Compared with the finance of other wars in the 18th century the outstanding feature of the wars against France is the far greater proportion of revenue from taxes.

Table 6. War Finance, 1700-1815

<u>Years of War</u>	<u>Tax Revenue as a Proportion of Total Revenue Raised to Finance the War.</u>
1702-13	26%
1739-48	21%
1756-63	20%
1775-83	19%
1793-1815	58%

Notes and Sources: I defined "Revenue Raised to Finance War" in the manner already outlined for Table 4. The actual dates of wars were: May, 1702 to March, 1713, October, 1739 to October, 1748, May, 1756 to February, 1763, June, 1775 to September, 1783 and February, 1793 to November, 1815 - including the Peace of Amiens.

Previous wars in the 18th century had been financed largely through the medium of funded borrowing and taxes had been imposed in wartime only sufficient to meet additional interest payments on the National Debt. Until the end of the century taxes had not been employed as a medium of war finance. Furthermore, the figures included in Table 4 will show that the departure from traditional policy did not come until 1798, the sixth year of the war. From 1793-97 only 10.4% of the additional finance required came from taxes but in 1798 the proportion rose to 40.6% and throughout the years after the Peace of Amiens revenue from taxes persistently exceeded the Government's income from loans.¹

Why Pitt and his successors at the Treasury chose to depart from traditional policy cannot be answered affirmatively without records of Cabinet minutes, but the attitude of Ministers and Parliament to the National Debt forms the background to any understanding of their willingness to employ taxes to finance war expenditure. During the American War of Independence, the National Debt increased from a nominal capital of £130 million to £243 million and the interest charge from £4.8 million to £9.5 million.² After the war, in a

1. See Table 4.

2. Hargreaves, National Debt, p.291.

climate of unease about the size of the debt and the country's capacity to bear the taxes involved in its further accumulation, Pitt revived the Sinking Fund as a regular part of public finance and placed the debt under a regular course of redemption. His Sinking Fund plan received general acclamation and allayed fears about the burden of interest payments and the magnitude of the debt itself. When war commenced again in the spring of 1793, Pitt decided to persist with the Sinking Fund, a policy which again received widespread support in Parliament and among the middle and upper classes.¹

From even a cursory reading of the pamphlet literature and Parliamentary discussion on the Sinking Fund in the late 18th century, it is obvious that most men who were at all articulate about the question of public finance, including Ministers of the Crown, shared a strong antipathy to the continued accumulation of the National Debt than either their predecessors or successors in the Victorian age.² With the re-commencement of war the debt began to accumulate at a more rapid rate than ever before. Between 1793 and 1798 its nominal capital rose by 76% and the interest bill almost doubled.³ Interest rates on public securities moved upward very sharply and in this situation predictions of national bankruptcy and the imminent collapse of the financial system appeared in pamphlets, newspapers and speeches in the House of Commons.⁴ These prophets of woe attacked the Government for having embarked upon a war which had brought the country close to the "brink of ruin".⁵

In part the attacks on financial mismanagement were attacks on the war itself, nevertheless Pitt and his Cabinet, who before 1793 had placed such emphasis on restraining the accumulation of the National Debt were vulnerable to criticism of this kind. Ministers were also not unconcerned in case the very high level of public borrowing, which characterised the early years of the war, did undermine confidence in public securities and bring about the collapse of the financial system, as Tom Paine and other Radicals predicted. Moreover, from the summer of 1795 until the Suspension of Specie Payments in February, 1797, the Treasury lost the traditional support of the Bank of

1. See p. 230.

2. Hargreaves, *National Debt*, chs. 5 and 6 and see pp. 63-64, 221, 235 and 236.

3. *Accounts of the National Debt, 1857-58*, pp. 241-43 and see Table 5.

4. See Table 19 and p. 222.

5. See footnotes 1 and 2, p. and Anon, 'The Political Salvation of G.B.', p. 71; Lauderdale, 'A Letter', 1798, p. 2. and Morgan, 'Facts', 1796, pp. 3-9.

England for its borrowing operations. As the Bank contracted liabilities in order to protect its gold reserve the Government found it not only more expensive but increasingly difficult to raise funds on the London money market. The Bank's deflationary policy also aroused the hostility of the mercantile community, whose support for the war Pitt anxiously hoped to retain.¹

Already in the autumn of 1796 Pitt consulted Sinclair, Pulteney and Henry Thornton about the possibility of raising more supplies within the year through taxes.² At the end of the year, faced by the prospect of an early French invasion with an extremely tight situation in the capital market and pressure from the Directors to restrain Government demands on the Bank of England, the Chancellor resorted to the desperate expedient of a Loyalty Loan - a loan by open subscription which he hoped would provide the administration with sufficient funds to meet the French threat at a lower rate of interest than the Government could then hope to obtain through the normal channels of the capital market.³ In February, 1797, in order to avoid the collapse of the Bank of England, the Privy Council relieved the Bank of the obligation to redeem its note in specie. At the subsequent inquiry the Directors made it clear that the possibility of the Bank's failure to meet its liabilities had arisen through heavy demands made upon it by the Government.⁴ Since specie payments had been initially suspended as a temporary expedient to avert financial chaos in the money market, Ministers realised that the demands of the state for funds would have to be modified in order to bring about a more secure ratio between gold and liabilities at the Bank of England and to place the Bank in a situation where it could increase credit to the private sector.⁵

But in April, 1797, the Government found it necessary to raise a further loan of £14½ million at a rate of 6.3%, the highest rate paid for funds certainly since 1756 and a rate never exceeded in the 19th century.⁶ Pitt's advisers warned him that further loans might push the rate on consols above 8% and by the end of the war, convinced that the war would be protracted beyond all his earlier expectations, he convinced the Cabinet that a far greater

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1. See pp. 86-87, 110, 111, 125, 134, 135, 176 and 205-206.
 2. Pitt Papers, vol. 178 - dd. 20.9.96. and 183, - dd. 14.9.96.
 3. See pp. 128-129.
 4. See pp. 136 and 202-206.
 5. See pp. 135-137.
 6. Commons Jnl., vol. 52, p. 512. For the yield on Consols in the 18th century see Ashton, Economic Fluctuations, p. 187 and for the 19th century, Mitchell, Abstract of Historical Statistics, p. 455.

proportion of the finance for war had to come from taxes.¹ As Lord Liverpool later admitted to Huskisson, the change was not a matter of choice but of necessity.²

Yet the Government still faced the problem of which taxes to employ and how to convince Parliament and public opinion that a radical departure from traditional policy was required. Pitt apparently contemplated an income tax but his advisors convinced him it would not be acceptable and in the autumn of 1798 he introduced a modified form of direct taxation, based upon the expenditure patterns of the more affluent classes - the Triple Assessment.³ His speeches to the House and those in support of the Government stressed the continued danger of direct French aggression on the country, the very high cost of loans and the desirability of placing some limit to the rise in the National Debt.⁴ As the Chancellor told the Commons, "Some medium, may, however, be found to draw as much advantage from the funding system as it is fit, consistently with due regard for posterity and at the same time obviate the evils with which its excess would be attended."⁵ Pitt knew that a reduction in borrowing by the Treasury would reduce the supply, stimulate competition and raise the price of public securities in the capital market.

Apart from deriding the Triple Assessment as an inequitable and unworkable instrument of taxation the opposition attempted to meet the argument that more taxation was required by asserting that the burden would become intolerable and self defeating, because increased taxation would adversely affect the volume of production. Fox, Sheridan and Whigs attacked the war itself, but as it had to continue they preferred loans to taxes.⁶ Their arguments found very limited support in Parliament.⁷ But their views on the Triple Assessment itself evoked more response and a year later when the implementation of the tax had shown it to be manifestly inequitable and unworkable, Pitt introduced a full scale income tax which he prefaced with the argument that Parliament had already conceded the principle of financing a large part of war expenditure through taxation.⁸

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1. The memos on this problem are in Pitt Papers, vol.273 - dd.11.10.97; vol.302 - dd. October, 1797; Liverpool Papers, vol.38354 - dd. 11.10.97; Dropmore Papers, vol.3, p.382 and Windham Papers, vol.37877, pp.205 and 268.
 2. Huskisson Papers, vol.38737 - Liverpool, dd.29.12.06.
 3. Pitt Papers, vol.302 - memo dd. October, 1797.
 4. Parly.Hist., vol.33, pp.1036,1042,1050-51,1053,1054,1067,1109,1136,1139,1192 and 1286; Lowe, Present State of England, 1822, p.21 and see pp.398 & 401-402.
 5. Parly.Hist., vol.33, p.1041.
 6. Ibid, pp.1105,1112 and 1123-26; Holland, Memoirs of the Whig Party, pp.96-97; Olphin, Tierney, pp.54 and 69; Auckland's Correspondence, vol.4, p.45; Lauderdale, 'A Letter on Present Measures of Finance', 1798, pp.1,6,19-22 and 33-37 and Rose, Life of Pitt, vol.1, p.330.

With the passage of an income tax through Parliament in 1799, the Government found it not only expedient but possible to raise more supplies within the year. As Vansittart pointed out in 1809, every Chancellor of the Exchequer after Pitt followed his policy.¹ The precise proportion of loans to taxes depended, however, on circumstances in particular years and also no doubt on the Government's strength in the House of Commons. Historians have often commended Pitt for his breakthrough in financial policy and some have criticised his tardiness or lack of courage in not introducing the change much earlier.² Presumably the basis of this critique rests on the assumption that the national interest demanded taxes rather than loans - an assumption it would be difficult to support at all conclusively. Yet given Ministers' views on the National Debt at the outbreak of war, it is a little surprising to find that war taxes came only after the financial crisis of 1796-97. To some extent an explanation can be found in their mistaken estimate of the duration of war and their unwillingness to risk conflict with Parliament over relatively small sums of money.³ Perhaps also the economic crisis of 1793 helped to restrain them from any precipitate additions to the tax burden, but weight in any answer to this question should probably be given to the view that it required the threat of a French invasion and a financial crisis to convince Ministers and Parliament of the need for far higher levels of taxation in general and a direct tax on income in particular. Members certainly viewed the accumulation of the National Debt and the mounting interest charges with more alarm than their forebears but they disliked taxes, especially direct taxes just as strongly. The crisis of 1796-97 helped to convince them that the two views were irreconcilable.

If the choice between loans and taxes represented the primary and most clear cut decision taken by Chancellors of the Exchequer in their arrangements for the finance of additional military expenditure, it by no means exhausted the problems which confronted them year after year. They had still to select

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7. Granville, *Correspondence of Granville*, vol.1, p.182.
 8. *Parly.Hist.*, vol.34, pp.3-4 and 98; Sinclair, *History of the Revenue*, 1802, pp.220-222 and see pp. 402-403.
 1. Vansittart, 'Substance of a Speech', 1809, pp.5-8; Huskisson Papers, vol. 38759 - memo on finance for 1806 and Liverpool Papers, vol.38363 - Vansittart memo on finance, May, 1812 and memo dd. 20.12.14.
 2. Hirst and Allen, *British War Budgets*, p.4; Massey, *A History of England*, vol. 4, p.262; Hardy, Huskisson, pp.57 and 75; Andreades, *History of the Bank*, pp.177,183-84 and 207 and Talyer, *History of Taxation*, p.49.
 3. Newmarch, 'On the Loans Raised by Pitt', pp.20-24; Hunt, *Political History*, p.347 and Lowe, *The Present State of England*, 1822, p.2.

the appropriate mode of borrowing money and to choose between a variety of taxes. Moreover, tax income could be augmented either by increasing the rates of taxes on incomes, wealth, commodities and services already taxed or by extension to the tax base. In the 18th century most innovations to the tax structure came in wartime when the demands of the Army and Navy became voracious, and the French wars were certainly no exception.

Income could also be increased through improvements to the administration of tax revenue. If the departments of Customs, Excise, Stamps and Taxes responsible for the collection of revenue, became more efficient their costs fell and the amount of tax income available for other purposes rose. More important administrative improvements brought into the net for tax assessment a greater amount of the capital, income, goods and services potentially and legally liable for taxation. The Government's income then rose. Although administrative reform again often came under the pressure of wartime necessity it was a protracted process which could not be regarded as a technique for raising revenue within the year.

Borrowing money involved the Chancellor of the Exchequer and his assistants at the Treasury in a complicated and wide ranging set of decisions which will only be outlined briefly in this introduction. Perhaps a more apposite description of this aspect of 18th century public finance is debt management because the Government was both borrowing (debt creation) and repaying past loans (debt redemption). As the amount of debt redeemed declined the need to borrow diminished and vice versa. Thus if, at a particular moment of time, the Government could postpone the repayment of loans, the level of public borrowing declined and the deferment of debt redemption might, therefore, be regarded as an alternative to borrowing.

Essentially the transfer of loans from the private sector into the Exchequer involved the Government in four types of transaction: the issue and redemption of bonds and the issue and redemption of bills, which encompassed the management of the funded and the unfunded debt. If the Government obtained cash in exchange for bonds it entered into no agreement to repay the principal but simply committed the State to pay interest on the securities in perpetuity. For bills the Government agreed to repay the principal and interest within a defined and short period of time. Thus the Chancellor of the Exchequer had available two distinct and alternative modes of borrowing money.

When it came to the repayment of debt the possibilities open to him increased even further. For bonds the Government under Pitt opted to redeem debt by purchasing bonds from the capital market in order to reduce the amount of funded debt outstanding. At any time the Government could, however, have suspended the operations of the Sinking Fund and allowed the funded debt to increase or remain constant. As bills matured the Government could repay its creditors in cash, persuade them to renew the loan for a further short defined period of time or it could fund the bills. Funding occurred when the Treasury induced bill holders to exchange their matured assets for bonds of equivalent market value. In this case the funded debt increased as the unfunded debt declined.

Given that the Government wished to borrow money as cheaply as possible the Treasury sought to manage its debt in order to minimise the overall interest bill. Since borrowing consisted of marketing public securities to achieve this objective the Treasury attempted to sell the kind of assets most acceptable to the money market. If the demand for bonds declined it paid the Chancellor to market bills and vice versa. If bonds of 5% denomination could only be sold at a lower price than consols it profited the State to market the 3% stock. Basically the business of debt management consisted of matching the supply of public securities to the level and composition of demand. It also involved careful timing in order to take advantage of changes in the disposition of the money market towards public securities. Debt management was the most complex task of public finance.

Finally debt management was intimately related to variations in the level and distribution of the money supply. If the Government borrowed funds from the Bank of England its expenditures placed reserve currency into circulation which could lead to multiple credit expansion by the banking system. As the money supply expanded the Government found it easier and cheaper to raise loans. The State both affected and was affected by changes in the availability of credit. If, however, the Treasury borrowed directly from the money market, with a constant supply of loanable funds, interest rates rose and credit became diverted from the private to the public sector. Governments in the 18th century never presumed to manage the money supply either in their own or the national interest, but because changes in the amount and mode of public borrowing brought about changes in the volume and cost of credit to the economy as a whole, the management of the debt and the money supply cannot really be separated. Moreover, during the French Wars the connection became

more explicit and the Government was pushed for the first time into the formulation of crude rules which might loosely be referred to as monetary policy.

To raise funds for the wars against France involved the Government in choices about taxes, loans and the money supply. Its decisions were taken within the constraints set by the rules of conventions of the established political and legal framework for the finance of public expenditure. Under the pressure of war the rules could be adapted to meet emergencies and Ministers found it easier to alter the rules to suit the needs of the time, but basically the system established over centuries remained intact. Governments had to submit their Ways and Means proposals to Parliament for final approval, they continued to be hampered in their selection of taxes by the activities of powerful pressure groups, they still hesitated to offend the views of the age as to the criteria for equitable and economically desirable tax structure. To borrow money they found it necessary to solicit funds through the traditional channels of the London capital market. In all matters of debt and monetary management the Treasury worked closely with the Directors of a private corporation - the Bank of England.

During the French Wars ultimate power on matters of finance rested with the Prime Minister. Often his responsibility became merely nominal and he delegated the job to his Chancellor of the Exchequer. Between 1793 and 1815 the Government's financial affairs were conducted by 5 Chancellors, William Pitt the younger from 1793-1801 and again 1805-06, Henry Addington (Viscount Sidmouth) from 1801-05, Lord Henry Petty for the Ministry of All Talents, 1806-07, Spencer Perceval, 1807-12 and Nicholas Vansittart (Lord Bexley) from 1812 to the end of the war. Pitt, Addington and, for a time, Perceval combined the offices of Chancellor and Prime Minister but Petty, Perceval and Vansittart worked in concert with their respective Prime Ministers: Lords Grenville, Portland and Liverpool.¹

Chancellors of the Exchequer controlled the financial system through the Treasury. Constitutionally they operated with the 4 Commissioners who headed the Treasury and were assisted by two politically appointed Secretaries.

1. Dictionary of National Biography.

who brought all matters concerning the revenue to the attention of the Commissioners and saw to the implementation of their decisions.¹ Subordinate to the Treasury came 4 other Boards of Commissioners responsible for the assessment and collection of taxes, namely the Boards of Customs, Excise, Stamps and Taxes.² These Boards corresponded and cooperated with the Treasury on all matters pertaining to taxes, but they do not appear to have been an important part of the financial administration. Day to day matters and the wider problems connected with the finance of Government expenditure devolved far more upon the permanent staffs of the Treasury and other Revenue Departments, the Chancellor of the Exchequer, the two Secretaries to the Treasury and a numerous group of unofficial and ad hoc advisers. Minutes of the Boards nominally responsible for the collection of the revenue (including the Treasury) suggest that Commissioners did not play an active role either in the formulation of policy or (with the exception of the Excise) in the management of their departments.³ They appear rather as tribunals to whom civil servants and the wider public affected by the implementation of tax law referred ultimately matters concerning their interests. For example, their minutes are overwhelmingly concerned with appeals from merchants, manufacturers and the general public against the operation of a particular part of tax legislation - in other words with case law. Alternatively, personnel problems (appointments, salaries, promotions and dismissals) occupied much of the attention of the Commissioners. I could find no evidence in the correspondence between the Boards of Customs, Excise, Stamps and Taxes with the Treasury that the Commissioners, legally at the head of these departments, played any significant part in the formulation of policy.⁴ In general they appear not to have been consulted on proposals to raise tax rates or to introduce new taxes.

The Boards of Revenue did, however, frequently provide the Chancellor with statistics and other information, useful in the formulation of taxation policy.⁵ Their legal departments were often employed to formulate tax proposals into the form of bills for submission to Parliament.⁶ It is apparent, for

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1. Bailly, *Expose des Finances du Royaume Uni*, pp.6 and 9-13 and Pitt Papers, vol. 231 - Memo on Organisation of Treasury.
 2. *Ibid*, pp.32-33.
 3. Treasury Minutes - T.29; Customs Minutes - Customs/28; Excise Minutes - E/47; Inland Rev. - 818, Minutes of the Property Department of the Board of Taxes and 1041/83 Minutes of the Board of Stamps, 1807-13.
 4. See Treasury in letters from Customs, Excise, Stamps and Taxes and Customs Series 30 and Excise Series 48 - correspondence with the Treasury, 1793-1815.
 5. Pitt Papers, vols. 283, 301 and 302.
 6. T 29/101-102; T 29/130/311, 314; T 29/132/714; Pitt Papers, vol.283 - Hume, dd. 5.2.98. and Excise 48/27.

example, that personnel of the Board of Taxes assisted Pitt to draw up the country's first income tax.¹ Furthermore, the Revenue Departments regularly made suggestions to the Treasury on possible amendments to the tax legislation they administered, designed to safeguard the revenue from fraud, legal loopholes or to facilitate the process of assessment and collection.² Finally, if new taxes or increases to rates of taxes affected the country's commercial regulations, navigation laws and diplomatic position the Treasury usually referred it for opinion to the Committee for Trade and Plantations.³ Beyond these matters the Boards of Revenue and Trade exercised no obvious influence on the formulation of taxation policy during the war years. I could find no trace either in published or manuscript sources of a formalised process of decision making in the selection of taxes for the finance of war.

On all matters connected with loans and monetary matters Chancellors of the Exchequer consulted the Directors of the Bank of England. From the Directors they received information about the state of demand for particular types of public securities, and advice as to opportune moments to time loans and funding operations. Between 1795-97 this traditional cooperation between the Bank and the Treasury almost broke down but for most years the Bank assisted the Chancellor with the problem of debt management.⁴

Pitt occasionally used other channels of information on conditions in the capital market including London bankers like Henry Thornton and the loan contractor, Walter Boyd, while Sir John Sinclair also plied him with suggestions on loan policy in the difficult years of 1795-97.⁵

Key decisions appear to have been discussed by a very small group of politicians and their advisers in personal contact with Chancellors of the Exchequer. Pitt's immediate and continuous advisers included George Rose (secretary to the Treasury from 1793 to 1801 and Vice President of the Board of Trade during Pitt's second tenure as Prime Minister).⁶ Lord Auckland (William Eden), Charles Jenkinson (later the first Earl of Liverpool), William

1. Pitt Papers, vols. 279 and 282.

2. TI/725/2707; TI/1306/3057; TI/754/3803; TI/723/2332; TI/868/4372; TI/897/348; TI/754/3840; TI/836/569; TI/794/4082; and TI/825/2825.

3. Bathurst Papers, pp.147-148 and TI/755/4065.

4. See pp. 49-50, 81 and 86-88.

5. Pitt Papers, vol.115 - Boyd; vol. 178 - Sinclair and vol. 183 - Thornton.

6. Pitt Papers, vol.173 - letters from Rose; Rose Papers, vol.42772 - letters from Pitt; Dacres Adams Papers, vol.8 memos by Rose on budget of 1802; Auckland Papers, vol. 34454 - letters from Rose.

Huskisson and Sir John Sinclair also appear from Pitt's and their correspondence to be among his closest advisers.¹ Pitt's papers are full of schemes for taxes and advice on finance from every conceivable strata of society. He appears as a man with contacts everywhere and ready to consult those intimately affected by his taxation proposals.

Henry Addington depended heavily on Nicholas Vansittart when he took charge of the country's finances and Vansittart's expertise came to be recognised by the Second Lord Liverpool who made him Chancellor in 1812. Perceval in office from 1808-12 used the men who had advised Pitt - Huskisson, Rose and the merchant J.C. Ferris.² Vansittart also consulted Rose and Huskisson and Charles Long (a former Secretary to the Treasury under Pitt).³ Lord Auckland continued to offer advice to the Ministry of All Talents when it assumed office in 1806.⁴

In short: a study of statesmen's papers for the period leaves the impression that at the centre of the decision making process in financial policy were a small group of men who had in most cases served under Pitt at the Treasury and who continued to manage the public finances after his death. The numbers of politicians who were interested in or who understood the financial system at the end of the 18th century could never have been large. That is probably why the same few names recur so often in the correspondence connected with war finance from 1793-1815.⁵

Decisions related to the management of the debt or the selection of taxes, particularly the latter, did not take place in a political vacuum. The Chancellor's "Ways and Means" had ultimately to be submitted to Parliament for approval and his proposals for taxes frequently aroused opposition from pressure groups, occasionally powerful enough to enforce modifications. Moreover, whenever he offended the prevailing ideology on questions of taxation his difficulties of translating proposals into law increased. At the close of the 18th century Members of Parliament and the wider public concerned with Government policy adhered strongly to conventional attitudes on principles of

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1. Pitt Papers, vol. 178 - Sinclair letters and vol. 152 - letters from Liverpool; Auckland Papers, vol. 34455 - Pitt's letters; Sichel, Glenbervie Journals, p.210 and Huskisson Papers, vol. 38759/155 - memo on financial policy, 1806.
 2. Gray, Spencer Perceval, pp. 331, 342-43 and 358.
 3. Vansittart Papers, vol. 31237 - Rose memo 11.11.09; Huskisson Papers, vol. 38737 - Liverpool, dd. 21.12.07 and Liverpool Papers, vol. 38365/fols. 143-149 and 38366, fols. 61 and 104.
 4. Droghere Papers, vol. 3, p.282 & vol. 8, pp.455, 457, 460, 472, 474 and 482.
 5. Perhaps most agreed with Wilberforce that financial affairs were of a "low vulgarizing quality" - Holland-Rose, Life of Pitt, p.83.

of taxation, and even in times of war could not be easily persuaded to depart from their traditional views.

It is difficult to trace the influence of pressure groups on Parliament in the formulation of policy. No doubt options and proposals were sometimes not tested in public partly because the Chancellor and his advisers appreciated the strength of opposition.¹ Moreover, Pitt and his successors at the Treasury also shared the conventions of the age which inhibited them in the choice of taxes. From past experience the Governments of the day knew they could expect strong and organised pressure from the West India merchants and planters, the East India Company and from the coal owners and their friends in Parliament against any proposals which adversely affected their respective interests. Ministers knew that a Parliament of landowners would not readily acquiesce to taxes upon agriculture, that the "City Members" could be easily organised to defend matters of mutual concern and that manufacturers had also begun to make their presence felt within the House of Commons. Pressure could be exercised through Parliament itself and also directly upon Ministers and public departments. In a House of Commons where party alignments remained far more fluid than today, Governments could not depend upon steady majorities for Ways and Means proposals, which gave the House of Commons a place in the determination of policy potentially far stronger than it exercised in more recent times.

Yet it cannot be argued that the debates and activities of the Commons came seriously to grips with the range of problems encompassed in paying for the war. Few members speaking either for or against the Government displayed any grasp of financial questions. The majority appear to be lamentably ignorant on a subject which so intimately affected the welfare of their country. To some extent the failure of Parliament to criticise constructively the finance of the war can be blamed upon the complicated format of public accounting and financial procedure adopted at the time.² But in the early years of the conflict with France Fox and his friends concentrated their opposition on the war itself and seldom found occasion to discuss the conduct of its finance.³

1. See Dropmore Papers, vol. 8, p. 457.

2. See Binney, *British Public Finance and Administration*.

3. *Early Hist.*, vols. 30-32.

Important and more informative debates took place between 1797-1799 when Pitt persuaded Parliament to accept the notion that taxes had to be imposed to pay for the war. Fox and his group opposed this departure from traditional policy and campaigned against the introduction of the income tax which came as its corollary.¹ For the first and perhaps the last time between 1793 and 1815 Parliament seriously confronted the question of how to pay for the war. For the rest of the period members simply rehearsed clichés about the effects of particular taxes. Frequently they argued that the tax proposed would "ruin" the industry or activity affected or alternatively that the Government should refrain from the taxation of groups like the poor, or farmers, or manufacturers, whom they praised as "the backbone of the nation".

Almost invariably the House accepted the Chancellor's, sometimes dubious, claim that the terms upon which he borrowed money were the best obtainable. Debt management seldom came under discussion except when the Government altered the arrangements for the Sinking Fund - a subject clouded in obscurity and well beyond the comprehension of most members of the House. Debates on these occasions tended to be dominated by the question as to whether or not the proposal under review departed from Pitt's original intentions.² In fact on all questions connected with taxes and debt management Pitt and his ideas enjoyed such a profound respect from the House of Commons, that he virtually dominated the conduct of war finance, even after his death.

Several historians of the Napoleonic period, basing their views on contemporary comment, have attempted to distinguish good from bad Chancellors of the Exchequer. Pitt is usually praised, Addington and Vansittart derided, Petty neglected and Perceval received sympathetic treatment from his most recent biographer.³ Apart from the questionable nature of the sources used to support judgements of this kind and the problem of locating and weighting the manifold influences which made up decisions in the field of financial policy, such questions cannot be meaningfully defined until proper criteria for

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1. Auckland, Correspondence, vol. 4, p.45. The debates are in Parly. Hist., vol.33 and Parly. Reg., vols.7-9.
 2. Parly. Hist., vols.33, 34, 36 and Parly. Debs. 6, 8, 11, 24 and 31.
 3. Gray, Spencer Perceval, pp.331-88; Aspinall ed. Abuthnot Correspondence, p.13; Pellew, Sidmouth, vol.1, p.399; Prendergast, The Financial Policy of Pitt, pp. 13 and 18; Holland-Rose, Life of Pitt, pp. 266 and 289. Pitt is not, however, without his critics - see Hardy, Huskisson, for a vehement and quite unsupportable denunciation of his talents as a Chancellor.

achievement have been established and the nature of the problem fully understood.

My aims in this thesis are to describe the character of the British financial system in the late 18th and early 19th centuries, to outline the methods used to finance the wars against France from 1793 to 1815 and to appraise the achievement. In evaluation I will not, however, attempt to separate more from less commendable Chancellors of the Exchequer. All the men who followed Pitt simply implemented his policies. Petty, Perceval, Addington and Vansittart cannot be described as innovators but proceeded along the lines established by their more famous predecessor at the Treasury. They modified here and there, made mistakes or achieved success on points of detail, but the broad questions of loans or taxes, stringent or liberal monetary policy and the general conduct of debt management were laid down by Pitt. When Pitt was Chancellor the tax base became broader and more productive, the Bank suspended specie payments and the Government began to employ bills to borrow money for the finance of its annual expenditure.

Furthermore, my appraisal of policy will not, in general, be in terms of effects on social welfare or economic growth. It would be extremely difficult to decide whether the methods used to finance the war seriously retarded the country's longer term development. Empirically, such questions are probably unanswerable for remote historical periods and in any case, given the need to find money to pay for the war, the question would involve speculation about alternative taxes or methods of finance which may possibly have had a more favourable impact on the course of economic change or the welfare of the population.¹ Instead my appraisal will begin with the constraints of the financial system and the range of problems faced by Ministers at the time in raising taxes and borrowing money. I will be primarily concerned with the innovations introduced into the British system of public finance and the manipulation of available techniques to provide the Army and Navy with the necessary resources to win the war against France.

1. Moreover, any investigation of the impact of the war upon economic development would have to take full account of the effects of public expenditure as well as public revenue. I spent nearly nine months working upon the ledgers of the Army, Navy and Ordnance for the period in an attempt to classify their expenditure into categories meaningful for an analysis of its possible effects on the economy. The exercise proved to be fruitless. Even if expenditure flows could be classified an assessment of their effect would have to be fitted into a background of detailed information on the sectors concerned, and this information is in most cases also not available.

The remainder of the thesis will be divided into two parts. The first will describe, analyse and evaluate the Government's management of borrowing operations conducted between 1793-1815. Since monetary policy and debt management were so intimately connected, I have included a similar analysis for the management of the money supply in the same section. Chapters 2, 3 and 4 outline the system as it functioned before the outbreak of war, 5 and 6 describe the system in operation during the war years and 7, 8 and 9 appraise the policies implemented between 1793 and 1815.

Part 3, Chapter 10 analyses the taxation system at the commencement of war and Chapter 11 describes and evaluates the system in operation from 1793 to the battle of Waterloo. I offer general conclusions in Chapter 12.

THE FUNCTIONS AND ORGANISATION OF GOVERNMENT BORROWING

The Functions of Funded and Unfunded Borrowing

The State borrowed money in order to finance that part of its expenditure not covered by taxes and other less important forms of revenue. Borrowing consisted essentially of transactions, whereby the Government contracted to pay private citizens an annual sum (an annuity) in exchange for the immediate transfer of cash into the Exchequer. During the late 18th century such contracts might take three possible forms. First the Government occasionally exchanged long annuities for cash. Long annuities were simply written promises to repay the sum borrowed plus interest over a fixed period of years terminating in 1860.¹ Since this form of borrowing contributed very little towards the finance of public expenditure I propose to concentrate entirely on the other types of borrowing.

By far the most important took the form of perpetual or permanent annuities, which were promises by the State to pay an annual sum in perpetuity for the ready cash supplied by private citizens or institutions. The security of such promises rested upon the stability of the State and the continuity of its revenues from taxation. Whenever the Government raised money by the sale of perpetual annuities it immediately imposed taxes to meet the required annual payments. Thus the debt contracted by this device was termed funded debt which implied Parliament had provided funds for the regular payment of interest. The Government seldom resorted to funded borrowing in order to pay for its regular expenditure in times of peace. Up to the wars against France the prime function of this type of borrowing had been to provide most of the finance incurred by the Army and Navy in order to fight the long series of wars engaged in by Britain over the 18th century. Thus additions to military costs and other forms of extraordinary and non-recurring expenditure were usually

1. Fairman, An Account of the Public Funds, 1816, p.33 and Chisholm Rept., 1868-69, pp. 568-569.

financed by the sale of perpetual annuities (hereafter called bonds) to the public.¹

Finally, the State borrowed money in peace and war alike for short defined periods of time (usually from three to twenty four months) after which it repaid the principal and interest on the loan of cash received. Such borrowing was affected by the sale of bills drawn upon the Exchequer, the Treasury or the military departments. It was referred to in contemporary parlance as unfunded borrowing and the debt created thereby as unfunded or floating debt.² The place of this form of borrowing in the 18th century system of public finance cannot be as readily defined as funded borrowing. Briefly we can say that its function consisted in the anticipation of revenue from taxes and permanent loans but why the Government needed or chose to borrow for short periods on the security of its more regular forms of income requires further explanation.

Unfunded borrowing was used to anticipate revenue for the current or subsequent financial years. Whenever Chancellors of the Exchequer borrowed from the public on the understanding that the debt would be repaid from revenues expected to accrue after the close of the financial year, they were in fact engaged in financing current expenditure from the proceeds of short term loans. On the other hand when they borrowed on the security of revenues accruing to the Government during the current financial year, unfunded borrowing was then simply a convenient device for providing an empty Exchequer with the ready cash required to cover pressing public expenditures.³ Each type of unfunded borrowing will be discussed separately, the former in chapter 3 and the latter here.⁴

On several occasions during any given financial year the Exchequer might be short of funds because there was no necessary coincidence in time between decisions by public departments to spend money and the availability of funds for their purposes. Moreover, with every rise in the overall level of public expenditure the possibilities for temporary shortages of cash increased. Since expenditures, particularly military expenditures in wartime, were not normally postponeable, lags between receipts and expenditure can be said to arise from the erratic and irregular flow of revenue into the Exchequer.

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1. Fairman, *An Account of the Public Funds*, 1816, pp.1-6; Binney, *British Public Finance*, pp. 89-92; Chisholm Rept., 1868-69, p.512 and Hales, 'The Bank Mirror', 1796, pp.1-2, 14 and 33-36.
 2. Fairman, *An Account of the Public Funds*, 1816, pp.113-124; Montefiore, *Commercial Dictionary*, 1803 and Wells, *The Revenue and Expenditure of the U.K.*, pp. 367-369.
 3. Cttee. on Public Monies, 1857, pp.488,499 and 533-34 and *Liverpool Papers*, vol. 38741 - Huskisson, dd. 5.4.19.
 4. See pp. 40, 61-63, 65 and 72.

To begin with, funded borrowing was a fairly protracted process. There had to be an announcement of them followed by a delay while contractors prepared their lists and bids. Payments on loans were made in several instalments and often a year elapsed between the original contract and the final cash payment to the Government. If the Treasury shortened the period allowed for the payment of money into the Exchequer for reasons outlined elsewhere, contractors normally reacted by charging higher rates of interest on the loan.¹ On the other hand if the period for the payment of instalments on loans was lengthened the volume of short term borrowing and the interest charged on the unfunded debt inevitably rose. Thus the Treasury had to weigh the costs to the public of accelerated payments on loans against the gain of a reduction in the level of short term borrowing. Officials certainly recognised that the instalment system on loans involved a cost because loan contracts usually contained provisions for discounts on prompt payments into the Exchequer. Although these discount rates usually moved in line with general short term rates of interest in the money market as well as with the urgency of Government demands for cash, they were often below rates paid on Exchequer bills.² Perhaps that is why the Treasury had such a poor response to its proffered reward for prompt payments on loans.

Another cause for the irregular flow of cash from loans into the Exchequer operated whenever the Treasury anticipated a rise in the price of bonds and postponed negotiations with contractors until later in the year in order to borrow at lower long term rates of interest. Meanwhile pressing expenditure had to be met by borrowing short term on the security of the forthcoming loan. In such circumstances the Treasury compared the potential gain from the delay in opening negotiations for a loan with the cost of short term borrowing and the costs which resulted from the reactions of contractors who invariably reduced their bids for loans which allowed a shorter time period for the payment of instalments into the Exchequer.

Most of the revenue received at the Exchequer emanated not from loans but came from the four departments concerned to collect and dispatch taxes to the capital. Their separate contributions in 1792 appeared in the accounts of the Select Committee of Finance as follows: Customs £4.4 million, Excise £8.4 million, Stamps £1.4 million and Taxes £3.5 million.³ Now each tax

1. Loan contracts are published in Bank of England Report Book, 1793-1815.

2. See Table 20.

3. 4 Cttee. on Finance, 1797, p.54.

department encountered problems, either of an administrative character or problems inherent in the type of taxes it collected, which made the flow of its payments into the Exchequer over a given financial year more or less erratic and irregular. For example, the collection of customs duties depended upon the movements of international and coastal trade and any seasonal or extraordinary fluctuations in trade were reflected not merely in the level but in the flow of customs duties into the Exchequer. The payment of excise duties levied on a wide range of domestic manufactures also fluctuated with seasonal and other cycles in production and assessed taxes with any short term changes in the expenditures of the upper classes.

Over such random and unpredictable disturbances to the flow of revenue the Government could exercise little control, but it could perhaps have done more to remove administrative bottlenecks. Two Parliamentary Committees of the late 18th century investigated the problem of delays in the despatch of tax receipts to the central Government and found Collectors of Customs and Excise and Distributors of Stamps sometimes retained unnecessary balances of public money in their hands. Apparently officials in Scotland were especially tardy in despatching revenue to London and in this respect, as in so many areas of administration, the Excise appeared more efficient than the Customs.¹ But from the quantity of letters and circulars addressed by the Board of Stamps to local distributors urging them to remit outstanding balances of public money, it seems that problem was perhaps even more acute in this department.² But since a large share of the revenue collected by these departments came from London, they were not nearly as slow as the Board of Taxes in remitting revenue from the Exchequer.³

Problems with the Department of Taxes had persisted for several decades in the 18th century, mainly because country gentlemen insisted on controlling the machinery for the assessment and collection for taxes imposed on their incomes and property. For each of the assessed taxes from the Land Tax of 1696 the machinery for collection remained broadly similar, although the administration of the entire group of taxes assessed was by no means combined in the hands of one single set of officials.⁴ When Parliament decided on the basis for assessment, a sub-department

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1. 13 Cttee. on Public Accounts, 1785, p.653; 4 Cttee. on Finance, 1797, pp.56, 59 and 60; 5 Cttee. on Finance, 1797, pp.107-109 and 6 Cttee. on Finance, 1797, pp.155-156.
 2. Ibid, pp.155-156 and Inland Rev. 10/85, dd. 1801-1802.
 3. Binney, British Public Finance, pp.26, 28 and 38 and 4 Cttee. on Irish Revenue, 1822, Appdx.62.
 4. Ward, English Land Tax, Chs. 3, 4, 5, 9 and 11 and Binney, British Public Finance, pp.49-72.

of the Treasury, the Board of Taxes, became responsible for the establishment and general supervision of administration, but the actual machinery for assessment and collection remained in the hands of amateur and voluntary officials.

Assessment and collection of assessed taxes took place at the parish level where the assessor and collector were chosen by rote from the citizens of the parish who then performed the thankless task of extracting money from their neighbours.¹ The assessment of direct taxes were complicated tasks for a voluntary organisation to perform and involved the measurement of property such as land, housing, servants, carriages, horses and dogs. It is not surprising to find that collection was frequently delayed because of the slowness of assessment or because appeals against parish assessors were being considered by the Divisional Commissioners for Taxes.²

Parish collection was perhaps the most inefficient link in the administration of assessed taxes. Either parishioners failed to pay up within the stipulated time, or sometimes the collector was indulgent enough to his neighbours not to report nonpayment to Divisional Commissioners and arrears piled up.³ Occasionally collectors absconded with the receipts from taxes or more frequently retained balances for their own private use and profit.⁴ Parliamentary Committees in 1780 and again in 1797 condemned their tardiness in handing over money. Evidently the problem was more acute in Scotland than England, where the parish unit was larger and somewhat more accessible to divisional control.⁵

Revenue collected from parishes was next handed over to officials called Divisional Receivers and further delays occurred before it arrived at the Exchequer. Receivers General were unpaid but, since their derived interest from the public money retained in their hands by leaving it on deposit with a local banker, not a reluctant part of the administration. Legally they were bound to pay tax revenue into the Exchequer within 20 days of receipt, but it never proved possible to enforce the law.⁶ Receivers General were political not administrative appointments and holders of this office expected to make a profit. Moreover, the Treasury and Board of Taxes, with no sanction of dismissal for

1. Treasy. - TI/1399/8401.

2. Treasy. - TI/1185/4598, TI/995/1582 and TI/1185/4599.

3. Treasy. - TI/1328/8409, TI/1185/4598, TI/902/2081 and Exch. - E/182/1360.

4. Treasy. - TI/997/1885, TI/995/1582, TI/8519/1411, TI/1254/6407, TI/263/1164 and TI/1328/840; Exch. - E/182/1360 and Inland Rev. Vol.384, p.185.

5. Cttee. on Public Accounts, 1780, Appdx.2; 8 Cttee. on Finance, 1797, Appdx.A.9 and A.16; 23 Cttee. on Finance, 1798, Appdx.E.5 and Cttee. on Tax Collection in Scotland, 1810, pp.507-517.

6. Cttee. on Land and Assessed Taxes, 1821, pp.2-6 and 42 G.3.c.34 and 43.G.3.c.161.

known infringements of the law could do little more than harry recalcitrant Receivers.¹ Infringements were in any case difficult to detect since the Board conducted no regular check on the amount of public money retained at any particular time.² Blame for delay in despatching money to London could always be shifted by the Receiver to Parish Assessors and Collectors.³ Their favourite excuse for tardiness was to point to the difficulty of obtaining suitable bills of exchange on London for remission of taxes collected in local money to the capital.⁴ Perhaps earlier in the 18th century some grounds existed for their plea but with the widespread development of country banking and its links with the capital, the excuse became less valid.⁵

Attempts had been made to speed up the flow of assessed taxes into the Exchequer during the 18th century. From time to time suggestions appeared for transferring their collection to officers of the Excise, but they proved politically impossible to implement.⁶ Even the indulgent Lord North concerned himself with harrying Receivers of the Land Tax during the American war when he introduced a bill to penalise Receivers who retained balances beyond a stipulated time.⁷ Under its provisions Receivers were also compelled to return quarterly accounts of the balance of public money in their possession.⁸ When Pitt took over as Chancellor he inaugurated a drive to speed up tax remission and a decade later the Select Committee on Finance reported that some progress had been made.⁹

Another point of delay in the passage of revenue to the Exchequer arose in London where Central Receivers of the revenue and Treasurers of spending departments also retained balances in their hands and employed public money for private profit through the medium of deposits with London Bankers at times when the Exchequer borrowed short term to obtain required cash. From time to time Parliamentary Committees made recommendations to correct these anomalies and Parliament had legislated for the deposit of at least some cash balances under the control of Government departments with the Bank of England.¹⁰ At the

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1. Binney, *British Public Finance*, pp.53-56; Ward, *Land Tax*, p.78; *Treasy.* - TI/769/2938 and TI/574/744 and *Inland Rev.*, 384, pp.52,53,68 and 93.
 2. *Treasy.* - TI/995/1582.
 3. *Inland Rev.* vol.384, p.63.
 4. Binney, *British Public Finance*, pp.55-56; Pressnell, *Country Banking*, p.56 and Ward, *Land Tax*, p.107.
 5. 8 Cttee. on Finance, 1797, Appdx.A.16 and Cttee. on Land & Assessed Taxes, 1821, p.6.
 6. Binney, *British Public Finance*, p.59.
 7. Ward, *Land Tax*, pp.78 and 146 and *Parly.Hist.*, vol.32, p.208.
 8. Ward, *Land Tax*, pp.145-146 and *Inland Rev.*, vol.384.
 9. 8 Cttee. on Finance, 1797, p.223.
 10. 25 G.3. c.31 and Binney, *British Public Finance*, pp.145,147,148,156 and 161.

outbreak of war either recommendations of Parliamentary Committees had not been implemented or the law was deliberately ignored by Government departments. When Pitt called for a list of public accounts lodged at the Bank in November 1797 it mentioned only the accounts of Customs, Excise, Stamps, Army, Navy and Ordnance, but as the Governor pointed out, even these accounts contained only a part of the revenue retained as balances by public departments.¹

The final bottleneck in the transferring of public money between different parts of administration was situated in the Bank of England itself. Government deposits at the Bank included unspent public funds which had been transferred from the Exchequer to departmental accounts, money nominally lodged at the Exchequer by the tax departments and instalments on loans which were received and managed by the Bank.² Unfortunately, figures for the total amount of public money retained on deposit by the Bank are not available for the years before 1806, but since very little money deposited there came from the private sector, a comparison of total deposits with state securities held by the Bank provides a good indication of the net amount of credit afforded by the Bank to the Government.³ For some of the years covered by the figures the amount borrowed by the Government from the Bank was exceeded by public funds on deposit at the Bank. This anomalous situation arose largely because the system of public accounting operated primarily to maintain Parliamentary control over Government expenditure and money voted for specified items of expenditure could not legally be applied by Ministers of the Crown to other purposes. Thus once a vote of money had been transferred from the Exchequer, the timing of expenditure remained at the discretion of the department concerned. Although Pitt consolidated taxes in 1787 the traditional practice of assigning taxes to particular items of expenditure persisted, though on a reduced scale. Thus at particular times of the year the Exchequer account at the Bank of England contained considerable sums of money waiting to be applied to pre-ordained votes of expenditure.⁴

Throughout the 18th century the Bank in fact derived profit simply for assisting the Government to overcome the inconveniences inherent in the prevailing system of public accounting. Furthermore as the Committee of 1807 observed, "deposits of public money accumulated for the benefit of the Bank because the augmentation of Government balances is followed by a proportionate

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1. Clapham, *The Bank*, vol.1, pp.214-215.
 2. Cttee. on the Bank, 1807, p.92; Cttee. on Public Accounts, 1831, pp.28,29, 41 and Appdx.10 and Account of Public Money in the Hands of the Bank, 1821,p. 163.
 3. See Table 22.
 4. Cttee. on the Bank, 1807, pp.96-98; Cttee. on Public Accounts, 1831, pp.27-41; Parly.Debs., vol.30, pp.660-668 and 871-872 and Cttee. on Public Monies, 1851, pp.522-526.

re-issue of paper as additional bills of exchange are discounted, purchased or more money is loaned directly to the Government. The principal that these balances are placed in their hands without interest must be considered as enlarging the scale not merely of their business but of their profits."¹ Even before the war one particular public deposit, the balance of unclaimed dividends on the National Debt, had attracted the attention of Pitt and in 1790 his intention of using the unclaimed dividends for public purposes was strongly resisted by the Bank. But eventually the Bank compromised and agreed to lend the Government £1½ million annually, interest free from these balances.²

Unfunded borrowing on the security of revenues accruing to the Government during a given financial year occurred primarily because Government Departments found themselves without the cash promised by Parliament for their estimated expenditure. Basically this situation arose as a result of a lag between receipts of revenue and payments for goods and services. The transfer of tax revenue from citizens to Government, depending as it did on movements in expenditure income, trade and production, could not be a smooth, regular and speedy flow of cash into the Exchequer. While for the reasons outlined above even payments on loans could neither be obtained in a lump sum or accelerated without cost to the public. Nevertheless, many of the delays in the receipt of revenue were not inevitable and sprang from remedial deficiencies in the system of public accounting and administration. Such deficiencies represented an avoidable cost to the public and constituted one of the ways open to the Government to contain the level of contingent short term borrowing. As the Finance Committee of 1797 pointed out "when the public service called for supplies greater than at any former period of our history the Government has a right and it is their duty to avail themselves of every farthing without delay which is taken from the purse of the subject."³

Most unfunded borrowing by the State, particularly in wartime, was repaid from the proceeds of loans and taxes accruing outside the financial year in which the borrowing took place. In other words it was not contingent upon the irregular flow of revenue into the exchequer but occurred either as a matter of policy or, more commonly, because the Government failed to provide other finance for its annual expenditure. If the Chancellor of the Exchequer decided to add to the volume of unfunded debt outstanding in fact he deliberately

1. Cttee. on the Bank, 1807, p.98.

2. Ibid, p.102; Clapham, The Bank, vol.1, pp.187-189 and Collier, Life of Newland, 1808, p.37.

3. 8 Cttee. on Finance, 1797, p.224.

engaged to finance current expenditure by short term borrowing. During the 18th century such methods, although not normally resorted to, were not unknown but during the French wars Chancellors made much more use of this form of borrowing than their predecessors. The logic behind their employment of short term borrowing will, however, be revealed in the first section of chapter three. Here I will deal with that part of unfunded borrowing which can be described as fortuitous or accidental.

The Government's failure to provide finance from taxes or loans for all public expenditure arose primarily from inaccuracies in the forecasts of revenue and expenditure, particularly military expenditure, over the financial year. During the American War of Independence, the Army, Navy and Ordnance overspent on their estimates submitted to Parliament by no less than 47%. Accidental or extraordinary spending of this kind was usually financed by short term borrowing, sanctioned and repaid on the authority of Parliament at a later date. Since no improvements were made to techniques employed by the military departments for forecasting their requirements between the American and French wars, it is germane to outline briefly how crude their methods were, just prior to the war.¹

The preparation and submission of expenditure estimates to Parliament were matters for the departments concerned. Apart from scrutinising the demands made by the Board of Ordnance, the Treasury played no part in their formulation.² Procedures for predicting expenditure varied considerably between the three service departments. In the Army, for example, apart from the staff, recruitment and hospital establishments, the basic unit for expenditure was the regiment.³ Colonels of Regiments had responsibility for the pay, food, clothes, shelter and transport of troops, and claimed from the Government a fixed annual amount per man to cover costs.⁴ Fixed per capita allowances of this kind gave Parliament some form of control over the level of expenditure and the Treasury some check against the misapplication of public funds by Army Officers. But expenditure rose above the prescribed levels whenever the current needs of troops or the prices of supplies required to meet their needs exceeded the per capita allowance sanctioned by Parliament. As military supplies and the prices paid for them varied between regiments and localities even within Britain, it is not surprising to find that the Army's estimates for its regiments stationed overseas were often

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1. Although Pitt gave some consideration to the subject - Pitt Papers, vols. 239 and 247, and Chisholm Rept., 1868-69, Appdx. 13.
 2. Binney, British Public Finance, pp. 160 and 165.
 3. 19 Cttee. on Finance, 1797, Appdx. B. 2.
 4. 35 Cttee. on Finance, 1798, pp. 625-628 and War Office - WO/33/51 and WO/33/42.

wildly inaccurate.¹

Nevertheless some sort of check existed on this 'extraordinary expenditure' because the Government compelled regiments to buy in excess of their estimates through the agency of Treasury officials, called Commissaries. Within the United Kingdom Commissaries thus provided regiments with all "excess" supplies of transport, food, fuel, forage and various items of equipment, and whenever regiments were stationed abroad the Commissariat assumed full responsibility for providing it with all its needs whether estimated or not.²

The Army actually financed purchases in excess of its estimates by short term borrowing from the private sector and the Paymaster General of the Army subsequently submitted detailed accounts of all expenditure not previously approved by Parliament which then sanctioned the allocation of revenue to pay off the Army's debts.³

Estimates of future expenditure by the Board of Ordnance were not subject to the same degree of inaccuracy as Army estimates primarily because the functions of the two services were so different. The Board of Ordnance operated as a supply service to the Army and the Navy and provided them with arms, ammunition, tents and other items of equipment. In addition the Board constructed military roads, barracks and internal fortifications. For these functions it employed both military and civilian personnel.⁴ While the annual cost of the Ordnance establishment was not difficult to predict because the requirements of its military personnel were met by centralised purchase, the costs of supplies provided for the Army and Navy fluctuated erratically from year to year.⁵ Similarly the funds needed by this department to build roads, barracks and fortifications were difficult to forecast. In part the problem was one of price fluctuations for building materials but it also occurred because the speed at which construction continued in wartime depended upon frequent and sudden changes in Government policy.⁶ The Board of Ordnance recognised both difficulties and classified its estimates for construction and armaments as 'extraordinary expenditure' by which the Board implied expenditure of a non-recurring and unpredictable kind.⁷

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1. Army Supply Estimates in Commons Jnls. 1793-1815 and Army - PNC/2/85 and PNC/2/90.
 2. 19 Cttee. on Finance, 1797, Appdx.3 and 18 Rept. of Commissioners of Military Enquiry, 1842.
 3. Army Supply Estimates in Commons Jnls., 1793-1815 and 19 Cttee. on Finance, 1797, pp.349-350.
 4. 13-16 Rept. of Comms. of Military Enquiry, 1806-12.
 5. 15 Comms. of Military Enquiry, 1840, pp.329-339.
 6. 14 Comms. of Military Enquiry, 1840, pp.246-262.
 7. 21 Cttee. on Finance, 1797, Appdx.E. and Ordnance - WO/48/281.

Finally the techniques employed for estimating naval expenditure were more liable to error than those employed by any other Government department. Naval estimates came before Parliament under three headings. First, expenditure for the "Ordinary of the Navy" (including on-shore establishments such as the Admiralty, the Royal Dockyards, Greenwich Hospital, Costs for Harbours and Moorings etc.) which was relatively easy to forecast. The second item of costs "Building and Repairing of Ships" was certainly difficult to predict because such expenditure could exceed estimates whenever increases occurred in the prices of timber, canvas, hemp and other imported raw materials.¹ In addition, naval policy often required sudden acceleration of the building programme for warships. Despite many difficulties the Navy Board appears to have been careful in preparing estimates of the future costs of shipbuilding. Where private yards constructed ships for the navy actual costs were likely to remain close to the original estimates, although the Navy Board sometimes allowed private contractors some upward revision of their original tenders in order to cover increased but unforeseen costs of production.² Expenditure on the repair and construction of ships in the royal dockyards came under the Surveyor of the Navy and his department usually compiled very detailed and careful estimates of the labour and raw material costs involved.³

Most of the discrepancy between actual and estimated expenditure arose under the third category of naval estimates submitted to Parliament, referred to in the accounts as "Naval Sea Service". This item included the wages, food, clothing and other personal necessities of sailors afloat as well as the "wear and tear of ships" in which they sailed. Estimates for sea service were compiled on a per capita basis and at the outbreak of war the Navy claimed £4 per man per month under this heading, a figure which had persisted in peace and war alike, throughout the 18th century.⁴ The Navy's claim included 19/- a month for food, 27/- for the depreciation of the ship and 30/- for wages, and 4/- for Naval ordnance.⁵ Although per capita estimates probably ensured some measure of control over expenditure and mitigated the extent of fraud, clearly such crude techniques for forecasting the cost of maintaining ships and sailors afloat was likely to be seriously inaccurate when prices and requirements fluctuated erratically in time of war.

1. 6 Cttes. on Finance, 1817, pp.203-225 and Albion, Forests and Sea Power, ch.4.

2. Navy - ADM/106/1457/1481 and 1612.

3. Navy - ADM/87/1, ADM/95/7 and ADM/95/8.

4. Rose, 'Brief Examination', 1806, p.59.

5. Commons Jnl., vol.46, p.504; 24 Cttes. on Finance, 1798, Appdx.E.4.

Furthermore, unlike the Army, the Navy did not submit supplementary estimates to Parliament to pay for expenditure in excess of the previous year's estimates. Instead its "extraordinary" expenditure was usually financed by additions to the department's floating debt which then accumulated from year to year.¹ During the American War of Independence Parliament had however attempted to prevent the rapid increase of Naval debt by allowing the Navy an annual grant of £1 million to pay off its creditors, but the grant proved to be insufficient to repay anywhere near all the money borrowed for unsanctioned Naval expenditure and at the end of the war the Navy's debt had reached a level six times its pre-war figure.² When Pitt assumed office he took steps to pay off this debt and in 1784 and 1785 the Treasury funded £16 million of outstanding navy bills, but even in peace time with relatively stable prices the inaccuracy of the estimating techniques employed by the Navy again lead to a steady accumulation of Naval debt between 1786 and 1792.³

When the Government began to mobilise resources for the most expensive war in British history, it had to utilise techniques for estimating expenditure which were known to be seriously defective even for peace time purposes. Whatever techniques had been employed the scale and geographical dispersion of warfare would undoubtedly have produced a serious discrepancy between estimated and actual expenditure. Military operations were undertaken in Europe, the Carribean, North and South America, the Middle East, India and on all five oceans of the world. Moreover, a good deal of expenditure took place in response to sudden initiatives by the enemy. Problems of forecasting expenditure were exacerbated by fluctuations in the prices of military supplies, particularly supplies produced abroad. After 1797 the floating rate of exchange complicated the task of predicting expenditure still further. Faced with the ramifications of a global war it is not surprising to discover the military services made serious errors in the estimates submitted to Parliament and that their unfunded borrowing and floating debts reached unprecedented levels.

Forms of Bills and Bonds

Government borrowing was accomplished through the sale of paper

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1. Wakefield, 'Observations', 1797, pp.14-15 and Vansittart, 'An Inquiry', 1796, p.9.
 2. Binney, British Public Finance, p.142 and Chisholm Rept., 1868-69, p.694.
 3. Ibid, p.540 and Rose, 'Brief Examination', 1806, p.12.

assets to the money market. The assets sold for cash consisted of bonds and bills, the latter were utilised for unfunded and the former for funded borrowing. Bonds or permanent annuities were issued in denominations of £100 and the annuity payment was expressed as a percentage of the nominal value of the asset. A 3% annuity for example was an official promise to pay £3 a year until such time as the state opted to repay the principal at par. Although the nominal value of such an annuity was £100 the actual price obtained by the Government might be above or below that sum. If the annuity sold at less than £100 the cost of borrowing (or the rate of interest) to the State was more than 3% while the sale of an annuity at a market price which was above par implied the cost was less than 3%. At par the cost was equal to 3%.¹

Perpetual annuities formed nearly all of the nominal capital value of the national debt in 1793. In contemporary accounts debt was often subdivided into a larger number of stocks or bonds, classified either by the year of issue (for example 4% Stock, 1777); by the purpose of issue (Navy 5% 's, 1784, had been issued to pay for Naval services during the American War of Independence) or by the name of the public companies to which annuities had been sold in the first half of the century (for example, South Sea Annuities, East India Stock or Bank of England Annuities). Although these distinctions are still mentioned in discussions of Government borrowing they are really only of administrative interest. For my purposes it will be sufficient to say that the Government borrowed money by selling perpetual annuities of 3%, 4% and 5% denomination.²

Citizens and institutions who purchased bonds had no claims against the State for the repayment of principal, but the State itself retained the option of repayment at par. Bondholders could however easily realise their capital by reselling their assets and at the outbreak of the wars with France an efficient organisation for marketing bonds had developed in London, which rendered assets which were permanent for the Government relatively liquid to individuals.³

Bills took the form of written promises by the State to repay a loan with interest on some specified date in the near future. Bills were issued by the Exchequer, the Treasury, the Navy and its sub-departments, the Army and the Ordnance. Broadly speaking bills issued by the Exchequer were exchanged for

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1. Fairman, A Guide to the Funds, 1816, pp.152-155 and Kortimer, Everyman His Own Broker, 1804, pp.32-36.
 2. Accounts of the Debt, 1857, pp.199-209.
 3. Pulling, Laws, Usages, Customs and Regulations of the City, ch.26.

ready cash and the bills issued by the Treasury and the Military Departments were used to pay for goods and services.¹

Exchequer Bills were first issued in 1696 and since 1755 their issue had been the dominant method employed by the Government for short term borrowing.² Exchequer bills were classified according to the security of the revenue from which they were repaid. For example, the Exchequer issued on the security of the Land and Salt taxes, on the proceeds of a forthcoming loan or more generally on the "Aids and Supplies" of the following financial year. Interest was expressed at a rate per day on the face value of the bill. Before the French wars the bill for £1000 remained common but as the need to borrow more money became more urgent after 1793, bills of lower denominations were increasingly employed to induce small savers to invest in Government bills.³

Issues of exchequer bills needed to be authorized by an Act of Parliament.⁴ Warrants, which authorized their preparation and detailed their denominations, dates of maturity and rates of interest, were signed by the Lords Commissioners of the Treasury then delivered to the Auditor of Receipt who prepared bills for circulation. Exchequer bills were issued or circulated on behalf of the Government by the Bank of England, or, less commonly, by private agents appointed by the departments themselves.⁵ Exchequer bills were paid off or renewed promptly on maturity and both the Treasury and the Bank of England seemed well aware of the effect on public confidence and possible disadvantage to the Government which might ensue from any lapse in the regularity of redemption.⁶ The Treasury decided on the proportion of outstanding bills to be redeemed and the remainder were renewed. On the dates specified for redemption most bills were cashed at the Bank of England and carried from there to the Exchequer for cancellation. While the renewal of exchequer bills was conducted at the office of the Paymaster of Exchequer Bills.⁷

Military bills were official promises to pay for the goods and services provided by the private sector for the military forces. Short term borrowing by the Army and Ordnance took the form of Barrack Bills or Ordnance and Army Debentures, all negotiable interest bearing securities of short maturity,

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1. Navy bills were sold for cash in 1800 and 1801 but this was unusual - Cttee. on 11 Naval Rept., 1805, p.5.
 2. Accounts of the Debt, 1857, pp.94,95 and 96 and Richards, 'The Exchequer Bill', pp.198-211.
 3. Exch. - E/406/219, E/407/124, E/407/129, E/407/134 and E/404/305 and Cttee. on Resumption, 1819, Appdx.5.
 4. Ways and Means Resolutions, Commons Jnl., 1793-1815.
 5. Exch. - E/405/469, E/406/162 and E/406/219 and E/407/134; Treasy. - TI/1131/9253 and TI/1200/8722 and Navy - ADM/15/5/11-12.
 6. Pitt Papers, vol.114, dd.5.5.93 and Treasy. - T/29/108.
 7. Exch. - E/405/469 and E/406/119 and 22 Cttee. on Finance, 1797 (pp. 2/1)

drawn on the Treasurer of the Ordnance or the Paymaster General of the Army.¹ When the army was abroad its extraordinary expenditure was financed by bills drawn directly on the Treasury in London and made payable at the Bank of England. Treasury bills promised to repay the principal and interest within 30 days.² They had not been a significant form of short term borrowing in the 18th century, but became much more important during the French wars.

Techniques of estimating naval expenditure had proved so woefully inadequate, even in peace time that short term borrowing constituted an important means for the finance of Naval expenditure. Navy bills are frequently referred to by accounts submitted to Parliament as Victualling bills, Transport bills and bills issued by the Ordnance Sea Service, classified that is by the purpose for which they were issued, but Navy bills consisted simply of instructions to the Treasurer of the Navy to pay for goods and services provided for the sea forces of the Crown.³

The Navy bill was certainly an inefficient and expensive way of borrowing money. Civil contractors for naval supplies were paid with bills redeemed only when the Treasurer of the Navy had sufficient cash to pay them off, and as bills were redeemed chronologically the maturity of a bill depended on the total outstanding amount of naval debt. It might be anything from three to twenty four months before a bill was paid off, and the Navy paid interest on its debts only after six months had elapsed from the issue of bills.⁴ Navy bills were, however, assignable by simple endorsement, but with uncertain maturity dates invariably changed hands at a discount.⁵ Thus when the volume of Navy debt outstanding was considerable creditors expected quite reasonably that current issues of bills would be of long maturity and consequently such bills could only be sold well below their par value. Contractors for naval supplies naturally enough added the prevailing rate of discount on bills to the price of the goods and services they supplied.⁶

2. The Marketing of and Market for Bonds and Bills

Government borrowing consisted of transactions for the sale of bonds which were not sold directly to investors but reached them through the agency of middlemen called loan contractors. When the Chancellor of the Exchequer

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1. Binney, *British Public Finance*, 1958, pp.159 and 165 and 13 Comms. of Military Inquiry, 1810, p.25.
 2. Cttee. on Suspension, 1797, p.133 and Clepham, *The Bank*, vol.1, p.252.
 3. Navy - ADM/49/11 and Cttee. on 11 Naval Rept., 1805, Appdx.46.
 4. Grellier, *History of the National Debt*, 1812, p.396 and Beveridge, *Prices and Wages*, pp.519-525.
 5. Rose, 'Brief Examination', 1806, pp.56-58.
 6. *Ibid*, Appdx. 6 and Beveridge, *Prices and Wages*, pp.519-525.

had decided upon the amount of the year's expenditure to be covered by a loan, he opened negotiations for the sale of the requisite amount of bonds.

As a first step the Chancellor made his intentions known to the Directors of the Bank of England. He asked their advice about the type of bonds at present acceptable to the money market and consulted them as to an appropriate date for floating a loan.¹ The Directors in turn informed the market about the Chancellor's plans and negotiated modifications to them on behalf of the loan contractors.² Occasionally Pitt consulted directly with contractors about his proposals for a loan but solicitation by a financial house was not welcomed by the Chancellor.³ On an agreed date the contractors met with the Chancellor and submitted sealed tenders for all the bonds constituting a loan which were then sold to the highest bidder.

Contractors who guaranteed to provide the Government with whatever funds it wished to borrow within an agreed period of time. Thus the sale of bonds and the responsibility for providing the public service with cash sufficient to finance the excess of expenditure over revenues from taxation passed by agreement from the Treasury to private middlemen.

Since the sums required by the Treasury were well beyond both the means and credit of a single firm or individual a loan contractor represented a consortium of firms and private individuals formed to sell all bonds issued by the Government during a particular financial year. Members of a consortium bound themselves to buy an agreed amount of bonds at whatever price their representative thought fit to bid. Only men of renown and high status on the London capital market could organise a consortium and assume responsibility for negotiations with the Treasury. They had to retain the confidence of a wide circle of friends, business associates and contacts willing to trust in their judgement in bidding for loans. To inspire such confidence loan contractors had to be established and successful businessmen willing to back their judgement with considerable amounts of their own capital. They needed the support of well known and wealthy associates. In fact during the war years consortiums were usually headed by a group of contractors, responsible jointly for negotiations with the Government. To maintain confidence to hold a consortium together required success in one of

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1. Pitt Papers, vol.183 - Thornton, dd.18.2.97 and 31.3.97; Bank Minutes, 17.4.97. and Bank Report Book, 12.2.01.
 2. Pitt Papers, vol.183 - Thornton, dd.23.1.98; vol.302 - Giles, dd.16.11.97; Cttee. on the Loan of 1796, p.310; Times, 20.3.06 and Morning Chronicle, 27.5.08.
 3. Pitt Papers, vol.115 - Boyd, dd.10.12.94, 13. & 17.11.95. and 15.4.95. and vol.96 - Theelluson, dd.11.12.94.

the most risky of all the 18th century enterprises.

Contractors not only required the trust of the money market, but the Chancellor also needed to be assured about their competence, because the Government's financial arrangements could be severely upset by failures to fulfil contracts. In order to reduce this risk he invariably consulted the Governor and Deputy Governor of the Bank of England about the reliability of contractors.¹ James Morgan, a prospective contractor for the loan of 1796 had for example to submit the names of members of his consortium to the Governor and also to lodge money as security at the Bank.² Again on the Bank's advice, a consortium headed by the firm, Hodsall Stirling & Company, were refused permission to bid for a loan in 1799 because the Governor had good reason to anticipate the impending bankruptcy of one of their associates, Messrs. Boyd and Benfield.³

But on two occasions during the French wars the Bank failed to prevent the Treasury being exposed to the risk of financial derangement by prior warnings. To avoid such a possibility, Pitt, in September, 1796, loaned Boyd-Benfield £40,000 of Naval money to enable them to make their payment on the 7th instalment of the loan for that year.⁴ Pitt surmised that the firm was at that time only in temporary difficulties because of severe credit stringency in the money market and his timely but unconstitutional action avoided what might have been a serious interruption to the flow of cash into the Exchequer.⁵ Nevertheless the Chancellor came in for strong criticism from the House of Commons when the transaction was discovered some years later.⁶

In the autumn of 1810, Goldsmid, the principal contractor for the loan of that year went bankrupt, and shot himself. Goldsmid's bankruptcy would not, however, have been anticipated by the Governor of the Bank before the loan contract but came about through a sudden and sharp decline in the price of consols.⁷ On this occasion post hoc cooperation between the Bank and Treasury prevented embarrassment to the Government. Perceval set up a Committee to liquidate the contractor's affairs as quickly as possible and persuaded Goldsmid's creditors to accept bonds in payment for their claims on the estate. At the same time the Bank of England guaranteed to provide credit so that bonds could be held until their prices rose again. Goldsmid's debts were paid off with his liabilities to the State and the flow of finance into the Exchequer was not

1. Rose, 'Observations', 1810, p.27 and Cttee. on 10 Naval Rept., 1805, pp.57 and 62.

2. Cttee. on the Loan for 1796, pp. 322 and 414.

3. Bank Report Book, 3 June 1799; Cttee. on 10 Naval Rept., 1805, p.50; Times 4.6.99. and Morning Chronicle, 6.6.99.

4. Cttee. on 10 Naval Rept., 1805, pp.5-6.

5. Ibid, pp. 40 and 46-47.

6. Farly. Debs., vol.5, pp.391, 393 and 395.

7. Cope, 'Goldsmids and the Money Market', pp. 205-206 and Anon, An Expose of the Stock Exchange, 1821, pp.41-48.

interrupted by the bankruptcy of the principal contractors.¹

During the French wars consortiums were formed by a relatively short list of contractors. For loan after loan the same names recur, and most of the business of selling Government bonds was effectively handled by no more than 10 firms.² Among the firms who received the confidence of the money market and contracts from the Treasury are some of the most famous names in English commercial history. There were the Jewish families: Theellusons, Solomons and Goldsmids, merchants, brokers and dealers in foreign exchange.³ John Julius Angerstein who was the Chairman of Lloyds for several years and appeared before the Committee on Marine Insurance in 1810.⁴ Rawson Aislebie was a merchant.⁵ Messrs. Roberts Curtis & Company, whose name appears as contractor on the majority of loans were bankers.⁶ Walter Boyd, who organised most of Pitt's loans for him until his bankruptcy in 1799 operated before the war as an exchange broker in Paris. In 1795 he was still a comparative newcomer to the City, but he had secured a wealthy partner in Robert Benfield, M.P. who had made his fortune in India.⁷ In 1798 he was apparently assisting in the peace negotiations with the French Government.⁸ Boyd was referred to by Samuel Whitbread as "a man of great talent and enterprise: perhaps an honest man of powerful imagination; great vigour of mind and body: plausible in conversation skilfull up a project and perpetually teeming with financial schemes."⁹ Barnes, Steers and David Ricardo who appeared as contractors during the last five years of the war were Stockbrokers who had managed to organise a consortium of jobbers and brokers to negotiate directly with the Treasury. Finally, but not least, came the House of Baring. The Barings first gained prominence in the City by financing external trade and in marine insurance and between 1793 and 1815 their name appears as contractors to no less than 12 loans floated by the Government.¹⁰ Certainly the Barings "happily identified private profit with wartime service to the state" so much so that it was said of Sir Francis that he had "extended his purchases so largely in Hampshire that he soon expects to be able to enclose the county with his own park paling."¹¹ With few exceptions, none of the successful contractors appears to have been specialised

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1. Times, 1,2,3,4 and 5. 10.10 and Cope, 'Goldsmids and the Money Market', pp. 201-203.
 2. Their names are recorded in Bank Minutes, Bank Report Books and The Times and Morning Chronicle.
 3. Cope, 'Goldsmids and the Money Market', pp. 181-86 and Bourne, English Merchants, pp. 26-27.
 4. Cttee. on Marine Insurance, 1810, pp.303-315 and Wright & Fayle, A History of Lloyds, pp.171, 192, 195 and 198.
 5. Kents London Directory, 1796.
 6. Hilton-Price, Handbook of London Bankers, 1876, pp.208-228.

in a single line of commercial activity. Most dealt in both paper assets and commodities, although names of London bankers such as Smith, Glynn, Baldere, Devayne and Walwyn do appear as associate contractors and occasionally as main contractors. All contractors were successful, wealthy and sufficiently famous to be able to undertake the risk and surmount the difficulties involved in loan contracting.

The formation of a consortium, like almost all business in the City at the end of the 18th century, was informal. For example in 1796 James Morgan made a list of his friends in the City who in turn made lists of their associates willing to buy an agreed amount of bonds. Subscribers were solicited by letter or by conversation. Some applied personally to Morgan through one of the forms he left at Garraways Coffee House.¹ A contractor who had gained esteem by the astuteness of his bid at the previous loan had no need to solicit but attracted applications. Apparently Walter Boyd was "overwhelmed with demands" by people and considered himself to be conferring favours in permitting people to join his consortium in 1796.²

Although consortiums were ad hoc federations of interests formed to bid for particular loans, they frequently tended to survive for a succession of loans. For example, the consortium headed by the House of Boyd Benfield, the Goldsmid Brothers, the Thellusons, R.P. Solomons, Robarts, Curtis and Company and Rawson Aislabie remained together as a successful group for the loans of 1795, 1796, 1797 and 1798. Boyd went bankrupt in 1799 but the group survived and was joined by Sir Francis Baring, Godshall Johnstone, and John Julius Angerstein. This enlarged consortium became contractors for the loans for 1799, 1801, 1804, 1805, 1806 and 1810. After the death of Goldsmid in 1810 the core of this group coalesced with the brokers, Barnes, Stears and Ricardo and sold all the bonds constituting loans floated between 1811 to 1815. Very few of the successful consortiums were not dominated by Boyd's original group and the Barings. Other groups contained the larger London banking houses, and a committee headed by Lord Kinnaird, Boldero Mills and Dorien, Charles Grote and Glyns representing 21 banks offered themselves as contractors for loans negotiated

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7. Pitt Papers, vol.115 - Letters from Boyd to Pitt, 1794-1799 and Cttee. on 10 Naval Rept., 1805, pp. 40, 50, 52 and 56-58.
 8. Herries Papers, vol.2, 1798.
 9. Parly. Debs., vol.5, p.393 and see Clapham, The Bank, vol.2, pp.16-18.
 10. Hiday, Barings, pp.15 and 25-27.
 11. Ibid, p.15 and Francis, Chronicles & Characters of the Stock Exchange, p.224.
 1. Cttee. on the Loan for 1796, p.313.
 2. Ibid, pp.332-334 and Rose, 'Observations', 1810, p.26.

from 1799 to 1804, but were successful for only one small loan in 1799. Smith, Payne and Smith organised groups of banking firms to bid for the loans between 1798 and 1802 and they managed to obtain the loan for 1802. Groups of stock brokers also joined together to bid for most of the loans floated after 1798, but failed to secure a contract until the firm of Barnes, Stears and Ricardo coalesced with the House of Baring during the last five years of the war.¹

When a consortium had been formed and accepted by the Government as competent to bid, negotiations with the Treasury became the responsibility of the chief contractor. He had complete discretion in making his bid and all members of his group were bound by whatever terms he agreed to make.² In turn contractors in Boyd's words "took the risk of insufficiency or bad faith of the original subscribers."³ Such default was by no means unknown. After bids had been accepted and to reduce this risk James Morgan required a small deposit from members of the consortium, not known to him personally.⁴

A consortium consisted of a large number of firms and individuals who were required to make payments on a given loan by instalments. Each payment was exchanged for a receipt, called scrip and the total liability for a loan was referred to as omnium. Both scrip and omnium were assignable.⁵ Something like 10% of every bond issue was allocated by convention to the major public companies and most of the remainder was usually subscribed in amounts of £25,000 and above.⁶ If the sample of subscribers to the loans for the period 1798 to 1804 can be taken as typical, it then appears that an overwhelming share of new bond issues were invariably taken by London bankers, merchants and stock brokers. Of course the fluidity of the London capital market in the early 19th century introduces an element of unreality into any system of classification (some merchants were bankers, some bankers were registered stock brokers and there were men who were all three), nevertheless the distinctions do have some utility in revealing the channels through which bonds ultimately reached those who loaned their savings to the Government.⁷

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1. Names from: Times and Bank Report Book, 1793-1815.
 2. Pitt Papers, vol.108, Lord Mansfield's judgement, dd.30.1.97. and Cttee. on Loan, 1796, pp.322, 327-329 and 342.
 3. Ibid, p.327.
 4. Pitt Papers, vol.108, dd. 30.1.97. and vol.276 - List of Defaulters on the Loyalty Loan and Cttee. on Loan, 1796, p.314.
 5. The membership of consortiums formed to market loans between 1778 and 1781 varied between 240 and 1600 members - Anon, 'Stock Exchange a Souvenir', 1812, p.50; Fairman, An Account of the Funds, 1816, pp.124-125 and Hamilton, 'An Essay', 1812, pp.311-312.
 6. Cttee. on Loan, 1796, pp. 333 and Appdx.2.
 7. My sample was taken from Consol Ledgers, Set.9 1792-98 and Set 10, 1798 to 1804.

London bankers had been a "vital link in the chain of Government borrowing" since the War of Succession and probably before.¹ According to the firm's historian, Thomas Coutts purchased bonds for patriotic reasons.² No doubt such motives played a part, but it is perfectly clear that public securities were very attractive assets for banking firms, because the market for them was wide and the organisation for their disposal well established. Moreover, investment in Government securities frequently yielded more than 5%, the maximum rate of interest allowed by law on other securities.³ During wartime when the capital value of Government securities fluctuated violently a skilful banker could exploit price changes to his own advantage. It is not surprising to find that bonds came to form a high proportion of the assets of London bankers in wartime and that the names of most London bankers are to be found written in the Bank's ledgers of dealers in Consols.⁴

London bankers were well situated to distribute bonds. They could sell with facility to a wide circle of customers, contacts and business associates. By taking 100 names at random from among those who purchased bonds from 6 London bankers between 1798 and 1804, it appeared that 13 had titles, 18 were described as merchants, 14 were London tradesmen (cordwainers, distillers, warehousemen, purveyors of food and the like). Also there were 16 jobbers, nearly all of the Stock Exchange, 5 lawyers, 4 clergymen, a civil servant, 12 anonymous individuals called "gent" and 17 bankers of whom the majority had addresses outside the London area.⁵ While the list is amorphous enough, it does indicate that London bankers sold bonds to wholesalers, merchants, aristocratic and professional clients and to jobbers and other bankers.

During the war years the number of London banking firms increased from 63 to 80.⁶ As the Deputy Governor of the Bank of England supposed, the easy credit conditions which prevailed after 1797 favoured the foundation of new firms.⁷ No doubt the handsome profits to be earned by investing in Government securities also encouraged expansion, as new firms attracted new depositors, established houses widened their circle of clients, and both extended the market for Government securities.⁸ Apart from the income earned on their investment, London bankers

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1. Joslin, 'London Private Bankers', p.185 and 'London Bankers', pp.156-177.
 2. Robinson, Coutts, 1929, p.51.
 3. Campbell, 'Economic & Social Effects of Usury Laws', pp.197-198 and Cttee. on Usury, 1818, p.143.
 4. Consol Ledgers, Set 10, 1798 to 1804; Leighton - Boyce, Smiths, p.85 and Joslin, 'London Bankers', pp.156-177.
 5. Sample from Consol Ledgers, Set 10, 1798 to 1804.
 6. Hilton-Price, A Handbook of London Bankers, pp.207-228 and see Joslin, 'London Private Bankers', pp.172-173.
 7. Bullion Report, 1810, pp.118-119.
 8. Leighton Boyce, Smiths, p.127 and Bullion Report, 1810, p.141.

held bonds in anticipation of a short term capital gain and provided credit for jobbers, merchants and others also interested in speculating on the stock market.¹

Prominent among the customers for bonds sold by London banking houses were country bankers. At the turn of the 18th century most banks outside the capital retained a high proportion of their investment in London assets. London assets were liquid and could be quickly realised to settle debts among provincial banks or with their customers. To hold London assets was both convenient and prudent. The most liquid of these assets was a deposit with a London banker, but a country banker also regarded holdings in Government stock as part of their reserves. Yields on public securities compared favourably with provincial rates of interest limited by law to 5%. Bonds were liquid, income from them secure and there always existed the prospect of capital gains. As assets they had marked advantages over provincial securities such as mortgages or advances to merchants and industrialists.²

Country banks increased prodigiously during the war years from 280 in 1793 and 660 two decades later.³ Credit conditions were easy and good profits were to be made from meeting the voracious demands of the Government for loans.⁴ Risks were probably lower than in trade and many cautious merchants found a safer outlet for their capital and talents in banking. In 1812 there were 646 bankers outside London. From a sample of 65 names it appeared that all but eleven held consols.⁵

Country bankers not only held bonds in their portfolios, they also purchased on behalf of their customers, collected dividends for them and maintained a deposit with a London banker which added considerably to the amount of provincial money loaned to the Government.⁶ They maintained a deposit with a London bank in order to remunerate them for managing their affairs in the capital. London bankers provided numerous services for their affiliates. For example, they honoured the bills of country bankers, cashed their notes and executed their orders for stock. By the outbreak of war the connection between London and country bankers was well established and provided an important link whereby provincial

1. Bullion Report, 1810, p.141.

2. Pressnell, Country Banking, pp.287-289 and 408, 418; Bullion Report, 1810, pp. 114, 115 and 140 and Malcolm, History of the British Linen Bank, pp. 80 and 84.

3. Pressnell, Country Banking, p.11.

4. Kerr, History of Banking in Scotland, p.150.

5. I took my names from Pressnell, Country Banking, passim; Graham, The £1 Note; Kerr, History of Banking in Scotland and Pitt Papers, vol.274 and compared with Consol Ledgers, set 12 for 1812-18.

6. Bullion Report, 1810, p.113 and Pressnell, Country Banking, p.261.

savings were channelled into Government loans.¹ With the rapid expansion of both London and country banking firms, their connections were strengthened and extended. For example, by 1800 Glynns were agents for 40 country banks and Robert Smith concentrated all the surplus funds of his provincial banks in London to invest in Government stocks during the war years.²

Parallel to the banking system and overlapping it at many points stood the organised market for dealing in Government stocks. This market had developed with the growth of public borrowing. (Despite the hostility of public opinion to most of its activities and an unfavourable legal environment). It consisted of brokers who purchased and sold Government assets on behalf of clients and made profits by charging brokerage of $\frac{1}{8}\%$ and of jobbers who dealt in securities to make capital gains. Brokers simply negotiated contracts. Jobbers acted as middlemen who accommodated both buyers and sellers of stock and quoted a price at which they would buy and sell.³ Both the Government and City Corporation had long attempted to regulate the numbers and activities of dealers in bonds by limiting entry to the profession, restraining brokers from dealing on their own account and by making certain kinds of speculations illegal.⁴ Despite these attempts not more than $\frac{1}{3}$ of all brokers (many of them jobbers as well) were licensed by the City in 1800 and the provisions of Barnard's Act "to prevent the infamous practice of stock jobbing" had never been enforced by the Courts.⁵

No doubt the object of regulation was to bring some order and responsibility into chaotic and extensive market, all too frequently disturbed by fraud, deceit and default of contract.⁶ At the end of the 7 Years War the more responsible dealers themselves recognised the need for reform and began to dissociate themselves from "lottery jobbers, gamblers, miscellaneous sharpers and those who were disposed either morally or materially to pick pockets."⁷ "Gentlemen Stockbrokers" formed a club in 1762 which met at Jonathan's Coffee House. A decade later this same fraternity moved to another and larger coffee house in Sweetings Alley near to the Bank of England and formed in effect an embryo stock exchange. Their affairs were controlled by a Committee of General Purposes, which made rules for the general conduct of business, and acted as Court

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1. Pressnell, *Country Banking*, p.408.
 2. Fulford, *Glynns*, p.96 and Leighton-Boyes, *Smiths*, pp.111-112 and 127.
 3. Nontefiore, *Commercial Dictionary*, 1803 and Pulling, *Usages, Customs and Regulations of the City of London*, ch.26.
 4. *Ibid*, ch.24 and Baily, 'Rights of Stock Jobbers Defended', 1805, pp.1-46.
 5. Mertimer, *Everyman His Own Broker*, 1801, p.156 and Eden-Hooper, *Stock Exchange A Souvenir*, p.36.
 6. Dickson, *Rise of the National Debt*, pp.535-536 and 552 and Powell, *Evolution of the Money Market*, pp.18-20.
 7. Francis, *Chronicles and Characters of the Stock Exchange*, pp.199-200 and Eden-Hooper, *Stock Exchange A Souvenir*, p.65.

for the settlement of disputes relating to contracts.¹

At the outbreak of in 1793 an organised and specialised market for the purchase and sale of Government securities existed in the City of London. Its function was to render assets which were not redeemable by the State liquid to its creditors. Jobbers preserved investors from delays in realising their assets; by buying and selling from each other, from merchants and from bankers, they guaranteed the liquidity of the entire organisation for dealing in bonds. They provided a constant demand which stabilised asset prices. Both brokers and jobbers had an active interest in widening the market for Government securities.

The number of dealers in bonds increased during the war years. In 1792, it is possible to distinguish 430 accounts of people dealing in consols. For the period 1798 to 1804 the Bank administration itself distinguished nearly 600, and in 1812 the Bank listed 726.² Another observable change is the increase in the number of dealers classified by the Bank as "Gentleman of the Stock Exchange". Before the war dealers in stocks tended to be more heterogeneous and included (apart from bankers) merchants, lawyers, stationers, mercers, booksellers, doctors, even the occasional clergyman. While these professions remained represented in the ledgers of dealers in consols they became outnumbered by the names of those with the address "of the Stock Exchange" appended. Allowing for improvement in classification the evidence suggests the emergence during the war of a new class of men who found it worth while to make a profession out of dealing in public securities. Before the war jobbing in the funds had been more commonly combined with another profession, usually that of merchant or exchange broker, but with the opportunities afforded by Government borrowing, the organisation for selling bonds not only expanded in size but apparently became more specialised.

There is, however, no evidence of any separation of function between jobber and broker up to 1815, a development which was imposed on the profession later in the 19th century.³ Another significant feature of the stock market also remained unchanged. While the numbers of dealers increased, the tendency for most of the turnover in bonds to remain concentrated in a relatively small number of hands persisted. 67% of consols sold in 1791 were handled by only 28% of all those dealing in consols. By 1798 the number of dealers had increased by 40% but dealings were dominated by men like John Addes, Philip Antrobus, Emmanuel

1. Eden-Hooper, *Stock Exchange a Souvenir*, pp.45 and 51 and Duguid, *Story of the Stock Exchange*, ch.14.

2. *Consol Ledgers*, set 9, 1792-98, set 10, 1798-1804, set 11, 1804-12 and set 12, 1812-18.

3. Powell, *Evolution of the Money Market*, pp. 160-162.

Lousada, the Sprott Brothers, William Steer, Edward Sheell, William Marriot, Theophilus Green, Thomas Ellis, Tom Fielder, John Farrer and David Ricardo to name but a few. These men might sell over a quarter of million consols in a year when the typical jobber purchased and sold between £30,000 to £40,000.¹

In 1802 initiative for forming a stock exchange came from among larger dealers, and they opened the building which houses the present exchange. It contained some 500 subscribers, but membership was controlled.² From the start the Exchange aimed to distinguish its members from the great mass of dealers (many of poor repute) and to protect them and their clients from the risk of fraud and default of contract. No doubt it helped to maintain discipline and responsibility at a time when there were no legal sanctions to enforce many of the contracts made in the stock market. Lists of defaulters were published.³ A nobleman who refused to pay his debts was exposed and in 1814 a Committee of the Stock Exchange successfully prosecuted a group of jobbers for a false announcement of peace which raised bond prices to their own advantage.⁴

Finally, the ledgers list hundreds of merchants who dealt in Government stock. Merchant was a term used by the Bank of England to cover every conceivable variety of trader, but it is difficult to see how their classification can be improved upon, except perhaps by distinguishing between the commodities they dealt in and their varied geographical spheres of interest; neither a possible or illuminating exercise.

Merchants engaged in internal and external trade might be expected to have developed contacts, associates and customers to whom they could just as easily sell paper assets as they sold commodities. Moreover, they were also in a position to obtain bank credit for the enterprise. The Antrobus family sold both tea and bonds, the Lousadas sugar and consols. John and Kathew Chalie switched their capital and talents from importing wine into dealing in paper assets when the war came. No doubt the additional risks attendant upon foreign trade in wartime encouraged other merchants to make the same move.

Many of the London mercantile community disposed of bonds through their brethren in the provinces or sometimes in foreign capitals. Moses Levy made use

1. Consol Ledgers, Set 10, 1798-1804.

2. Eden-Hooper, Stock Exchange a Souvenir, p.54.

3. Melsheimer & Walter, Laws and Customs of the Stock Exchange, pp. 2 and 5.

4. Anon, 'Report of the Sub Committee of the Stock Exchange', 1814 and Anon, 'Calumnious Aspersions Contained in a Report of the Stock Exchange Refuted', 1814.

of his Liverpool contacts. Luke Walford and Jacob Teifer supplied business associates in Glasgow and Bristol. The Minet brothers sold to Canterbury wool drapers. The Texeras and Molineaux had family connections in Geneva and The Hague. Thus by devious and multifarious routes usually established for commodity trade, bonds were distributed around the country and dealing in paper assets came to be as common to some merchants as trading in other wares.¹

Unfunded borrowing was achieved through the sale of Military, Exchequer or Treasury bills to the money market. Government bills were received by individuals or institutions in exchange for commodities or services provided for military departments or in exchange for cash supplied to the Exchequer. Bills could be held by those to whom they were first issued until maturity when claims against the Government could be translated into a capital sum plus interest. Alternatively bills could be sold on the capital market to others with cash to invest in liquid securities and who desired to earn interest upon or to make a capital gain with their ready money. By the outbreak of the French Wars an organised market had also developed for the circulation of Government bills which made it relatively easy for the State to borrow short term in order to meet its day to day expenditure.

At the centre of this market stood the Government's bank, the Bank of England. In fact in peace time the Bank held the bulk of the unfunded debt in its own portfolio, but during the war the Government called upon the market to take increased quantities of its bills.² Before outlining the Bank's functions and assessing its importance I propose to describe the remaining but subsidiary parts of the market for Government bills. Some impressions of the individuals and institutions who held unfunded debt can be obtained from the names of people who exchanged bills for irredeemable bonds on the occasion of several funding operations which occurred during the war years. Their names and occupations are recorded in ledgers among the Bank of England's records. Unfortunately these ledgers do not provide us with an entirely accurate impression of the holders of the bills at any particular moment of time, because bill holders might avoid funding their bills by selling them to people or banks who were willing to exchange bills for bonds. Furthermore, the descriptions contained in the ledgers are not really specific

1. All information on merchants comes from Consol Ledgers, Set 10, 1798-1804 and London Directory, 1796, Kents London Directory, 1800, New Annual Directory, 1800 and Universal British Directory (all available at Goldsmiths Library, London).

2. See Tables 16 and 23.

or detailed enough for a good analysis of the composition of the money market. Nevertheless, random samples of the names of people who exchanged bills for bonds in 1794 to 1796, 1808 and 1812, when coupled with other descriptive evidence provides us with some notion of the kind of people and institutions who purchased and held Government bills.¹

To begin with bills were a sufficiently liquid and profitable security to be a favoured outlet for the funds of bankers. My analysis showed that as a group London bankers held more unfunded debt than any of the other parts of the capital market, except the Bank of England. London banks had been "nurtured on Government finance" and throughout the 18th century they had switched their resources into Government debt in wartime.² The French Wars proved to be no exception to established practice. Coutts, Hoares and Glyns all held bills and by 1813 the turnover of Exchequer bills at Smiths reached half a million.³

In spite of their obvious importance the role played by London banks must be clearly understood because some part of their holdings of bills undoubtedly represented the investment of funds on behalf of clients. Country and Scottish banks for example, welcomed the opportunity to earn the high rates of interest payable on liquid public assets during wartime.⁴ Some obtained bills directly from the Government broker or from the Bank of England but most country bankers purchased their bills through the agency of a London banker.⁵ Furthermore, country bankers often maintained deposits with London bankers. Alternatively the resources of a country bank might be channelled through its main branch in the capital.⁶

In addition to banks fire and marine insurance firms who needed to maintain a balance of liquid assets to meet claims on them for losses at sea or by fire, found Government bills a suitably safe and liquid security for their surplus cash.⁷ The London Assurance and Royal Exchange marine insurance companies both held exchequer bills and several names prominent as underwriters at Lloyds can be found among those funding bills during the war years.⁸

1. The samples have been taken from Consol Ledgers, Sets 9-11, 1792-1812.
2. Joslin, London Private Bankers, p.185 and 'London Bankers', pp. 175-176.
3. Robinson, Coutts, p.51; Bullion Report, 1810, p.50; Fulford, Glyns, pp.93-94 and Leighton-Boyce, Smiths, p. 100.
4. Pressnell, Country Banking, pp.288,421,422,424,426; Cttee. on Suspension, 1797, pp.205 & 207; Bullion Cttee., 1810, pp.114,115 and 140; Cttee. on Usury, 1818, p.162 and Kerr, Banking in Scotland, pp.136-139.
5. Sayers, Lloyds Bank, p.181; King, History of the London Discount Market, p.9; Pressnell, Country Banking, pp.80-81; Thornton, Paper Credit, 1802, pp.76,80,81, 85,98,108 and 279; Leighton-Boyce, Smiths, pp.112 and 116 and Fulford, Glyns, p.96.
6. Pressnell, Country Banking, p.402 and Leighton-Boyce, Smiths, p.127.
7. John, 'Marine Insurance', pp.138-139.
8. Ibid, p.158 and Pitt Papers, vol.277.

THE ESSENTIALS OF DEBT MANAGEMENT

The Issue and Redemption of Public Securities

Borrowing money consisted in marketing public securities and this task involved the Chancellor of the Exchequer and his assistants at the Treasury in the business of debt management, which is but another name for borrowing policy. But the nature and complexity of their task can only be appreciated by a detailed investigation into the range of decisions involved in the sale of assets to the public.

The amount of money spent by the Government in any single year consisted of taxes and the net sum borrowed from the public. Given the level of expenditure, clearly the higher the level of taxes levied on the population the lower was the additional amount borrowed by the Government to finance its spending. In other words the volume of public securities marketed over the year bore an inverse relationship to the total sum raised in taxes.

As I have already explained, Government borrowing at the close of the 18th century took one of two forms, funded or unfunded. Yet contemporary discussions of public finance usually ignored the latter as a source of revenue and regarded a balanced budget as one where receipts from taxes covered expenditure and the Government had no recourse to funded borrowing.¹ It is easy to see how confusion could arise. In peace time most of the bills sold to the money market were designed to obtain funds in anticipation of revenue accruing during the current year and were automatically paid off when taxes or, less commonly receipts from loans, arrived at the Exchequer. "Contingent" unfunded borrowing of this kind made no contribution towards the finance of annual expenditure, it simply met the Exchequer's temporary needs for ready cash. But when the Treasury issued bills on the security of revenue which failed to arrive at the Exchequer or issued bills to provide funds for unforeseen increases in the level of expenditure, clearly the Government employed unfunded

1. Cttes. on Public Income and Expenditure, 1786 and 1791 and Rayment, Income and Expenditure of G.B. of the Last 7 Years, 1791.

borrowing to finance current expenditure. The case is even more obvious when the Treasury sold bills to finance current expenditure but which were legally redeemable from tax revenue accruing in future financial years.¹

Both funded and unfunded forms of borrowing provided the Government with the finance required to meet the difference between expenditure and receipts from taxes. But since the Treasury both borrowed money and repaid debt during the financial year, only the net amount of money borrowed could be used as interest payments and for the purchase of resources by public departments. Clearly the greater the gap between total receipts from the sales of bonds and bills and money expended for the redemption of bonds and bills the higher would be the proportion of all money borrowed from the public available for the finance of "real" expenditure. At the same time the more rapid would be the accumulation of the national debt. As the volume of debt redeemed grew larger the amount of current loans available for other forms of expenditure became comparably smaller. At the point where repayments of debt exceeded cash borrowed over the year the Government allocated taxes to meet obligations to its creditors, but the net amount of debt outstanding and the interest bill then declined. As pre-war discussions about the Sinking Fund made clear, only if the Government possessed a surplus of tax receipts over expenditure could effective reductions be made in the size of the national debt.²

The net amount borrowed by the Government for the finance of expenditure consisted then of receipts from bonds sold minus payments for bonds purchased in the market by the Treasury, plus revenue from bills marketed minus revenue used to redeem matured bills. During the wars with France all four operations took place annually and encompassed the business of debt management. Receipts from bonds sold invariably exceeded the amount of revenue employed to buy bonds and funded borrowing always made a positive contribution towards the finance of expenditure. The contribution of unfunded borrowing on the other hand could be either positive or negative. Whenever it became negative (that is when bills repaid exceeded bills issued) part of the revenue from funded borrowing had in fact been diverted to the redemption of the floating debt. Whenever bills issued exceeded bills repaid unfunded borrowing contributed to the finance of real expenditure.³ Finally the net volume of bonds sold over the year bore an

1. See pp.35 & 72; Cttee. on Public Monies, 1857, pp.488-500 and 533-534 and Wood, English Theories, pp.60-62.

2. Chisholm Rept., 1868-69, pp. 710-712 and Hargreaves, National Debt, pp.98-100.

3. See Table 4.

inverse relationship to the net volume of bills issued. Unfunded and funded borrowing were alternative ways of raising money and the higher the level of one the lower the level of the other and vice versa. Only with these relationships in mind is it not misleading to discuss separately the management of the funded and the floating debts.

The management of the funded debt consisted of the sale of new bonds, an operation called floating or negotiating a loan, and the redemption of debt through the purchases of bonds from the money market by the Commissioners for the Sinking Fund. It is however important to emphasise that at the end of the 18th century the only form of debt for which the Government contracted with its creditors for the repayment of principal as well as interest on maturity consisted of exchequer military and Treasury bills. Other debts of the British Government consisted of claims for interest or annuity payments and were redeemable only at the option of the Government itself. Although the Government could purchase bonds in the market if it wished, bonds were not legally promises for the repayment of debt.

After the American War of Independence, both the public and statesmen became deeply concerned with the size of the country's debt, and Pitt, prompted by the Select Committee on Public Accounts, resolved to place the debt under a regular course of redemption.¹ It is well known that his plans for the reduction of the debt leaned heavily on the ideas of Richard Price who had published ideas on the subject as early as 1770.² Briefly Price recommended the establishment of a Sinking Fund under the terms of which the taxes formerly paid as interest on bonds redeemed by the Government would continue to be collected and employed to redeem more bonds. Thus the annuity payments on redeemed bonds would provide the Government with an accumulating fund for the redemption of the national debt. As Price himself put it, "A Sinking Fund fed by interest is a fund constantly increasing."³ As a device for diverting public money towards the repayment of debt Price's ideas had much to commend them. Of course taxes would have to be imposed to provide the initial funds to buy bonds from the capital market but as time went on the Sinking Fund would depend less and less on the imposition of new taxes and more upon receipts from existing

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1. Chisholm Rept., 1868-69, p.711; Fairman, An Account of the Public Funds, 1816, p.178; Grenville, An Essay on the Sinking Fund, pp.18-19 and Binney, British Public Finance, pp.112-114.
 2. Cone, 'Price and Pitt's Sinking Fund', pp.244-251.
 3. Price, An Appeal, 1774, pp.312-315.

taxes formerly levied to pay interest to the Government's creditors. Further taxes need not be imposed, the Government would simply not lighten the existing burden until the required amount of debt had been redeemed. For a society which exhibited such a marked reluctance to contribute anything in taxes the attractions of Price's scheme are obvious.

Thus in 1786 Pitt established his famous Sinking Fund when he proposed to allocate £1 million every year from surplus revenue for the purposes of debt redemption. In addition he proposed to use the interest formerly paid to the owners of the redeemed stock for the redemption of even more bonds. But when the annual income of the Sinking Fund reached £4 million the interest on the bonds thereafter redeemed would be cancelled and taxes reduced accordingly.¹ Calculations among Pitt's papers show that if the price of consols had remained at 75, and no further borrowing occurred, the entire National Debt could, through the operation of this plan, have been paid off over 35 years.² Finally Pitt and the Commissioners for Public Accounts were most anxious to avoid the fate of all previous Sinking Funds whose income had been diverted away from their original purposes towards other items of public expenditure. In order, as he put it, "to convince the kingdom something effectual is meant and public debts are indeed on the way to be extinguished," Pitt attempted to design the legal and administrative framework of his Sinking Fund in such a way that it would be mandatory on future Chancellors of the Exchequer.³

For the five years prior to the war, the Sinking Fund operated as Pitt intended, purchasing bonds with surplus revenue from taxes and receiving interest on redeemed stock.⁴ When the war began in 1793 the Government once again commenced borrowing on a large scale and with the disappearance of the budget surplus the whole problem of the Sinking Fund obviously required reconsideration. For reasons discussed further on, the Government persisted with the Sinking Fund and between 1793 and 1815 allocated revenue for the purchase of bonds at the same time as it sold bonds to the market.

The management of the unfunded debt involved decisions about the issue, renewal and redemption of bills. Every year the Treasury was confronted with a block of matured supply or deficiency bills due for redemption and could meet the

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1. Chisholm Rept., 1868-69, pp.711-712 and Hamilton, 'An Inquiry', 1812, p.141.
 2. Pitt Papers, vol.275.
 3. Sinclair, History of the Revenue, vol.1, pp.486-487, 496 and 499; Chisholm Rept., 1868-69, pp.711-712 and Grenville, An Essay, pp.59 and 63.
 4. Fairman, An Account of the Public Funds, 1816, p.182 and Chisholm Rept., 1868-69, pp.711-712.

Government's obligations to its creditors in one of four ways. First the bills could be repaid from the cash received from tax revenue and the Government debt would then decline. Next the Chancellor could allocate cash received from a loan towards the repayment of bills. In this case the funded debt would rise but the unfunded debt would decline by a comparable amount. Whenever the Government borrowed on bonds and at the same time reduced the unfunded debt the Treasury had in fact allocated part of the loan towards the redemption of bills. Thirdly the Chancellor could opt to renew matured bills for a further year. Renewal occurred whenever the amount of bills issued over the year exceeded the amount repaid and the unfunded debt increased. Renewal of floating debt involved no transfer of cash from the public to the Government and implied that the Chancellor had deferred making proper provision for the redemption of bills issued to finance past expenditure until some future date. Finally, the Treasury could convert bills directly into bonds under an operation called funding. Funding consisted simply of the exchange of bills for bonds of a comparable market value. Again no cash passed between citizens and the State, and in funding operations the Treasury reduced the floating debt but added a comparable amount to the funded debt. Funding thus added to the supply of bonds offered to the money market over the financial year, and implied that past expenditure, met in the first instance through the sale of bills was ultimately financed in a subsequent year through the sale of bonds.¹

Borrowing policy was concerned essentially with operations for the sale and redemption of bonds and bills. It aimed to facilitate the flow of revenue into the Exchequer at the lowest cost possible to the public. In the management of the floating and the funded debt the Treasury operated within the framework of laws, conventions and institutions already described. Occasionally it could operate upon this framework and change the conditions for borrowing money to its own advantage. But unlike taxes, which were compulsory levies, revenue could only be borrowed by eliciting cooperation from those with funds to lend through the institutions and methods established for that purpose. There were definite and important constraints on the Government's freedom to change conditions in the

1. The management of the unfunded debt is not described in any of the usual sources on 18th century public finance. My understanding has been derived from Ways and Means and Supply Resolutions printed in Commons Jnls.; Treasury Accounts - T30/20; Chisholm Rept., 1868-69, pp. 694-701; Cttee. on Public Monies, 1857 and Treasury Calculation Book - T35/27 for 1799.

market place for its bills and bonds.

At any one time the distributive network for the sale of public assets was given. Thus the Treasury had to bargain with loan contractors, it had to market bills through the Bank of England and had to negotiate its funding operations with committees of London bankers. Moreover, it depended heavily on the Bank not merely to act as intermediary with the capital market but to support both the Government and the private institutions involved in supplying finance to the State with whatever credit seemed necessary. Finally, Chancellors of the Exchequer operated within the legal framework and political conventions of the financial system. They required approval from Parliament for all their actions. Money had to be borrowed and spent within a single financial year. Nevertheless, the Chancellor of the Exchequer could do some things to affect the terms upon which he borrowed money. First he could regulate the flow of assets onto the London capital market in order to take advantage of changes in demand. Next he could market the kind of assets popular with the market and profitable to the Government. Finally he could seek to promote competition among those who purchased public securities. I propose to discuss each of these options in turn.

The Timing and Arrangements for the Issue of Public Securities

Chancellors of the Exchequer attempted to regulate the flow and composition of assets offered to the London capital market in order to take every possible advantage of variations in demand. Thus when liquidity preference ran high the interest charge could be contained by borrowing through the medium of bills. If bonds seemed to be in favour with the market obviously it paid the Treasury to fund part of the floating debt. Strategy consisted essentially of reacting to changes in the disposition of the market towards different types of public securities. It was above all a matter of making the right arrangements at the right time. But in order to appreciate the opportunities open to the Chancellor for reducing the Government's interest bill it is necessary to understand the factors affecting changes in demand for public securities and also to appreciate the methods available to him for taking advantage of fluctuations in demand.

Given the amount of money the Government opted to borrow over any financial year, its opportunities for effecting reductions in the overall interest bill really depended on the state of demand for public securities during that year. In seeking loanable funds the Government competed with the private

sector and changes in opportunities for profitable investment elsewhere in the economy certainly brought about increases and falls in the level of demand for its paper assets. Nevertheless it should be observed that while the market for public securities overlapped with the national market for capital, it was not a homogeneous market. My study of bondholders reveals that they were concentrated in and around London. Their investment horizons probably did not extend to the possibility of owning industrial assets in the North or Midlands. For several reasons discussed elsewhere the way in which industry was financed did not appeal to them.¹ Probably the range of alternatives open to investors in Government bonds and bills may well have been confined to mortgages on real estate and the limited range of securities negotiated on the London capital market, such as stocks of the Bank of England, the East India Company, the shares of several insurance companies, London public utilities and the more numerous canal companies.

Competition between the public and private sectors for funds available on the London capital market does not appear to have been national in extent and since Government borrowing was conducted through the sale of assets (transactions legally exempt from the operations of the Usury Laws), it became even more difficult for the private sector to compete whenever interest rates moved above the legal maximum of 5%.² All the evidence suggests that the low risk, higher yield and marketability of public securities rendered them a favoured outlet for whatever funds were available to be invested in London and that merchants, landowners, canal companies and industrialists found it difficult to obtain loans or credit in wartime because of the diversion of investible funds into Government securities.³ But potentially at least the ease and price at which the Government sold its assets depended in some degree upon the opportunities open for alternative investments in the private sector.

The first buyers for any new public securities included loan contractors, banks, insurance companies, bill brokers, gentlemen of the Stock Exchange, wholesalers, retailers and merchants of every kind, who together made up the

1. See p. 262.

2. Campbell, 'Economic and Social Effects of the English Usury Laws', pp.197-198 and 206 and Campbell, 'Usury and Annuities', pp.473-491.

3. Cttee. on Usury, 1818, pp.8, 11, 13, 20, 143, 162 and 197; Joslin, 'London Bankers', pp. 169, 171 and 174; Pressnell, Country Banking, pp.287-288; Thornton, Paper Credit, 1802, pp.286, 290, 292 and 310; Cttee. on Suspension, 1797, p.145 and Lords Cttee. on Suspension, 1797, pp.254 and 382.

London capital market. Although it might be difficult at the margin to distinguish dealers from true investors, nevertheless it is clear that most of the immediate and possibly the second line of demand for bonds came from professional and semi-professional speculators, that is from people more interested in realising a capital gain on their transactions in public securities than in the annual interest earned by holding them. In wartime the day to day fluctuations in the value of bonds could be exploited for profit by skillful speculators while the less skillful made losses.¹

Bills on the other hand provided the market with an asset less likely to fluctuate in value, more easily exchanged for cash at the Bank of England or another London bank, of short maturity but which in general earned lower rates of interest than bonds. Although bills were less easily exploited for capital gains they did provide a fairly profitable and highly liquid outlet for the surplus funds of the capital market.

At any point of time the market distributed the funds available to it for investment in State assets between cash, bills and bonds. Cash balances offered little or no interest but were completely safe. Bills paid interest and were easily realised for cash while bonds paid high rates of interest and offered the greatest prospects for capital gains or capital losses. Today, the propensity of the capital market to hold cash or bills rather than bonds is referred to as liquidity preference, but the evidence suggests that the movement of funds between different types of securities in response to pressures for liquidity was probably already well known to Governments at the end of the 18th century.² Furthermore, reasons for changes in the disposition of the market towards different types of assets are also not difficult to trace from contemporary comments. To begin with, the propensity to purchase bonds grew stronger when people's wishes for cash and bills had been satisfied.

I have already shown how the liquidity position of the market depended on the Bank of England and any restraint imposed by the Bank either upon purchases of bills from the Government or upon the volume of commercial paper discounted for the private sector immediately reduced the demand for bonds. Even hints or rumours of stringency in monetary conditions produced similar effects.³

1. See pp. 49, 51 and 53.

2. Joslin, 'London Bankers', pp.156-177; Cttee. on Suspension, 1797, pp.43, 57, 178, 180, 205 and 212-216.

3. Cttee. on Suspension, 1797, pp.37, 43, 57, 180, 190, 192, 212 and 215 and Boyd, 'Letter to Pitt', 1811, pp.2-5.

But apart from the absolutely central position of the Bank it is also apparent that the Government itself could and did influence the liquidity position of the market. If it issued more bills than it repaid over the financial year the volume of unfunded debt held by the market increased. On the other hand a contraction of the floating debt reduced the market's liquidity position and its propensity to buy bonds.¹

Similar effects were occasioned by large scale issues of cash to or withdrawals from the private sector. For example for some weeks before the quarterly payment of dividends on the national debt cash accumulated at the Exchequer and affected the liquidity of the money market. Newland, the Bank's cashier, explained to the Lords Committee of Secrecy in 1797 how dividend payments made a considerable difference to the volume of money in circulation and 22 years later another Lords Committee put the variation in the note issue during the weeks preceding and the weeks following the payment of dividends at between £3 and £5 million.² All fluctuations in the flow of Government expenditures over the year produced comparable variations in the volume of cash on deposit with London bankers and through these variations expansions or contractions in the overall supply of credit afforded the banking system.

The propensity of the market to buy bonds was strongly influenced by expectations of future movements in their values. If price trends were in an upwards direction and the market expected them to continue that way its disposition to buy bonds became stronger, but if buyers anticipated a fall in prices their antipathy to bonds grew and they preferred to hold bills or cash. In an organised and interlocked market dispositions to optimism or pessimism tended to become generalised quickly and in war time changes in mood were apparently highly volatile.³ Nevertheless the factors normally taken into account by speculators in their predictions appear to have been fairly rational.

To begin with dealers in paper assets knew their customers were prepared to buy only a certain amount of bonds at any one time and that large and rapid increases in their supply could only be disposed of at lower prices. Thus when purchasing bonds from the Treasury or from their fellow dealers in the capital

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1. Pitt Papers, vol.183 - Thornton dd. 18.2.97 and 31.4.99; Cttee. on Suspension, 1797, pp.191-192 and 271-272; Anon, 'Letter on the Loan of 1796', p.33 and Cttee. on 11 Naval Report, 1805, p.169.
 2. Lords Cttee. on Resumption, 1819, pp.11-12; Lords Cttee. on Suspension, 1797, p.271; Cttee. on the Bank, 1807, p.95 and Collier, Life of Newland, 1808, pp.54-57.
 3. See Samuel Hoar's evidence to Cttee. on Suspension, 1797, p.50 and Reports in the Monthly Magazine, 1796 to 1805.

market they had to make some estimate of the effects on prices of the potential flow of bonds onto the market and of the willingness of investors to absorb all the bonds offered for sale over some finite period of time.¹ The flow of bonds consisted of the annual loan, bills funded by the Treasury and old stock marketed by the public. Usually the Chancellor informed the market about the amount of the loan early in the financial year but funding operations occurred as and when the Treasury thought it necessary and profitable to reduce the floating debt. Dealers had no way of ascertaining the amount of bills scheduled for funding during the year but they could reasonably anticipate such operations whenever the volume of floating debt outstanding had risen rapidly and when bills fell to a discount.² As for sudden additions to the amount of old stock in the market that remained unpredictable and depended upon the anxiety of investors about the capital value of their holdings in the funds.

Political events had, however, been recognised throughout the century as perhaps the most significant influence on the disposition of both dealers and investors to buy or sell bonds. In peace time the illness of the King, a change of administration, or, as Mortimer so amusingly says, "the advancement to the highest offices in the state of men of weak minds, corrupt hearts and debauched manners" had also a tendency to reduce the demand and lower the price of state assets.³ By the end of the century investors were probably only slightly concerned with the risk of default by the Government on its interest payments as administrations changed but they could be certain that war would increase and peace diminish the amount of money borrowed by the state. Annual expenditure in peace time was usually financed from taxation while additional military expenditure to fight the war had been invariably met by borrowing. War or the expectation of war presaged an increase in the supply of bonds and a reduction in their price. Peace portended the opposite and investors who had purchased assets relatively cheaply while the war continued could expect to make capital gains when hostilities ceased, while unfortunate people who had purchased bonds before war broke out could expect to make a capital loss if they realised their assets during the conflict. Thus speculators and investors concerned with the capital value of their investments always hurried to sell out

1. Cttee. on the Loan of 1796, pp.317-319.

2. Ibid, p.334; Vansittart Papers - to Castlereagh, dd. 17.10.14 and Pitt Papers, vol.108, dd.5.2.94.

3. Mortimer, Everyman His Own Broker, 1801, p.255.

at the onset of war and to buy when peace seemed near.¹ The influence of this body of "floating assets" on prices was often considerable. Consol prices, for example, fell sharply at the onset of war in 1756, 1776 and 1792 and appreciated again when peace terms were agreed to in 1762, 1782, 1802 and 1814.²

During the French wars any political or military event which was a portent of either the prolongation of the war or an early peace frequently affected the price of bonds and the bid submitted for bonds by loan contractors. For example, James Morgan observed that this bid "would be governed by reference to the market price in the first instance, next the disposition of the public towards peace". Reports on stock prices published in the Monthly Magazine between 1796 and 1805 indicate that alliances formed against the United Kingdom, the loss of Naval engagements or land battles and breaking off negotiations for peace with France were all events which depressed bond prices. While victories, diplomatic success or the opening of peace talks invariably lead to some appreciation of prices.⁴

Not all speculation about possible movements in the price of bonds can be described as rationally based. On several occasions during the Napoleonic wars the stock exchange and other parts of the market apparently bought and sold on the basis of wild rumours and at least once the market succumbed to a deliberate fraud designed to persuade it that peace was in the offing and prices would rise.⁵ Furthermore, the pamphlets of the period contain several assertions accusing the Stock Exchange or other groups of dealers in public securities of rigging the market in order to further their own interests. Those about to buy bonds certainly possessed an interest in affecting reductions in their prices, while "bears" about to sell out naturally appreciated rising prices. But whether either group could effectively bring about changes in prices sufficient to affect the overall demand for bonds and the cost of borrowing seems extremely doubtful, whatever Mortimer and other opponents of the Stock Exchange might say to the contrary.⁶

The methods open to Chancellors of the Exchequer for regulating the supply of securities to the market in order to take advantage of variations in

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1. Mortimer, *Everyman His Own Broker*, 1801, p.248-251; Maxwell, *The Creevey Papers*, p.11; McPherson, *Annals*, vol.IV, 1805, p.264 and *Dropmore Papers*, vol.2, p.338.
 2. Monthly prices of bonds are tabulated in the *Annual Register and Gentleman's Magazine* and annual prices in Ashton, *An Economic History*, table 13.
 3. Cttee. on the Loan for 1796, p.319.
 4. Cttee. on 11 Naval Rept., 1805, pp.167-168 and monthly reports on the stock market in *Monthly Mag.*, 1796-1805.
 5. *Monthly Mag.*, Feb., 1803, p.98 and Anon, *Rept. of the Sub Cttee. of the Stock Exchange*, 1814.
 6. Anon, 'An Expose of the Stock Exchange', pp.15-46; Anon, 'Letter on the Loan of 1796', p.34 and Mortimer, *Everyman His Own Broker*, 1801, Chs. 2 and 9.

the level and composition of demand can now be outlined.

Major decisions about debt management had usually to be made before the Chancellor presented his Ways and Means estimates to Parliament and at that stage he decided upon the proportions of revenue to be raised from taxes, by bonds and through the medium of bills. Theoretically the Chancellor should have favoured bills over bonds whenever the prices of the latter were low and falling and whenever the market displayed a strong propensity to remain liquid. The loan could be delayed and allocated towards the payment of bills issued to anticipate its revenue. Unfortunately the Chancellor was simply never in a position to calculate the relative advantages of funded against unfunded borrowing simply because he could rarely predict with any accuracy the likely flow of bills onto the market over the year. He certainly knew the amount of bills up for repayment and could assess the possible increase in the floating debt due to issues of bills for the finance of foreseen expenditure. But the volume of bills circulated to cover inaccuracies in the estimates of revenue and expenditure or to anticipate receipts from taxes and loans accruing during the current year could not be predicted and brought within a framework of calculations necessary for any rational policy of debt management. Yet contingent short term borrowing, particularly by the military departments, frequently accounted for the greater part of additions made to the flow of bills onto the capital market over the year.¹ When sudden and rapid increases in the supply of bills could alter the whole basis of the Chancellor's predictions about the relative movements in the prices of bonds and bills the Treasury could do little more than attempt to contain contingent short term borrowing within narrower limits. Fine calculations as to the relative advantages of borrowing on bills or bonds were never really feasible. The Treasury did not really have an overall policy for debt management but reacted to the floating debt by funding bills whenever the market appeared disposed to move into bonds and whenever profitable opportunities for conversion arose.²

Of course the floating debt could also have been contained if the Government repaid matured bills with the proceeds of loans but funding operations had certain definite advantages. First of all the Treasury usually managed to convert bills into stocks of 4% and 5% denomination which loan contractors frequently refused to accept, but which had the merit of being convertible after

1. See pp. 42, 105, 106, 109 and 125-126.

2. See ch. 5 and Vansittart Papers, vol. 31231 - Castlereagh, dd. 17.10.14.

the war into 3½ consols, thereby reducing the Government's interest bill.¹ Some authors considered funding had the added advantage of allowing the Treasury to by-pass loan contractors and to deal directly with a larger number of bill proprietors, but whether cutting out one group of middlemen reduced the interest bill is impossible to say.² Probably not, because negotiations for funding were usually conducted with a fairly small group of London bankers representing the market who apparently reached prior agreement on the terms generally acceptable for the conversion of bills into bonds.³

Perhaps the most important advantage of funding was that it presented the Treasury with an opportunity to regulate the flow of bonds offered to the market. Proceeds from the loan could be used to pay off bills and the Treasury took account of the possible gain from increasing the loan instead of floating a smaller loan followed by a funding operation. Calculations of this sort must have been difficult to make since they involved comparing the known prices of bonds on the date chosen for negotiating the loan with their expected prices on the date proposed for funding sometime later in the year. Additions to the loan would, moreover, depress consol prices while deductions from the volume of bills funded usually gave the Government better terms on the conversion. Theoretically the Treasury should have funded an amount of bills or borrowed an amount of money so that the interest payable after both operations was minimised, at the point where the annual cost of the last pound borrowed equalled that on the marginal bill funded.⁴

Funding could also be timed to take advantage of changes in the disposition of the capital market. Negotiations to convert bills into bonds should theoretically have taken place when bond prices were rising and the market anticipated the increase to continue. In wartime daily and unpredictable fluctuations in bond prices rendered the selection of dates extremely difficult and in any case the time for funding operations was subject to negotiation with bill holders who had different interests to the Treasury. Both they and the Treasury had, however, a common interest in selecting a time which did not overlap with the release of bonds for the loan. They attempted to avoid

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1. Chisholm Rept., 1868-69, pp.513-515, 523-528, 537 and 541 and Sinclair, History of the Revenue, 1802, vol.1, pp.484-485 and 503-505.
 2. Sinclair, History of the Revenue, 1802, p.280; Hales, 'The Banks Mirror', 1796, p.35 and Ricards, 'Financial Policy of War', pp.19-21.
 3. Pitt Papers, vol.276 - Newland-Long, dd.20.2.75 and 23.4.96 and vol.102, dd. 17.9.96.
 4. Bill or Bond Finance is discussed in Pitt Papers, vol.183 - Thornton, dd. 18.11.96, 25.12.96, 18.2.97 and 31.4.99; Huskisson Papers, vol.38759 - Memo to Pitt, dd. 8.3. 06. and Parly. Debs., vol.2, pp.144, 179 and 880, vol.10, p.991 and vol.23, pp. 574, 582, 583 and 1203-1209.

occasions when contractors were trying to dispose of new stock when additional supplies of bonds could depress their value.¹

Loans could be timed and arranged with more freedom and facility than the issue of bills and funding operations, and it was through the sale of bonds to loan contractors that the Chancellor and Treasury could take more advantage of opportunities to reduce the cost of borrowing. Dates for the negotiation of contracts were selected by the Chancellor and presented him with opportunities for choosing times when the demand seemed buoyant. Often he could avoid opening discussions about a loan when prices were declining, when the market expected bond values to fall or displayed a strong tendency to remain liquid. For example, whenever adverse political or military conditions coincided with negotiations for a loan the Government could expect the cost of borrowing to rise. But military intelligence and the Foreign Office could provide the Treasury with advance information about current events and the Chancellor could then decide whether to float a loan late or early in the year in order to take advantage of possible fluctuations in bond prices.

If the market displayed a preference for liquidity and antipathy to the purchase of bonds the Government could create more favourable conditions for the negotiation of a loan either by issuing exchequer bills or by timing the contract to follow the payment of dividends on the National Debt and the purchases of stock by the Commissioners for the Sinking Fund. Accessions of cash or issues of bills helped to satisfy the market's demand for liquidity and disposed it towards bonds. Samuel Thornton often advised Pitt to issue exchequer bills before opening negotiations with contractors and the Treasury certainly appreciated the advantage of timing the contract to coincide with the availability of cash in the market.²

Other things being equal the Government obtained better terms for the loan if it gave contractors some degree of control over the supply of new bonds offered to the market. This could be achieved by timing contracts for loans and funding operations in such a way that the supply of bonds remained in the hands of a single group of middlemen. If loans overlapped or coincided with funding operations the distribution of bonds to a wider market passed into the hands of

1. Pitt Papers, vol.183 - letters from Thornton and Parly. Debs., vol.10, p.991, vol.11, p.13 and vol.16, p.1045.

2. Pitt Papers, vol.183.

several rival groups of bankers and contractors all competing for a limited demand. In this situation contractors would adjust their bids for the loan upwards and the cost of borrowing would rise. If on the other hand the Treasury arranged matters in order to allow a single consortium to monopolise the supply of bonds, at least for short periods, contractors were more likely to take an optimistic view of their prospects for capital gains and would raise their bids on the loan accordingly.¹

Funding was a novel operation in the early years of the war so that the Treasury probably obtained some advantage by withholding information about its future plans.² No mention was made, for example, at the negotiations for the loan in 1796 that the Government proposed to fund some £15 million of Navy bills and £1½ million of Exchequer bills during the same year.³ Contractors tendered for the loan unaware of additions to the supply of bonds over the year. Whether the public gained or lost from withholding information depended upon the contractors' assessment of Government plans. If they consistently underestimated the amount of bills they expected to be funded the public would gain. On the other hand if they overestimated the future supply their tenders for the loan would be revised downwards. In 1794 and 1795 the amounts funded were small; the practice of funding in wartime was novel and contractors may have ignored the possibility of funding operations. But with an augmented amount of bills outstanding during the rest of the war it seems unlikely that their tenders for loans took no account of possible funding operations. By 1797 the policy of withholding information ceased and for the remainder of the war the Chancellor told contractors his intentions with respect to the floating debt.⁴

But it was difficult for the Treasury to widen the gap between the negotiations without shortening the total time allowed to contractors for the payment of instalments into the Exchequer. Unless subscribers had large personal or credit resources, they frequently sold the scrip of one instalment to make the next payment. Thus it was in the interest of a consortium to have its liability spread out over the financial year. If the Treasury required payment within a shorter period the rate at which new bonds were supplied to the market would be accelerated; profits would thus be lower and bids for the loan would inevitably

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1. This comes out most clearly in Perceval's negotiations with the market - see Bank Report Book, 8.3.09, 9.5.09 and 4.3.12.
 2. Funding usually occurred after the war - Chisholm Rept., 1868-69, p.540 and Rayment, Income and Expenditure of G.B., 1791, pp.42-43.
 3. Bank Minutes, 3.2.94 and 25.11.95.
 4. Bank Report Book, 1798-1815.

be reduced. To facilitate the work of contractors, the Treasury tried to arrange its borrowing operations in order not to overlap and at the same time give middlemen the maximum amount of time in which to pay the instalments on a loan.¹

The Selection of Stocks

By the outbreak of war the Government had marketed bonds of 3%, 4% and 5% denomination and could presumably experiment with stocks of higher or lower denominations if it so desired.²

Borrowing money or funding bills into stocks of higher rather than lower denominations gave the Chancellor opportunities for reducing the long term interest charge on the national debt through conversion operations. Conversion consisted in essence of borrowing money at lower rates of interest in order to reduce old debts contracted at higher rates. Since the Government retained the right to redeem bonds whenever their value reached par when prices rose to that level the Treasury could readily reduce the State's interest bill by converting debt.³ Perhaps an example will reveal more clearly how these operations brought advantages to the State. Suppose during the war the Government had the option of borrowing in 5% bonds issued at par or in 3% bonds at 60. In the short run the interest bill on either option is identical because the rate of interest is 5%. Assume now that after the war bond prices rise by 50% and the rate of interest thus falls to 3½%. Bonds of 3% denomination would then sell for £90, that is £10 below par and 5% bonds for £150 or £50 above par. If the Treasury had borrowed in 3% bonds it would not be presented with an option of reducing the Government's interest bill. But if borrowing had occurred in 5% stock (repayable at par) interest could be reduced by 2½%.

Marketing bonds of higher denomination thus presented the Government with the option of reducing its interest bill in future. As Ricards put it, "Borrowing at par enables the state to redeem whenever the stock rises above par the other system fixes the rate of interest for ever."⁴ Not only was his argument theoretically tenable, but a long list of conversion operations dating from the early years of the 18th century testify to its efficacy. For

1. See Bank Report Book, 1793-1815, passim.

2. See Table 13.

3. McCulloch, *Treatise on the Funding System*, pp.448, 465 and 475; Ricards, 'Financial Policy of War', pp.32-35, 76, 79, 80 and 82 and Hargreaves, *National Debt*, pp.121-122.

4. Ricards, 'Financial Policy of War', pp.79-80.

example, interest on loans from the Bank of England and the South Sea Company had been reduced from 6% to 5% in 1717, to 4% in 1727, to 3½% in 1750 and to 3% in 1757 by well timed conversion operations.¹ Between the close of the War of Succession and the opening of the Seven Years War the Treasury reduced by stages the interest on nearly £58 million of stock from 4% to 3% and all of the stocks bearing interest at 4% and 3½% in 1761 were subsequently reduced to 3%. But from 1763 opportunities for conversions had been more limited because nearly two-thirds of the bonds issued after that date were of 3% denomination and the remainder were nearly all 4% stock. Furthermore from 1786 the Government preferred to rely on the Sinking Fund to bring about long term reductions in the interest paid on the National Debt. Nevertheless the Government's long term interest was clearly served best when the Chancellor marketed bonds of the highest denomination acceptable to the market.²

The System of Competitive Tender

Firm adherence to the system of competitive tender was another means open to the Treasury to influence the price it obtained for bonds. At the outbreak of war this system was still of recent origin.³ Negotiations for loans in the early part of the 18th century had frequently been conducted with the East India Company, the Bank of England or the South Sea Company.⁴ Only public companies of their resources and status could guarantee the success of a Government loan. Later private bankers and prominent mercantile firms took over the function of distributing bonds for the Government but up to the American War the numbers of firms who could guarantee the subscription to a public loan remained small. Most of those who could were no doubt present at the negotiations with the Treasury.⁵ Already during the American War sufficient groups were interested in distributing Government bonds for two rival consortiums to be formed for the loans of 1782 and 1783 but the Treasury preferred to allocate and incurred the charge of partiality. Pitt changed the system when he insisted upon sealed tenders for the loan of 1784 and thereby introduced the system of

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1. Chisholm Rept., 1868-69, pp.513-515 and 523-528 and Sinclair, History of the Revenue, 1802, vol.1, pp.484-5.
 2. Chisholm Rept., 1868-69, pp.537-541; Sinclair, History of the Revenue, 1802, vol.1, pp.503-505 and Fairman, An Account of the Funds, 1816, pp. 22 and 162.
 3. Rose, 'Observations', 1810, p.27.
 4. Chisholm Rept., 1868-69, p.515; Hales, 'The Bank's Mirror', 1796, p.34 and Grelhier, Terms of the Loans, 1812, pp.33-56.

competitive tender.¹

Yet the system of negotiations with select groups of City financiers even in competition with one another, was not without its opponents who favoured 'open subscriptions'.² Critics often failed to realise that open competition placed responsibility on the Chancellor to fix the price at which he proposed to issue new bonds and attract subscribers and it would have been very difficult for him to discharge such a responsibility with competence. His price had to be sufficiently high to obtain all the cash required. The Treasury needed to assess the reliability of all potential subscribers to honour their engagement. If bond prices moved downward after the contract the risk of default increased and if they moved upward the Chancellor stood exposed to the charge of extravagance with public money.³ An open subscription implies an extensive and developed stock market ready to subscribe to any reasonable offer made by the Treasury. Such a market was not sufficiently developed in the late 18th century for anything but closed and competitive tenders to be appropriate. Nevertheless, the Loyalty Loan of December, 1796 is often cited as an example of what might have been achieved by experimenting with open subscriptions during the French Wars but this argument overlooks the special circumstances in which that loan was floated.⁴

By the outbreak of war the London capital market was sufficiently developed for competition to be a possibility, and the system of competitive tender enjoyed widespread approval. But among those not impressed with the vaunted system of competition was Sir John Sinclair. His view was that competition encouraged speculation. Speculators took up a new loan in order to sell out quickly which lowered the price of bonds and thereby increased the cost at which subsequent loans could be obtained. Competition, Sinclair thought, had raised the rate of interest, because it augmented the risk and diminished the profits of lending to the Government. Sinclair preferred the old system whereby established banking houses received their allocation of scrip which they sold gradually at a reasonable profit to themselves and the Government interest bill was contained.⁵

There is not much substance in his first argument. Certainly it would be

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1. Parly.Hist., vol.22, pp. 1052-64; vol.23, pp. 767-796 and vol.24, pp.1018-34; Rose, 'Observations', 1810, p.27; Sinclair, History of the Revenue, 1802, vol.2, p.281 and Norris, Shelburne, p.105.
 2. Douglas, 'On the Principle of Free Competition', 1791 and Parly.Hist., vol.32, p.792.
 3. Sinclair, History of the Public Revenue, 1802, vol.2, p.280 and Hales, 'The Bank's Mirror', 1796, p.35.
 4. Ricards, 'Financial Policy of War', pp.19-21 and see pp.29-31.
 5. Sinclair, 'History of the Revenue, 1802, vol.2, pp.281-285.

impossible to prove that subscribers to loans offered to competitive tender contained more "speculators" (so often a term of disapprobation at the turn of the 18th century) who sold scrip more rapidly than old-established houses. Upon inspection so many speculators with or without competition turn out to be old-established houses anyway. Furthermore, how a competitive system of tender per se influenced decisions about selling or holding bonds is difficult to comprehend. These decisions depended primarily upon expected movements in bond prices. If prices were expected to rise speculators held on to bonds, and they sold if a downward trend was anticipated. Of course, proponents of Sinclair's view might argue that the existence of competition itself leads to pessimistic expectations about bond prices. Competition was, however, a continuing factor in the capital market and only one among the multifarious influences on price changes, actual or anticipated. Even in theory competition cannot be conceived as responsible for a tendency towards more rapid sales of new bonds than might have occurred if loans were allocated among contractors by the Treasury.

There is more to Sinclair's second criticism. Insofar as competition raised the bid made by a loan contractor for bonds it reduced the margin within which he could profit from their subsequent sale, and also increased the risk of loss if bond prices declined while the loan was under payment. Movements in bond prices in wartime were very unpredictable and when a consortium suffered losses the capital market in general revised its assessment of the risks involved in loan contracting. Bids for the subsequent loan might thus be pushed upward. For example, the failure as far as the market was concerned of the Loyalty Loan and the Peace Loan of 1802 probably increased the rate of interest on the loans of April 1797 and June 1803.¹ These losses appear to have reduced competition for subsequent loans. For example, the contractors Johnstone Angerstein and Morgan who made losses on the loan for 1794 made no attempt to form a consortium for the loan of 1795.² Perhaps it is significant that a collusion of contractors followed losses made by them on the loans for 1802 and 1803 and again for the loans of 1810 and 1811.³

Chancellors of the Exchequer were aware of this factor and in expressing satisfaction with the terms of a loan usually added that they hoped the terms

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1. Pitt Papers, vol. 115 - Boyd ed. 21.4.97; Times, 27.4.97. and see pp. 129, 130 and 146.
 2. Pitt Papers, vol. 108 - Angerstein, ed. 25.2.94.
 3. See pp. 163, fn. 5 and 157-161.

would prove profitable for the contractors. Pitt, for example, told Parliament the terms of the loan for 1794 "were highly favourable to the public and what was desirable he hoped safe to the lender."¹ Thus Pitt's attempt to compensate the capital market for its losses on the Loyalty Loan displays an appreciation that over time the Government would not gain if subscribers to loans made losses. A shrewd appreciation that pushing competition too far would not be in the public interest characterised several of the Treasury negotiations with the capital market.

Finally, to point out that certain of the loans negotiated in closed contract were raised at lower cost than others offered to competition is an invalid criticism. Adherence to the system of competitive tender remained the only real guarantee that the Treasury had at the time of negotiations borrowed money as cheaply as possible. Competition, moreover, prevented corruption and did away with patronage. When loans were allocated by the Treasury the market price of bonds on the day of the loan contract was invariably used as a basis for settling the price at which bonds were taken by contractors. Thus contractors had a joint interest and sometimes took steps to artificially depress the price of bonds before negotiating for a loan. As a group they gained and the public lost from subsequent appreciation in bond prices. But under a system of competitive tender, their interests did not necessarily coincide. Efforts to depress the current price of bonds for a loan contract certainly continued during the war years, but the presence of rival groups of consortiums at negotiations implied an interest by at least some groups, to bid close to, sometimes below, a market price which was generally known to be artificially depressed. Finally, had loans continued to be allocated to old-established houses it seems doubtful if the boundaries of the capital market and the development of specialisation within it would have been pushed as far as they were during the war years. Departures from competitive tender could only be defended by the circumstances of a particular case.

1. Parly. Hist., vol.30, p.1358 and Parly. Debs., vol.3, p.549; vol.6, p.569 and vol.13, p.535.

GOVERNMENT BORROWING, THE BANK OF ENGLAND
AND THE MONEY SUPPLY

The Bank as an Intermediary

Perhaps it is no exaggeration to maintain that the facility and cost at which the State borrowed money, through the medium either of bills or bonds, depended more upon the cooperation of the Bank of England than any other single factor. Certainly by the end of the 18th century, the Bank, still privately owned and managed, occupied a crucial position in regard to the finance of war expenditure. Its services as an intermediary between the Treasury and the London capital market have already been outlined. Here it is sufficient to recapitulate by noting that the Directors informed the Chancellor about the kind of assets acceptable to the market, advised him as to opportune dates for loan negotiations, checked the credentials of contractors for him and finally assisted the contractors to meet their obligations with its own credit.¹

In the marketing of bills the Bank performed services of no less importance. Since 1707 it circulated bills on behalf of the Exchequer and for most of the century completely monopolized their sale to the market.² Rates of interest on exchequer bills were fixed by the Treasury in consultation with the Bank of England as close as possible to the current market rate of interest, in order that they might circulate at or above par, but if necessary the rate could be altered during the life of the bill to maintain their par value.³ The quantity of any particular issue which the Bank might retain in its own portfolio was controlled by Act of Parliament, but contracts for the circulation of exchequer bills invariably contained a clause to the effect that the Bank could buy any not taken by the market as and when requested by the Treasury.

1. See pp. 49-51 and 68.

2. Clapham, *The Bank*, Vol. 1, p.59. and Dickson, *The National Debt*, p. 468. Brisco, *Walpole*, p.59.

3. Exch. E/406/219 and E/407/134 and Lords Cttee. on Resumption, 1819, Appdx.A.3.

Such requests were usually made whenever bills were at a discount in the market. The Bank seldom purchased exchequer bills at a premium and never resold bills it had purchased for itself.¹ Furthermore, the Bank sometimes helped the Treasury to limit the unfunded debt of the military departments and thus to manage it more efficiently, by purchasing Naval and Army bills at a discount from the market. Treasury bills used to finance extraordinary military expenditure abroad were actually made payable at the Bank of England.² In other words, to assist the Government, the Bank agreed to meet its unforeseen debts overseas, but before the French wars the Bank had seldom held more than £150,000 of Treasury bills in its portfolio.³

2. The Control of the Money Supply

While the Bank's services as an intermediary were obviously useful to the Government its influence on the liquidity position of the London capital market in particular and through the capital market upon the money supply in general were of far greater importance for the finance of war. If we define money as generally acceptable purchasing power the British money supply in 1792 consisted of gold, silver and copper coins, bills of exchange and the liabilities of banks; the latter included notes of the Bank of England and private banks of issue and bankers deposits. It is not possible to present a statistical breakdown of the total money supply because information about important components, such as bills of exchange and bank deposits does not exist, although there are rough estimates available on the amount of gold coin and bank notes in circulation for the early 19th century.⁴ The gaps in information are unfortunate because bills of exchange in the hands of the public may well have been the most important single component of the money supply.⁵ Moreover, although bank deposits were not much employed as a means of payment outside London, within the capital cheques and drafts upon bankers may have exceeded the value of Bank of England notes in circulation.

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1. Lords Cttee. on Resumption, 1819, p.6, Appdx.A.1 and A.3.; Lords Cttee. on Suspension, 1797, pp. 168-169, 247, 269-271 and 548 and Exch. E/406/218-219.
 2. Cttee. on Suspension, 1797, p.133.
 3. Cttee. on Resumption, 1819, Appdx. 6 and Binney, British Public Finance, p.175.
 4. Coppieters, English Bank Note Circulation, pp.21, 144-145, 150 and 154.
 5. Pressnell, Country Banking, pp. 171-172 and Ashton, 'Bill of Exchange', pp.37-38.

Forms of money which attracted more contemporary attention included gold coin and the notes issued by the Bank of England and bankers located outside London. For several reasons, discussed elsewhere, the supply of coins at the end of the 18th century failed to meet demands for an adequate means for the making of fractional payments, and during the war years, with the rise in the market price of specie, gold and silver coins all but disappeared from circulation.¹ Within the metropolitan area notes issued by the Bank of England filled the gap left by the failure of the Government to mint adequate supplies of coins, but the Bank's notes seldom circulated beyond a thirty mile radius from central London. In the countryside the failure of both the Mint and the Bank of England to provide a means of payment suitable for the growing needs of the economy had been partly alleviated by the note issues of country bankers. At the beginning of the war the amount of their notes outstanding throughout Great Britain probably almost equalled the circulation of the Bank and by the battle of Waterloo may have exceeded it.² Country bank notes usually circulated within a fairly well defined geographical area and were employed mainly for such payments as wages and the purchase of local produce. Payments for goods and services supplied between different parts of Britain were usually made through bills of exchange drawn upon banks located in the capital.³

By the end of the 18th century the money supply consisted primarily of the liabilities of the banking system. Bankers then as now issued notes and created deposits in exchange for assets offered by those who wish to obtain readily acceptable purchasing power. Their ability to acquire assets and create liabilities is today controlled by the central bank, but until well in the 19th century it is perhaps incorrect to use a term as strong as control to refer to the status of the Bank of England with respect to the money supply. Certainly the Bank's Directors never claimed to exercise such control and further confusion has been created about the extent of their powers by the variety and conflict of views among contemporary and more modern writers on the 18th century monetary system.⁴

Controversy has arisen not on the problem of the Bank's relations to London banks, a subject generally ignored by contemporaries, but on its

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1. Feavearyear, *Pound Sterling*, pp.169, 183 and 187; Pressnell, *Country Banking*, p. 159; *Cttce. on Suspension, 1797*, p.69; Thornton, *Paper Credit, 1802*, p.97 and *Pitt Papers, Vol. 276 - Bank*, dd. 4.5.98.
 2. *Copplesters, English Bank Note Circulation*, p.21 and Pressnell, *Country Banking*, pp. 15, 16, 136, 142 and 159.
 3. *Ibid*, p.136 and Feavearyear, *The Pound Sterling*, p.159.
 4. *Bullion Cttee., 1810*, p. 90.

relationship to the note issues of banks outside the metropolis, which probably assumed a more important position in the overall money supply during the war years. On the one hand several of the bullionist writers and the Bullion Report maintained that the expansion of credit by country bankers could be determined by the Bank.¹ Malthus, for example considered it "a point susceptible of complete demonstration that an increase in the issue of Bank of England notes is attended with a proportionate increase in the issue of country bank notes."² On the other hand while a few contemporary writers denied all connexion between the Bank of England and the note issues of country banks Bosanquet, Wheatley and in his speech Nicholas Vansittart came close to this position, and in more recent years Silberling and Angell seemed prepared to argue that the Bank could exercise virtually no influence over variations in the total money supply.³ But on this question at least the Bullion controversy either in its original or more modern versions seems to have thrown up very little in the way of empirical evidence to illustrate the relationship between the Bank of England and the rest of the banking system. There seems to be no need to go over the arguments again.⁴

Particularly as nearly all the bankers who appeared before the Committees on monetary matters during the war years admitted they followed the lead of the Bank in the expansion and contraction of credit.⁵ Gilchrist of the British Linen Bank, to take but one example, stated quite unequivocally that, "If the Bank of England were to restrict the issues of course Scots Banks would find it necessary to restrict their issues."⁶ Parliament's Select Committees seem to have been in no doubt, to quote one, that "the Bank of England is at the head of circulation," or to cite another that the credit of private bankers was "a superstructure raised upon the foundation of the Bank of England."⁷

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1. Ricardo, 'High Price of Bullion', 1811, pp.87-88; Boyd, 'Letter to Pitt', 1811, p. 23; Fetter, Economic Writings of Horner, p.46; Parnell, 'Observations on Paper Money', 1828, p.33 and Cannan, 'Paper Pound', p.61.
 2. Malthus, 'Review of the Controversy', 1811, pp. 457-58.
 3. Bosanquet, 'Practical Observations', 1810, p. 78 ; Wheatley, 'Remarks on Currency and Commerce', 1803, pp. 209-21; Parly. Debs., Vol. 19, pp. 948-49; Silberling, 'Financial and Monetary Policy', pp. 399 and 419-20; Silberling, 'British Prices', p.243; Viner, Studies, pp. 157-170 and Angell, Theory of International Prices, pp. 44, 479 and 490.
 4. See above
 5. Cttee. on Suspension, 1797, pp. 190, 212 and Bullion Cttee., 1810, pp. 141 and 143.
 6. Bullion Cttee., 1810, p.114.
 7. Lords Cttee. on Suspension, 1797, p.373; Paper Pound, p.61; Cttee. on Suspension, 1797, p.142 and Bullion Cttee., 1810, pp.90 and 132.

While such general opinions were shared by most contemporaries, the mechanism through which the Bank brought about variations in the money supply at the end of the 18th century has only recently been elucidated by Wood, Clapham and Pressnell. Briefly stated, their conclusion is that the Bank affected the overall creation of credit through its influence on the reserves of London banks and through them indirectly on the reserves of banks located outside the metropolis.

London bankers regulated the liabilities they incurred on a reserve of specie and Bank notes.¹ During the war years when specie all but disappeared from circulation, Bank notes became the dominant form of reserve money. London banks obtained their reserve money from several sources including the deposits of clients (largely landowners and merchants), deposits of public funds, en route to or from the Exchequer, deposits from country bankers and finally directly or indirectly from the Bank of England itself.² Before 1797, the Bank did not permit London banks to rediscount bills of exchange, but this regulation could easily be circumvented by arrangements between the London bankers and one of the Bank of England's mercantile clients. But even before the war London banks could open drawing accounts at the Bank and borrow money in that way and Clapham's figures show that in 1793 just under half of them kept balances at the Bank.³ After the Suspension of Specie Payments London bankers were permitted to rediscount bills at the Bank and nearly all of them came to keep balances there.⁴

As long as alternative ways existed for London bankers to obtain Bank notes and specie, direct and immediate control over their reserves could not be exercised by the Bank. Nevertheless, since the Directors determined the level of Bank notes and deposits in circulation by expanding or contracting the Bank's liabilities they could ultimately affect the reserves of London bankers.

The Bank incurred liabilities (that is issued notes or created deposits) in 4 ways: in exchange for gold or silver, as advances to individuals or firms and by discounting bills for the Government or the private sector.⁵ The exchange of Bank notes for gold did not add to the supply of reserve currency since gold already took that form, but advances and discounts for either the private or the public sector certainly did. Assuming the Bank followed the normal banking practice and matched liabilities with assets, its accounts for the years 1789-91

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1. Morgan, Central Banking, p.52; Cttee. on Suspension, 1797, pp.35-37, 43 and 191-192; Boyd, 'Letter to Pitt', 1811, p.23 and Bullion Cttee., 1810, p.147.
 2. Joslin, 'London Private Bankers', pp.167, 176, and 177.
 3. Clapham, The Bank, Vol. 1, pp.169, 172 and 204-5 and Clapham, 'The Private Business of the Bank', pp.83-84.
 4. Clapham, The Bank, Vol.2, p.30; Lowe, The Present State of England, 1822, Ap p.25 and Cttee. on Suspension, 1797, pp.71-72.
 5. Morgan, Central Banking, p.4.

show that about half of its liabilities were backed by public securities; 41% by bullion and the remainder by private assets. If the portion of notes and deposits backed by bullion is excluded from view and attention is focussed on the monetisation of private and public assets, it then appears that about 80% of the Bank's outstanding liabilities in the years immediately before the war were incurred in respect of loans afforded to the State. This picture changed radically during the war years when the amount of bullion held at the Bank fell sharply and discounts to the private sector became a more important part of total assets.¹ Nevertheless, the point to stress here is that the creation of reserve money by the Bank of England originated as a response to requests for loans and by refusing to meet either Government or private demands for accommodation the Bank could effectively curtail the supply of reserve money upon which London and indirectly provincial bankers expanded credit.

Although the Directors could legally refuse the demands of the Treasury in practice they had little choice but to accede to the Chancellor's requests for credit. Outright refusal after 1793 could have disrupted the war effort and no British Government would for long tolerate the frustration of its foreign policy by a private corporation. Moreover, the Bank enjoyed its monopoly as a joint stock bank of issue for its continued services to the State and the Government took good care to make the Bank's privileges subject to periodic review and renewal.² The Bank Directors admitted to the Commons Committee on Suspension that, in the last resort, they simply had to obey and their correspondence with Pitt during the years 1795-97 reveals that their powers to curtail the Bank's liabilities on Government account were limited to pressuring the Chancellor to borrow more money directly from the capital market.³

The monetary history of the years immediately preceding the Suspension of Cash Payments showed the influence of the Bank and the Treasury on the liquidity of the London money market. Pitt's attempt to comply with the Directors' requests to market bonds rather than bills and to issue a higher proportion of bills direct to the capital market elucidated the following relationships. Whenever the Bank exchanged its notes for exchequer and other Government bills, expenditure by the military and other departments added to the supply of Bank notes in the hands of the public, who then deposited their surplus cash with private bankers.

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1. Table 22 - liabilities include notes, plus deposits, plus rest.
 2. Clapham, *The Bank*, vol.1, p.177 and Cttee. on the Bank, 1807, p.C11.
 3. Cttee. on Suspension, 1797, pp.17, 73, 148 and 157. The correspondence is printed in the Bank's Minutes and as Appdx. 9 to the above report.

Finding themselves with more reserve currency in their tills the bankers then granted more advances and the overall money supply increased. If on the other hand the Treasury by-passed the Bank and offered a larger amount of public securities (bills as well as bonds) directly to the money market, unless the Bank of England concurrently increased its discounts and advances to the private sector or the demands for credit by that sector declined at a similar rate, the banking system would be confronted with a higher level of demand for credit. If bankers were not prepared to lower the ratio of Bank notes and specie to their outstanding liabilities the demand for loanable funds then exceeded the available supply and interest rates rose. Rates on public securities, unaffected by the operation of the Usury laws, would inevitably rise higher than rates on private bills, shares and mortgages. As Exchequer bills and bonds were usually less risky and more liquid assets than bills of exchange, a greater share of the available supply of investible funds was diverted into the hands of the Government and the private sector experienced a shortage of credit. Furthermore, the higher profits made on Government paper prompted clients of London bankers to withdraw their deposits, which paid no interest, for the purpose of investment in liquid Government bills. This reduction or slower rise of cash on deposit with London bankers reduced still further their ability to create credit. If pressure from the Bank forced the treasury into the market unless the market obtained reserve money in the form of discounts from the Bank of England facilities for borrowing money diminished and interest rates increased.¹

Although the Bank could in practice only divert the demands of the Treasury towards the market it could definitely refuse to discount bills or make advances to the private sector. In wartime when higher profits could be made from speculation in public securities, merchants, landowners, farmers and industrialists often found it difficult to secure accommodation from London bankers and turned to the Bank of England.² Provided they were willing to pay

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1. Cttee. on Suspension, 1797, pp. 22, 35-37, 43, 72, 157, 175, 178, 180, 191-192, 212, 303; Cttee. on 10 Naval Report, 1805, pp. 42, 47 and 69; Thornton, Paper Credit, 1802, pp. 281, 289 and 291; Boyd, 'Letter to Pitt', 1811, pp. 2 and 5; Bank Minutes, 15.4.96, 23.6.96 and 3.11.96; Pitt Papers, Vol. 115 - Boyd, dd. 14.4.96 and 26.2.97, Vol. 183 - S. Thornton, dd. 18.2.97 and 31.4.99; Auckland Papers, Vol. 34454 - dd. 2.7.96; Wakefield, Observations, 1797, pp. 26 and 54 and Monthly Mag., May, 1796, p.326 and July, 1796, p.498.
 2. Joslin, 'London Bankers', pp. 157 and 175; Cttee. on Suspension, 1797, pp. 37, 43, 71, 145 and 207.

5, and the Bank complied with their requests, the level of private investment need not fall. Moreover, as the Bank increased its loans the supply of reserve currency available to London bankers also rose and credit conditions in the metropolis did not become stringent. But if the Bank behaved as it did between December, 1795 and February, 1797 (when the Directors not merely forced the Treasury into the market but rationed credit to the private sector at the same time), the private sector inevitably experienced extreme difficulty in raising funds and interest rates rose very sharply.¹ Moreover, as Walter Boyd told Pitt and the Commons Committee, the effects of the Bank's policy went beyond restriction in loans and reserve currency and adversely affected the confidence of London bankers, who withheld accommodation and operated with higher reserve ratios.²

While the experience of 1795-97 revealed how the liquidity of the London money market depended on the credit policies of the Bank of England the indirect dependence of banks outside the metropolis has only recently been elucidated, although an appreciation of their subordinate position can be detected from the evidence of country bankers to Parliamentary Committees in 1797 and 1810.³ Outside London the dominant component of the money supply, apart from bills of exchange, consisted of notes issued and to a lesser extent deposits created by bankers. Since the liabilities incurred by provincial banks were legally convertible either into gold or, after the Suspension, Bank notes, some limits to their abilities to create credit were set by the need to retain a certain amount of reserve currency in order to meet demand.

Banks outside the capital did not, however, regulate their liabilities only upon a reserve of specie and Bank notes but on reserves which included gold, notes of the Bank of England and London assets. The latter consisted of highly liquid securities such as exchequer bills convertible at call into cash and a balance on deposit with a London banker.⁴ London assets could only be purchased with London money. Deposits with London bankers could only be created or maintained if country bankers left a balance of Bank notes and specie in the hands of a banker in the metropolis or London bankers were prepared to extend credit to country banks.

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1. Pitt Papers, Vol. 178 - Sinclair, dd. 5.3.96 and 11.4.96, Vol. 145 - Hoarb, dd. 11.6.96; Bank Minutes, 9.2.97 and Cttee. on Suspension, 1797, pp. 12, 154, 175 and 208.
 2. Ibid, pp.35-37, 50, 173-175, 190 and 215 and Pitt Papers, Vol. 115 - Boyd, dd.5.3.96.
 3. Cttee. on Suspension, 1797, p.179 and Bullion Cttee., 1810, pp.113-115 and 140.
 4. Presanell, Country Banking, pp.116,120, 197, 285-288, 402, 408 and 416; Thornton, Paper Credit, pp.215-217; Bullion Cttee., 1810, pp.113-115 and 140; Leighton-Boycie, Smiths, pp. 111 and 116 and Sayers, Lloyds, p.110.

Country banks obtained their reserve currency and London assets through several channels and in a variety of forms. Undoubtedly the most important source was deposits from clients who as merchants, landowners, farmers and industrialists traded either with or through the capital and received remittances in the form of specie, Bank notes, or, more commonly, bills of exchange drawn upon banks located in London. Given the dominance of London as a market for the consumption of provincial products and also as a centre of internal and international trade, the flow of funds from the metropolis to its hinterland provided country bankers with a constant supply of London money or assets such as bills of exchange, readily convertible into money in the capital.¹

Deposits from officials concerned with the despatch of taxes to the Exchequer formed another but less important source of funds². Other deposits came from local Government bodies, turnpike trusts and the carriage, haulage, canal and coastal shipping companies involved in the business of transporting passengers and goods overland and by sea.³

Finally, the country banks could increase credit if permitted to draw upon the resources of banks in London. By the late 18th century nearly all provincial bankers had established close working arrangements with a bank in the capital. With London banks, country banks maintained a balance of funds surplus to their needs in the localities in order to pay their bills of exchange and drafts made payable in the capital. London bankers also acted as an intermediary for country banks in the purchase of public and other securities sold on the London capital market. In brief London bankers held and used the reserves of country bankers and could increase their reserves by extending credit to them.⁴ Banks located in the agricultural counties rarely called upon banks in London for advances, because usually their balances on deposit more than sufficed to meet any payments in the capital. But banks located in the industrial parts of the country often borrowed from metropolitan banks in order to provide their customers with facilities for the finance of their purchases in London.⁵

1. Pressnell, *Country Banking*, pp. 76, 77, 122 and 243-259.

2. *Ibid*, pp. 45 and 60-67.

3. *Ibid*, pp. 76-77, 122 and 243-259.

4. Joslin, 'London Private Bankers', pp. 180 and 183; Leighton-Boyce, *Smiths*, pp. 111, 116 and 127; Pressnell, *Country Banking*, pp. 76, 77, 80-81, 84, 98, 117-125, 285, 402, 408 and 416 and Fulford, *Glynns*, p. 96.

5. Morgan, *Central Banking*, p. 21; Feavearyear, *Pound Sterling*, pp. 164-165 and Pressnell, *Country Banking*, pp. 76 and 288.

Since the Bank of England could bring about changes in the amount of reserves (Bank notes, specie and London assets) held by country bankers, it was in a position to influence their ability to create credit. The Bank could do little to affect the propensity of the population outside London to exchange cash for bank deposits, although the effects of its credit policies on confidence might increase the public's preference for liquidity.¹ But the Bank could certainly inflate or deflate demand for provincial products in London by expanding or contracting the supply of credit in the metropolis, which in turn brought about variations in the supply of credit afforded by London bankers and the flow of remittances from the capital to the countryside. Moreover, since London financed and handled a large share of the country's exports any alteration to the supply of credit from London to provincial merchants and industrialists affected the level of receipts from exports. If, for example, the Bank deflated, country banks, with of course a time lag, would find that deposits from clients would either fall or fail to rise and unless they obtained reserve currency from an alternative source their ability to grant credit would be diminished.

Their only important alternative consisted of advances from London bankers. But if the Bank restricted its credit either to the Government or to its private customers, the ability of London bankers to make advances to country bankers would be correspondingly limited. It is because London loomed so large in the British economy of the late 18th century and because country banks depended on London banks for advances that the Bank of England could influence not merely the liquidity of the London capital market but the overall money supply.²

Influence is not, however, the same as control. Despite the assertions of some bullionist writers it cannot be proved that expansions or contractions of credit by the Bank lead to proportionate changes in the liabilities of the entire banking system. For several reasons the Bank of England never occupied a position strong enough to maintain the money supply at some predetermined level. First it had only slight influence on the volume of bills of exchange circulated as money. Next, inflows or outflows of bullion which accompanied changes in the country's balance of payments position increased or diminished the gold reserves of private

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1. Cttee. on Suspension, 1797, pp.35-37.
 2. Wood, *Theories of Central Bank Control*, pp.3-5 and 26-27; Presnell, *Country Banking*, pp. 76, 77 and 219-222; Thornton, *Paper Credit*, 1802, pp.104-105; *Bullion Cttee.*, 1810, pp. 90, 112, 147; Viner, *Theories*, p.159 and Clapham, *The Bank*, Vol. 2, p.28.

bankers and parri passu their ability to create credit. While movements in exports and imports or remittances on capital account were certainly not as independent of the monetary policies pursued by the Bank of England as its Directors seemed to imagine, there are reasons, discussed in Chapter 9, to describe monetary policy as having no more than a marginal influence on international trade, at least during the period 1793-1815.¹ Thirdly, changes in the level of cash on deposit with bankers could come about through changes in liquidity preference without any contraction or expansion of credit by the Bank. Only if the Bank's policies influenced confidence could the Directors affect the public's disposition to switch between bank deposits and cash holdings. Here again the Bank policies constituted only one factor among many which disposed the public towards liquidity.² But by rationing credit and forcing the Treasury into the market the Directors could force up interest rates and initiate a switch from bank deposits into public securities. Provided the money then expended by public departments did not pass back immediately into bank deposits private bankers would be prompted to contract liabilities.³ Fourthly, the Bank could not effectively control its advances to the Treasury and any increase in Government expenditure financed by the Bank created possibilities for multiple expansion of credit throughout the banking system. In order to restrain rises in the money supply during periods when the level of public expenditure increased the Bank could encourage the Treasury to borrow directly from the market and to cut back its own advances to the private sector. Finally, the Bank's powers of control over the money supply were definitely limited by the fact that both London and country banks regulated their liabilities on flexible rather than fixed reserve ratios. Pressnell collected abundant statistical evidence to demonstrate considerable variations in the ratios maintained by country bankers in the early 19th century.⁴ Unfortunately no comparable statistics exist for London bankers, but remarks by Henry Thornton and John Wheatley's pamphlet suggest that a similar flexibility prevailed in the capital.⁵ The range of variation depended very much on confidence. If bankers took an optimistic view of business prospects

1. Bullion Cttee., 1810, pp. 95-97.

2. See p.175 and Morgan, Central Banking, pp. 52-54.

3. See pp. 117, 121, 122, 125, 134, 135 and 175-176.

4. Pressnell, Country Banking, pp. 196, 203-206 and 214; Sayers, Lloyds, p.177 and Morgan, Central Banking, p.12.

5. Thornton, Paper Credit, 1802, pp. 113 and 286; Wheatley, Remarks on Currency and Commerce, 1803, pp. 209-221; Bullion Cttee., 1810, pp. 147-148 and Viner, Theories, p.159.

their advances expanded. If their feelings tended towards pessimism the money supply often contracted. Many of the economic crises of the 18th century originated in changes in liquidity preference among the public and bankers. The ratio of reserves to the outstanding liabilities of the banking system usually fell in the upswing of the business cycle and rose in the downswing.¹

Given these very real constraints on the Bank's powers to initiate changes in the money supply it is certainly inappropriate to use verbs like control to refer to its status vis a vis the rest of the banking system. Moreover because the Bank had never made any consistent attempt to exercise control it is difficult to decide how serious the limitations were. Nevertheless the evidence now available and the experience of the years 1795-97 suggest that the expansion of credit by the Bank created conditions for expansion by other banks and that any contraction of its advances either to the State or the private sector lead to a contraction in the overall money supply. Certainly the bankers operating at the time would accept this view and no recorded case exists of a contraction of credit by the Bank coinciding with expansion by private banks. Changes in the supply of money depended upon the liquidity of the London money market which could be influenced by the credit policies of the Bank of England. If the Bank was not in control by the late 18th century, it certainly stood at the head of the banking system.

3. The Principles of Control

Government borrowing affected the money supply and in turn the money supply affected the terms and facility upon which the Treasury marketed public securities. If the Treasury borrowed directly from the Bank of England, through the issue of exchequer bills, the supply of reserve currency in circulation rose and created conditions for credit expansion throughout the banking system. Whenever the banks expanded their liabilities competition between the public and private sectors for loanable funds declined and the Treasury found it easier and cheaper to borrow the money it required. A plentiful supply of credit satisfied the demand for liquidity and encouraged those with idle balances to speculate in Government bills. If we recall that the Treasury sold public

1. Cttee. on Commercial Credit, 1793, pp. 125-133 ; Tooke, History of Prices, Vol. 1, p.177; Cttee. on Suspension, 1797, pp. 69 and 303; Lords Cttee. on Suspension, 1797, pp. 284-285; Thornton, Paper Credit, 1802, p.280 and Cttee. on Resumption, 1819, pp. 166-167.

securities to middlemen who normally operated with borrowed funds, it is obvious why easy credit conditions would raise the level of demand for bills and bonds, and credit stringency reduced it.¹ As Sir Richard Carr Glynn, the London banker, told the Commons Committee, "a want of cash forces Merchants and traders to sell out of the funds and obtain cash from people with money in the funds".² Thus whenever the Bank restricted the supply of its notes and deposits either by forcing the Treasury to borrow directly from the market or by rationing discounts to the London business community, its policy produced a decline in the money supply which heightened the competition between the public and private sector for funds and forced up rates of interest. If the Bank's action also affected confidence the pressure for liquidity could prompt a withdrawal of balances from banks by the public thereby reducing the supply of loanable funds still further. Since changes in the liquidity of the London money market brought about by changes in the Bank's credit policy exercised such a powerful influence on the prices obtained by the Treasury for its securities, it is clearly important to understand the principles upon which the Bank normally regulated its advances to the State and the private sector.

Advances took the form partly of deposits but mainly of notes issued to the Government and the private sector. The events of 1795-97 showed clearly that the Bank could not in practice refuse to grant accommodation to the Treasury and thus effective control over its liabilities could only be exercised in relation to credit granted to the private sector.³ This credit included discounts on bills of exchange and drawing and deposit facilities granted occasionally to individuals but usually only to the large city corporations such as the East India, South Sea and Hudson Bay Companies.⁴

Bills of exchange were the most important private asset held by the Bank, but its regulations on discounting do not indicate that the Bank set out to attract clients in the 18th century. Only firms located in the capital could discount their bills. The privilege required a Directors' recommendation, usually accorded only to well established and solid businessmen. Bankers could

1.. See pp. 49, 59-60 and 123.

2. Cttee. on Suspension, 1797, p.43.

3. See pp. 110, 116, 117 and 133-136.

4. Clapham, *The Bank*, Vol. 1, pp. 204 and 208, Vol. 2, p.21.

not enjoy the facility nor, for example, could persons the Directors disdainfully referred to as "speculators". Rules on the kind of bills discounted appear to have been equally stringent, but as Clapham noted practice by the 1790's had departed somewhat from the letter of law. Bills discounted had to be for the purpose of industry or trade, of short maturity (one to three months) and for amounts above £50. Continuation loans were not permitted and no firm could owe the Bank more than £3,000 at any one time on inland bills of exchange. These rules and the higher rates of interest charged by the Bank suggest the Directors were not seriously interested in competing with London bankers in the discount business. By the French wars some 1200 to 1500 firms discounted with the Bank. Just under half of outstanding advances on bills of exchange in 1799 were to merchants engaged in foreign trade and the remainder covered almost every other mercantile and manufacturing activity represented in London.¹ Even the Bullion Committee, so hostile to the Bank on other counts noticed that "the discount of mercantile paper is confined to paper of undoubted solidity arising out of real commercial transactions and payable at short fixed periods."²

Since the Bank had never enunciated principles for the regulation of credit in the 18th century it is not easy to make unequivocal statements on the subject. A survey of practice over time supported by the somewhat vague statements made by the Directors to Parliamentary Committees enables one to deduce, if not principles, at least some rules of thumb. First of all it is clear that the Bank's liabilities were legally promises to pay on demand a certain sum in specie, its notes and deposits were regulated on a reserve of gold. Only the rules governing the amount of liabilities incurred by the Bank on a given sum of bullion are in doubt. Statistics covering the period 1720-97 reveal that the Bank certainly did not maintain anything that could remotely be termed a fixed ratio of bullion to either its note issue or its total outstanding liabilities of notes plus deposits.³ But although the range of variation is from a minimum of 5% to a maximum of 66%, for 58 out of the 76 years covered by the data that ratio fluctuated between 20% and 50%; for ten years it

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1. Clapham, *The Bank*, Vol. 1, pp. 124, 125, 129-130, 204, 205, 208, 215-216; *Bullion Cttee.*, 1810, pp. 89, 95, 97, 98, 157 and 220 and Clapham, 'The Private Business of the Bank', pp. 84-90.
 2. Cannan, *Paper Pound*, p.46.
 3. Table 22 ; Lovell, 'The Role of the Bank', pp. 18-19; Horsefield, 'The Bank and Its Treasure', pp. 59 and 65 and Clapham, *The Bank*, Vol. 1, p.156.

fell below 20% and for 8 years rose above 50%.¹ Furthermore, in 1797 the Directors clearly repudiated the idea that they regulated credit on anything but highly variable cash ratios. When asked by the Committee on Suspension, Will it appear from any documents laid before the Committee in what proportion the Bank regulates its issues? Bosanquet, one of the Bank's senior Directors replied: "No I conceive it will not because although the Directors have attention to the state of their cash they have no stated or precise rule to regulate their conduct."² The Committee then asked why the Bank wished to suspect specie payments in 1797 though they had more gold in hand than in 1783 and Bosanquet admitted, "It is possible for the Bank to be a much safer situation with a smaller sum in specie when public affairs are prosperous." He also revealed that the Bank judged the quantity of gold necessary for its safety "from a probability of permanent abundance. Whenever there is an influx of bullion the Bank has nothing to fear, when a drain takes place it is a period for them to be alarmed."³ For the Directors, visible indications of actual or potential movements in specie included changes in the volume of exports and imports and prospected remittances on the capital account of the balance of payments.⁴

Clearly the Directors could not be pinned down either in 1797 or at any other time in the 18th century to very concrete rules on how they regulated their liabilities. A study of the occasions when the Directors actually limited credit and of situations when the low bullion reserve at the Bank might have prompted limitation leaves the impression that they acted upon a variety of purely ad hoc and empirical criteria. It always depended on the circumstances of the moment and upon their own predictions about future changes in the economy.

For example, there is no record of discount contraction by the Bank in 1720-21 or 1725-26 when the ratio of bullion to liabilities outstanding had fallen well below the normal level and exchange rates with Hamburg had dropped below par.⁵ But an internal drain of gold associated with the victories of the Young Pretender prompted the Bank to limit discounts in the last quarter of

1. Table 22.

2. Cttee. on Suspension, 1797, p. 73.

3. Ibid, pp. 24-25.

4. Ibid, pp. 15-17, 22, 39-41 and Lords Cttee. on Suspension, 1797, pp. 151, 158, 160 and 247.

5. Table 22 and Ashton, An Economic History, p.253.

1745. On this occasion no action was taken until the ratio of gold to liabilities had fallen to the exceptionally low level of 14%.¹ No limitation of discounts are recorded at the Bank in 1761 and 1762 when the exchange had fallen sufficiently below par to make it profitable to export bullion.² In 1763 Dutch capital left London and British bankers supported their Dutch correspondents in the post-war crisis by loans of bullion.³ The exchange on Amsterdam fell below par and the Bank's ratio of bullion to liabilities stood at its lowest level for the entire century but commercial discounts continued to expand.⁴ Throughout the years 1766-1773 the reserve ratio at the Bank was at a low level.⁵ "Heavy investment in houses, turnpikes, canals, and other public works had been in process for several years at a rate that probably tended to outrun current savings." Credit was over-expanded and in the Summer of 1772 private bank failures occurred first in Scotland and then England and spread in the latter months of that year to Amsterdam. Bullion again left England in the early months of 1773 to restore confidence in Amsterdam.⁶ Clapham's statement that the Bank early in 1772 "had tried to put a break on overtrading" is, however, a little misleading.⁷ At the height of the crisis in the Summer of 1772 the Bank discounted liberally and throughout the period of strain on the gold reserve the Bank's reaction had simply been to reject private securities the Directors had reason to dismiss as "doubtful" - such as the paper of certain Scottish banks or Jewish houses involved in speculation on the Amsterdam Bourse.⁸ A decade later, from August 1780 to August 1784, the Bank's bullion reserve fell steadily. Total note issues were reduced with the diminution of Government expenditure at the end of the war, but not sufficiently to prevent the ratio of bullion to liabilities falling to the very low level of 8% in 1784. Bullion outflows in 1780 and 1782 had been connected with the Government specie payments to the British Army in the United States.⁹ In

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1. Table 22 ; Clapham, *The Bank*, Vol. 1, pp. 233-34; McCleod, *Theory of Banking*, p. 57 and Ashton, *Economic Fluctuations*, p.123.
 2. Table 22 ; Ashton, *Economic Fluctuations*, p. 125; *An Economic History*, p.253 and Mushet, 'An Inquiry', 1810, p.96.
 3. Wilson, *Anglo Dutch Commerce*, p.168; Chalmers, *Domestic Economy*, 1812, p.138 and Mushet, 'An Inquiry', 1810, p.96.
 4. Table 22 and Ashton, *An Economic History*, p.253 and Chalmers, *Domestic Economy*, 1812, p.138.
 5. Table 22.
 6. Ashton, *Economic Fluctuations*, pp. 127-128; Wilson, *Industrial Activity*, p.153 and Wilson, *Anglo Dutch Commerce*, pp. 176-177.
 7. Clapham, *The Bank*, Vol. 1, p. 245.
 8. Table 22 ; McCleod, *Theory of Banking*, p.61; Acres, *The Bank of England*, p. 200 and Clapham, *The Bank*, Vol. 1, p.245.
 9. Table 22 and Mushet, 'An Inquiry', 1810, p.100.

April 1782 the Governor of the Bank complained that the exchange on Hamburg continued to be adverse enough to produce a heavy drain.¹ When peace came at the beginning of 1763 Dutch investors again repatriated capital and the exchange remained below par until 1785.² At the close of the war the demand for credit had been stimulated in Britain by speculative exports sent to the United States and a boom in the cotton industry.³ The Bank's reaction to this apparently unfavourable situation was to limit discounts early in 1783 and in May it refused to make advances on the scrip of the Government loan raised for that year.⁴ But by June commercial discounting was again heavy and in October with bullion still at an extremely low level the Directors felt safe enough to reverse their policy and make advances to scrip holders.⁵ The policy of the Bank was described by Samuel Bosanquet, a Bank Director, in these words: "The drain of cash proceeded from the great extension of commerce which followed the peace, and which occasioned so considerable an export of the commodities of this country that the circulation was hardly sufficient to support it. It was evident that if this drain could be supported for a short time the influx of wealth that must follow from the return of the amount of the Exports would amply compensate for the preceding drain, and so it turned out. The Bank Directors, therefore, without opening the state of affairs to the Administration, took a bold step on their own authority and refused to make the advances on the loan of that year; this answered the purpose of making a temporary suspension in the amount of the drain of the specie. The time at which they had most ground of alarm was not when their cash was at the lowest, but about April or May, when they refused advance on the loan, and although in October their cash was lower than before, yet they had such reason to expect a turn in their favour by a favourable alteration of the exchanges that they were under much less apprehension."⁶ Tooke's opinion, that the Bank had resorted to a "forcible and extraordinary contraction in 1783 and 1784" is certainly not borne out by the evidence.⁷

A study of the evidence now available reveals that the Bank's guides to action in the 18th century were simple. Discount all first class bills of exchange for respectable members of the London mercantile community at fixed rates

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1. Table 22 ; Ashton, *An Economic History*, p.253 and Clapham, *The Bank*, Vol. 1, p. 253.
 2. McPherson, *Annals*, 1805, p.34 and Kuschel, 'An Inquiry, 1810, p.100.
 3. Macleod, *Theory of Banking*, p.66; Ashton, *Economic Fluctuations*, p.131; Wilson, *Industrial Activity*, p.157 and Pressnell, *Country Banking*, p.91.
 4. Macleod, *Theory of Banking*, pp. 66-67 and Clapham, *The Bank*, Vol. 1, pp.255-56.
 5. Table 22 and Macleod, *Theory of Banking*, pp. 66-67.
 6. Lords Cttee. on Suspension, 1797, pp. 24-25 and 73.
 7. Tooke, *History of Prices*, Vol. 1, p. 193.

of interest but with a concern for the safety of the treasure. Directors of the Bank had exercised this concern with a high degree of flexibility both in peace and war. They made no attempts to maintain either a fixed ratio of bullion to liabilities or to restrict advances when the rate of exchange fell below par. In fact only two accounts of discount limitation are on record. One occurred in the highly unusual circumstances of the Jacobite Rebellion in 1745; the other at the end of the American War of Independence which lasted for a very short period of time. On no occasion in its history had the Bank refused to provide the Government with the credit required for the public service, although it did limit advances to contractors on the scrip of the public loan for 1785. With the exception of the two limitations listed above the same is true for the private sector. Provided those seeking accommodation were established businessmen, willing to pay interest at 5% and offered the Bank secure bills of short maturity their requests were seldom rejected. As Horsefield observed, "the chief intellectual basis of banking theory at the end of the 18th century was a belief that to supply the needs of trade was not only to fulfil most adequately the purpose of banking but to avoid any danger of over issue."¹ The Bank's pragmatic approach grew out of and seemed suited to a century when confidence in credit of all kinds increased steadily and for most of the time the country probably enjoyed the luxury of an active balance of payments. No wonder Lord North described the Bank in 1781 as "part of the constitution."² At the outbreak of war in 1793 if past experience was any guide both the Treasury and the London business community could expect complete support from the Bank for their respective financial concerns.

1. Horsefield, 'Duties of a Banker', p.7.
2. Clapham, The Bank, Vol. 1, p.181.

DEBT MANAGEMENT, 1793-1815Introduction

Debt management between 1793 and 1815 was concerned to provide the Government with the additional funds it required to prosecute the war at the lowest possible cost to the public. The legal and institutional framework within which Pitt and his successors at the Treasury conducted the business of borrowing money has already been described and the essentials of debt management outlined, but a brief repetition of points already developed will be useful as an introduction to this chapter.

Both types of borrowing, funded and unfunded provided the Government with funds for the finance of real expenditure over the year, but the latter also met the needs of the Exchequer for ready cash, whenever the budget estimates turned out to be inaccurate. Unfunded borrowing of this type could, however, be curtailed by improvements to the techniques used to forecast receipts and expenditure or by measures designed to speed up the flow of revenue into the Exchequer.

Borrowing was accomplished through the sale of bills and bonds to the London money market. Although the Treasury ultimately obtained the money required from a fairly large group of investors, it actually conducted negotiations for funds with a far smaller group of middlemen, who speculated in public securities. It was through bargains between the Treasury on the one hand, and contractors, bankers, members of the stock exchange and merchants on the other, that the terms upon which the Government borrowed money were partly determined. Only partly because the services of the Bank of England to the State both direct and indirect exercised a powerful influence upon the cost paid by the Government to obtain funds. The Bank acted as the intermediary between the Chancellor and the London money market. It offered him advice about the reliability of contractors, suggested dates for negotiations and informed him on the general disposition of the market towards liquidity or particular types of public securities. The Directors held a large share of the floating in the Bank's portfolio and stood by at all times to meet the needs of the Exchequer for ready cash. Finally, the Bank's liberality or stringency in the extension of its credit, either to the public or private sectors brought about significant changes in the liquidity of the London money market and

in the total supply and through that the overall propensity to purchase public securities. In short, cooperation with the Bank of England constituted a vital element in the Government's efforts to borrow money.

To borrow as cheaply as possible the Treasury attempted first to stimulate competition among dealers in public securities; second to market bonds of a high denomination which gave the Government opportunities for conversion operations after the war and, finally, it tried to regulate the flow and structure of public securities offered to the market in order to take every possible advantage of variations in the level and composition of demand. By the outbreak of war, if not soon afterwards, most of the methods the Treasury could conceivably adopt to lower the cost of raising funds had been discovered. Competitive tender for loans had been successfully introduced by Pitt and a long series of conversion operations testified to the efficacy of borrowing in 4^{1/2} or 5 bonds. Pitt certainly knew that bond prices would be higher if he timed loan negotiations and funding operations to coincide with buoyant demand in the money market. On the other hand if the market displayed an antipathy to bonds it obviously paid the Treasury to utilize unfunded borrowing and sell bills.

Demand tended to be buoyant at times when its preference for liquidity had been satisfied and it expected bond values to appreciate. The liquidity of the capital market depended mainly on the credit policies of the Bank of England, but the Treasury could bring about short run changes by issuing exchequer bills through the quarterly payment of interest on the national debt or purchases by the Commissioners for the Sinking Fund. Bond prices were liable to rise if the Treasury sold them after, rather than before, the payment of dividends, the purchase of stock or the issue of exchequer bills. Expectations tended to be optimistic if people anticipated peace. Although the tide of war could not be controlled from London advance intelligence often enabled the Chancellor to time loans or funding operations to take advantage of the markets reactions to political events.

Contractors liked to be given the maximum possible time for the disposal of annuities and if the Treasury organized its loan and funding operations to meet their wishes it was liable to obtain better terms. Here again strategy involved careful timing designed to ensure that funding operations did not coincide with loans or that instalments on one loan did not overlap with payments on another. Only if the flow of bonds onto the market could be spread out more or less evenly over the year could the Treasury and the contractors hope to avoid the sharp falls in prices which usually accompanied sudden and large increases in supply.

Of course the whole notion of policy or planned debt management might seem misplaced in the context of war at the end of the 18th century. Sudden demands

for extra cash by the military departments, unexpected accessions of bills onto the market and a lack of cooperation from the Bank could, and frequently did, frustrate even the most carefully formulated of Treasury schemes. Furthermore, in wartime when the supply of securities marketed over the year increased enormously and demand became highly volatile, even very short run prediction became extremely difficult and by no means all the men who succeeded Pitt at the Treasury attended as carefully and diligently as he did to the public interest.

Borrowing policy between 1793 and 1815 inevitably became a matter of improvisation to take advantage of whatever opportunities presented themselves in a highly unstable situation. In fact the evidence gives the impression that the Treasury often simply staggered from one expedient to another in a hasty endeavour to obtain funds for the prosecution of the war effort. Sometimes the method and cost seemed to be secondary and obtaining the money became all. Nevertheless, the ways open to the Government to reduce the interest charge and to manage the debt in the public interest remained the same in peace and war alike. War simply made all planning much more difficult.

Borrowing money consisted essentially of a large number of separate transactions involving the Treasury, the Bank and the money market for the sale of bonds and bills, which can only be appreciated in their immediate context. For example, it would be impossible to comment on the loan for 1799 unless details of the overall supply of assets over the year, the credit policy of the Bank of England and the state of demand in the money market during the spring of 1799 are taken into account. Since debt management was a day to day affair with the Treasury reacting to the Government's pressing demands for finance on the one hand and variations in the demand for public securities on the other, it can only really be described and appraised against the background of events which engendered changes in the conditions of demand and supply. A chronological and detailed treatment of debt management during the war years appears to be indispensable because generalisations and conclusions can only emerge from evidence presented in that way. I propose in this chapter to give a year by year account of the Government's funded and unfunded borrowing operations between 1793 and 1815 in order to show as clearly as possible what happened and also to ascertain if the Treasury managed these operations with any degree of efficiency.

1793

An economic crisis which accompanied the outbreak of war led to credit stringency on the London capital market in 1793. Bullion reserves at the Bank had declined steadily from August 1791 and in February 1793 the proportion of specie to liabilities stood at 23%; a ratio well below the level recorded at the outbreak of previous wars. The decline in the Bank's reserve could not be connected with the balance of trade because exports continued to rise up to the outbreak of war. There had, however, been some repatriation of foreign capital from London during 1792 and the rate of exchange fell 2% below par for most of the year, but contemporary accounts of the crisis all suggest that an internal drain was mainly responsible for the reduction in the Bank's specie reserve.¹ The basic factor responsible for the drain of gold inland included a failure of confidence which followed an over-extension of credit by country bankers at the height of the investment boom, but the strong desire for liquidity which accompanied the anticipation and outbreak of war in February 1793 undoubtedly aggravated the crisis.² Heavy and persistent demands for credit were being made by the commercial community on the Bank throughout 1792 and the first quarter of 1793. Despite assertions that the Directors were not daring enough to restore confidence by meeting all reasonable demands for credit, advances to the private sector expanded rapidly between 1791 and 1793.³

Against a background of economic crisis Pitt prepared his arrangements for the finance of the first year of war. Already in October 1792 the Bank warned him that gold was flowing overseas and a month before the outbreak of war the Governor wrote again to inform the Chancellor about the repatriation of foreign capital and asked him to reduce the Bank's holdings of exchequer bills by £1 million, adding that if the war broke out the Bank would like the debt reduced by £2 million.⁴ Pitt agreed and his budget proposals submitted to Parliament in March contained a promise to avoid the accumulation of unfunded debt during the war.⁵ Thus, Pitt's arrangements for the planned issue of bills to the market for 1793 provided for the sale of £5½ million of exchequer bills and the repayment of a like amount. In other words the Chancellor planned to hold the floating debt at a constant level.

1. Bank Minutes 5 and 18.1.93. and see Tables 22, 26 and 34.

2. See pp. 199-200.

3. See Table 22.

4. Bank Minutes 16.10.92 and 5 and 18.1.93.

5. Bank Minutes 19 and 31 1.93. and Parly. Hist., vol. 30, p.559.

But as new issues included a Vote of Credit of £1½ million for unforeseen military expenditure, Pitt had in fact reduced the usual issue of supply bills from £5½ million to £4 million.¹

When the contract for the loan was concluded the rate of interest on exchequer bills was higher than the bond rate.² Thus the Treasury might well have opted to reduce the unfunded debt still further by increasing the amount of the loan and thereby reducing the amount of supply bills renewed. £4½ million seems a relatively small loan, and if Sinking Fund repayments are taken into account the net amount of bonds issued over the financial year amounted to £2.9million. The Treasury had no reason to expect the price of bonds to appreciate and with the rate of interest favouring bonds, further reductions in the floating debt would have been profitable.

As the Bank wished to diminish its holding of exchequer bills, a higher proportion of the years circulation was sold to the market and the Bank thereby failed to provide the banking system with additional reserve currency.³ Sales of bills to the market diverted credit from the private sector and aggravated the commercial crisis. In April the Government itself restored confidence by offering short term loans to businessmen in the form of exchequer bills cashable at the Bank.⁴ By the summer of 1793 the crisis had passed and with the Bank's gold reserve for August well above the February level, the Government had no trouble in persuading the Bank or the market to accept its bills.⁵

The very first loan of the war for £4½ million was not subject to competitive tender. Grelhier and Newmarch considered that the Chancellor had done everything in his power to excite competition but was unable to do so because of conditions in the money market. They blamed the commercial crisis which undoubtedly made borrowing of any kind difficult.⁶ Despite the crisis, the marketing of what was after all only a very small quantity of bonds appears to have been ineptly handled. Was it necessary to conduct negotiations for a loan at the height of the commercial crisis? Surely the Treasury might have borrowed short term and waited until its own palliatives for the commercial crisis had had time to take effect.⁷ Short term borrowing would have had the dual advantage of financing

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1. Farly. Hist., vol.30, pp.564 and 570 and see Table 15.
 2. The loan was negotiated on 25 March, 1793 - see Bank Minutes 25.3.93 and Table 18.
 3. The Banks refused the Chancellor's request for a £300,000 loan in April - Bank Minutes 19.4.93 and 20.6.93.
 4. See pp. 200-201.
 5. Before 1796 the Bank's holding of exchequer bills purchased in the market was negligible and I can find no trace of requests from the Treasury to take additional bills. And see Tables 22 and 23.
 6. Grelhier, Terms of the Loans, 1812, p.57 and Newmarch, 'On the Loans Raised by Pitt', pp.9-10.
 7. See p. 201.

necessary expenditure and also providing needed liquidity for the capital market. True Pitt first attempted to raise this loan in 4% or 5% stock and when he secured only a single bid, he offered the market consols instead. But he failed to give contractors sufficient time to organise consortiums to tender for the revised loan and consequently just a week after his initial negotiations he again obtained only a single bid.¹ Furthermore the first instalment on the loan was made payable before the payment of dividends on the National Debt. Just one month after the contract was signed bond prices recovered again. From every conceivable point of view there appears to have been a case for delaying negotiations until April at least.

At the end of the year the Treasury was obliged to anticipate taxation revenue for 1794 by issuing £3½ million of exchequer bills on the surplus of the consolidated fund. But although Pitt managed to keep the amount of exchequer bills outstanding in check he exercised little control over the issue of military bills. During the year ending in January 1794 the military debt was doubled and the issue of Army and Navy bills was responsible for almost all the increase in unfunded debt in 1793. This rapid accumulation of floating debt occurred because actual expenditure by the services exceeded their estimates submitted to Parliament by 38%. Over half of all "extraordinary" expenditure was incurred by the Navy and naval debt was increased by 100%.² The sale of Navy bills was an expensive way of borrowing money, chiefly because of the uncertainty associated with their repayment. They were at heavy rates of discount throughout 1793 and in September Pitt asked the Bank to prevent their further depreciation by buying bills from the market.³

Unauthorized expenditure overseas by the Army increased the Bank's holding of Treasury bills which were issued as "payable at the Bank".⁴ Whether they liked it or not the Directors had to support short term borrowing overseas by the Army. In June the Governor expressed concern to the Chancellor in case holdings of Treasury bills infringed the Bank's Charter which clearly stipulated that the Bank could not hold Government bills unsanctioned by an act of Parliament.⁵ Pitt quickly circumvented the difficulty by introducing a bill which indemnified the Directors for past misdemeanors and allowed the Bank to hold unlimited amounts of

1. Bank Minutes 18 and 25.3.93 and Times, 19, 21, 25, 26 and 28.3.93.

2. See Tables 16 and 17.

3. Bank Minutes 10.9.93 and see Table 21.

4. See Table 23.

5. Bank Minutes, 19.6.93.

Treasury bills.¹ At the same time the Chancellor, recognising that the Governor's anxiety was in part prompted by a dislike of his obligation to cash Treasury bills, assured him that the Bank would not be required to retain more than £½ million at any one time.²

At the end of the first years hostilities, despite Pitt's promise to avoid accumulation of floating debt, the rapid increase of military bills outstanding undoubtedly represented the most urgent problem which had emerged in connection with the management of the national debt. Because of a continued and serious divergence between actual and estimated military expenditure this problem persisted in an acute form until 1798. Extraordinary expenditure by the military departments over the years 1793 to 1797 exceeded the estimates placed before Parliament by 70%, even though the Chancellor included in his budget a sum of £9 million on Votes of Credit in order to meet "unforeseen" expenditure by the services.³

Nearly 40% of all floating debt outstanding during the first four years of war consisted of military bills, the majority of which had been issued by the Navy.⁴

Breakdowns of naval debt outstanding on 31 December 1793 to 1796 indicate that expenditure on transport, food and stores caused most of the inaccuracies in the forecasts of Naval expenditure.⁵ One serious source of error consisted of the failure to coordinate estimates for the land and sea services. For example shipping hired by the Transport Board to carry troops and their equipment to and from Europe and also between ports on the continent were included in neither the Army nor Naval estimates and demands by the Army for shipping services for the campaigns in Europe were particularly heavy during the early years of the war.⁶ Freight rates failed to maintain the stability achieved in the American War and up to the summer of 1798 rose rapidly.⁷ Popham, the Transport agent at Hamburg, told the Navy Board how military people always want troops in the battle area as quickly as possible which send up the price of shipping.⁸ Furthermore the uncoordinated demands of the

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1. 33, G.3.c.32; Comms Jnl., vol.48, p.667 and Lords Cttee. on Suspension, 1797, Appdx. A.3.
 2. Bank Minutes, 6.11.94.
 3. Without these votes extraordinary expenditure would have risen to 84% of estimated expenditure. See Table 17.
 4. See Tables 16 and 17.
 5. Breakdowns of Navy Debt were published with the Supply estimates in the Commons Jnl., 1793-1798. See also Pitt Papers, vol. 247.
 6. Annual Supply Estimates, 1793-1797 and Navy - ADM/49/96-97, ADM/108/69.
 7. 31 Cttee. on Finance, Appdxs. G.3.b and c.2 and Navy, ADM/108/69.
 8. Navy - ADM/108/69.

Navy Board, the Board of Ordnance and the Transport Commissioners for limited supplies of shipping helped to push prices even higher.¹ Pitt told the House that the unforeseen expense of transport threw out naval estimates.²

Food supplied to troops en route for and at foreign stations came from the Victualling Board. Although this item of naval expenditure amounted on average to nearly £1 million a year it did not form the subject of an estimate to Parliament.³ Furthermore, the Board continued to estimate the cost of food for the navy at 19/- per man per month at a time when nearly all foodstuffs it purchased were rising in price.⁴ Finally, between 1793-97 a rapid increase occurred in the prices of materials purchased by the Navy for building, maintaining and equipping ships. Most of the timber, hemp, canvas, tallow and some of the iron lead and copper came from abroad and the increase in their price reflects competition with the French for limited supplies as well as higher freight charges on the Baltic run.⁵

Army estimates were considerably more accurate and only about half of its expenditure was not included in estimates submitted to Parliament between 1793-96.⁶ As the Paymaster-General compiled accounts showing why extraordinary expenditure was incurred, it is possible to outline the main reasons for inaccuracies in his estimates. Well over half of the extraordinary expenditure went on food for troops stationed in Europe, India and the West Indies. Barrack building in Britain was another important reason and the domestic rise in food prices occasioned additional expenditure on food by regiments stationed at home.⁷

Extraordinary expenditure by the Ordnance almost equalled its estimated expenditure between 1793 and 1796 and by 5 January, 1796, the outstanding debt of the Board of Ordnance stood at just over ten times its pre-war level.⁸ Accounts submitted to Parliament by the Master General reveal that the major reason for inaccurate estimates consisted of a failure in coordination between the Board on the one hand and the War Office and Admiralty on the other, because most of the non-estimated expenditure by the Board covered arms, ammunition, tents and other military equipment supplied to the navy and to troops fighting in Europe. The only item of substance for which the Board bore some responsibility consisted of

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1. 31 Cttes. on Finance, 1798, Appdx. G.3.b.
 2. Parly. Hist., vol.30, p.1358 and vol.32, p.1263.
 3. Annual Supply Estimates, 1793-97 - breakdown of Naval debt.
 4. 32 Cttes. on Finance, 1798, Appdx. 3(2) and Cttee. on Finance, 1817, Appdx.2.
 5. Tooke, History of Prices, vol.1, p.189 and 31 Cttee. on Finance, 1798, Appdx.E.
 6. Mainly because the Army appropriated the Votes of Credit given by Parliament for extraordinary expenditure - see Table 17.
 7. Annual Supply Estimates, 1793-97 - breakdowns of Army Extraordinary Expenditure, and ARMY P.M.G./2/90.
 8. See Tables 16 and 17.

extraordinary expenditure on the construction of military fortifications in Britain, but in this case the rapid rise in the price of building materials and labour made prediction extremely difficult.¹

Unfunded borrowing by the services could not be predicted and complicated the Treasury's task of managing borrowing. Uncertainty about the annual flows of bills onto the market made a rational policy for debt management almost impossible to implement. The Chancellor needed to forecast future trends in asset prices in order to reach decisions as to how much unfunded debt to leave outstanding and how much to convert into funded debt through loans or funding operations. As Vansittart told Castlereagh when the Treasury used bill finance it was important not to have sudden accessions which would derange the market.² No doubt the same uncertainty about the flows of bills onto the market also influenced prices offered by the money market for bills and bonds.³ Moreover the issue of military bills was one of the more expensive ways of borrowing. Navy bills were never popular with the market and the sudden and rapid accumulation of floating debt occasioned funding operations at times not convenient to the Exchequer or profitable to the public. Lastly, the sale of military bills overseas produced a strain on the country's gold reserves, which might have been partly avoided if more accurate estimates had been submitted to Parliament.

1794

Pitt announced in the budget of February 1794 that he would not leave Naval debt to accumulate until the end of the war.⁴ Acting on advice from Samuel Hoare the Banker, the Chancellor fixed 15 months as the maximum period for the loan period with 4% interest payable on the bill from the day of issue and he reduced the amount of debt outstanding by one-third by funding £2 million Navy bills just after the payment of dividends on the Debt in April.⁵ Conversion took place in a 5% stock, at 5.11% which was 0.42% above the rate of interest paid on the loan negotiated in February.⁶ Can it, therefore, be concluded that the Treasury would have been better advised to pay off the Navy bills by adding £2 million to the loan in February? Additions to the loan might, however, have eliminated the narrow

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1. Annual Supply Estimates, 1793-97 - breakdown of Ordnance Extraordinary Expenditure.
 2. Vansittart Papers, vol. 31231, dd.17.10.14.
 3. Pitt Papers, vol.178 - Sinclair, dd.March '96 and vol.183 - Thornton, dd.18.11.96, 25.12.96, 18.2.97 and 31.5.99.
 4. Parly. Hist., vol.30, p.1356.
 5. Pitt Papers, vol.145 and Treasury, TI/729/858 and TI/730/1078.
 6. See Table 18.

differential cost between borrowing and funding and the sale of stocks of high denomination, gave the Treasury the opportunity of converting bonds to a lower rate of interest after the war. Furthermore, revenue from loans reached the Exchequer in instalments while funding operations were completed on the chosen date. If Navy bills had been permitted to float beyond April 1794 their discount may have risen. Delay would have added to the supply of short term assets in the market and probably reduced the price of bills issued over the year. Thus, when the possible gains from additions to the loan are weighed against possible increases to the interest on the unfunded debt it seems that the Treasury managed the issue of bills to good advantage.

Negotiations for a loan of £11 million took place at the beginning of February which gave the contractors 11 months to pay their instalment. A fifth of the bonds issued consisted of 4% stock. At this meeting the Chancellor gave some information about his future plans for the management of the floating debt. He announced his proposed issues of exchequer bills but did not disclose his plans for the funding operations.¹ Contractors in their bids for the loan had to make predictions about the aggregate future supply of assets. If they anticipated a funding operation their bids would be reduced; even though the Treasury usually tried to convert into stocks which did not compete directly with the loan. It may have been in the public interest for the Chancellor not to disclose plans for the unfunded debt and to leave contractors to speculate about what might occur. Provided they did not overestimate the future supply of bonds the Government might gain. In 1794 funding was still a novel part of debt management operations and it seems probable that the public incurred no extra charge on the loan which was raised at 4.6%.²

Interest on exchequer bills in 1794 was 3½% and it might seem that the Treasury gave inadequate attention to possibilities for the reduction of interest charges by selling fewer bonds and carrying a larger unfunded debt in exchequer bills. Heavier short term borrowing by the Government at a time when the Bank of England was being cautious in discounting for the private sector would, however, have diverted credit to the Government and might have adversely affected the level of trade and production. Pitt's policy of containing the unfunded debt seems to have been formulated with an eye to the needs of the London mercantile community and through

1. Bank Minutes, 3.2.94.

2. See Table 18.

them to Government revenue from taxation.

Thus the bill arrangements for 1794 remained conventional. Borrowings on the security of the Land and Salt taxes amounted to £2½ million, supply bills to £3½ million and a Vote of Credit added a further £2½ million. At the same time Pitt arranged to pay off £5½ million bills issued on the supplies for 1794 and to make good the deficiency in grants of £475,000.¹ Despite the Bank's refusal to increase its holdings of Exchequer bills the Treasury had no difficulty in disposing of them in the market at rates of interest only 1½% above the pre-war levels and Pitt's reform of the Navy bill and the funding operation in April reduced the discount on Navy bills for the rest of the year.²

Funding failed to prevent an absolute rise in the amount of naval debt outstanding during 1794. By January 1795 it stood at £1.7 million above the year before, despite the fact that the Chancellor had taken the precaution of adding £1 million to the estimates submitted by the Navy Board.³ Pitt rashly told Parliament that the Navy's debt would not increase at anything like the rate of 1793 but in fact Naval estimates for 1794 were inaccurate by nearly 30%.⁴

Army estimates were also out by 60% and as most of its extraordinary expenditure took place overseas, the amount of Treasury bills held by the Bank more than doubled in 1794.⁵ The Directors did not welcome the rise and in November told Pitt that the Bank's holding of Treasury bills exceeded the amount they agreed to hold and asked for prompt repayment.⁶ At that stage of hostilities a considerable part of the British war effort was located overseas, and the increased holdings of Treasury bills merely reflected the Government's military strategy. But since the ratio of specie to liabilities at the Bank had risen to 41% by August 1794 and its holding of Exchequer bills had fallen below pre-war years, complaints by the Directors about Treasury bills probably indicated nothing more than their dislike of that particular security and not a concern with the specie reserve.⁷ Thus it was perhaps unreasonable of the Directors to press the Chancellor for prompt payment. Funds were not always readily available at the Exchequer and the conversion of Treasury bills into Exchequer bills may have raised short term interest rates in the market.

1. Parly. Hist., vol.30, p.1356 and see Table 15.

2. See Tables 20 and 21.

3. Parly. Hist., vol. 30, p.1357.

4. Ibid, p.1361 and see Table 17.

5. See Tables 17 and 23.

6. Bank Minutes 6, 7 and 19.11.94.

7. See Tables 22 and 23.

1795.

From the summer of 1795 to the Suspension of Specie Payments at the end of February 1797 the Government experienced real difficulty in obtaining the short term loans it required to finance the war effort. Certainly the Chancellor's difficulties in marketing Government bills were more acute during these 20 months than they were throughout the rest of the war. Furthermore, the friction which developed between Bank and Government had no precedent and on several occasions cooperation between the Bank and the Treasury threatened to break down entirely. While the grudging and half-hearted support the Chancellor of the Exchequer managed to elicit from the Directors for his financial policies constituted a constant worry.

The cause of disharmony between Bank and Government is not difficult to find. Between June 1795 and February 1797 the ratio of specie to liabilities at the Bank declined from 41% to a mere 8% and very rapid rates of decline in the gold reserve occurred in the second half of 1795 and the early months of 1797. Throughout 1796 the specie reserve remained stable at the very low level of between £2 and £2½ million.¹ In January and February of 1797 the decline became sufficiently rapid and the gold reserve fell to a level low enough for the Government to consider it expedient to relieve the Bank of its obligation to redeem its notes in specie.

The Bank Directors contended that the Government's expenditure overseas bore the main responsibility for the downward movement in their specie reserves. Director Winthrop imputed the decline in 1795 and the continuing low level of 1796 "in great measure to the Imperial Loan, to the subsidy to the King of Prussia, to the amount of bills drawn for the expenses of war on the continent; to bills drawn for the West Indies; to the amount of neutral cargoes and in general to such causes as appear to me to have no connection with trade or with any balance of trade."² Giles, the Bank's Governor, agreed with this list.³ Samuel Bosanquet considered foreign expenditure had the additional disadvantage of depreciating the exchange and encouraging the export of bullion for purposes of speculation; a point also mentioned to Pitt in a memorandum from Lord Auckland.⁴ In other words while the balance of trade remained favourable, Government remittances overseas and contingent movements of speculative funds had occasioned an adverse balance of payments.

1. See Table 22.

2. Cttee. on Suspension, 1797, p.42.

3. Ibid, p.151.

4. Commons Cttee. of Suspension, 1797, p.26; Auckland Papers, vol.34454, dd.3.8.96.

Winthrop's list of factors which operated first to denude and later to prevent the replenishment of specie at the Bank appears to be substantially correct. During 1795 and 1796 the Treasury remitted £8½ million abroad as loans and subsidies to the foreign Governments. Over half of this sum consisted of a loan raised in Great Britain for the Emperor of Austria, agreed to by a convention of 4 May 1795 and another million included subsidies to Sardinia and the German states engaged in military operations against France. Most of the remainder appears to have been sent to Dublin as loans and subsidies to the Irish exchequer. At the same time the Treasury sent another £5½ million in specie to British troops serving in Europe. During 1796 imports of naval stores from the Baltics increased considerably. Finally between June 1794 and February 1797 a further £1,876,000 was paid as compensation to the owners of neutral ships confiscated by the Royal Navy.¹ Government remittances abroad in 1795 and 1796 seem to be equivalent to an increase of nearly 20% on the current annual level of imports.²

Although Government payments overseas were outgoings on the capital account of the balance of payments; overseas remittances were probably not without influence on the current level of exports and their net effect on the Bank's specie reserve is overstated by a consideration of the above figures alone. Since the loans and subsidies were remitted to enable the German and Austrian Governments to put troops in the field against the French, some of the money may well have been employed to purchase military equipment made in Britain. Expenditure by British troops on the continent might have increased the propensity of Europeans to import British merchandise and exports to Germany in 1795 and 1796 certainly rose well above the pre-war level.³ Furthermore, as Walter Boyd told Pitt, the depreciated exchange in 1795 and 1796 also encouraged additional purchase of British goods overseas in 1796, and Sir Francis Baring and Jasper Atkinson made the same point some years later.⁴ Boyd who was the contractor responsible for remitting the loan to Austria also claimed that the Emperor's credit was good enough overseas for the Imperial Loan to attract foreign capital.⁵ Boyd's answer to those critics who claimed that the

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1. Chisholm Rept. 1868-69, p.547; Pitt Papers, vol.196; 35 G.3.c.93; Commons Jnl., vol.51, p.358 and for 1801, p.897; Cttee. on Suspension, 1797, Appdx.23; Cttee. on Suspension, 1797, Appdx. 2, 4 and 20 and see Tables 32 and 37.
 2. The figures of imports for 1796 are Inlah's - see Table 25.
 3. See Table 28.
 4. Pitt Papers, vol.115 - dd.9.4.94; Baring, 'Observations', 1801, p.20 and Atkinson 'Thoughts', 1802, p.73.
 5. Pitt Papers, vol.115 - dd.9.4.94.

Imperial Loan had drained bullion overseas was to point out that only £1,200,000 had been remitted in specie and the rest had been remitted by bills of exchange, but remittances by bills of exchange do not eventually lead to an outflow from the Bank; a point which seems to have been overlooked by the enthusiastic Boyd, but not by the Lords Committee of Secrecy.¹

Pitt admitted to the Commons Committee that Government payments overseas were perhaps mainly responsible for the low level of the Bank's reserve at the beginning of 1797, although he refused to accept Sheridan's motion that loans to Austria and Ireland had been entirely responsible for the Suspension of Specie Payments in February 1797.² There were indeed several other factors which caused an outflow of gold not stressed by the Bank Directors or admitted by Sheridan. First of all the restoration of metallic currency in France made it profitable to export bullion to Paris from the spring of 1795 to the autumn of 1796. Pitt mentioned this factor to the Commons Committee and the event has been described in two articles by Hawtrey.³ Unfortunately it is not possible to even guess at the amount of bullion sent to France and Hawtrey himself is perhaps inclined to minimise the difficulty of illegally exporting specie to an enemy country in wartime. Nor does he explain why gold did not continue to flow to Paris in the first half of 1796 when the French Government continued to restore the currency.⁴ Most contemporaries completely overlooked the effects of borrowing by the Irish Government on the Bank's specie revenue.⁵ Next the coincidence of a poor harvest in 1795 undoubtedly aggravated the situation because the quantity of grain imported in 1796 increased by 28.3% and its cost from £1½ million to nearly £4 million.⁶ Hawtrey's point and the bad harvest of 1795 qualifies, but in no way disproves, the contention of the Bank Directors that Government remittances overseas were principally responsible for the decline and subsequent low level of the Bank's specie reserve in 1795 and 1796.

To restore and maintain the reserve ratio to a level which they considered consistent with the safety of the Bank the Directors tried to check the outflow of gold and to reduce outstanding liabilities by curtailing loans to both public and

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1. Cttee. on Suspension, 1797, pp.35-36; Pitt Papers, vol.115, dd. 9 and 10.94 and Lords Cttee. on Suspension, 1797, p.373.
 2. Dacres Adams Papers, vol.196; Cttee. on Suspension, 1797, p.13 and Farly.Hist., vol.33, pp.222, 238-239 and 466.
 3. Hawtrey, Currency and Credit, chs. 15 and 16 and Cttee. on Suspension, 1797, p.60.
 4. Hawtrey, Currency and Credit, pp.263-267.
 5. Cttee. on Suspension, 1797, p.30, Chisholm Rept., 1868-69, pp.551-52 and Pitt Papers, vol.115 - Boyd, dd.18.3.95.
 6. Burke, 'Thoughts and Details, 1795', pp.32-34 and Cttee. on Suspension, 1797, Appdxs. 5, 16 and 23.

private sectors.

Towards the Government the Directors pursued two policies in order to protect the gold reserve. First, they protested to the Chancellor against any public expenditure which transferred specie overseas. They also tried to contain the amount of public securities held at the Bank by refusing to discount Government bills. These two policies were related because the Directors often coupled a protest against expenditure abroad with a threat to withhold credit and their efforts to contract lending to the Government were concentrated on reducing the amount of advances on Treasury bills, the means employed by the Government for military expenditure overseas.

Although gold reserves at the Bank began to decline from August 1794 their absolute level occasioned no alarm until June 1795.¹ But as a loan for Austria had been mooted and opposed by the Bank during 1794, the Directors told Pitt in December "not to depend on our assistance too much because of the pending foreign loan."² Against this unpromising background Pitt made his arrangements for financing expenditure for 1795. The contract for a loan of £18 million was settled even before the new year. Negotiations were opened so early that the first instalment of the loan overlapped with the final instalment of its predecessor, but the loan still appears to have been well timed. Its payments were spread out over twelve months and throughout 1794 the unfunded debt had increased in such an erratic way that the Chancellor probably anticipated the need for funding operations in the early months of 1795. Moreover, his plans for the Austrian loan were already known to the capital market. By opening negotiations in December, Pitt gave the Treasury opportunities for selecting advantageous dates for funding and allowed contractors valuable time before bonds on the Austrian loan were offered for sale to the market. He even managed to persuade contractors to accept a third of the loan in 4½ stock.³

But the Chancellor made very little attempt to offer the loan to competition for reasons connected with the Imperial Loan. During 1794 Britain's Austrian allies had been trying to arrange for a loan for £6 million, on the London capital market.⁴ Since they needed money to prosecute the war against France, the British Government could hardly object, but was concerned in case the

1. See Table 22.

2. Pitt Papers, vol. 115 - Boyd dd. 9.4.94 and Bank Minutes, 11.12.94 and 15.6.94.

3. Bank Minutes, 12.12.94; Commons Jnl., vol. 50, pp. 268 and 463 and Times, 12 and 20.12.94.

4. Pitt Papers, vol. 115 - Boyd dd. 9.4.94.

Austrian loan raised the overall cost of borrowing. Understandably Pitt did not wish to add the charge of extravagance to opposition on other grounds to an Austrian loan.¹ Walter Boyd who handled negotiations for the Austrians proposed the neat solution of linking both loans. He offered to form a consortium to handle both the British and Austrian loans, provided the Treasury offered neither to competition.² Under the terms proposed for the British loan subscribers were given the option of buying a proportionate amount of the Imperial loan. Interest on the Imperial loan was to be paid by Austria but guaranteed by the British Government.³ Although their security seemed equally unimpeachable, Imperial bonds were purchased by the contractors well below the price paid for the British loan, negotiated at the same time.

Pitt was well satisfied with the price he had obtained for his consols, but as Fox pointed out, the terms of the British loan were good because contractors were able to make high profits on the Imperial loan.⁴ Fox's prediction that saddling the Austrian Government with part of the cost of the British loan might increase the risk of default turned out to be accurate. No further interest was paid by the Austrians after May 1797 and the interest on the Imperial loan was thereafter paid by the Treasury.⁵ Thus in the event the departure from competition proved to be expensive to the public and the Chancellor might have been better advised to leave the Emperor of Austria to raise his loan for whatever terms he could obtain and to have offered the British loan to competitive tender.

Pitt's other arrangements anticipated no planned additions to the unfunded debt but comparison between bond and bill prices may suggest that the Treasury could have borrowed more cheaply by selling bills. At that stage of the war the situation in the money market probably prompted the Chancellor to contain unfunded borrowing.⁶ Pitt knew his loan to Austria and military expenditure overseas would deplete the Bank's gold reserve and he undoubtedly anticipated further additions to the amount of military debt outstanding. A prudent policy with respect to the issue of exchequer bills seemed the best course to follow.

Army estimates, even with the additional Vote of Credit were cut by one-third, naval estimates by two-thirds and the Ordnance estimates by 100%⁷

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1. Parly.Hist., vol.31, p.1310.
 2. Pitt Papers, vol.115, dd.10.12.94.
 3. Bank Minutes 12.12.94 and Commons Jnl., vol.50, pp.268 and 463 and vol.51,p.358.
 4. Parly.Hist., vol. 31, pp. 12, 499, 1311, 1315 and 1316; Times, 13.12.94 and Adolphus, History, vol.6, pp.114-115.
 5. Chisholm Report, 1868-69, pp.548-549.
 6. See Tables 18, 20 and 21.
 7. See Table 17.

As a result discount rates on Navy bills were high in January and February, when the Treasury made arrangements to fund £1½ million Navy bills.¹ It would not have paid to use the loan to redeem Navy bills because the differential cost of borrowing over funding remained narrow and the Treasury secured the advantage of a conversion into 5% stock. Negotiations for the funding proceeded as follows. Twenty six major holders of Navy bills met at the London Tavern and resolved to demand £108 in 5% stock for every £100 subscribed with interest on the stock to begin from January. They communicated their terms first to Newland the Bank's cashier who told Charles Long at the Treasury.² Since the funding did not take place it can only be surmised that the Treasury were not satisfied with the offer and preferred to wait for a rise in the price of 5% stock, but the Government obtained no better terms when the funding eventually took place in May. Delay occasioned increased cost to the public because by allowing the Navy debt to rise, the Treasury contributed to a further decline in the prices of Navy bills.³

Although funding helped to check the depreciation of Navy bills the Government still required large scale assistance from the Bank in order to prevent short term rates from rising sharply. By August 1795 the Bank had purchased over £2.3 million of Navy bills from the market, but the Directors became increasingly reluctant to finance the Army's extraordinary expenditure by holding Treasury Bills.⁴

When the British Government signed the convention with Austria in May of 1795 the Imperial Loan had been reduced to £4,600,000. At this stage the Bank's specie reserve still amounted to 30% of outstanding liabilities and the Directors appeared no more than apprehensive about a foreign loan.⁶ When transfer of the loan coincided with a rapid decline in the specie reserve they became hostile and their protests to the Chancellor about the Bank's holdings of Treasury bills became frequent and strong. As early as the 5th June they told Pitt that the Bank held over £1 million in Treasury bills and could not therefore agree to any further advances. On the 28th July the Chancellor received a very solemn warning about Treasury bills and two days later the Bank threatened not to cash the bills while the specie drain continues.⁷ Early in August Pitt's request for an advance of £2½

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1. A funding operation had been first suggested in December 1794. Bank Minutes, 4.12.94 and See Table 18.
 2. Pitt Papers, vol.276, Newland to Long, dd.20.2.95.
 3. See Table 21.
 4. Bank Minutes 20 and 31.3.95 and 16 and 17.4.95 and see Table 23.
 5. Commons Jnl., vol.51, p.358 and 35.6.3.0.95.
 6. See Table 22.
 7. Pitt Papers, vol.276 - Bank dd.5.6.95; Bank Minutes, 28.7.95 and Ctee. on Suspension, 1797, Appdx.9.

million on Exchequer bills was not even considered by the Court of Directors because he had not repaid any of the advances on Treasury bills.¹ His reply promised to repay Treasury bills from the money advanced on Exchequer bills.² The Bank's dislike of Treasury bills was sufficiently strong for them to agree to this proposal, provided the Exchequer bills were repaid later in the year and the Treasury bills repaid immediately.³ In August Pitt had recourse to the unusual expedient of asking the loan contractor, Boyd, to anticipate three of his instalments on the loan in order to obtain funds for the public service.⁴

By the autumn of 1795 the specie reserve at the Bank had fallen further and at this stage the Directors were "out of humour with Pitt".⁵ They informed him that events had proved them right about the consequences of the Imperial Loan and hoped they would hear no more of foreign loans. The Directors had already suspended purchases of Navy bills and demanded the immediate payment of £1 million of Treasury bills, this time on the advance granted on the Vote of Credit.⁶ Pitt was further told he must not depend on them for the traditional advances on Land and Malt taxes. Pitt promised to delay the request for advances on Land and Malt and told the Governor that the amount of outstanding Treasury bills would be reduced as the troops came home from Europe.⁷ At the end of October when "the large specie drain filled the minds of the Directors with alarm", they heard rumours of a second foreign loan. Pitt denied the rumour but said it might happen.⁸ On 18 November the Chancellor informed the Directors he would like to send another £2 million to Austria but would delay doing so if the Bank opposed it. His assurances did not satisfy the Directors; specie still drained away and they demanded the repayment of more Treasury bills and asked Pitt not to rely on them for advances on the Vote of Credit or on Aids and Supplies of the following year.⁹ Pitt was not deterred and on contracting for the loan for 1796 reserved to himself the right to raise a further £3 million for the Emperor if he so wished. At this high handed treatment further protests came from the Bank.¹⁰

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1. Cttee. on Suspension, Appdx.9 and Bank Minutes, 6.8.95.
 2. Bank Minutes, 7.8.95.
 3. Bank Minutes, 13.8.95 and Cttee. on Suspension, 1797, Appdx.9.
 4. Cttee. on the Loan for 1796, pp.329-330,334, Appdx.7 and Appdx.8 and Pitt Papers, Boyd, dd.7.10.99.
 5. Greig, Farrington Diary, vol.1, p.158.
 6. Bank Minutes, 8 and 10.10.95 and Cttee. on Suspension, 1797, Appdx.9.
 7. Ibid.
 8. Bank Minutes, 23.10.95.
 9. Bank Minutes, 18 and 20.11.95.
 10. Bank Minutes, 25 and 5 and 31.12.95.

One important result of the Bank's pressure on the Chancellor to reduce short term borrowing was to push the Treasury into selling a higher proportion of its bills to the money market.¹ Direct sales to the market reduced the supply of Bank notes available as a basis for credit expansion by other Banks. Since the supply of bullion in the hands of private bankers probably declined at the same time this constituted a serious limitation on their ability to create credit. When businessmen found their facilities for discounting contracted they attempted to obtain accommodation from the Bank of England but from the summer of 1795 the Bank refused to meet all the demands made upon it by the private sector and in December 1795 the Bank gave formal notice of its intention to ration discounts.²

1796

The Chancellor's plans for borrowing for the financial year 1796 were formulated against the background of tight credit conditions on the London money market, occasioned by the reactions of the Bank of England to heavy Government expenditure overseas and persistent short term borrowing at home. Pressures from the Directors were, however, not without effect on the Government policies. On 14 January, 1796, Pitt wrote to the Directors and asked them if they would still object to a foreign loan, if it were raised in Germany. They did object, because as they pointed out, even if the Prime Minister prevented British subjects taking up loans abroad, foreigners with funds over here would withdraw them.³ Despite strong diplomatic pressure from the Austrians and Walter Boyd the Treasury raised no further loans in London for the Emperor in 1796. Nor did Pitt even consider Boyd's request to raise a loan for the Portuguese Government on the London capital market.⁴ In March the Directors appeared apprehensive about an Irish loan, but the Chancellor assured them it would not be raised here.⁵

Pitt incurred some strong and justified criticism for the arrangements he made for the loan for 1796. To begin with, when the negotiations were opened at the end of November, three instalments of the previous loan remained outstanding, and the Chancellor accepted the contractors' argument that the overlap compromised the Government's right to offer the loan for competitive tender.⁶ In fact this loan established the precedent that if the Treasury floated any loan while the

1. See Tables 16 and 23.

2. Bank Minutes, 31.12.95.

3. Bank Minutes, 14.1.96.

4. Pitt Papers, vol.115, dd. 2.1.96, 11.4.96 and 16.5.96.

5. Bank Minutes, 4.3.96.

6. Bank Minutes, 25.11.96; Pitt Papers, vol.115 - Boyd, dd. 23.11.95 and Colchester, Diary of Abbot, vol.1, p.18.

previous loan remained under payment it could not be offered for competitive bid, but would go to the contractors for the previous loan. Contractors were obviously interested in the guarantee this principle gave of some control over the market. If all new bond issues were to be managed by rival contractors, scrip prices might well be forced down and profit margins cut. The new rule gave them some control over the rate at which bonds were supplied to the wider market so that the original consortium could benefit for any appreciation in prices or, alternatively, would possess the option of holding stock whenever prices were declining. Of course their control over supply remained only partial and temporary. Partial because the total supply of bonds consisted of new issues and sales of old stock over which the contractors could have only marginal influence. Temporary because it lasted only until all instalments on the current loan were paid up. Normally to retain even this limited control of the market the contractor had to underbid his rivals for the next loan. Nevertheless the guarantee was sufficiently important for contractors to insist upon its being part of every loan contract and to protest vigorously against any infringements of it.

When Pitt admitted Boyd's claim to the loan for 1796 because one third of the loan for 1795 had not been subscribed, he was subjected to vigorous attacks both inside and outside Parliament for departing from the system of competitive tender, and even accused of corruption. Boyd had not only protested against the loan being open to competition but had offered to take it at $\frac{1}{2}\%$ below any other bid. Subsequently at negotiations with all the interested parties, Pitt explained he wanted to open the loan to competition but he had given his word to the contractors that no fresh loan would be negotiated until payments on the previous loan were completed. Morgan and Mellish refused to bid on condition that Boyd should pay $\frac{1}{2}\%$ below their offers for the loan, so Pitt and Boyd settled the terms between them. Morgan strongly disputed Boyd's right to the loan and with some force he pointed out that as contractor for the loan of 1794, he had not protested when the loan for 1795 had been floated a month before its final payment was made. To allow a contractor 2 or 3 months was, Morgan felt, long enough; to give them 12 months seemed to him incompatible with free competition.¹

Pitt insisted before the House of Commons that he had wanted competition but as a considerable part of the previous loan was not paid up he had to decide whether to defer the loan or break faith with the contractors. At first he had

1. Cttee. on the Loan for 1796, pp.311-312, 323 and 325-328 and Adolphus, History, vol.6, pp.414-415.

felt inclined to delay, but when Boyd offered $\frac{1}{2}$ below the lowest bid, there seemed no point in doing so.¹ Fox was not impressed and considered the Minister had "outraged a fundamental principle of the constitution by deserting competition."² William Smith felt Boyd had received no real promise about a future loan. Cases might arise, argued Smith, highly prejudicial to the public if the Chancellor were excluded from opening a new loan to competition and an anonymous pamphleteer pointed out that the Chancellor legally could not give such assurances to loan contractors, because future loans were a matter for the discretion of Parliament.³

On the other hand both the Select Committee which investigated the matter and the Directors of the Bank of England considered the action adopted by the Chancellor to be just and correct. Newland, the Cashier, thought it was understood that the old loan should be completed before a new one was negotiated. Giles, the Governor, observed that since the establishment of the Bank no new loan had been made when two payments on the previous loan were outstanding.⁴

Thus the loan for 1796 established a precedent which curtailed the Treasury's freedom to offer loans to competition. Since Boyd obtained the entire loan as consols presumably the precedent created inhibited the Government from offering bonds of whatever denomination it thought best to the market. Because the Chancellor often found it neither expedient nor advantageous to delay floating a new loan until the previous loan had been fully paid up both restraints proved to be important. However, if Pitt had adopted the advice of his critics and refused to give contractors assurances about future contracts, the public may have gained some pecuniary advantage from competition only to lose it again as contractors lowered their bids to counteract the additional risks of a new loan.

Nevertheless, it is *prima facie* somewhat difficult to see the case for opening negotiations for the loan for 1796 as early as November 1795. A delay until the middle of January would have given the Government the advantage of the quarterly dividend payment on the national debt.⁵ More important, within a few days of the contract, the King recognised the Republican Government of France, which encouraged widespread expectations of peace and bond prices immediately rose between $5\frac{1}{2}$ and $7\frac{1}{2}$. There seems little doubt that if the loan had been postponed, better terms could have been obtained and Pitt's excuses that he could

1. Parly. Hist., vol.32, p.565 and Parly. Debs., vol.5, p.403.

2. Parly. Hist., vol.32, p.568 and Anon, 'Letter to Pitt', 1796, pp.26-27.

3. Parly. Hist., vol. 32, pp. 567, 771 and 773.

4. Cttee. on the Loan for 1796, pp. 310, 332, 335 and 341 and Parly. Hist., vol. 32, pp. 786 and 789.

5. Commons Jnl., vol. 51, p.199.

not have foreseen the rise of the funds occasioned by the King's message and that other factors also contributed to their rise, are really rather feeble.¹ He knew as well as anyone that political news which increased the expectation of peace would almost certainly augment the demand for bonds and lower the cost of borrowing.

Although he might, with advantage to the public, have delayed negotiations until after the royal proclamation, Pitt's case for an early loan probably rested upon the state of the floating debt and ever present possibility of credit contraction by the Bank of England. Throughout the autumn of 1795 the Chancellor must have been aware that further depletions in the Bank's specie reserve would occasion severe credit stringency on the London money market and raise the cost of borrowing considerably. Furthermore, the continued accumulation of debt by the military departments must have lead him to anticipate the possibility of funding operations in 1796 in order to relieve the market of bills. In these circumstances Pitt probably deemed it necessary to open negotiations earlier than usual for a loan as large as £18 million. His arrangements were later vindicated because when the Bank announced discount rationing at the end of December bond prices fell two points in a day, and in 1796 the Treasury found it expedient to fund floating debt on no less than three occasions. If Pitt had delayed the loan the coincidence of funding operations and loan negotiations could have depressed bond prices severely.

Although the Treasury's arrangements for the circulation and redemption of exchequer bills during 1796 provided for no planned additions to the floating debt, throughout the year the Chancellor's attention came to be occupied by a continuous but unplanned increase in the supply of bills to the market then operating under conditions of credit restraint. Naval debt in January 1796 reached a level nearly £4 millions above that of the previous year and further large additions were made to it by the end of March and the rate of depreciation on Navy bills rose rapidly.² Exchequer bills outstanding in January were also at a far higher level than the year before largely because income from the surplus of the Consolidated fund proved insufficient to redeem the £2½ million of Exchequer bills sold to anticipate taxes for 1795.³ Money was needed urgently by the Exchequer to meet Army expenditure in Europe and to satisfy the Bank's

1. Anon 'Letter to Pitt', 1796, pp.11, 32 and 37 and Parly.Hist., vol.32, pp. 769, 776, 791, 807 and 882.
 2. See Tables 15, 16 and 21.
 3. Parly.Hist., vol.32, p.558.

insistent demands for prompt repayment of Treasury bills. Pitt told the Bank in February he planned some alternative method of meeting these bills but asked the Bank to continue to cash them until May at least.¹ So urgent were military demands that receipts from Supply bills issued in March could not be used to pay off Supply bills for 1795, (the normal Exchequer practice) and payments on the loan had to be anticipated by issuing an additional £3½ millions. Exchequer bills in the first quarter of 1796.² At the same time, the contractors were borrowing from the Bank of England and private banks to meet instalments on the loan payable in December 1795, January 1796 and March of 1796.

Sir John Sinclair wrote to the Chancellor in March to say he regretted to find the public alarmed with the magnitude of the unfunded debt.³ Strong protests had been made to the Bank against its policy of rationing discounts and Merchants had asked Pitt to intercede with the Directors.⁴ Clearly the Bank could not possibly meet all demands made upon it on such a low gold reserve. Pitt had no powers to interfere with Bank's regulation of credit but instead adopted the policy urged upon him by the Bank Directors of funding bills in order to relieve the pressure of Government demands for short term accommodation from the money market. Thus in April the Treasury offered Navy bill holders £103 in 5% bonds for every £100 subscribed but its offer was rejected.⁵ The Treasury successfully relieved the market of £7½ million Exchequer bills by raising a loan in 3% stock and using the proceeds to redeem bills. Although negotiations were well timed to come after the April distribution of dividends, it had none of the advantages normally attached to funding operations. To begin with the bonds were a stock of low denomination. Under the precedent established the previous November, the Government had to allow the same contractors first option of any subsequent loan floated during the year and this loan went to Boyd and his consortium.⁶ Despite the absence of competition the Government borrowed money at a rate of interest only just above that paid for the loan of the previous November. Even so the Chancellor incurred strong criticism outside Parliament for giving the loan to Boyd. "The Minister has committed his boasted system of finance to the direction of contractors and loan jobbers" wrote one pamphletser. Another, quite incorrectly, referred to it as a usurious bargain.⁷ Presumably the

1. Bank Minutes 28 and 29.1.96, 5 and 12.2.96.

2. Treas. T./30/20.

3. Pitt Papers, vol.178, dd.11.3.96 and 11.4.96 and 29.4.96.

4. Bank Minutes, 23.2.96.

5. Pitt Papers, vol.276 - Bank dd. 23.4.96.

6. Pitt Papers, vol.115 - Boyd, dd. 12 and 13.4.96; Bank Minutes, 11 and 15.4.96; Commons Jnl., vol.51, p.588 and Times, 16,19,22 and 25.4.96.

7. Morgan, 'An Appeal', 1797, p.38; Martin, 'A Letter', 1796, p.34; Grellier, Terms of the Loans, 1812, p.64 and Ctee. on 10 Naval Report, 1805, p.92.

Chancellor extracted good terms from the contractors because of his strong bargaining position. If Boyd refused to take the loan at the price offered, he could always revert to a funding operation and weaken their control over the market. Since bond prices declined steadily from April the negotiation seems opportunely timed. From its revenue, which had to be paid in by the end of October, the Treasury issued £4½ millions for the repayment of bills in the portfolio of the Bank and £2 millions to redeem bills held by the market.

But again the Treasury reaped no advantage by the delay in funding Navy bills because in July it had to raise its offer to £105 in 5% stock in order to clear the market. Meanwhile the Exchequer bills had considerably depreciated. Interest charges on the funding rose to 5.33% compared with 4.49% for the loan in April but the Government did secure the longer term advantages of selling a 5% stock. Moreover, by clearing the market of £4.2 millions of Navy bills in a single day funding caused discount rates on naval debt to fall sharply.¹

Whether or not these operations relieved the private sector from the pressure of Government demand for credit depended upon the subsequent behaviour of Banks.² If bankers simply held bonds instead of bills, no additions could be made to the amount of private credit. If banks sold bonds to investors for gold or bank notes then they were in a position to grant more credit to traders and manufacturers. Finally, if the Bank of England discounted more bills this would have multiple effects throughout the banking system. Private securities held by the Bank certainly rose between February and August 1796, but some of the credit granted to the private sector was undoubtedly employed to make payments on Government loans.³ The conversion of bills into bonds seems a rather dubious method of helping businessmen afflicted by credit stringency but as far as the Government was concerned, funding usually produced a rise in short term interest rates on public securities.

At the beginning of July Auckland informed the Prime Minister that gold was going to Hamburg because it could make 6% there and warned him that further contraction of credit by the Bank could have really adverse consequences for public borrowing.⁴ At the end of the month Pitt asked the Bank for an advance of nearly £2 million and required the Directors not to resell Exchequer bills in the

1. See Tables 18 and 27.

2. Sinclair thought not - Pitt Papers, vol.178, dd. 11 and 24.4.96.

3. Bank Minutes, 31.5.96.

4. Auckland Papers, vol.34454, dd.2.7.96.

market because they were already at a discount there. The Directors acceded to half of the short term loan but insisted that all future advances on Treasury bills must be done away with.¹ A week later, in response to a further appeal from the Chancellor, they agreed to advance a further £800,000 "because of the great depression of public credit and from a sense of public service". They begged leave to declare that "nothing could induce them under the present circumstances to comply with the demand now made upon them but the dread that their refusal might be productive of greater evil - in doing so they render themselves incapable of granting any further assistance to the Government for the remainder of the year."²

In 1795, during a period of intense pressure for discounts, the Bank refused to make the usual advances to the loan contractors for their instalments on the loan of December, 1795, and almost caused the collapse of the House of Boyd Benfield.³ Pitt secretly diverted £40,000 of public money, appropriated for the Navy as ^{an} interest free loan to Boyd. Several years later when the Chancellor was called to account for his unconstitutional action to a Parliamentary Committee he excused himself on the grounds that the failure of a major contractor at that time, which he described as "a period of the greatest embarrassment both of public and private credit", would have had far reaching effects on the confidence of the entire capital market.⁴ The Committee accepted his case and reported to Parliament that "if a failure in the loan then in progress of payment had occurred the deficiency could not have been supplied by a fresh loan except upon terms of very considerable loss and disadvantage to the public."⁵

Since the Bank's specie reserve remained at a critically low level, Pitt planned to bring about a substantial reduction in the amount of unfunded debt outstanding. Navy bills were the obvious candidate for conversion because the Bank refused to purchase any and with the rapid increase in the supply offered to the market by September they had fallen to a discount of 15%. The Treasury wrote to the Governor of the Bank of England and asked him to ascertain on what terms bill holders would be induced to accept 5% stock.⁶ Evidently the terms were not acceptable to the Government because on 24 October, Boyd wrote to Pitt saying he had heard from the Deputy Governor that the Treasury intended to fund

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1. Bank Minutes, 20.7.96.
 2. Pitt Papers, vol.276 - Bank, dd.28.7.96 and Parly. Hist., vol.33, p.299 et seq.
 3. Cttee. on 10 Naval Report, 1805, pp.5,50, and 53-56; Bank Minutes, 3, 10 and 31.5.96.
 4. Ibid, pp.47-48.
 5. Ibid, pp.6-7.
 6. Pitt Papers, vol.102, dd.17.9.96 and See Tables 16 and 22.

in 3^d stock and he pointed out that the contractors to the late loan would object most strongly to this plan. Boyd also advised Pitt to delay his funding operation until January because when dividends were paid on the National debt he would then obtain better terms.¹ Pitt wished, however, to affect immediate reductions in the floating debt in order to assist the Bank, to reduce Treasury competition with the private sector and as part of a longer term plan to solve for once and all the problem of Naval debt. He realised that temporary expedients such as funding, whenever the rate of depreciation on Navy bills reached a high level, could not continue indefinitely without radically disturbing the whole basis upon which negotiations for loans were conducted. Already contractors to the present loan had protested about the Government's decision to add unexpectedly to the supply of bonds on the market. Furthermore, if Naval borrowing were kept to a minimum the Treasury would have greater control over the whole area of debt management. It could then make some sort of prediction about the possible future supply of short term assets to the market and arrange borrowing operations more advantageously. Thus during October the Chancellor explored, in cooperation with the Navy and Victualling Boards, the possibility of paying for supplies with bills of 90 days maturity, bearing interest of 5^d from the day of issue.² Meanwhile Boyd sent the Chancellor a strongly worded resolution from the loan contractors protesting against any proposal to fund in a 3^d stock. He claimed that they had already made losses and urged the Treasury to fund in bonds of higher denomination.³ Some notice may well have been taken of his objections because when the funding took place on 7 November the Treasury gave bill holders the option of exchanging their assets for bonds of 3^d, 4^d and 5^d denomination. They opted overwhelmingly for Consols. Of the £13 million bills funded on 7 November, 85% were exchanged for consols, even though the rate of interest was 12/6^d higher on 5^d stock and 6/- on 4^d stock. Apparently the market could not be persuaded to accept stocks of higher denomination, except at prices which far outweighed any longer term advantages to the State.⁴

1797.

In the closing months of 1796 peace negotiations with France failed and

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1. Pitt Papers, vol. 115, dd. 24.10.96.
 2. Treasry., TI/776/4686.
 3. Pitt Papers, vol. 115, dd. 27.10.96.
 4. Commons Jnl., vol. 52, p. 89.

invasion became an imminent possibility.¹ Gold reserves at the Bank continued to decline and the floating debt remained a serious problem. Furthermore, the rapid increase in the supply of bonds over 1796 together with the uncertain political situation depressed their prices severely.² Against this unpromising political and financial background the Chancellor prepared his plans for borrowing sufficient money to finance the additional military expenditure required to meet the threat of a French attack and to show the Directory that the British Government possessed the resources and the will to fight back.

In order to appease the Bank, Pitt continued the policy of containing unfunded borrowing as far as possible. Parliament voted sufficient money for the repayment of all Exchequer bills issued on the revenue of 1797, but he also made arrangements to repay all bills issued on the Surplus of the Consolidated Fund for 1795-96; a revenue which failed to materialise.³ As Pitt told the House, "I cannot believe the Committee would have chosen to have those sums charged like a mortgage on the Consolidated Fund. I have provided for its relief."⁴ In other words, the Chancellor did not intend to allow bills to float on the Security of the Consolidated Fund year after year until it produced a surplus sufficient to pay for their redemption. Parliament agreed to repay £1,250,000 Exchequer bills issued on the security of receipts from the Land and Malt taxes which had also not been realised in past years. Pitt considered it expedient not to issue too many Exchequer bills on the security of tax revenue for 1798 and in November he told Parliament he intended to raise only £5½ millions, but in April (even after the Suspension of Specie Payments) he reduced the issue to £3½ million.⁵ He did not ask Parliament for a Vote of Credit for 1797.

Apart from the limiting planned sale of bills the Chancellor also determined to curb the amount and reduce the cost of unpredictable borrowing by the military departments. He told Parliament of his intention to make military estimates more accurate and "at the same time to claim a large though discreet indulgence for unforeseen contingencies."⁶ Per capita allowances for soldiers were increased from 8½d to 10d a day and the Paymaster General was told to submit an Annual estimate to Parliament to cover expenditure which "might" be incurred by the Army over the financial year, instead of asking Parliament a year later

1. Hunt, Political History, pp.383-87.

2. See Tables 19 and 22.

3. Parly.Hist., vol.32, p.1258 and see Table 15.

4. Senator, vol.18, pp.1211-12.

5. Senator, vol.16, p.232, vol.18, p.1213 and Parly.Hist., vol.32, p.1258.

6. Senator, vol.18, pp.1209-1210 and Parly.Hist., vol.32, p.1263.

to approve extraordinary expenditure incurred in the previous year.¹ As a result of this simple administrative reform the Army incurred no further unforeseen expenditure until 1801 and sales of Army debentures were considerably reduced.² Presumably this constituted the Chancellor's promised solution to the Treasury bill problem, because with additional funds at his disposal the Paymaster-General could now assume responsibility for anticipating and meeting expenditure overseas by the Army and the Bank of England would not be troubled by sudden accessions of bills.

By 1796 the Board of Ordnance had evolved its own method of predicting expenditure in wartime. With the encouragement of the Treasury the Board began to ask Parliament for more money than it could foresee an immediate need for, and its Treasurer had no hesitation about switching money between Votes of Supply.³

Pitt's proposed new Navy bill proved acceptable to the contractors and the Navy Board became responsible for repaying its debts with a marketable asset bearing 5% interest and redeemable after 90 days.⁴ This reform merited praise from the Select Committee of 1805 because at no time during the remainder of the war did the cost of borrowing on Navy bills reach the level of 1796.⁵ But the whole problem of naval debt did not disappear with the design of a new bill. In order to redeem bills after 90 days the Treasurer of the Navy required the correct amount of cash at his disposal. Surprisingly, the Navy Board made no immediate effort to reform its procedure for drawing of estimates. Instead Pitt added £2½ million to the Naval estimates for unforeseen contingencies and at the end of December 1796 he opened negotiations for yet another funding operation.⁶ Again the terms offered proved unacceptable to the market and the Chancellor announced in April that over £1 million bills would be paid off from the Supplies for 1797.⁷ But when Pitt incurred strong criticism from Fox and Tierney for continued inaccuracies in the Naval estimates he reacted by raising the per capita allowance for sea service from £4 to £7, the first change since William and Mary, but he warned Parliament that "even in their present shape the estimates are not to be considered as so accurate as to exclude the possibility of any excess."⁸

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1. War Office Paper, 30/33/51; 19 Cttee. on Finance, 1797, pp.350-351 and Cttee. on Finance, 1798, pp.151-152.
 2. See Table 17.
 3. 21 Cttee. on Finance, 1797, pp.425-428.
 4. Treas., TI/776/4686; 37 G.3.c.26 and Parly.Debs., vol.5, pp.65-66.
 5. Cttee.on 11 Naval Report, 1805, Appdx.42 and Parly.Debs., vol.5, pp.64,71,136 and 161.
 6. Senator, vol.18, pp.1208-09 and Pitt Papers, vol.183, - Thornton, dd.25.12.96.
 7. Senator, vol.18, p.1212.
 8. Parly.Hist., vol.33, pp. 938 and 1056; 24 Cttee.on Finance, 1798, Appdx.E; 32 Cttee.on Finance, 1798, Appdx. 3(2) and Rose, 'Brief Examination', 1806, p.59.

The Treasury's management of the unfunded debt attracted criticism outside Parliament in 1797 from William Morgan, actuary of the Equity Insurance Company, who condemned the whole system of giving military departments discretionary power because "debts arising in these enormous extraordinaries after having been increased without use or economy seem to have been discharged without any regard for the public interest."¹ Morgan advocated closer Parliamentary control over military expenditure and his assertions about wasteful expenditure were later substantiated by the Commissioners of Military Enquiry. War is not, however, an appropriate time for administrative reform. However, some waste might have been better avoided by compelling military departments to submit detailed accounts of how their extraordinary expenditure was in fact incurred.² Nor is it by any means certain that the kind of reforms made in military estimates during the war really saved a great deal of public money. By encouraging the services to raise their estimates, the Treasury gained more control over the whole area of public borrowing, but at the cost of more profligate expenditure by the Army and Navy.³

Morgan's second criticism that funding operations were an expensive way of raising funds and that the Treasury would be better advised to borrow directly through loans is not valid.⁴ It is simply not possible to gauge how far increases to the loans in order to redeem outstanding bills would have depressed the price of bonds. Moreover, part of the higher interest rates paid on funding operations occurred because the Treasury persuaded the market to accept stocks of high denomination which allowed the Government opportunities for conversion after the war. Finally, as Vansittart pointed out Pitt's funding operations prevented the accumulation of floating debt in a totally erratic manner and created possibilities for more rational management of the debt in the public interest.⁵

In order to finance the rapid rise in expenditure required for 1797 and at the same time finding himself under pressure from the Bank to limit short term borrowing, Pitt had no alternative but to depend heavily on funded borrowing. He knew, however, that the market had absorbed nearly £42 millions of bonds in loans and funding operations over the past year, that the Bank could not satisfy demands for credit and with an uncertain political situation the market's preference for liquidity was high.⁵ Determined to find some new and cheaper way

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1. Morgan, 'An Appeal', 1797, pp. 19 and 25-26.
 2. Wakefield, 'Observations', 1797, pp. 10 and 15.
 3. Reports of the Commissioners of Military Inquiry, 1806-1812.
 4. Morgan, 'An Appeal', 1797, p.21.
 5. Vansittart, 'An Inquiry', 1796, p.9.
 6. Newmarch, 'On the Loans Raised by Pitt', p.18.

of raising money he contacted Sir John Sinclair as early as the end of September about the practicality of a voluntary contribution.¹ Apparently the response was not favourable because later Pitt publicised proposals for a "forced loan" whereby "all persons possessed of a given income should be required to lend a given portion of it."² But by December an open and voluntary purchase of bonds on terms fixed by the Chancellor came to be possible. Pitt fixed the sum to be raised at £18 million and offered investors £112½ in a 5% stock for each £100 subscribed. The contract also specified that within two years of peace investors could opt either for repayment of their capital at par or for conversion into £133 of consols.³ Thus the Loyalty Loan contract can be distinguished from all other contracts negotiated during the war as being an open subscription by including only bonds of a high denomination and above all by being redeemable at the end of the war. In effect it was a short term loan.

Furthermore, the Government made great efforts to attract subscribers by averting to the danger of invasion and by appeals to patriotism. Sir John Sinclair, Thomas Coutts and the Lord Mayor of London all became active propagandists for the loan. A good example was expected from men of high rank and Pitt added a hint of possible discriminatory taxation against those who were not generous.⁴ To the relief and delight of an anxious Government the public subscribed £18 million in a matter of five days. As George Rose put it, "money poured into the coffers by all ranks and conditions in the country vying with each other."⁵ Rose is, however, exaggerating. Among the 3,600 subscribers are to be found many small donations, but the bulk of the loan was taken by the same groups who normally managed new bond issues, plus a number of aristocrats and prominent politicians. Patriotism and fear certainly played a part, but the profit motive appears to have remained a dominant influence in encouraging people to buy loyalty bonds.⁶

The Treasury borrowed money raised at 5.8%, a rate of interest higher than any paid for previous loans. In the circumstances, the cost of the loan may well have been reduced by open subscription, and the Treasury also succeeded in selling 5% stock, which contractors had consistently refused to take. Furthermore, the British Government showed the Directory that it could find extraordinary

1. Pitt Papers, vol.178, dd.20.9.96.

2. Morning Chronicle, 24 and 28.11.96; Pitt Papers, vol.126 - Coutts dd.28.11.96 and Sinclair, History of the Public Revenue, 1802, vol.2, p.202.

3. Fairman, An Account of the Public Funds, 1816, pp.17-18 and Grellier, Terms of the Loans, 1812, p.62.

4. Times 2 and 6.12.96; Morgan, Comparative View, 1801, p.35; Sinclair, History of the Public Revenue, 1802, vol.2, pp.204-205 and Pitt Papers, vol.126 - Coutts d.d. 2.12.96. Among Lord Auckland's friends it was common to subscribe 20% of annual income - Auckland Correspondence, vol.3, p.386.

5. Ibid, p.364; Dropmore Papers, vol.3, p.262.

6. List of Subscribers to the Loyalty Loan 1797 in Commons Jnl.vol.51, pp.336-337.

resources in order to carry on the war.¹

Subscribers were not nearly so well pleased with their bargain. Monetary policy remained stringent. The threat of a French invasion did not pass away and at the end of April the Navy mutinied. Scrip on the Loyalty Loan had fallen to a discount almost immediately and by the end of December the discount reached 5%. In March 1797, with another loan in the offing scrip remained almost worthless and the Treasury became concerned with default on the payment of instalments.² Subscribers accused Pitt of a breach of faith and claimed they purchased scrip on the understanding that no further loans were to be raised within a year.³ Appealing to the established precedent they demanded preference in the allocation of any additional bonds issued while the Loyalty Loan remained under payment.⁴ Pitt listened sympathetically but could not see how he could, in practice, link the Loyalty Loan with the following loan of April 1797. Instead he proposed to compensate subscribers by allowing them an annuity of 7/- a year for each £100 contributed.⁵ When Parliament debated his proposal at the end of May, discount on the Loyalty Loan had reached 12%, but Parliamentary opposition to the Chancellor's idea appeared strong enough to persuade Pitt not to proceed with compensation. Most of the opposition seemed worried with the precedent it might create, except Sheridan, who wittily remarked of the subscribers, "If they were left to bear the whole of this loss they would be entitled to the character of patriots, but his measure took away all the grace of their public ardour."⁶

Although the Treasury had surmounted the difficult problem of raising money in December 1796 by means of an open subscription in 5% bonds, there is no reason to suppose that the Loyalty Loan created a precedent which might have been exploited to public advantage for the rest of the war. To begin with the loan had attracted investors by the guarantee of a capital gain of 8% when the war ended. Moreover, appeals to patriotism and fear were almost certain to be effective in the circumstances of December 1796, and at no time after that was the political situation quite so grave. Through threats and persuasion Pitt managed to secure the cooperation of the capital market for an open subscription. After this unfortunate experience it is unlikely that Chancellors could again

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1. See Crenville's letter to Malmesbury - Dropmore Papers, vol.13, p.282.
 2. Pitt Papers, vol.108 - Mansfield dd.30.1.97 and vol.276, List of Defaulters on the Loyalty Loan.
 3. Herries, Sketch of Financial Affairs, 1797, pp.8-9.
 4. Pitt Papers, vol.108 - Anderson, dd.20.4.97 and vol.102 - Pitt to Prescott, dd.7.4.97.
 5. Sinclair, History of the Public Revenue, 1802, vol.2, p.207 and Bank Minutes, 9.5.97.
 6. Monthly Mag., May 1797, p.319; Parly.Hist., vol.33, pp.783-790 and Sinclair, History of the Revenue, 1802, vol.2, p.208.

depend on the support of the City for this type of loan. Contractors usually demanded some control over the supply of bonds but by increasing the numbers of persons selling scrip an open subscription reduced the profit margins of the larger financiers upon whose continued support the Treasury depended. Moreover, the rapid fall in the price of the omnium on the Loyalty Loan served to reinforce the antipathy to stocks of high denomination and after 1797 contractors insisted more strongly on consols. In retrospect the Loyalty Loan can be seen as a successful experiment for obtaining funds at a particularly difficult moment of the war but there is no reason to suppose that its particular arrangements could have been repeated later in the war.

The Government still needed to borrow a further £14½ million in order to finance the heavy addition to military expenditure projected for 1797. Pitt toyed with the idea of raising another loan at the end of January, but the discount on the scrip of the Loyalty Loan was then very high. At the same time the Bank severely restricted loans to the private sector and with the danger of invasion imminent, the preference of the capital market for liquidity naturally remained high.¹ At mid February Samuel Thornton told the Chancellor to raise his loan before 17 March, when an instalment on the Loyalty Loan was due, but two months later Pitt was still awaiting a favourable opportunity to negotiate with the capital market.² Meanwhile specie payments had been suspended by the Bank, but as the duration of suspension remained uncertain, contractors were unable to obtain assurances of advances from the Directors. At the beginning of April, Pitt received a letter advising him to delay negotiations for a week because the "City had taken pains by enormous sales to depress the funds."³ He waited until the end of the month. By then Government demands were urgent and the Treasury could not borrow short term from the Bank, ostensibly preparing itself for an early resumption of cash payments. Although the date fixed by the Chancellor for negotiations took full advantage of the April dividend payment, it unfortunately coincided with the Naval mutiny. Further delay was, however, impracticable and in any case would not have been profitable to the public because a loan for Austria was floated in May, and bond prices failed to rise again until July.⁴ Although

1. Pitt Papers, vol.108, Memo dd.30.1.97.

2. Ibid, vol.183, dd.18.2.97; vol.115 - Boyd dd.15.4.97; Bank Minutes, 17.4.97 and Daores- Adams Papers, vol.8, memo of Pitt's dd.20.4.97.

3. Pitt Papers, vol.126 - Crawford dd.6.4.97.

4. Commons Jnl., vol.52, pp.512 and 589 and Times, 27.4.97 and 1.5.97.

the rate of interest on this loan was the highest of the war, the Chancellor appears to have done everything in his power to negotiate the loan in a way and at a time which would be advantageous to the public.¹ But the uncertainties connected with monetary policy and low ebb of British military fortunes together with the heavy losses made by many firms in the bond market in 1796, all served to depress bond prices severely.

Part of the high interest charged on this loan can also be attributed to the absence of competition, although the Government cannot be held responsible for the lack of tenders. At Boyd's suggestion the terms of the April loan were linked to another loan for the Emperor of Austria, with its interest again guaranteed by the Government.² George Rose considered Boyd's House should have some preference for this loan, presumably because Boyd had shown himself adept at remitting funds to Austria on the previous occasion, but Pitt still attempted to stimulate competition.³ Linked to an Austrian loan of uncertain amount, negotiated during a financial crisis, not surprisingly the Chancellor managed to elicit only one bid for the loan, from Boyd and Co., but he did succeed in persuading the contractors to accept part of the annuity in the form of 4½ bonds.⁴

Still Pitt was obviously so disturbed at paying 6½ for money, particularly as the Treasury had again saddled the Austrian Government with part of the cost, that even after the contract had been concluded he tried to persuade the contractors to allow the Government better terms. With annuity on the loan declining rapidly in price during the summer of 1797 they naturally refused.⁵

1797 saw the termination for the rest of the war of credit restraint engineered by the Bank of England. With the Suspension of Specie Payments at the end of February the Chancellor's long months of trouble with the Bank ended and thereafter the Government could rely on the full cooperation of the Directors for its financial policies. Only a desperate and unprecedented situation pushed the Government into relieving the Bank of its obligation to redeem its notes in specie. In the first instance Suspension represented not a deliberate act of policy designed to aid the finance of war but, as the following account shows, came as an expedient adopted to prevent the collapse of the British monetary system.

1. Wakefield, 'Observations 1797', p.67 and see Table 18.

2. Pitt Papers, vol.115 - Boyd, dd.6.2.97 and 21.4.97 and Times, 21.4.97.

3. Pitt Papers, vol.115, dd.16.5.95 and 15.4.97; Rose Papers, vol.42772 dd. and Bank Minutes, 17.4.97.

4. Wakefield, 'Observations', 1797, p.27 and Commons Jnl., vol.52, p.512.

5. Pitt Papers, vol.115 - Boyd, dd.7.5.97.

During January and February 1797 gold reserves at the Bank declined rapidly. Some gold moved abroad as subsidies to the German states and some passed through the hands of speculators on its way to Hamburg where the rate of exchange on London remained above par.¹ At the same time the Government remitted a loan of £300,000 to Ireland.² But a drain of gold inland occasioned by a widespread fear of French invasion was, however, the principal cause of the sudden decrease in the Bank's reserve. Alarms of invasion began to disturb the country from October of 1796 and they grew stronger when British peace overtures were rejected by the Directory in December. By the end of the year there had been a attempted French invasion of Ireland which nearly succeeded and anxiety throughout the country became acute in the early weeks of 1797.³ Liquidity preference among the population increased and with it the demands by provincial bankers on London for gold.⁴ At the Bank of England gold reserves fell by £622,000 in 7 weeks.⁵

Pitt told Parliament in his budget speech of November, 1796 that Exchequer bills of 90 days maturity bearing interest of 5% would be issued to anticipate instalments on the loans. In all the Exchequer circulated £7 million, half of them in the first quarter of 1797 before the Supply bills for the previous year had been redeemed.⁶ At the same time subscribers on the Loyalty Loan borrowed from banks to pay instalments on the loan and with the general shortage of credit it became impossible to sell Exchequer bills at par (even of short maturity and paying 5%). When Samuel Thornton wrote to the Chancellor about the considerable shortage of the cash in the City they had fallen to a discount of 23%.⁷

On the 1st of February the Governor demanded immediate repayment of all Treasury bills. Pitt apologised but maintained he could not comply because of the urgent demands of public service. He added that additional Treasury bills had just come in from St. Domingo and that he required specie to send to Ireland.⁸ In a further interview the following week Pitt was told that the Irish loan would ruin the Bank, but the Chancellor insisted that it was essential, and the Irish Government needed the money straight away. At this point the Directors adamantly

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1. See Tables 22 and Cttee. on Suspension, 1797, pp. 5-6, 13, 19 and 20.
 2. Cttee. on Suspension, 1797, pp. 19 and 30.
 3. Ficton, Memorials of Liverpool, p.279 and Hunter Political History, pp.383-387.
 4. Lords Cttee. on Suspension, 1797, pp.238-240.
 5. Clapham, The Bank, vol.1, p.271.
 6. Treasy. T.30/20.
 7. Pitt Papers, vol.183, dd.18.2.97.
 8. Bank Minutes, 1, 2 and 10.2.97.

insisted that if the loan took place some £7 million of advances from the Bank to the Government must be repaid immediately. Pitt, surprisingly acceded to this demand and promised to raise a loan for the purpose.¹ Yet it is difficult to take his promise seriously since, as Boyd told him, the cost of raising another loan on the London capital market in February would have been prohibitive.² On the 15th of February Pitt promised to delay the despatch of specie to Dublin.³

On the 18th of February a Government order to drive agricultural stock away from the coasts produced a panic among farmers in Northumberland, who rapidly sold out their stocks and demanded gold from the Newcastle Banks. Two days later the Newcastle bankers unable to obtain gold stopped payment.⁴ On the 21st the Bank asked Pitt to alleviate fears of invasion.⁵ Two days later the Banking firm of Harley and Cameron failed to obtain aid from the Bank because £90,000 in gold had already been withdrawn from the Bank's reserve that day. On the 24th when a further £130,000 was withdrawn Pitt informally promised to give Government security to Bank notes if it became necessary.⁶ The following morning over a thousand French troops were landed at Fishguard.⁷ What had been invasion anxiety developed into widespread fear. Demands for specie multiplied and the drain of specie reserve became inordinately rapid.⁸ The Bank refused to meet any more Government requests for advances.⁹ On Sunday 26th February the Government by an Order in Council, relieved the Bank of England of its obligation to meet its liabilities in gold.¹⁰

In previous wars support for Government policies never conflicted with what the Directors conceived to be a proper concern for the security of the Bank. Their functions as Directors of a private corporation and as arbiters of public credit had coincided to the convenience of the Government and the profit of the shareholders. This coincidence was, however, nothing more than fortuitous, in that for all wars in the 18th century the specie reserve, although it certainly declined, always maintained a ratio to outstanding liabilities consistent with the safety of the Bank.¹¹

1. Bank Minutes, 10.2.97.

2. Pitt Papers, vol.115, dd.26.2.97.

3. Bank Minutes, 15.2.97.

4. Cttee. on Suspension, 1797, pp.180-188 and Phillips, Banks in Northumberland, p.63.

5. Bank Minutes, 21.2.97.

6. Clapham, The Bank, vol.1, p.271.

7. Hunt, Political History, p.387.

8. Cttee. on Suspension, 1797, p.12.

9. Bank Minutes, 22.2.97.

10. The text of the Order is printed in McPherson, Annals, 1805, pp.409-410. Sinclair wrote to Pitt in February and suggested he suspended and then reintroduced specie payments - Pitt Papers, vol.176, dd. February 1797.

11. Cttee. on Suspension, 1797, p.73.

During the Revolutionary War Government demands for both credit and bullion were heavier than they had ever been before. Pitt had attempted to contain unfunded borrowing, ^{but} it inevitably increased in wartime. Moreover, the presence of British troops in Europe required the despatch of bullion overseas. Given the pressure of demands on the Bank for credit, from both the private and public sectors, it seems doubtful if the Directors could possibly have preserved anything like a safe level of specie in reserve. For example, to maintain the modest ratio of 20% in 1796 would have required a vigorous contraction of liabilities involving a complete cessation of discounting for businessmen as well as cuts in loans to the Government. The consequences of such measures for the war effort and the level of private activity upon which it depended are not difficult to imagine. The Suspension of specie payments appeared as the only possible alternative.

The official enquiries in the Spring of 1797 into the causes of the Suspension of Cash Payment, together with the experience of the preceding twenty months revealed clearly how finance for the war effort depended on the Bank and how the Bank's failure to cooperate over the past twenty months severely hampered the initiative of the Chancellor. To begin with, the possibility that the Directors might withhold credit entirely had been present throughout the last two years. Samuel Bosanquet agreed with the Common's Committee that it was "always in the power of the Directors to restrict the amount of their advances to the Government and to enforce the reduction of their advances."¹

Moreover it became obvious to all concerned from evidence submitted to Parliamentary Committees that the overall cost of Government borrowing depended to a considerable extent upon the willingness of the Bank to increase its note supply, either in the form of the discounts to the private sector or by holding Government bills. Long and short term rates of interest reached their highest wartime levels during 1796 and 1797 when the Bank effectively reduced the liquidity of the London capital market.² Lord Auckland and Walter Boyd had explained these points to Pitt even before the Suspension and Boyd told the Commons Committee that it did not matter if Bank notes were reduced to the Government or private merchants, the effect on the price of Government bills would be the same.³

Several examples of more direct effects of the Bank's policy of restricting credit were well known to Pitt. In 1795 he had been compelled to ask the contractor to anticipate instalments on the loan because the Bank refused to

1. Cttee. on Suspension, 1797, p.73.

2. Ibid, p.43 and Thornton, Paper Credit, p.290.

3. Commons Cttee. on Suspension, 1797, p.37, and Auckland Papers, vol. 34454, dd. 2.7.96.

grant credit. The following autumn the Bank declined to advance money to contractors for instalments of the loan outstanding. To prevent a possible dislocation in the money market Pitt had secretly loaned Boyd £40,000 of Government money. To placate the hostility of the Bank to overseas remittances he had reduced the first Austrian loan from a proposed £6 million to £4,600,000. A further proposal to lend money to the Emperor had been abandoned entirely because of the state of the Bank's specie reserve and strong opposition from the Directors. Pitt gave no consideration at all to Boyd's request to float a loan for Portugal and he delayed exporting specie urgently required by the Irish Government in February 1797 because gold was then rapidly flowing out of the Bank. Although it is more difficult to trace the direct influence of the Bank on Pitt's policies for the management of the national debt, the facts are that the Chancellor had been careful to restrain increases in the amount of Exchequer bills sold to the market. Military bills outstanding had risen but the Chancellor had little control over their rate of flow on to the market. It was probably no accident that he reformed the Navy bill in December, 1796 in order to make it a more acceptable asset to the market, or that protests from the Bank about Treasury bills eventually succeeded in inducing the Government to improve the Army estimates. Moreover, the several funding operations conducted by the Treasury in 1795-96 were urged on the Chancellor by the Bank in order to alleviate the pressure of Government demand on the money market. The Government was certainly not without interest in the flow of credit to the private sector but, in the context of debt management, the advantage of containing the amount of unfunded debt depended upon its effect on the overall interest charge. If the Bank had been able to hold more Government paper or alternatively to discount more private bills, unfunded borrowing could have been accomplished cheaply and with more facility. Funding military bills and containing the amount of Exchequer bills outstanding increased the supply and lowered the price of bonds. If more initiative had rested with the Chancellor, as it did for the rest of the war, he might have found it more advantageous to carry a larger floating debt and to have made more use of short term borrowing. At least after Suspension the Treasury could time funding operations to accord with its own aims and not to appease the Bank.

Moreover, the Government were sensitive about the effects the Bank's monetary policy had on the private sector. Pitt was anxious that the supply of credit to businessmen should not be restricted to the point which depressed the level of private activity, upon which most tax revenue rested. Disapprobation for the credit shortage had fallen on the Bank while the Chancellor listened

sympathetically to the complaints of merchants against discount rationing. But at both public enquiries into the causes of Suspension the Directors made it clear they had been unable to meet mercantile demands because the Bank had been compelled to hold considerable quantities of Government bills.¹ From that point on the Chancellor knew that his financial policies, not to say the war itself, might incur the positive hostility of the London mercantile community. Pitt also realised that if the Directors contracted credit to reverse a sudden and rapid outflow of gold they might occasion a more widespread and serious commercial crisis than the country had witnessed in 1793 and which could dislocate the whole war effort.

Finally it must have been humiliating for the Prime Minister to have his policies criticised by the Directors of a private corporation, and embarrassing to have to resort to apologies, administrative expedients and promises he could not keep in order to obtain the finance necessary to carry on the war. He admitted to the Commons Committee that he had promised the Bank to reduce its holding of Treasury bills but "No measures were taken for that purpose, the state of public demand from time to time not admitting it."

Pitt considered the Suspension of Specie Payment constituted an act of Government policy which arose primarily from the exigencies of wartime finance. When asked by the Commons Committee, "Was it from an apprehension that there might not remain in the Bank a sufficient balance of cash to answer public exigencies and not from the apprehension that they might be unable to answer demands on their outstanding notes that you as Chancellor made the representation of 26 February?" he replied, "I was certainly influenced by both considerations but the first was a danger which might be incurred the soonest and therefore considered by me as the most immediately pressing in point of time, the second consideration, however, confirmed me in my opinion of the general necessity of the measure."² To the Lords Committee the Chancellor replied, "I wish to have it understood that my view of the necessity of the measure did not rest merely on the necessity of reserving Cash then in the Bank in order that it might be applicable in case of exigency to Public Service, but also on the conviction that the continuance of the same drain even for a short period longer would render ultimate mischief both to the Bank and to the Public much more difficult to be repaired, at the same time it would add

1. See pp. 174-175.

2. Cttee. on Suspension, 1797, p.14.

greatly to the embarrassment of the public service in the interval."¹

The Suspension had been occasioned by the rapid internal drain of gold in February 1797. Both the Directors and the Government intended it to be nothing more than temporary. Pitt questioned by the Commons Committee, "what circumstances existing before the actual removal of the restriction would satisfy your judgement that the restriction might safely be removed", informed the Committee that the Government required a big increase in Cash and "A sufficiently certain prospect of a considerable diminution in the Cash demands." Although pressed to do so by the Committee the Chancellor refused to commit himself to a specific date for resuming specie payments because he did not know what "the pressing object of public service" might require.²

During the early weeks of suspended specie payments the Government naturally remained apprehensive about the possibility of widespread refusals to accept inconvertible Bank notes.³ In fact the country passed through the transition to an inconvertible paper currency with minimal difficulty. On the day after Suspension, London merchants met at the Mansion House to consider steps which it may be proper to prevent embarrassment to public credit from the effect of any ill founded or exaggerated alarms" and passed the following resolution, "resolved unanimously, that we the undersigned being highly sensible how necessary the preservation of public credit is at any time, do most readily hereby declare that we will not refuse to receive Bank notes in payment of any sum of money to be paid to us; and we will use our utmost endeavours to make all our payments in the same manner." Similar resolutions were passed at Birmingham, Bristol, Edinburgh, Manchester and other parts of the country.⁴

Government fears about the consequences of suspending specie payments soon passed as the country settled down to transacting its business in paper supported ultimately by Bank notes. Moreover, as the invasion scare died away and the Bank's gold reserves moved upward, the Directors began to be more generous in discounting to the private sector and resumed their traditional function of supporting the Treasury.⁵ On 15 March they "obliged" by buying £100,000 of Exchequer bills which Goldsmid, the Government broker, was anxious to sell.⁶ Yet there was still no question of liberal increases in the supply of credit as long as

1. Lords Cttee. on Suspension, 1797, p.242.

2. Cttee. on Suspension, 1797, pp.13-14.

3. Pellow, Life of Sidmouth, vol.1, p.18 and see pp. 189-190.

4. Annual Register, 1797, pp.177-207; Davies, Birmingham, p.40; Forbes, Memoirs of a Banking House, p.82 and Mackenzie, Newcastle, p.72.

5. Cttee. on Suspension, 1797, p.151.

6. Pitt Papers, vol.201.

resumption remained a strong possibility and in May the Bank purchased gold.¹ At negotiations for the loan at the end of April, Pitt told the contractors that he intended to anticipate payments by issuing £5 million of Exchequer bills which would be paid off at the end of June. He reserved the right to issue a further £3 million bills at the end of the year, and in May the Exchequer's need for cash remained urgent enough for the discount on prompt payments to be raised from 4% to 5%.²

At the beginning of June gold reserves at the Bank reached a level sufficient for the Directors to contemplate cash payments again, but on the 12th Pitt informed them of his intention to prolong the Suspension.³ To Parliament the Prime Minister stressed the desirability of an early resumption, but told the House it was "prudent" to prolong Suspension until next session and a second Bank Resolution bill giving sanction to his views became law on 19 June.⁴ At long last the Treasury felt able to send gold to Ireland and by July the Bank was buying £100,000 Exchequer bills a week from the market.⁵ At the end of October the Bank Directors passed a resolution expressing willingness to resume specie payments but recognising that this was a matter of public policy.⁶ Pitt's response was to set up a Committee to inquire into the expediency of continuing the Suspension. On 17 November, 1797, the Committee informed Parliament that although the Bank's gold reserves were satisfactory, although the rate of exchange seemed particularly favourable, although the Governor and Deputy Governor of the Bank recommended resumption, it was nevertheless necessary "under the present state of public affairs to continue the restriction."⁷ Of course the Committee represented the Government's views and Pitt rose immediately to bring in a bill prolonging Suspension to the end of the war. Opposition speakers were, however, not slow to point out that the present measure was not one of necessity but choice. On this occasion 9 months after the Order in Council, the Prime Minister felt sufficiently confident to dilate on the virtues of the Suspended cash payments.⁸ On the 18th November cash payments were finally suspended until one month after peace.⁹ Thus it came about that Britain fought the most expensive war of the

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1. Bank Report Book, 5.5.97 and 25.5.97. Ellison, of the Country Bankers' Association, wrote to Pitt in April and asked if Suspension would continue - Pitt Papers, vol.132.
 2. Bank Report Book, 20.4.97 and 2.5.97.
 3. Pitt Papers, vol.276 - dd.4.6.97 and Parly.Hist., vol.33, pp.828-829 and see Table 22.
 4. Ibid, p.829 and 37 G.3.c.61.
 5. Bank Minutes, 13.7.97, 10 and 13.8.97.
 6. Pitt Papers, vol.276, dd.27.10.97.
 7. Citae. on Continuance of Suspension, 1797, pp.85-86.
 8. Parly.Hist., vol.33, pp.1028 and 1030.
 9. 38 G.3.c.1.

18th century off gold. Historians cannot really criticise Pitt for failing to maintain specie payments. He had done his best to limit short term borrowing, but for the first time since Marlborough the country financed a large scale warfare on the mainland of Europe. That alone made the maintenance of a gold standard untenable.

1798.

Pitt's arrangements for 1798, the first financial year after Suspension, show some tendency to depart from his previous policy of containing the unfunded debt. Lord Liverpool had informed the Chancellor that loans could only be raised at high rates of interest and suggested he borrowed £4 million from the Bank as a cheaper way of financing expenditure.¹ Consol prices showed no tendency to rise above 50 in the latter months of 1797 and Pitt told the Bank he wished to avoid negotiations for a loan until February at least.² In March he borrowed £3 million from the Bank to finance expenditure while he delayed the loan.³ Initiative for the timing of loans had clearly been restored to the Treasury after the Suspension and with bond prices depressed Pitt wisely accepted Liverpool's advice and borrowed short term from the Bank. Although his plans met with opposition from George Tierney, who objected to "this unnatural connexion between the Government and the Bank of England."⁴ Negotiations for the loan of £18 million were eventually opened in April and although the market had recovered sufficiently for competition to be a reality the Chancellor apparently made no attempt to market stocks other than 3½'s and raised the money at the relatively high rate of 6.22%.⁵

Otherwise arrangements for debt management seem conventional. £7½ million Exchequer bills were issued to anticipate the revenue for 1799, including a Vote of Credit of £1 million and the Treasury proposed to redeem £3½ million bills.

The change in policy of 1797 towards financing a higher proportion of expenditure through taxes meant the flow of revenue into the Exchequer became more irregular. As a result the need to anticipate revenue increased and in 1798 the Treasury issued £10¼ million bills on the security of revenue accruing during the year.⁶ More bills were issued than the market was willing to hold at the current rate of interest and the Bank frequently supported the Treasury by buying bills whenever they fell to a discount in the market.⁷

1. Liverpool Papers, vol.38354, dd.11.10.97 and Pitt Papers, vol.173, dd. 11.10.97.

2. Bank Minutes, 20.11.97 and Pitt Papers, vol.273 - Thornton, dd.23.1.98.

3. Parly.Hist., vol.33, p.1040; Senator, vol.19, p.179 and Pitt Papers, vol.115 - Boyd, dd. 11.2.98 and 9.3.98.

4. Senator, vol.19, p.194.

5. Bank Report Book, 20.4.98 and Commons Jnl., vol.53, p.508.

6. See Tables 4 and 15.

7. Bank Minutes, 11.3.98, 17 and 22.5.98, 23.8.98, 13 and 25.9.98 and 2.10.98.

1799.

Consol prices showed no tendency to rise above 55 in the first half of 1799 and Pitt delayed floating his main loan hoping, no doubt, for a rise in prices.¹ To tide the Exchequer over he raised a small loan of £3 million at the beginning of December and anticipated the main loan by the issue of the Exchequer bills in the early months of the new year.² In April Thornton advised him to time negotiations to coincide with the quarterly dividend payment on the national debt, but the Chancellor preferred to hang on until the beginning of June.³ This gave the contractors only 5 months in which to pay instalments on a loan for £15½ millions but the delay may well have been expedient because bond prices were slightly higher in June. Moreover, splitting the loan into two negotiations probably stimulated competition by reducing the size of the loan. This device might have been tried with advantage for other loans during the war years.⁴

Pitt planned to issue £9½ million bills on the revenue for 1800, an increase of £2 million over the previous year. As he explained to Parliament, "Navy bills were now being promptly paid off, therefore, we can float more Exchequer bills. This arrangement appears to me from every point of view more economical and prudent than adding to the loan."⁵

In addition to redeeming Supply bills of the previous year, the Treasury arranged to pay off nearly £2½ million Exchequer bills circulated to cover deficits in the estimates for 1798, but unfunded debt outstanding on 5 January 1800 reached a level of £6 million above the year before.⁶ This increase reflects Pitt's policy of anticipating more revenue from supplies of future years and also the Exchequer's need to borrow money on the security of taxes for the current year. Yet the Government had no difficulty in selling its bills at just above 57, although the Bank did support the market by purchasing bills immediately before the dividend payments of April and October.⁷ From 1799 onwards, one can detect a change in the previous rather cautious approach towards unfunded borrowing as the Treasury began to mortgage more of its future revenue in order to finance current supply, a technique carried to unusual lengths during the closing years of the war.

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1. There had been a preliminary meeting about a loan in December 1798, Bank Minutes, 1.12.98 and see Table 19.
 2. Bank Report Book, 1 and 4.12.98 and Commons Jnl., vol.53, p.508.
 3. Pitt Papers, vol.183, dd.31.4.99.
 4. Bank Report, 4.12.98 and 3.6.99.
 5. Parly.Hist., vol.34, p.1651.
 6. Senator, vol.23, p.1646; Parly. Hist., vol.34, p.1649 and see Tables 15 and 16.
 7. Bank Minutes, 2.9.99 and 1 and 8.10.99.

1800.

Thus the circulation of bills increased rapidly during 1800 and by January 1801, the amount of unfunded debt outstanding had risen by £9 million. The Treasury's arrangements for managing floating debt indicate that this increase resulted from both contingent and planned short term borrowing. During the year the Treasury had issued nearly £18 million Exchequer bills to anticipate the revenue of the current year. £9½ million bills were also issued on the revenue of 1801 but only £8½ million of the £14.6 million bills issued on the supplies of 1800 were paid off.¹

In addition the Chancellor borrowed £3 million from the Bank, repayable in 1806; one of the few medium term loans negotiated during the war. Thirteen years before the expiration of its Charter the Bank opened discussions with the Treasury about its renewal and the Government obtained an interest free loan from the Directors for 6 years in return for a promise that the Charter would be renewed in 1812 for a further period of 21 years.² Tierney noting the Bank's substantial profits considered the Treasury had not obtained good terms but Pitt defended the bargain by arguing that borrowing in 1800 when consols stood at 60 instead of 6 years later when they would probably be at par, resulted in a gain of nearly £2 million to the public.³ His reply does not meet Tierney's point. If he had averted to the considerable profits the Bank had made and would make from the Restriction of Specie Payments he might well have achieved better terms. An interest free loan of £3 million for 6 years was equivalent, at the 1800 rate of interest, to a gift of about £144,000 to the state.⁴ Perhaps it is unfair to point out that Pitt's forecast of Consols at par in 1806 proved to be incorrect, and by waiting 6 years the Government could undoubtedly have extracted more from the Bank.⁵

Bond rates were below bill rates when the Treasury negotiated the loan in February 1800 and as the price of Consols continued to rise the differential widened thereafter. If it seemed profitable to add to unfunded debt the year before, the reverse seems true in 1800, particularly as prices fell for some months. During the early part of the year the market did not borrow from the Bank and the

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1. The tax estimates for 1799 were also deficient by nearly £2 million - Senator, vol.24, pp.706-708 and see Tables 15 and 16.
 2. Pitt Papers, vol.276 - Bank, dd.4.4.99; Cttee. on Government Relations with the Bank, 1807, p.102; Commons Jnl., vol.55, p.253 and Clapham, The Bank, vol.2, pp.44-45.
 3. Parly.Hist., vol.35, pp.3, 7 and 10.
 4. Calculated on the rate of interest paid for the loan of 1800.
 5. By 1806 the large profits made by the Bank from Suspension were obvious to members of the Government - Dropmore Papers, vol.8, Auckland, p.56.

Directors purchased a high proportion of the Exchequer bills offered for sale by the Treasury. In February, for example, they agreed to purchase £ $\frac{1}{2}$ million of bills which the Government broker had been unable to sell at par in the market.¹ Between February and August when private discounting by the Bank increased rapidly, its holdings of Exchequer bills declined, and the Government's bills remained at a premium in the market throughout this period, although in September the Bank again purchased Exchequer bills from the market in order to counteract the influence of the quarterly dividend payment.²

During the closing months of 1800 the Treasury resorted to unusual methods in order to obtain funds cheaply. When the "Armed Neutrality" blockaded the Baltic, the prices for naval stores rose and produced an unexpected increase in naval expenditure and thus in the amount of Navy bills outstanding. Navy bills had to be paid off in 90 days, and although the Treasurer of the Navy managed to renew some bills, he required an immediate issue of cash to redeem the remainder. As John Marsh, the Commissioner for Victualling, observed, "It was of the greatest national consequence that money should be forthwith issued from the Treasury if it could be done to pay such bills then becoming due so as to prevent the possibility of the present advantageous system of paying the Navy by 90 day bills getting into discredit."³ It was, however, not easy for the Treasury to provide the ready cash. Accumulated funds at the Exchequer had to be available to meet the quarterly dividend payment. Considerable quantities of Exchequer bills had already been circulated and Goldsmid, the Government broker, considered that further accessions could only have been forced on the market at a considerable discount. The Treasury, therefore, condoned the unusual expedient of selling Navy bills in order to redeem matured Navy bills. Goldsmid maintained it was easier to dispose of Navy bills because when they were 25 days old and had only 65 days to run, they became eligible for discount by the Bank. Money borrowed by this means, he claimed, saved interest to the public.⁴

1801.

Bills due for repayment included those issued to anticipate the revenue for the current year together with others circulated to make good deficiencies in the

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1. Bank Minutes 20 and 25.2.1800 and see Tables 18, 19, 21 and 23.
 2. Bank Minutes 10.9.1800 and see Tables 21 and 23.
 3. Cttee. on 11 Naval Report, 1805, pp. 137-139 and 151.
 4. Ibid, pp.138,155,157 and 159 and Bank Minutes, 10.9.1800.

estimates for previous years. For example, Pitt's estimate of the surplus on the Consolidated Fund for 1800 was out by £3½ million, primarily because when bad harvests impelled the Government to prohibit distilleries and breweries from using grain, its tax revenue from alcoholic beverages fell sharply. The estimated yield for the income tax exceeded actual receipts by just over £1 million and the Chancellor was also faced with £1.4 million Exchequer bills issued on unrealised revenue from the assessed taxes for 1798 and 1799 and deficiencies in the malt duty.¹ In all £15½ million bills were scheduled for repayment of which £6½ million represented discrepancies in estimates for previous years.

The Treasury opted to keep the amount of unfunded debt constant at the high level attained over the previous year by issuing £15 million of Exchequer bills on the security of revenue for 1802, instead of adding to the loan of £28 million for 1801.² Although the Chancellor's policy passed without comment in Parliament, the assiduous William Morgan was not slow to write another pamphlet which criticised the way loans of subsequent years were anticipated by the extraordinary expenditure of previous years, and thereby accumulating unfunded debt. Morgan's remedy consisted of further improvements to the estimates, a remedy which might well have proved more costly to the public than unfunded borrowing.³ Moreover, Morgan, against floating debt per se, failed to realise that the anticipation of future revenue was often an expedient and cheaper method of borrowing money.

Early in the New Year Goldsmid continued to sell Navy bills in order to redeem Navy bills. Again the Government's broker "couldn't depend on the sale of Exchequer bills because of the suspense continuing with regard to the Chancellor of the Exchequer making his loan".⁴ Exchequer bills were at a discount in the market and Pitt had asked the Bank to accept them in anticipation of instalments on the loan.⁵ Nevertheless the Chancellor certainly adopted the correct strategy of delaying the loan until two weeks after his Government reopened peace negotiations with France. Although competition apparently prevailed for the substantial loan of £28 million and Pitt appeared content with the bargains he obtained, some collusion had undoubtedly taken place. Two out of the six consortiums bidding submitted identical offers.⁶ For loans above £20 million it

1. Parly.Hist., vol.35, p.973 and Senator, vol.1, p.218.

2. The Government paid 5.57% for the loan - see Tables 15 and 18.

3. Morgan, 'Comparative View', 1801, pp.60-62 and Herries, 'A Reply', 1802, p.3.

4. Cited on 11 Naval Report, 1805, p.156.

5. Bank Minutes, 11.2.01.

6. Bank Report Book, 16.2.01.

was difficult for contractors to form a cohesive unit and by joining forces they pooled the risks attendant on fluctuations in bond prices. If the Treasury had borrowed money in two separate transactions it might have reduced the risks of commitment to a very large loan and stimulated more competition among contractors.

While peace negotiations continued during the autumn of 1801, the Navy discovered that its estimates were deficient largely because naval stores had again risen suddenly in price. Vansittart, then Secretary to the Treasury, considered ways of meeting the large amount of Naval debt awaiting repayment. To open negotiations for a loan during peace talks with France he knew would have been disadvantageous to the public. He also predicted that Exchequer bills would fall to a considerable discount if more had been offered to the market. Thus the Treasury again used the expedient of raising cash from the sale of Navy bills and Goldsmid sold the bills at $6\frac{1}{2}\%$ below the current rate on Exchequer bills.¹

But the Treasury remained concerned about the level of the floating debt. The Suspension bill provided for the resumption of specie payments within six months of the signing of a peace treaty and the Directors told the Chancellor they wished to reduce the Bank's holdings of public securities.² Addington made arrangements to fund nearly £9 million Exchequer bills. Negotiations took place between the Chancellor and the representatives of the Stock Exchange and the contract provided for the funding of nearly £6 million Exchequer bills; 40% into 3% stock, 40% into 4% stock and the remainder into 5% stock. Bill holders were also given the option of contributing to a loan of £3 million, which constituted part of the funding operation. For every £200 of Exchequer bills funded they became entitled to buy £100 of identical stocks at the same price. The Treasury raised £3 million in this way and used the cash to reduce Government indebtedness to the Bank.³

1802.

Britain concluded a peace treaty with France in April and while military expenditure was immediately reduced the Treasury's arrangements for the management of the debt hardly reflected a reversion to peace time finance. Negotiations for the loan perfectly timed just two weeks after the Peace of Amiens was for the

1. Cttee. on 11 Naval Report, 1805, pp.159, 161 and 166-169.

2. Bank Minutes, 31.10.1801.

3. Bank Report Book, 11.11.01. and Commons Jnl., vol.57, pp.33 and 56.

large sum of £25 million.¹ Nevertheless the Chancellor received no less than seven offers for the loan and considered his bargain as "perfectly satisfactory and auspicious to the greatest degree."² Although he borrowed on bonds at 4%, the Chancellor still decided to circulate nearly £15 million of bills on the security of the revenue for 1803 at a rate of interest of 4.55%.³ This does not imply that Addington planned to increase the floating debt because he arranged at the same time to repay £17 million of bills. Nevertheless it is curious that given the impending resumption of specie payments and the state of demand for bonds he made no attempt to fund more bills. Perhaps the Chancellor anticipated further rises of bond prices which would enable him to redeem unfunded debt more cheaply during the following session.

In August the Government repaid half the Bank Charter loan and unfunded borrowing began to revert to its pre-war pattern with an increased proportion of Government bills held by the Bank while other parts of the capital market met the demands of the private sector.⁴ Nominal rates of interest on Exchequer bills were reduced to 3d. per day and the bills circulated well above par. Although it no longer competed seriously with the private sector for credit, the Government thought it expedient "in the interests of commerce" to defer the reintroduction of specie payments at the Bank.⁵

1803.

Financial policy for 1803 reflected the impending outbreak of war. Addington introduced his budget early in December, 1802 and told the House that although the unfunded debt had been contained in the previous year, arrangements did not provide for further reductions. He proposed to anticipate £12½ million of the revenue for 1804 and thought the House might be surprised at the total, but he justified his policy on the grounds that Exchequer bills could be sold at low rates of interest.⁶ The Chancellor's plans envisaged the redemption of only £6½ million of the £15 million bills issued to anticipate the revenue of 1803, and revealed that he intended to fund between £6 and £8 million later in the year, and if he failed to fund on terms favourable to the public, he promised to negotiate another loan in order to redeem these bills.⁷

1. Cittes. on 11 Naval Report, 1805, pp.167-169; Bank Report Book, 5.4.02. and Commons Jnl., vol.57, p.201.

2. Farly.Hist., vol.36, p.447 and Pope, 'Considerations', 1802, pp.24-26.

3. See Tables 15, 18 and 20.

4. Bank Minutes, 26.8.02 and see Table 23.

5. Farly.Hist., vol.36, pp.541-547 and 42.G.3 c.40.

6. Farly.Hist., vol.36, pp.1117 and 1122.

7. Ibid, p.1123.

Addington's arrangements to limit the size and delay the loan were sensible because the bond prices fell rapidly from February onwards when investors anticipated the renewal of war. In such circumstances to finance the reversion to war expenditure by circulating exchequer bills possessed the dual advantage of allowing the Treasury to time the loan advantageously and satisfied the market's demand for liquidity. The Chancellor knew that bond prices would rise or at least cease to fall once the market had settled down to operate again under wartime conditions. When he eventually negotiated with 3 groups of contractors in June he borrowed at a rate of interest of just over 4%, which was certainly above the terms obtainable earlier in the year. Addington's obvious satisfaction with the bargain was not shared by the contractors who apparently made losses on both loans negotiated during the Peace of Amiens.¹

In February 1803, the Government continued the Suspension of Specie Payments for the rest of the year. Addington again stressed the needs of commerce as the pretext, but the imminence of war was undoubtedly a more compelling motive for maintaining the status quo with regard to monetary policy. Fox knew this and Auckland made the motive explicit when he told the Lords "peace might not long continue."²

Three months later the country again found itself at war and to finance the reversion to war expenditure the Government had to borrow large sums of money quickly. Foreign trade and production were not increasing at the same rate as the previous years. In fact private borrowing from the Bank declined in 1803.³ Bills could only be sold to the money market at falling prices and the Government turned to the Bank for help.⁴ In December, 1803 specie payments were suspended for the rest of the war and Addington's claim that the policy was 'unquestionable' in a period of war received general assent in the Lower House.⁵ Only members of the House of Lords questioned its prudence.⁶

1804.

Contractual rates of interest on Exchequer bills were revised upwards by the Bank and Treasury in the second half of 1803 to 3½%. At that price demand

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1. Bank Report Book, 5.6.03; Parly.Hist., vol.36, pp.447 and 1122-23 and Pope, 'Considerations', 1802, pp.24-25.
 2. Parly. Hist., vol.36, pp.1148, 1151 and 1159.
 3. See Table 22.
 4. Bank Minutes, 10 and 15.2.03, 3.6.03 and 4.8.03.
 5. 44 G.3 c.1. and Parly.Debs., vol.1, p.1572.
 6. Ibid, pp. 708, 713, 1673, 1676, 1825, 1836 and 1837 and see pp. 177-178.

was sufficient to prevent their falling to a discount in 1804, even though total unfunded debt outstanding increased from £27 million in January 1804, to £34 million a year later. Addington proposed to issue bills to anticipate £12 million from the Supplies for 1805 and to pay off £12½ million Exchequer bills from the Supplies for the current year. He also redeemed bills circulated to meet deficiencies in the estimated revenue from income tax.¹ Although the Chancellor planned for no increases in the unfunded debt during 1804, he had not fulfilled his promise to fund between £6 and £8 million bills in 1803 and the high level of unfunded debt outstanding in April 1804 occasioned criticism in Parliament.² Johnstone maintained that the circulation of a large quantity of bills reduced their value and he advised the Chancellor to increase the loan and redeem floating debt.³ Bond prices had, however, declined in 1803 and while they rose slightly in the spring of 1804, the Treasury evidently did not consider the appreciation sufficient to accept Johnstone's advice.⁴ When bond and bill prices were close it was difficult for the Treasury to see the point of funding operations or increases to the loan.⁵

1805.

Taxes for 1804 came in so slowly and erratically that nearly £8 million of Exchequer bills had been issued to anticipate receipts and eventually tax revenue fell short of the estimates by about £3 million.⁶ The Chancellor met these deficiencies from current revenue and at the same time redeemed £12 million of Exchequer bills, issued to anticipate the Supplies of 1805. Only £10½ million bills were issued on the security of revenue for 1806, some £2 million less than the year before which implied a reduction in the floating debt. Bond prices had risen slightly and were slightly above bill rates when the loan of £22½ million was negotiated in February, 1805. This timing allowed contractors 11 months to meet their payments but why negotiations were not opened closer in time to the January distribution of dividends is difficult to fathom.⁸ For this loan and for the loan of the previous year the Treasury had been unable to excite competition

1. See Tables 15, 16, 20 and 21.

2. Parly. Debs., vol. 2, pp. 348, 351 and 353.

3. Ibid, pp. 144, 179 and 880.

4. See Table 19.

5. The loan was negotiated in May, well after the April dividend payment - Bank Report Book, 25.4.04; Morning Post, 26.4.04 and 2.5.04 and Commons Jnl., vol. 59, pp. 249-50.

6. Bank Report Book, 25.4.04 and Parly. Debs., vol. 3, pp. 545 and 546.

7. See Table 15.

8. Bank Report Book, 15.2.05 and Commons Jnl., vol. 70, pp. 68-70.

In 1804 only two offers were submitted to the Chancellor after consortiums headed by Baring and Goldsmid combined to underbid a grouping of London bankers. No rival offers were received for the 1805 loan. Three contractors formed consortiums but later decided to combine. Goldsmid informed Pitt that by coalescing they had been able to make a better offer.¹ Apparently the Chancellor was happy to know "what is fair and frugal to the country will be safe and advantageous to the contractors".² This over sanguine sentiment appears to have protected him from criticism for not doing more to stimulate competition. But in the light of such large bond issues and the unprofitable experience of contractors with the loans for 1802 and 1803 it is difficult to see what the Government could do to evoke competition against the inclinations of the capital market.

1806.

Huskisson advised the Chancellor to finance more expenditure for 1806 by unfunded borrowing because exchequer bills had "acquired a high degree of credit" and the "money market had a marked predilection for them."³ No doubt Vansittart tendered the same advice because he had previously told Parliament that "such was the state of the market than an issue of £5 million bills would not affect it."⁴ Huskisson also told the Chancellor that the Bank could hold more bills if he reduced the loan, because their advances to contractors and subscribers would then be smaller. Cooperation from the Bank would prevent bills falling to a discount and they could be funded on better terms next year.⁵ Huskisson's suggestions apparently only had slight influence on Pitt's borrowing policy for the year. While the Chancellor circulated £12 million of bills on the security of revenue for 1807, £1½ million more than the year before, and also renewed the Bank Charter loan for the rest of the war, he also arranged to redeem £16½ million bills. £6 million of the unfunded debt paid off consisted of bills issued on revenue which had failed to materialise.⁶ The supply estimates for 1805 were

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1. Star, 19.2.05.
 2. Parly. Debs., vol.3, p.549.
 3. Huskisson Papers, vol. 38759, memo dd. 8.3.06.
 4. Parly. Debs., vol.6, p.158.
 5. Huskisson Papers, vol. 38759, memo dd. 8.3.06.
 6. See Tables 15 & 16 and Commons Jnl., vol.63, p.60.

also cut by £1 million because no provision had been made to pay interest on contingent exchequer bills issued to anticipate supplies of the current year. Apparently the convention was to provide for such interest from the Supplies of the following year, but in 1806 Petty changed this practice by bringing the expense within the year.¹

Petty's policy appears to have been to maintain floating debt at a constant level and not to increase it as Huskisson advised. Since bond rates were just slightly below bill rates all year he may have decided that nothing could be gained by anticipating future supplies or he may simply have exercised caution with respect to unfunded borrowing. Castlereagh criticised the timing of negotiations by observing that "Better terms might have been obtained if Petty had waited until the April dividends found their way into circulation."² Days for the payment of instalments were, however, chosen to allow contractors the benefit of the repayment of £700,000 on the Loyalty Loan.³ Contractors were also given more time than usual after the preliminary announcement of the loan to form consortiums. Yet only two offers were received and the loan went to the large group headed by Baring, Goldsmid and Robarts. Goldsmid told the Chancellor that the groups had combined because of the size of the loan.⁴ Grenville and Petty seemed pleased with terms secured which they considered "advantageous to the public."⁵

1807.

Pitt's attitude towards unfunded borrowing was not shared by the men who succeeded him in office. Petty, who managed finance for the Ministry of All Talents, was determined to check the accumulation of funded debt and he had recourse among other devices to the circulation of more bills. His plans provided for the anticipation of £16½ million from revenue accruing in 1808 but he also proposed to redeem £12 million bills issued on supplies for 1807.⁶ The loan of £14.2 million was about £17 million less than the amounts borrowed in 1805 and 1806 and by reducing the size of the loan Petty managed to stimulate competition among contractors, and persuade them to accept a small amount of 5% stock.⁷

1. Parly. Debs., vol.6, p.568.

2. Ibid, p.624.

3. Times, 26. and 19.3.06; Morning Chronicle, 29.3.06 and Bank Report Book, 25.3.06.

4. Times, 20.3.06 and Bank Report Book, 25.3.06.

5. Parly. Debs., vol.6, p.572 and Morning Chronicle, 29.3.06.

6. See Table 15.

7. Bank Report Book, 27.2.07 and Commons Jnl., vol.63, p.162.

Petty deliberately opted to add £4½ million to the floating debt at a time when bond prices were high. Moreover, during the year the Treasury had to authorise the issue of £16 million bills to anticipate current revenue. 1807 saw the opening of Napoleon's blockade on British trade with Europe which produced a rise in the price of Naval supplies from the Baltic, and parri passu an immediate increase in outstanding Naval debt.¹ As private credit was being employed to finance an increased volume of "anticipatory" imports from the Continent and America in 1807, the Treasury found the market more reluctant to lend short term to the Government and exchequer bills fell to a discount for most of the year. Thus, the Chancellor had to ask the Bank to hold additional bills in order to maintain their prices.²

For the first time since the war commenced, Parliament displayed anxiety about the floating debt and at Huskisson's initiative debated the matter. Members seemed particularly concerned with that part of unfunded borrowing which resulted from inaccuracies in the estimates or in the delays of revenue en route for the Exchequer.³ They did not debate planned borrowing through the issue of bills. Perceval explained to the House that the Chancellor actually calculated deficiencies in the estimates by adding up the balances on hand and taking them from the demands outstanding, but as Castlereagh observed, as a matter of accounting it was difficult for the Chancellor to work out a correct deficit because usually all the previous year's revenue had not come in by the time he introduced his budget.⁴ This implied that Exchequer bills continued to float until proper provision could be made for their repayment at the subsequent budget. Castlereagh, Vansittart and Rose, all members with knowledge of Government finance, definitely opposed any proposals to contain contingent unfunded borrowing by adding still more to the estimates for unforeseen expenditure.⁵ Presumably they all realised that any saving in the interest bill would be more than compensated by increases in profligate expenditure by the military services. Huskisson's solution was to make up the revenue accounts for a period identical to that for expenditure (that is to make the accounting years terminate in January), to pay off as much as possible of the State's debts from balances in hand at 5 January and to carry all other debts forward to the accounts

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1. See Tables 15 and 16.
 2. Bank Minutes, 14.1.07, 19.2.07 and 25.6.07.
 3. Parly. Debs., vol.6, pp. 615-616.
 4. Ibid, pp. 617 and 620.
 5. Ibid, pp. 621, 627 and 628.

of the following year.¹ His first suggestion is obviously sensible. It seems absurd for the Chancellor to work with different periods of account for revenue and expenditure, but his other ideas would not contain contingent unfunded borrowing. To reduce the volume of bills issued to anticipate supplies of the current year the Treasury could only attempt to expedite the flow of revenue into the Exchequer.

I have already shown elsewhere that the most important impediments to the rapid flow of revenue into the Exchequer were to be found in the assessment and collection of direct taxes and in the retention of idle balances of public money by the central administration for taxes in Edinburgh and London. Under the pressure of wartime needs the Treasury implemented a series of administrative reforms designed to speed up the flow of taxes from the countryside and to give the Chancellor stronger control over the disposition of public funds when they reached the capital.

Thus throughout the war years the Board of Taxes continued with the task of harrying Divisional Receivers who were tardy in remitting their balances.² Parliament passed bills which limited the time allowed for the retention of balances and George Abbot introduced a bill in 1800 which enabled the Treasury to charge interest on public money retained by Receivers after they had ceased to hold office.³ New tax divisions were created which facilitated the Receivers' work of tax collection from parishes under their jurisdiction.⁴ The Treasury laid down new regulations for the remission of taxes from Scotland.⁵

Perhaps the most important administrative reform of the war years consisted in strengthening of control over the voluntary organisation for tax collection in the counties which had the effect of speeding taxes on their way to London. Central control became more effective largely through the medium of divisional surveyors.⁶ Despite resistance from country gentlemen the numbers, functions and powers of professional surveyors were extended during the war years.⁷ Their status was improved, their salaries raised and the Treasury apparently exercised more care in the selection of candidates for the job.⁸ Surveyors' functions

1. Parly. Debs., vol. 7, p. 1122.

2. Exch. E/82/1360; Cttee. on Land & Assessed Taxes, 1821, p. 157; Inland Rev., vol. 384, pp. 52, 53, 68 and 93 and 22/396, 22/397, 22/705 and 22/706.

3. 43 G.3. c. 161; 45 G.3. c. 71 and Parly. Hist., vol. 35, pp. 326-329.

4. Inland Rev., vols. 384, 385 and 22/405 and Treasy. TI/1003/3985.

5. Pitt Papers, vol. 126 and Treasy. TI/1240/3461 and TI/1305/2717.

6. See pp. 324, 325, 417 and 418-420.

7. Treasy. TI/1252/6188, TI/802/1206, T92/218 and T22/10.

8. Cttee. on Land & Assessed Taxes, 1821, p. 5 and Inland Rev. 22/396, 22/397, 22/398 and 22/705-706.

were extended to include all new direct taxes introduced during war. Their powers to supervise, check and amend local assessments were gradually increased vis a vis the General Commissioners. Finally it became an important part of their duties to accelerate payments of taxes into the Exchequer. Under the supervision of Surveyors the process of assessment was expedited, and in Scotland they often took over the process of assessment entirely.¹ They also prompted parish collectors to collect meticulously and to hand over receipts more regularly to Divisional Receivers. When Surveyors obtained access to all local information affecting taxes they could send reports to the Board of Taxes on the amount of public money which had left the parish and thereby placed the Board in a strong position to harry Receivers.²

Six years after the war a Select Committee still considered the organisation for the collection of taxes capable of considerable improvement. Receivers, the Committee pointed out, continued to make profits from the investment of balances of taxes retained in their hands.³ Nevertheless it is not correct to conclude from this single fact that the Government accomplished little during the war years.⁴ Through the agency of its Surveyors and Travelling Inspectors the Board of Taxes had in fact done a great deal to expedite the flow of revenue to London, and the figures of public money retained in the hands of divisional receivers reveal that the balances they held declined sharply when expressed as a proportion of total revenue passing through their hands between 1793 and 1815.⁵

Pitt had been informed by the Select Committee on Finance as early as 1797 that Central Receivers of Revenue and the Accountants of the Spending Departments in London had persistently retained balances of public money at a time when the Treasury borrowed short term from the market.⁶ Five years later the Commissioners of Enquiry revealed how naval money had been invested for the private profit of the Treasurer of the Navy in Government and Mercantile bills.⁷ Yet not until Hawkesbury's minute of 1805 did the Treasury take proper steps to compel public departments to retain their cash balances at the Bank of England.⁸

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1. Treasy. TI/961/448.
 2. Cttee. on Land & Assessed Taxes, 1821, p453-154 and 167-168; Exch. E/182/1360 and Treasy. TI/995/1582.
 3. Cttee. on Land & Assessed Taxes, 1821, pp.5-6.
 4. Pressnell, Country Banking, p.59.
 5. The figures are in Inland Rev. vols. 384 and 385 and Annual Finance Accounts submitted to Parliament.
 6. Clapham, The Bank, vol.1, p.214.
 7. Cttee. on 10 Naval Report, 1805, p.1164 and Walpole, Spencer Perceval, pp. 157 and 161.
 8. Bank Minutes, 13.6.05, 24.6.08 and Cttee. on Government Relations with the Bank, 1807, pp. 102-103.

Suspended specie payments had relieved the Directors of the need to maintain resources idle in the form of gold reserves and with the rise in Government deposits the Bank's opportunities for profitable investment had risen.¹ When Huskisson was Secretary to the Treasury in 1805 he opened negotiations with the Directors about its charges for the management of the public debt.² Lord Auckland considered the Bank ought to charge less because it had made large profits from the Suspension.

The following year, 1807, the Government set up a Committee to investigate the Bank's gains from its services to the State. The Committee discovered that since the Bank was paid at a rate of £450 per £ million for its management of the debt, its profits had naturally risen with the increase in public borrowing.³ But the Committee seemed more anxious to draw the Government's attention to the profits made by the Bank on deposits of public money, including unclaimed dividends on the National Debt. For 1806 they put the average amount of public money deposited there at £11 million and pointed out that the Bank was concurrently paid interest on nearly £15 million of public securities. The Committee made detailed recommendations as to how the Treasury might circumvent the conventions of the financial system in order to use idle deposits at the Bank for public expenditure.⁴ Perceval in subsequent negotiations with the Bank reduced the management charge for servicing the national debt to £110 per £ million, secured a loan of £½ million a year from the balance of unclaimed dividends and an interest free loan of £3 million for the rest of the war.⁵

Government negotiations with the Bank during the war years had affected some savings in the interest bill. In the light of the very large profits made by the Bank for its assistance to the State, the achievement is not impressive. Not until 1830 did a new series of negotiations modify the terms upon which the Bank rendered services to the Government.⁶

1808.

Perceval followed Petty's policy of containing funded borrowing as much as possible and the loan amounted to only £10½ million. Thus Perceval's plans included the issue of £18 million of exchequer bills on the revenue for 1809 and

1. Cttee. on Government Relations with the Bank, 1807, pp. 108-109.
 2. Huskisson Papers, vol. 38759.
 3. Clisholm Rept., 1868-1869, pp. 578-579.
 4. Cttee. on Government Relations with the Bank, 1807, pp. 92, 94, 95, 97 and 100.
 5. Clapham, The Bank, vol. 2, p. 49; Huskisson Papers, vol. 38759, dd. ;
 Bank Minutes, 11.1.08 and 10.2.08 and Parly. Debs., vol. 6, p. 133.
 6. Cttee. on Public Accounts, 1831.

he also secured an interest free loan of £3 million from the Bank, repayable at the end of the war.¹ At the same time he arranged to redeem £16½ million of bills circulated on the Supplies of 1807, and in March funded £4 million of the bills.² The Treasury's arrangements for debt management for 1808 thus included a small loan and plans to keep the floating debt at its 1807 level. One purpose of the funding operation was to sell 5% stock. Perceval claimed, probably correctly, that funding saved on the Government's interest bill because it reduced the loan and helped the Government to negotiate with contractors on more favourable terms.³ The smaller loan almost certainly helped to stimulate competition. Moreover, both Perceval and Huskisson were obviously determined to sell bonds of higher denomination which gave the Government opportunities for conversion after the war. At the negotiations they attempted to persuade the contractors to accept a new stock in 3% redeemable at 80. When they refused Perceval insisted, despite their protests, in floating the entire loan in 4% stock.⁴ The Treasury's sales of bonds also appear to have been well timed, with a funding in March followed by a loan two to three months later. This delay had the advantage of allowing London bankers and others who had converted bills into bonds time to sell their holdings before fresh omnium reached the market.⁵ Perceval had funded in 5% stock, borrowed in 4% stock and converted bills to bonds in order to lower the interest bill. His successful strategy prompts one to ask if more interest could have been saved by further reductions to the floating debt.

1809.

The management of the unfunded debt became much more difficult for the last seven years of war when contingent borrowing to meet deficiencies in the estimates or to anticipate current revenue rose with the cost of supporting British and allied troops fighting in Europe.⁶ Breakdowns of unspecified or extraordinary military expenditure which were submitted to Parliament reveal that most issues of bills by the military departments occurred in order to obtain funds to buy food, fuel and forage for soldiers stationed in the Iberian Peninsula or consisted of subsidies transferred to Britain's allies to help

1. 48.G.3.0.4.

2. See Tables 15 and 18.

3. Parly. Debs., vol. 10, p. 991 and vol. 11, p. 13.

4. Morning Chronicle, 27 and 28.5.08.

5. Bank Report Book, 29.5.08 and Parly. Debs., vol. 8, p. 991.

6. See Tables 15 and 16.

them maintain troops in the field.¹ Since borrowing abroad was an expensive and often a difficult process, and the country and the Government experienced acute difficulty in obtaining specie to send overseas, it became more and more imperative to anticipate needs so that military supplies could be purchased in the United Kingdom and then shipped to the theatres of conflict.

Rose suggested to Vansittart that better estimates were needed and the Treasury did bring about some immediate and obvious improvements.² For example it raised per capita allowances for naval expenditure to £7. 2. 0d. in 1807 and to £8. 6. 8d. during 1810 in order to provide for the increased price of naval stores and additional functions assumed by the Navy.³ The Transport Board constructed more careful estimates of the expected cost of hiring ships to carry troops and military stores to the Peninsula, and Naval bills issued for transport never attained the levels of 1796.⁴ Nor did the problem of food become as serious because the Victualling Board took charge of providing Wellington's Army with some of its basic food requirements.⁵ In spite of improvements to the techniques for estimating expenditure the naval debt still rose rapidly in the closing years of the war.⁶ Army estimates continued to be based on the per capita allowance established in 1797, but for some years Parliament recognised that food prices had risen and provided the Paymaster General with extra allowances for bread and meat.⁷ Extraordinary expenditure together with the funds granted by Parliament to the Army for unspecified expenditure were dispensed by the Commissariat. In fact nearly all supplies required by Regiments in the Peninsula were provided by Commissaries and from 1807 the Commissariat began to anticipate some of the Army's needs by submitting its own estimates to Parliament.⁸

These improvements were never sufficient to avoid large scale extraordinary borrowing by the services. Thus between 1811 and 1814, the Army submitted to Parliament detailed estimates for the expenditure of £68 million, as well as requests for "unspecified" expenditure of £38 million, but in addition the Army spent £38 million for which no prior estimates had been drawn up at all.⁹

1. See Annual Supply Estimates, Commons Jnl., 1809-15.

2. Vansittart Papers, vol. 31237 - dd. 11.11.09.

3. 6th Cttee. on Finance, 1817, p.205.

4. Annual Supply Estimates for the Navy, Commons Jnl., 1808-15; 18 Cttee. on Finance, 1797, Appdx. 9 and Rose, 'Observations', 1810, p.13.

5. Ibid, pp. 30 and 32 Cttee. on Finance, 1797, Appdx. B (2).

6. See Table 16.

7. Annual Supply Estimates for the Army, Commons Jnl., 1808-15 and Clode, Military Forces, pp.105-106.

8. Ward, Wellington's Headquarters; Clode, Military Forces, p.139 and Annual Supply Estimates, Commons Jnl., 1808-15.

9. See Table 17.

Select Committees who examined these "unspecified" estimates reported that they encouraged a good deal of wasteful expenditure, but neglected to remind Parliament that they were adopted earlier in the war to reduce the level of short term borrowing.¹

Partly as a reflection of rising military expenditure but partly as a matter of conscious choice by the Treasury the floating debt increased from year to year.² Pitt's policy of containing unfunded borrowing was abandoned by his successors whose plans indicate no inhibitions in the use of bill finance. Thus Perceval's successful loan and funding operations in 1808 provided a pattern for debt management which persisted until the end of the war. This new policy was to fund a portion of the outstanding exchequer bills by converting them directly into bonds in March and to negotiate a smaller loan in May or June.

£15 million bills were issued in 1808 because of inaccuracies in the estimates and at 5 January, 1809, the floating debt stood at £51 million, £9 million above the level a year before.³ The Treasury decided to fund £8 million exchequer bills in March and to float a loan later in the year. Terms for the funding operation were even better than the year before and the bills were converted into a 5½% stock, but the Chancellor gave his promise to bill holders that the loan would be floated in another stock.⁴ He waited two months before he borrowed £14.6 million at a rate of 4.7% and despite protests from the contractors half of the bonds issued were in 4½% stock.⁵ These combined funding and loan operations gave the Treasury an opportunity of selling bonds of a higher denomination. The timing of both operations may also have lowered the interest charge.

Plans for the management of the floating debt for 1809 provided for the repayment of £24½ million of exchequer bills, the majority of which had been issued to anticipate revenue of 1809 and the rest reflected inaccuracies in the Chancellor's estimates of revenue and expenditure. The Treasury issued £21 million bills redeemable from the revenue of 1810 including a Vote of Credit of £3 million as a subsidy to the Portuguese Government.⁶ During the year £15 million bills were issued to anticipate receipts from taxes and loans at the Exchequer but the floating debt in January 1810 stood the same as the level of the year before.⁷

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1. 14 Comms. of Military Inquiry, 1810, pp.169, 234, 239, 269, 284 and 289-298.
 2. See Table 16.
 3. See Table 16.
 4. Bank Report Book, 8.3.09.
 5. The loan was floated on 8 May, 1809 - Parly. Deba., vol.14, p.534.
 6. Ibid, vol.13, p.536. and see Table 15.
 7. See Table 15.

1810.

The Treasury again planned to maintain the floating debt at a constant level during 1810. Parliament authorised the sale of £24 million bills on the revenue for 1811 and during the year the Exchequer found it necessary to issue £15 million bills to anticipate revenue. At the same time/^{the} budget provided for the repayment of £26 million bills and the Treasury funded a further £8.3 million into 5% stock at the end of March.¹ Apparently bill holders were eager to accept the Treasury's terms because bond prices were rising.² When the loan was offered for tender on 11 May, the Government received several bids and borrowed the £12 million required at 4.3% in a 3% stock.³ It appears that in the short run the interest bill might have been contained by adding to the loan in order to redeem bills. Alternatively, since bill rates were below bond rates in the first half of 1810, the Treasury could have carried a larger floating debt. But the funding operation did have the longer term advantage of borrowing in a stock of high denomination.

In the last quarter of the year the economy entered into a severe depression which persisted until the Autumn of 1812. During the depression private borrowing from the Bank first declined and subsequently failed to expand rapidly enough to provide the demand for the increasing quantities of bills the Treasury attempted to market and the Chancellor found himself compelled to rely more and more on the Bank for short term loans.⁴

Coinciding with the depression and increased Government dependence on the Bank came the bullionist attack on official monetary policy and the recommendation of the Bullion Committee that the Bank should resume specie payments within two years. The bullion controversy has been analysed elsewhere.⁵ Here it is sufficient to note that the opposition had almost no impact on the Treasury's borrowing operations or on the determination of the Bank to give full support to the private sector. As far as the latter was concerned the Directors decided "in this period of embarrassment and want of confidence a liberal accommodation to the public in the way of discount appears to them desirable."⁶

For its part the Government were determined not to be hampered by the constraints of convertibility in the prosecution of the war, as Pitt had been in 1795-97. Moreover, the Treasury continued with the policy of employing

1. See Table 15 and Parly. Debs., vol. 16, p. 1045.

2. Cttee. on Funding Exchequer Bills, 1810, p. 587.

3. Bank Report Book, 11.5.10 and 15.5.10 and Commons Jnl., vol. 65, p. 378.

4. See Tables 17 and 23.

5. See pp. 178-180 and 303-307.

6. Bank Minutes, 18.9.10.

bill finance to finance an increasing proportion of Government expenditure, and in the closing years of the war the amount of Exchequer bills held by the Bank reached record heights.¹ To their credit the Directors seem to have been more aware of the dangers of this form of finance than the Chancellor and warned him from time to time about the growing volume of public securities in their portfolio, but with little effect on policy.

In September of 1810 Goldsmid, the Government broker responsible for selling bills to the market, went bankrupt with over £500,000 worth of exchequer bills in his possession and at this suspicious point some faults in the procedure of sale were revealed and reforms effected. The possibility emerged that Government brokers may not have sold the bills in the most advantageous way. George Rose, then Treasurer of the Navy, suggested that at particular times the Government broker may have been forcing too many bills, too quickly on a reluctant market, and so failed to obtain the best terms possible for the public, and observed that bills need not be forced on the market because the cash could always be obtained from the Bank.² Moreover, exchequer bills had been sold in advance of the departments need for cash at an extra expense to the public equal to the interest paid on the cash while it was not being used.³ In 1810 the Treasury appointed Templeman Cole & Child to sell bills on behalf of military departments. The bills were to be deposited at the Bank of England and the Bank would make arrangements for them to be delivered to the brokers as and when required. Detailed accounts of the sales of exchequer bills were to be submitted by the brokers to the Treasury. The military departments agreed to the Treasury's new regulations and no further administrative reforms were effected in the issue of exchequer bills during the wars with France.⁴

1811.

£29 million of Exchequer bills were due for repayment from the revenue in 1811 and Perceval announced he intended to fund £12 million in March.⁵ He offered holders £103. 7. 4. in 5% stock for each £100 of bills, with interest on the stock payable from 1 January. On these terms, an interest rate of 5.25%, the Treasury managed to fund only £7 million bills. To fund the rest it had to offer the market a better bargain. Perceval persisted with 5% stock but he altered the

1. See Table 23.

2. Treas. - T 29/108.

3. Navy - ADM/15/5.

4. Treas. - T 29/108, T1/1159/12678-79 and Navy - ADM/15/249.

5. Parly. Debs., vol. 19, p. 366 and see Table 15.

format of the contract in order to allow purchasers of bonds up to 6 months to pay their instalments. Through this device he managed to lower the rate of interest to 5.19%.¹ Two months later the Government negotiated a loan of £12 million. Although he tried, the Chancellor failed to persuade contractors to accept anything but 3%^s and a very small amount of 4% stock; while the coincidence of the loan with the drawn out funding operation undoubtedly raised the cost of borrowing.² Again the rate of interest on the loan was below that of the funding operation but the Treasury looked to the longer term advantages of borrowing in stocks of higher denomination.

Military estimates had been improved in 1811 but the Government still found it necessary to issue £15 million bills to anticipate the year's revenue. All year the Government experienced difficulties in marketing bills, largely because a higher share of available short term funds were locked up in stocks of merchandise delayed en route for Europe and the United States by Napoleon's Continental System and the American Trade Embargo.³ At the end of August short term rates were adjusted upwards to 5 $\frac{1}{2}$ % but the Treasury relied more and more upon the Bank for the credit required.⁴ With the recent warnings of the Bullion Committee fresh in their minds the Directors became somewhat perturbed by the increased demands made upon them. In May they warned the Chancellor that "present advances were well beyond any previous level."⁵ At the end of the year the Chancellor regretted he had not been able to reduce the debt to the Bank in spite of all efforts to do so and told the Directors, "I cannot do so until 10 October next unless some great and unexpected alteration takes place in the public market." He coupled his apology with a request for a further advance of £2 million bills which could not be sold in the market, and the Bank agreed with "deep regret".⁶ At the end of December he asked the Bank to take another million, but told the Directors he had a plan for reducing exchequer bills next year.⁷

1812.

Despite the extra care taken with the estimates they continued to be inaccurate and in the first quarter of 1812 the Treasury made arrangements to

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1. Commons Jnl., vol.66, p.177 and Times, 25.4.11. and 29.4.11.
 2. Bank Report Book, 15.5.11.
 3. Parly. Debs., vol.19, pp. 128, 372, 375 and 777.
 4. See Tables 20 and 23.
 5. Bank Minutes, 16.5.11.
 6. Bank Minutes, 21 and 28.11.11.
 7. Ibid, 31.12.11.

redeem over £30 million of exchequer bills.¹ As a first step the Chancellor informed the City early in the year that he intended to fund £14 million and offered bill holders £108 in 5% stock for each £100 subscribed, but Baring told him the market would not be able to meet such an accession and that the announcement of his intention to fund in 5%'s contributed to a depression of that stock.² Perceval persisted with his plans but despite his promise not to market further 5% stock during the year and to pay interest from 5 January, the market took only £5.4 million bonds on the terms offered.³ Nevertheless, the Chancellor still determined to fund the remaining bills into 5% stock and made another offer which gave holders the option of exchanging their bills for bonds in instalments spread out over 9 months on the same terms. But he also threatened to raise a loan in 5% stock if bill holders failed to subscribe the amount required.⁴ This unusual expedient of bullying the market succeeded because those who had already converted their bills at the initial funding could not afford to have the market in 5% bonds (which were already declining in price) thrown open to a wider public.

But the technique used in 1811 and 1812, of funding in instalments failed to clear the market of bills at the beginning of the year and implied a continuous issue of new stock on to the market over the year. The Treasury delayed the opening of negotiations until June. No doubt the Chancellor hoped the public would gain by giving bill holders more time to dispose of 5% stock before the Treasury offered further supplies of bonds to the market. On 12 June the Government borrowed £20 million, an amount much larger than for previous years which made it impossible to stimulate competition. At the first round the Chancellor received two bids from rival contractors. Neither came up to his expectations and the contractors declined to bid at all for 4% bonds. Eventually the contractors (Barings and Roberts Curtis and Co.) combined in order to tender a lower bid, which Vansittart, still not satisfied could do more than accept. Competition in this instance apparently worked to the detriment of the public and as no profits were made from the sale of annuities in 1812 the Treasury can be commended for its flexibility in departing from the system of open tender.⁵

1. Parly. Debs., vol. 23, p. 560-561.

2. Ibid., vol. 21, p. 804 and Bank Report Book, 7 and 18.2.12 and 4.3.12.

3. Parly. Debs., vol. 21, p. 806; Commons Jnl., vol. 67, p. 120 and Grellet, Terms of the Loans, 1812, p. 101.

4. Bank Report Book, 4.3.12.

5. Ibid., 11.6.12 and Parly. Debs., vol. 22, p. 565.

Moreover, as funding by instalments overlapped with the loan, it is difficult to discern what had been gained from delaying negotiations until late in the year. Particularly as the Government's need for cash became so urgent that it borrowed £3 million from the Bank in anticipation of receipts on the loan, at a cost slightly higher than the bond rate of interest. Delay had the further disadvantage of compelling contractors to pay their instalments into the Exchequer over a shorter time period, which probably lowered the price they were prepared to pay for consols.¹

The large number of variables at work in the money market make it difficult to appraise debt management by the Treasury in 1812. There does seem to be substance in the criticism made by Tierney and Huskisson that the higher level of unfunded borrowing probably raised the overall interest charge. They both recommended raising more loans or taxes within the year. The Chancellor defended his techniques for borrowing funds with the argument that if loans were increased bond prices might be depressed still further.² His policy had been "adapted to avoid a greater increase of the funded debt and in the hope, which events had disappointed, of an opportunity of converting them into stock to a greater advantage. Mr. Pitt had acted upon similar expectations and met with similar disappointments."³ Moreover, he pointed out the Treasury invariably succeeded in

funding into stocks of high denomination. From 1807 onwards the policy of anticipating future revenue by bills which could be redeemed when conditions in the money market made it convenient and profitable became popular with successive Chancellors of the Exchequer. It meant however that the unfunded debt could go on rising indefinitely with every addition to public expenditure. The Treasury could always wait for a more profitable occasion to convert bills into bonds and other pressing claims on the revenue also implied that the reduction of the floating debt invariably received low priority. It was the inflationary potential inherent in unlimited issues of bills which caused concern to knowledgeable critics of financial policy like Huskisson and Grenville.⁴

1813.

Despite criticism Vansittart persisted with unfunded borrowing and in 1812 issued no less than £19 million in anticipation of the revenue accruing over the

1. Bank Minutes, 17.3.12 and 12.6.12 and Parly.Debs., vol.23, pp.574,582,583 and 1203-05.
 2. Ibid, pp.1208-09.
 3. Ibid, pp.1209-10.
 4. Parly.Debs., vol.21, p.687 and vol.23, pp. 574 and 582.

following financial year.¹

Both revenue and expenditure estimates for 1812 were more inaccurate than usual. Taxes fell short of predictions by £3.3 million largely because excise receipts had been reduced by the industrial depression. Naval debt remained roughly constant but the Army's estimates, despite provision for possible extraordinary expenditure were out by nearly £5 million and Treasury bills again appeared as a noticeable item of the floating debt.² "To prevent the recurrence of the same unpleasant circumstance" the Chancellor increased the sum for possible extraordinaries in 1813 to $89\frac{1}{2}$ million, a sum equal to nearly 40% of the Army's total supply estimate.³ At the beginning of 1813 the floating debt had risen by £4 million.⁴

Criticism in Parliament and the warnings of the Bank were however not without some effect on policy because Vansittart avowed his intention of containing the unfunded debt during 1813.⁵ As part of his New Plan of Finance the Chancellor proposed to provide the Commissioners for the Sinking Fund with an annual grant equal to 1% of the amount of exchequer bills unprovided for on 5 January in each year, which would be used for their redemption. These bills, he told the House, "may now be considered a permanent addition to the public debt because they are renewed from year to year."⁶ Here the Chancellor implicitly admitted that the Government resorted to bill finance as a permanent part of its borrowing operations but his New Plan would make little impact on the accumulation of unfunded debt. It could only decline if the Treasury opted to redeem more bills than it issued over the year and the provision of a small sinking fund would have practically no effect while the Treasury continued to borrow huge sums on bills. Moreover, if the Government seriously aimed to reduce public debt there seemed to be no reason to single out floating debt for special treatment. Whether bills or bonds were redeemed depended, logically at least, on their relative prices and the opportunities this gave the Treasury for affecting reductions in the interest bill.

Vansittart's more serious efforts to contain the floating debt consisted, however, of two funding operations, timed to take place in April and May 1813 and designed to convert £18 million of exchequer bills into bonds. Vansittart also proposed to raise a further £9 million in cash from the issue of a new form of asset called debentures. It was a bold scheme which failed. Sensibly the Treasury

1. See Table 15.

2. Parly. Debs., vol. 26, pp. 574 and 578.

3. Ibid, p. 574.

4. See Table 16.

5. Parly. Debs., vol. 26, p. 576.

6. Ibid, vol. 24, pp. 1081-82.

delayed funding until later than usual in the year in order to give the market time to absorb £4 million omnium from the last two payments on the loan for 1812 and to follow the April issue of dividends on the debt. Vansittart proposed to fund £12 million bills on 7 April into 5% stock at 115½ and a further £6 million into 4% stock at 139, a month later, with interest on the bonds payable from the beginning of the year. Furthermore, the scheme gave bill holders the option of purchasing £9 million of the new debentures. Debentures were a medium term asset bearing interest at 5%, redeemable after two years, provided the holder gave three months notice of an intention to realise his asset. Alternatively a debenture holder could at any time convert into £100 5% stock, or £120 4% stock, or £150 3% stock.¹

Vansittart's offer for the April funding was accepted by the market and he converted £12 million exchequer bills into 5% stock at a rate of interest of 5.86%.² But at the second operation in May the Treasury succeeded in funding only £3.8 million of the proposed £6 million bills.³ There might be any number of reasons why the market refused to accept all of the 4% bonds offered. The imminent loan undoubtedly deterred some bill holders. They probably calculated that a large accession of consols in June would almost certainly depress the price of 4% bonds, or they might have considered the loan as a potentially more profitable investment.⁴ Perhaps finally, the increased interest offered on 4% stocks did not outweigh the lower risk of purchasing consols.

Vansittart's attempt to raise £9 million in cash from the sale of debentures failed almost completely. Less than a million were taken.⁵ Why the market rejected the new security so decisively is again difficult to ascertain. Interest rates on both bonds and bills made them a more profitable outlet for funds but exchequer bills, unlike debentures, could always be cashed at the Bank. One writer considered the market's reaction was deliberately calculated to force the Government to add to the loan and thus to depress bond prices still further.⁶ Certainly the offer of a new asset one month before the loan was not timed to the best possible advantage. As peace approached in May, 1813 the market preferred to invest in consols, a less risky stock and one certain to appreciate after the war. Such a complete rejection points, however, to a fundamental reluctance on the

1. Bank Report Book, 31.3.13, 28 and 30.4.13; Chisholm Rept., 1868-69, p.547 and Parly.Debs., vol.26, p.576.
 2. Bank Report Book, 31.3.13.
 3. Ibid, 28. & 30.4.13. and Parly.Debs., vol.26, p.574.
 4. The loan was negotiated on 9 June, 1813 at 5.8%.
 5. Chisholm Rept., 1868-69, p.547 and Parly.Debs., vol.26, p.576.
 6. Anon, 'An Expose', 1821, p.31.

part of the money market to experiment with any but the traditional and limited range of securities even though similar assets were used in Ireland.¹

But Vansittart must have been disappointed, particularly as he continued to receive solemn warnings from the Directors about the quantity of exchequer bills held by the Bank.² Moreover the funding operations affected both the size and terms of the loan. As Lord Liverpool promised, the loan had to be increased in order to contain the unfunded debt, and Vansittart, departing from usual practice, reserved the right to raise further loans during the year if necessary. Wisely he made no attempt to force 4¹/₂ or 5¹/₂ stocks on the contractors. Nevertheless with the short time lag between the funding operations in April and May and the loan in June, and with the possibility of further accessions of bonds before the close of the year, it is not surprising to find an absence of competitive tender.

Consortiums headed by Barings and Angerstein and Barnes Steers and Ricardo combined to make a single offer. "All parties ought to be satisfied", the Chancellor rather sanguinely informed the House that "They did not impose a greater burden to the public than was necessary and if beneficial to the contractors it was not so much as to give them an unfair advantage." The loan of £27 million consisting entirely of consols, was raised at a cost slightly above that paid to persuade bill holders to convert into 5¹/₂ stock in April.³

Over the year the Army and Navy pressing the war to a conclusion made demands for funds well beyond their original estimates. When the Treasury issued bills to finance this expenditure Vansittart told Parliament he hoped "he would not be accused of increasing the unfunded debt unnecessarily" and promised if the Consolidated Fund realised a surplus it would be employed to redeem exchequer bills.⁴ Although the market increased its holdings of bills the Treasury found it necessary to ask the Directors for help and bills held at the Bank reached the unprecedented level of £25 million, but the Bank's assistance did keep exchequer bills at a premium all year.⁵

In November the Government, confronted with demands for cash and a mounting unfunded debt, opened negotiations for another loan of £22 million. Vansittart told Parliament he could have issued more bills on favourable terms but was anxious not to overstock the market.⁶ Moreover, by that stage of the year the

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1. Pitt had asked Thornton about the market's reaction to a similar security in 1796 and received a firm no - Pitt Papers, vol.183, dd. 18.11.96.
 2. Bank Minutes 20. & 26.5.13 and 10.6.13.
 3. Bank Report Book, 3.6.13 and Parly. Debs., vol.26, p.580.
 4. Ibid, p.576.
 5. Bank Minutes, 3.3.13, 1.4.13., 20. & 26.5.13., 10.6.13, 9.9.13., 6.10.13., and 17.11.13, and see Tables 21 and 23.
 6. Parly. Debs., vol.27, pp.107-108.

battle of Leipzig had been won and Wellington's soldiers stood on French soil. With the war nearly over the market displayed a strong propensity to purchase bonds and Vansittart abandoned the normal Spring funding operations for a loan late in the year.¹ But he seems precipitous. Bond prices continued to rise until the war ended in April, 1814 but then declined again.² If the Treasury had persisted with the usual funding operations the public could have gained both from the higher bond prices prevailing in February and March, 1814 and from the sale of stocks of higher denomination. As matters were arranged Vansittart negotiated for a loan in consols in November when bond prices had just commenced their upward trend and negotiated a second loan in June, 1814 when prices had declined again.³ Past experience (at the Peace of Amiens for example) might have warned the Chancellor that bond prices tended to appreciate rapidly when the market anticipated peace but, because expectations of gain were usually over-optimistic, prices fell again almost as soon as war ended and as foreigners repatriated their investments in the national debt. Furthermore this loan provides us with a clear example of a clear and possibly reprehensible departure from competition. Vansittart certainly raised the loan while the previous loan remained underpaid, but he had reserved the right to negotiate another loan during the year and there seems to be no case for offering it to contractors for the previous loan at a price fixed by himself.⁴ With peace in the offing the City was "anxious for a loan" and one consortium wrote to Liverpool protesting against the Chancellor's action of "depriving the public of fair competition."⁵ Perhaps Vansittart considered the price he fixed for the sale of bonds higher than anything that could have been obtained through the medium of competitive tender. But how could he really know? Throughout 1813 the premium on annuities had been rising and the Chancellor should have left contractors to decide how far prices would continue to rise.

1814.

At the beginning of April 1814 the allies occupied Paris and the long war seemed to be over. Yet the British Government made no hurried provisions for a return to a peace establishment because the country remained at war with America. Despite the provision in 1813 of a large grant for extraordinaries, Army expenditure still exceeded its estimates by over £6 million and Parliament allowed

1. Bank Minutes, 6.10.13. and Times 16.11.13.

2. See Table 19.

3. Times, 14.6.14. and Commons Jnl., vol.69, p.351.

4. Bank Report Book, 12.11.13. and Hamilton, An Essay, 1812, p.311.

5. Liverpool Papers, vol.38255, dd. 9.11.13.

it £9 million for extraordinaries in 1814 and approved a Vote of Credit of £3 million.¹

Nor was any attempt made to reduce the floating debt to its peace time proportions. £29½ million bills were redeemed but a further £26 million new bills were issued to anticipate the revenue for 1815.² The Treasury opened negotiations for a loan in June, 1814 after bond prices had passed their peak and made no attempt to sell bonds other than consols.³ Only one tender was received for the loan and Vansittart told Parliament "from the large amount of the loan it was not probable that a great competition could have been produced." He also mentioned, however, that he had thought of diverting part of the Sinking Fund revenue to the finance of expenditure in order to reduce the loan and stimulate competition. Anxious no doubt to preserve their monopoly of the market in bonds the contractors dissuaded the Chancellor from what might well have proved an imaginative way of promoting competition.⁴

With bonds rates below bill rates for most of 1814 there seemed to be opportunities for the Treasury to fund floating debt. They were not taken perhaps because the Chancellor anticipated further rises in the price of bonds. Six months after the conclusion of war the Bank Restriction Bill was due to expire, but the Government renewed it until March 1815.⁵ The Treasury still needed unstinted support from the Bank for its borrowing operations. Repeated demands were made on the Bank to anticipate revenue for the Government; although the Directors warned the Chancellor against excessive short term borrowing, by January, 1814 the floating debt had reached the record height of £69 million.⁶

1815.

Army estimates for 1814 were inaccurate to the extent of nearly £12 million and Naval estimates by £2 million but when the Government asked Parliament to approve of an estimate of £18 million for unspecified expenditure it aroused strong criticism. Baring, Tierney and Pensonby demanded to know how the money would be used and criticised the wasteful expenditure of public money in the

1. See Table 17 and Tierney's objections - Parly.Debs., vol.27, p.812.

2. See Table 15.

3. Bank Report Book, 3.6.14.

4. Parly.Debs., vol.28, pp.66-68.

5. Parly.Debs., vol.27, p.629.

6. Bank Minutes, 19.1.14., 9.3.14., 15.6.14., 6. & 28. 7.14. and 2, 16 & 23, 11.14. and see Table 16.

Peninsular.¹ Another Member of Parliament, Pascoe Grenfell, objected to the large profits the Bank continued to make from the Restriction of Specie Payments. Once again he raised the problem of public money deposited at the Bank and asserted that the Government borrowed its own money from the Bank. Vansittart argued that the Treasury could not interfere with these balances of Public money at the Bank without deranging the whole system of public credit and he did not consider himself free to vary the way business had traditionally been carried on. This did not satisfy Grenfell, who pointed out that Pitt had obtained additional control over these balances and Parliament could easily legislate to reform the Government's relations with the Bank.² Nothing was, however, accomplished in this direction until 1832.³

By the end of 1814 bond prices had not yet appreciated sufficiently for the Treasury to contemplate considerable reductions in the floating debt. Vansittart told the City that he intended neither to float a loan nor fund bills during 1815. Instead he proposed to curtail the issue of bills on the revenue for the subsequent financial year to £12½ million and to redeem those issued in 1814.⁴ But his plans were upset by the renewal of war in March. As the end of hostilities seemed indefinite, something had to be done immediately about the floating debt, particularly since the Directors had asked the Chancellor to reduce the amount of exchequer bills held by the Bank by £9 million in the course of the year.⁵ Prompted by the renewal of war and pressure from the Directors, Vansittart arranged to fund £18 million exchequer bills and he offered 118 in 5¹/₂ stock for each £100 contributed in bills.⁶ Bond prices fell again at the outbreak of war in Europe. Many bills holders, anticipating a loan, preferred to wait in case a further large accession of stock depressed bond prices still lower and also to ascertain whether the loan might not prove a better investment. Thus the market took up only £10 million on the original terms and the Chancellor redeemed the remaining £8 million bills by funding again in 5¹/₂ stock but payable in instalments.⁷ In order to fund these bills the Government paid interest of nearly 6¹/₂.

Two weeks later it borrowed a further £36 million in 3¹/₂ and a small amount of 4¹/₂ stock at a lower rate of interest. Vansittart told Parliament he had borrowed

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1. Parly. Debs., vol. 29, pp. 146, 164, 339, 340, 796 and 799.
 2. Ibid, vol. 30, pp. 660-667 and 871-72.
 3. Cttes. on Public Accounts, 1831.
 4. Parly. Debs., vol. 31, pp. 146 and 148.
 5. Bank Minutes, 7.3.15.
 6. Parly. Debs., vol. 31, p. 801 and Bank Report Book, 26.4.15.
 7. Commons Jnl., vol. 70, pp. 228 and 305.

£36 million to meet the costs of the Waterloo campaign which the Government anticipated would be short. If this was true it is very difficult to understand why the Chancellor did not issue exchequer bills and open negotiations after the result of Waterloo reached London. Vansittart in fact fixed the date for negotiations to coincide with the battle and when the victory was announced the City and not the taxpaying public reaped the benefit. Could it be that the Treasury expected defeat and a prolongation of war and was therefore unwilling to risk the possible loss from the depression of bond prices which would undoubtedly have been occasioned by a victory for Napoleon?¹ Apparently the City was not too confident of the outcome. The Chancellor received only a single bid for the admittedly very large loan. Four experts had been consulted by the Treasury as to what would be a reasonable price for the bonds and the sum offered by the contractors turned out to be exactly equal to the minimum the Chancellor was disposed to accept.²

During 1815 the Chancellor made strenuous efforts to reduce the floating debt which had, as the Select Committee observed, "increased with the succeeding embarrassments of the public and the extraordinary exertions of the concluding years of the last war."³ Thus he redeemed £38 million exchequer bills and issued only £26 million on revenue accruing in 1816. By 5 January, 1816, he had succeeded in reducing the unfunded debt by £20 million in a year.⁴

The war finally came to an end but its legacy of funded and unfunded debt continued to exercise the Treasury for several more years. In fact the strain and wartime difficulties of debt management persisted until well in the 1820's when the financial system finally reverted to a more normal basis.⁵

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1. Parly. Debs., vol. 31, pp. 810-811; Liverpool Papers, 38366 - memo dd. 10.6.15 and Bank Report Book, 10.6.14.
 2. Parly. Debs., vol. 31, p. 801.
 3. Cttee. on Resumption, 1819, p. 22.
 4. See Tables 15 and 16.
 5. Acworth, Financial Reconstruction in England, 1815-22; Clapham, The Bank, vol. 2, pp. 52-74 and Viner, Studies, pp. 171-209.

MONETARY POLICY AND ITS CRITICS, 1793-1815Introduction

Chapter 3 has shown that borrowing by the Central Government and lending by the Bank of England brought about variations in the nation's money supply. Through its management of the debt the Treasury created and absorbed reserve currency and through the expansion or contraction of loans to the private sector the Bank could likewise increase or decrease the reserves of the remainder of the banking system. Although the money supply could be profoundly affected by the actions of central authorities, particularly after the Suspension of Specie Payments when Bank notes became the dominant form of reserve currency, monetary policy in the sense of conscious management of the money supply in order to achieve some objective or set of objectives hardly existed at the end of the 18th century. Neither the Government nor the Bank presumed to exercise control and given the institutional and legal framework of the financial system it is very doubtful if either could do more than exert a fairly strong influence on the money supply. Both statesmen and Directors proceeded on a purely ad hoc and pragmatic basis. Very little existed either in the way of established precedents or economic theory to guide their actions.¹ Previous wars in the 18th century had been conducted on the specie standard and the Bank's bullion reserve had never fallen to a level low enough to prompt the Directors to initiate a sustained and serious contraction of their liabilities. For several decades Britain's balance of payments position seems to have been favourable enough to preclude the need for deflationary credit policies. In peace and war alike, the Bank supported the demands of the Government and the London mercantile community with a concern for the safety of its treasure but the monetary system had never been tested by global warfare, widespread depression or a persistent deficit in the balance of payments. Rules guiding the operation of the Bank had worked well and the Treasury and merchants had almost never been denied credit.

1. Hollander, 'The Development of the Theory of Money from Smith to Ricardo', pp. 429-70 and Fetter, Development of British Monetary Orthodoxy, pp. 6-9.

During the period 1793-1815, the situation changed radically - the country had to face a series of exceptionally bad harvests, to finance heavy military expenditure abroad and defeat a determined attempt by France at economic blockade. Four years after the outbreak of war circumstances compelled the Government to suspend specie payments by the Bank. Both Statesmen and Directors were compelled by the completely new and difficult situation as well as by their vociferous critics to examine the whole problem of regulating an inconvertible currency, with very little from past experience or monetary theory to help them.

Even though the Treasury and Bank of England did not proceed from a set of principles towards a clearly defined objective their relations with each other and with the London capital market to a considerable extent determined the direction and rate of change in the money supply between 1793 and 1815. If we redefine policy as the assumptions or premises of actions taken by central authorities which effectively initiate or constrain increases in the money supply then it is plausible to refer to a wartime monetary policy formulated and implemented by the Treasury and the Bank of England, acting for most of the war in complete concert.

This chapter will outline the policy pursued by the central authorities; analyse the forces which shaped that policy and attempt to discover why alternative courses of action so strongly suggested by critics were rejected by the Government.

The Expansion of the Money Supply

An absence of statistics for such important components as coins and bills of exchange in circulation and the deposits of London and country bankers makes it very difficult to say anything definite about changes in the total money supply between 1793 and 1815. The data available consist of some rather dubious indicators of the note issues of country bankers from 1805-15 and a fairly complete set of figures on the assets and liabilities of the Bank of England.¹

Compared with previous wars in the 18th century, and still more with periods of peace, the rate of increase in the outstanding liabilities of the Bank of England between 1793 and 1815 seems to have been unusually rapid. Since the Bank had never maintained a constant ratio of bullion to notes and deposits the consequences of conducting the French wars off gold cannot be defined precisely. But a study of the ratios it maintained between bullion on the one hand and notes

1. See Table 22 and pp. 82-83.

plus deposits on the other for the period 1720 to 1797 reveals that for only 18 years before the Suspension of Specie Payments did this ratio fall below 30% and for only 9 years below 20%. On the other hand, for the 18 years of suspended specie payments the ratio of gold to liabilities rose above 30% for only 2 years and above 20% for only 8 years. Even in previous wars the ratio seldom fell as low as a third. During the Austrian War of Succession it stood below that level for just 2 years. A cash ratio of 30% and above was maintained by the Bank for all but a single year of the Seven Years War and again for all but two years of the American War of Independence.¹

To afford a clear comparison of movements in the relevant variable I plotted figures of the Bank's bullion reserve, notes and deposits on a graph and compared years of war with their preceding periods of peace.² In three wars from 1756 to 1793 while the amount of bullion in the vault of the Bank did not move upward and in some cases declined, there was nevertheless a discernable expansion of notes plus deposits outstanding. For the wars against France at the end of the century there occurred a sharp fall in the amount of bullion held by the Bank and a very marked expansion in its outstanding liabilities. The conclusion suggested from historical comparisons is that the Government's decision of February, 1797 to suspend specie payments permitted the Bank to operate on a far lower cash ratio than it had ever maintained before in war or peace and that its liabilities expanded at a quite unprecedented rate.

Such a marked and rapid increase in the notes and deposits of the Bank of England created conditions for a corresponding credit expansion by the entire banking system. Unfortunately it is not possible to verify statistically aggregate changes in the volume of advances afforded by London or country bankers to their customers. Nothing is known of the aggregate amount of credit supplied by private bankers in London. Previous writers on the monetary history of the period have used figures of notes stamped for taxation purposes to illustrate variations in the note issues of country banks.³ But in a detailed appendix Dr. Pressnell sets out the numerous defects which "render the use of the stamp returns extremely undesirable for all save very limited purposes."⁴

In marked contrast to the relatively complete information on the Bank of England there appears to be little of statistical value to illustrate aggregate

1. See Table 22.

2. Sources from Table 22.

3. The figures are printed in Appdx. 99, Cttes. on Bank Charter, 1832 and reproduced by Silberling., 'British Financial Experience', p.294 and in his 'British Prices and Business Cycles', p.258.

4. Pressnell, Country Banking, pp. 180-188.

movements in credit supplied elsewhere in the financial system. We do know that the number of banks increased very rapidly over the war years: (London banks from 63 in 1792 to 80 in 1814 and country banks from 280 in 1793 to 657 just before Waterloo) and the data published in histories of just 6 of these banks indicates that in every case their liabilities expanded as fast, if not faster, than the Bank's over the period.¹ Vincent Stuckey admitted to the Bullion Committee that the circulation of his three banks in the West Country had risen. John Tritton of Barclays made the same point and Gilchrist of the British Linen Bank was willing to testify that the entire note issue of Scottish banks had gone up.²

Furthermore, contemporary opinion favoured the notion that not only had bank notes and deposits risen rapidly after the Suspension but bankers worked with lower reserves. Wilkins, the Brecon banker, lowered his reserve. Thompson who ran the Hull branch of Smith Payne and Smith thought it was "not necessary for a country bank to be provided with the same amount in bank notes in proportion to his issue as he was before restriction liable to keep gold." Tritton, Thomas Richardson the bill broker and Walter Boyd all held the same view.³ Finally the Bullion Committee, of whom four were bankers, reported, "It seems reasonable to believe that the total amount of unproductive stock of all country banks consisting of specie and Bank of England paper is much less at this period under a circulation vastly increased in extent than it was before the restriction of 1797."⁴

But since the definition of a reserve and practice varied between bankers and from one time to another, it is impossible with the paucity of data at our disposal to put contemporary opinion to a statistical test. Yet no writer on the monetary history of the period is prepared to deny that a general and probably rapid expansion in the supply of money occurred after the Suspension of Specie Payments.

After 1797 the ultimate reserves of the British banking system consisted mainly of the liabilities of the Bank of England and without a rise in its note circulation and deposits no sustained expansion of credit could have occurred

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1. Joslin, 'London Private Bankers', p.173; Hilton-Price, A Handbook of London Bankers and Pressnell, Country Bankers, p.11. The circulation figures for banks are in: Leighton-Boyce, Smiths, pp. 315-319; Pressnell, Country Banking, pp. 512 and 517; Graham, The £1 Note, pp. 133, 137 and 142; Phillips, Banks, Bankers and Banking, p.57. See also Coppiters, English Banknote Circulation, p. 154.
 2. Bullion Cttee., 1810, pp. 113, 115, 116, 139 and 140 and Cannon, Paper Pound, p. 62.
 3. Cttee. on Bank Charter, 1832, q. 1757; Bullion Cttee., 1810, pp. 116 and 147 and Boyd, Letter to Pitt, 1811, pp. 19-20.
 4. Cannon, Paper Pound, p.62.

during the war years. Bank notes and deposits passed into circulation through two main channels - as advances to the Government on exchequer and other bills or as advances to the London business community mainly on bills of exchange. To obtain some estimate of the relative responsibility of the public and private sectors for the creation of Bank liabilities (reserve money) we look to the assets side of the Bank's balance sheets and compare its holdings of private and public securities. Simple comparisons between types of assets provide us with only a crude measure and the relevant and more refined comparison is between the net asset position of both sectors at the Bank. Thus if public and private balances are subtracted from public and private assets respectively, proper comparisons can be made. Whenever the net asset position of the private sector increased as a proportion of total assets (public plus private) this indicates that the Bank issued a higher proportion of its liabilities to the private sector. Whenever the Bank issued proportionately more of its liabilities to the public sector the ratio of public to private securities would rise.

The Bank's liabilities were backed by three types of assets - bullion, private securities, and public securities. For more than half the war years the bullion reserve provided less than 20% of the cover for notes and deposits outstanding and for 19 of the 22 years of war it provided less than 30%.¹ Thus public and private securities supplied the bulk of the cover required for the Bank's liabilities. Immediately before the war 71% of total securities held by the Bank consisted of exchequer and other Government bills, but during the war the relative importance of advances to the private sector increased enormously and in some years actually exceeded advances to the State. Over the war years as a whole the average ratio of private to total securities held by the Bank amounted to 43% and this proportion provides a measure of the private sector's responsibility for the rise in Bank liabilities and reserve currency between 1793 and 1815.²

Comparisons between the wars against France and other wars in the 18th century cannot be made easily due to a lack of data for years earlier than 1776, but the Bank's income from private loans and discounts (which is a good index of changes in the accommodation granted to the private sector) fell during the Austrian War of Succession, rose but not markedly in the second half of the Seven Years War and displayed no definite trend during the American War of Independence.³ Given the increased demands invariably made by the Government upon the Bank in

1. See Table 22.
 2. See Table 22.
 3. See Table 22.

time of war, the figures suggest that in previous wars its advances to the private sector either failed to expand or expanded at a far slower rate than advances to the State. In other words any increase in the money supply which occurred in wartime prior to 1793 can be attributed to borrowing by the Treasury. During the French Wars the high level of public borrowing from the Bank was accompanied by an unparalleled addition to the amount of accommodation granted to the London mercantile community. Both the rapid rise in the liabilities of the Bank of England and this unprecedented increase in advances to the private sector suggest that the British Government conducted the wars against France with what appears to be expansionary monetary policy.

Government Borrowing, The Money Supply and the Bullion Controversy

The Government's influence on the money supply could be exercised in two ways - directly through its own borrowing operations and indirectly through its influence on the amount of credit granted by the Bank to the private sector. My concern in this section is entirely with the former.

Borrowing by the Treasury from the Bank exercised less influence on the money supply than Bank loans to the private sector. Nevertheless if the Government's policy had been to limit increases in the money supply the experience of the years 1793-97, when the Treasury attempted to finance the war within the dictates of convertibility, certainly showed that ways were open to the Chancellor to restrict his demands on the Bank. During those years, confronted with repeated warnings from the Directors about their declining bullion reserve, the Treasury's management of the debt began to take a form which effectively reduced the impact of Government borrowing on the money supply. For example, Pitt attempted to contain the floating debt through the employment of bigger loans and periodic funding operations. His reforms to the military estimates and the mode of credit used by the Navy also sought to limit unfunded borrowing and in order to by-pass the Bank he sold a larger share of bills direct to the market.¹

Critics exaggerate when they suggest that the Government deliberately brought about the Suspension of Cash Payments in order to make the Bank an "engine of State finance", but the whole episode does show that Pitt, although strongly pressured by the Directors, was prepared to modify but not to radically alter his financial policies in order to preserve the safety of the Bank.² Either the

1. See pp. 86-87, 114, 117, 121, 125, 126 and 137-138.

2. Hardcastle, Banks and Banking, p.116 and Boyd, 'Letter to Pitt', 1811, pp.69 and 75.

Chancellor did not understand the logical outcome of his actions or, what is more likely in a man with Pitt's grasp of finance, he simply refused to abide by the traditional rules of the monetary system.¹ He preferred to risk the collapse of the Bank and when this became imminent during the crisis of February, 1797, the Government, in order to avoid financial chaos, had no alternative but to relieve the Bank of the legal obligation to redeem its liabilities in gold.

Even if all the implications of the experience of the early years of the Revolutionary War were not fully grasped, Pitt and his advisers must have drawn several of the more obvious lessons spelled out in his correspondence with the Bank and reiterated by witnesses before the Committees of Suspension in 1797.² First of all the Chancellor perceived that the requirements of the gold standard involved not merely interference from the Bank with his management of the debt but even with his foreign policy. Debt management, always difficult in wartime, became doubly so when the Treasury lost the flexibility afforded by support from the Bank for the marketing of bonds and bills. As the Directors told the Commons Committee they intended to show Government and Parliament that the Bank could not support, at one and the same time, heavy military expenditure overseas, rising demands for credit from the State and for discounts from London merchants. They therefore limited discounts to the private sector and pushed the Treasury into greater dependence on the market for short term loans.³ Since the market could no longer adjust through the Bank, the competition for funds became intense and diverted credit to the Government.

Interest rates rose rapidly and the Bank's policy affected confidence in credit during a political situation which already made liquidity preference very high. London businessmen reacted against credit stringency and asked the Chancellor to use his influence on their behalf with the Bank. Pitt, worried by the potential hostility from the City to his foreign policy and still more by the possible effects of a deflationary credit policy on trade and production and through them to tax receipts, listened to schemes for an alternative medium of circulation and asked the Directors to do more for merchants. Naturally enough the Directors became peeved and carefully explained to the Commons Committee that they wanted nothing more but to help commerce but could not unless the Treasury repaid some of its advances. Their evidence is clearly designed to exonerate the Bank from responsibility for the Suspension and to bring out the conflict between Government and private demands for credit.

1. Commons Cttee. on Suspension, 1797, pp.12-15 where Pitt emphasises the primacy of the public service. Auckland moreover wrote to Pitt in July, 1796 and explained fully the possible consequences on the Bank of the Chancellor's actions - Auckland Papers, Vol. 34454, dd. 2.7.96.

2. This correspondence is printed as an appdx. to Cttee. on Suspension, 1797.

3. Cttee. on Suspension, 1797, pp.16,19,21-22,34,41-42 and 71-72. See pp. 87, 112, 113, 114, 115, 116, 123 and 202-204.

During the early years of the Revolutionary War the Treasury had been forced to conduct its borrowing operations without the traditional, expected and above all unstinted support of the Bank of England. With the removal of cash payments as "a necessary evil" the Chancellor soon discovered he could again demand and receive complete cooperation from the Directors. The Treasury found greater flexibility in alternating between bills and bonds, it could time loans to better advantage and experienced no lack of willingness on the part of the Bank to support interest rates on short term securities or to anticipate revenue from bonds and taxes.¹ In short, the debt could be managed more with an eye to its own ends and less for the convenience of the Bank. The Chancellor could proceed with the difficult enough task of financing global warfare unhampered by the requirements of convertibility. Suspension came about almost by accident but it came as a blessing in disguise. No wonder Addington, who headed the Treasury, in 1803, found restriction a measure of "unquestionable convenience" and the Government throughout the war strongly resisted every attempt to force a resumption of specie payments.

While the inflationary potential inherent in the removal of the traditional and only check to making the Bank an engine of State finance did not go unnoticed, in 1797 the subject was not extensively discussed principally because both Committees on Suspension and the Government proceeded on the assumption that the Bank would resume cash payments within the near future.² Discussion of and opposition to monetary policy only became serious when the Government suspended cash payments for the duration of war and when it appeared to its critics that the creation of Bank credit had become excessive.

According to critics of official policy the creation of credit became excessive whenever the market price of gold rose above its mint price, the rate of exchange fell below par or prices increased. Their views, which form one side of the now famous bullion controversy, have been analysed in several publications.³ Here it is relevant to bring out only that aspect of the controversy which impinged directly on questions of war finance.

Warnings often stern on the dangers of credit inflation were uttered both inside Parliament and published outside the House immediately after the Suspension of Cash Payments, but as the transition to an inconvertible currency

1. See pp. 112-139.

2. See pp. 133 and 136-139.

3. Viner, *Studies*, pp. 119-170; Angell, *Studies in the Theory of International Prices*, ch.3; Rist, *History of Monetary and Credit Theory*; and Macleod, *Theory of Banking*.

was achieved fairly easily, no further criticism of the measure emerged until prices rose rapidly between 1799-1801.¹ At that time most writers agreed bad harvests provided the basic explanation for the elevation of prices, but several subscribed to the theory that changes in the money supply had exercised an independent influence. While their opponents denied any such influence. There is, however, no need to recapitulate the arguments. With the exception of contributions from Boyd, Malthus and Thornton the controversy was not marked by any profound analysis of the relationship between money and prices.² Those who followed Boyd and ascribed an independent influence to the money supply also agreed with the Earl of Suffolk "the great source of evil was the stoppage of the Bank of England" and recommended an early resumption of cash payments.³ Apart from Boyd who recognised the advantages the Treasury derived from the Suspension and told Pitt he was not in favour of resumption "if it embarrasses your administration", no opponent of official policy expressly considered relations between the Treasury and the Bank.⁴ On the other side, spokesmen and pamphleteers simply denied all connection between the currency and the rise in prices.⁵ In any case the main controversy took place outside Parliament and hardly came to the notice of the Cabinet.⁶

Very little dissent from the Commons marked the passage of the Addington's bill to prolong Suspension until the end of the war but the Lords conducted a lively debate on the subject in 1803 and again on the Irish Bank Restriction Bill of 1804.⁷ Grenville, one of the original framers of the measure in 1797, warned his fellow peers, "There was growing up in this country a mistaken apathy on the subject. Many persons believed that the continuance of restriction had hitherto produced no inconvenience and that there was therefore no danger in prolonging it indefinitely."⁸ Grenville's speech really warned

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1. Parly. Hist., vol. 32, pp.1510, 1527, 1529 and 1550; vol. 33, pp. 42, 53, 65, 324, 326, 344, 358 and Holland Memoirs, p.84.
 2. See p. 242 and 'Boyd Letter to Pitt', 1811, pp. 50-56.
 3. See pp. 242-243; Parly Hist. vol. 35, pp. 1265-69.
 4. 'Boyd Letter to Pitt', 1811, p.57.
 5. Baring 'Observations', 1801, pp.9-11, 22-24 and Anon, 'Brief Observations', 1801, p.15.
 6. The Committees which investigated the High Price of Provisions in 1800-1801 paid no attention to the currency but the connection between money and prices was certainly mentioned in Parliament - Parly. Hist, vol. 35, pp. 641, 646, 793, 838 and 1265-69. Auckland was the only member of the Government who participated in this debate.
 7. On the Irish monetary system see Fetter, The Irish Pound and Parly Debs., vol.1, pp. 698-99, 1082-84 and 1087-88. The Earl of Farnham wrote to Grenville about it in 1800 - Drogheda Papers, vol. 4, dd. 20.6.1800.
 8. Parly Debs., vol. 1, p.1825; see also pp. 708 and 713.

the Government of the dangers of credit inflation and suggested it was unwise to extend the Suspension for an indefinite period. Lord King, likewise appalled by the casual way Suspension had been prolonged, saw no case for the measure at all. Even in 1797, he reminded the House "It was acknowledged to be a measure of the most questionable nature open to the most dangerous abuses."¹ In his view abuses had already occurred; since 1798 "a uniform and unexampled increase of the price of specie corresponding as it did with the increase in the quantity of Bank notes and the depression of the foreign exchanges afforded decisive evidence of misconduct of the Directors of the Bank."² Although the Lord Chancellor defensively reverted to the official attitude of 1797 and defended the measure as "a necessary evil", Auckland and Hawkesbury refused to be intimidated by the opposition.³ On behalf of the Government they denied King's assertions, defended the Bank and insisted the Suspension constituted a necessary part of the war effort.⁴

For several years the market price of gold remained near enough to the mint price and the rate of exchange sufficiently close to par to preclude serious opposition to the Government's monetary policy. Antipathy to the inconvertible currency lay dormant while changes in the money supply exerted no obvious effects on the economy, but in 1809, when the market price of gold rose $14\frac{1}{2}\%$ above its mint price and the exchange with Hamburg fell by almost a fifth, these symptoms of "excessive" credit creation engendered a vigorous and sustained attack on the Government's monetary policy.⁵ The attack opened with the publication of Ricardo's three letters to the Morning Chronicle in August and September, 1809.⁶ Ricardo began by pointing out that the price of gold had risen by 20% since 1797, which with the depreciated exchange provided proof of the excessive credit creation by the Bank of England because under the gold standard "no effort of the Bank could keep more than a certain quantity of notes in circulation and if that quantity was exceeded its effects on the price of gold always brought the excess back to the Bank for specie." In a third letter to the same paper Ricardo stated his aims specifically. "I shall attempt to prove, Gold be the standard of value, and consequently Bank notes the representatives of the Gold coin that Bank notes are at present at a discount and that the excess of the market above the mint prices of gold measures the depreciation."⁷ Ricardo's letters were followed

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1. Fortescue, *Speeches and Writings of King*, pp.210-212 and *Parly Debs.*, vol. 1, pp. 1673, 1676 and 836-37.
 2. *Parly Debs.*, vol. 1, p.1674.
 3. *Ibid*, p.713.
 4. *Ibid*, pp. 709, 1675-76 and 1838.
 5. See Tables 34 and 35.
 6. Fetter, '*Politics of the Bullion Report*', pp.104-105.
 7. Ricardo, '*Letters to the Morning Chronicle*', 1809, pp. 16-21 and 29.

up by publication of pamphlets by Fushet and others which also demonstrated (on the same criteria) that the Bank of England had inflated the money supply.¹ In February 1810, Francis Horner moved the Commons to appoint a Select Committee "To enquire into the cause of the high price of gold bullion."² Extracts from the Committee's report appeared in the press in June, although it was not officially published until August of 1810.³ "Upon a review of all the facts and reasonings which have been submitted," the Bullion Committee informed the country, "There is at present an excess in the paper circulation of this country, of which the most unequivocal symptom is the very high price of bullion, and next to that, the low state of the Continental Exchanges; that this excess is to be ascribed to the want of a sufficient check and control in the issues of paper from the Bank of England; and originally, to the suspension of cash payments, which removed the natural and true control. For upon a general view of the subject, your Committee are of opinion, that no safe, certain and constantly adequate provision against an excess of paper currency, either occasional or permanent, can be found, except in the convertibility of all such paper into specie."⁴ The Committee recommended the resumption of specie payments within two years, but more extreme supporters of the Report demanded an immediate resumption.⁵ With the publication of the Committee's report, the Government had to contend with very purposeful opposition both inside and outside Parliament to its monetary policy. Ricardo wrote further letters to the Morning Chronicle and the editor of that Tory paper appeared to sympathise with his views.⁶ Of course Whig newspapers supported the bullionist criticism of the Government. Over the following years numerous pamphlets were published reiterating Ricardo's point.⁷

Inside the House of Commons Francis Horner concluded his introduction of the Bullion Report to Parliament by moving 16 resolutions. The wording of four sum up the bullionist case.

"That the Promissory Notes of the Bank of England are stipulations to pay, on demand, the Sum in Pounds Sterling respectively specified in each of the said Notes."

"That when it was enacted by the authority of Parliament, that the payment of the Promissory Notes of the Bank of England in Cash should for a time be suspended,

1. Fushet, 'Inquiry', 1810.
2. Commons Jnl., 1810, p.105 and Horner, Memoirs, vol. 2, p.29.
3. Morning Chronicle, 11th June, 1810, and Fetter, 'Politics of the Bullion Report', pp. 107-108.
4. Canning, Paper Pound, p.66.
5. Ibid, pp. 68-69.
6. Ricardo, 'Letters to the Morning Chronicle', 1810, pp.131-153 and Morning Chronicle, 11th May, 1811.
7. Surveys of this literature can be found in Viner, Studies, chs.3-4; Angell, Studies in the Theory of International Prices, ch.3; Wu, An Outline of International Price Theories, pp.328-335 and Silberling, 'British Financial Experience', pp.282-297.

it was not the intention of Parliament that any alteration whatsoever should take place in the Value of such Promissory Notes."

"That it appears, that the actual Value of the Promissory Notes of the Bank of England, (measuring such Value by weight of Standard Gold and Silver as aforesaid) has been, for a considerable period of time, and still is, considerably less than what is established by the laws of the Realm to be the legal Tender in payment of any money contract or stipulation."

"That the Fall which has taken place in the Value of the Promissory Notes of the Bank of England, and in that of the Country Bank Paper which is exchangeable for it, has been occasioned by too abundant Issue of Paper Currency, both by the Bank of England, and by the country Banks; and that this Excess has originated, from the want of that Check and Control on the Issues of the Bank of England, which existed before the Suspension of Cash Payments."¹

Horne's resolutions received support in the Commons from thoughtful critics of financial policy such as Huskisson, Canning and Thornton; men who could not simply be dismissed as prejudiced members of the opposition.²

A very large part of the criticism levelled against credit policy is concerned to show that the Bank had departed from principles it had observed in regulating the creation of liabilities until 1797. Before the Suspension of Specie Payments the Bank's debts were legally promises to pay on demand a fixed quantity of gold. If a paper title failed to purchase in the market the legally designated quantity of gold it was described as depreciated in value. Symptoms of depreciation were a higher market than mint price for gold and a rate of exchange below par. The cause of depreciation was an excessive supply of credit initiated by the Bank. Correction of depreciation was automatic because as the market price of gold rose and remained above its mint price or the rate of exchange remained consistently below par, it would become more profitable to settle both internal and external debts in gold. Bank notes would be exchanged for gold and as the bullion reserves of the Bank of England and the rest of the banking system declined, the whole system would be compelled to contract credit. Furthermore, contraction by the Bank of England entailed multiple contraction throughout the banking system to the point where the market and mint parities were equal and the par of exchange was restored. By tying the currency to a given quantity of gold fixed in price and making gold payments legal tender, the 18th century monetary system had

1. Parly. Debs., vol. 19, p.831.

2. Ibid, pp. 896, 973 and 1104. and Thornton, Paper Credit, p.327.

secured a check on excessive credit creation by banks and a currency relatively stable in value for both internal and external transactions.

Before the bullion debate, the formal requirements of the 18th century gold standard had never been enunciated. For several decades before the French Wars the country had experienced no balance of payments problems and neither the Bank of England nor other banks had been compelled to contract liabilities through a persistent outflow of gold. Furthermore, the banking system had developed very rapidly in the last decades of the 18th century without a corpus of theory, positive or normative to explain and guide its development. Adam Smith apparently missed the point of banks when he observed that their circulation did not increase the money supply but simply substituted for gold. His prescriptions are, moreover, marked by some hostility to banks and a dislike of inconvertible paper. Discussions of the role of money and monetary policy in the economy certainly do not appear to have been popular either among economists or men of affairs in the late 18th century.¹ Nevertheless, the underlying logic of the British monetary system was present before the bullion controversy, but it required a war and a serious balance of payments crisis to bring them to the fore.

In February of 1797 Pitt's government removed the central regulator of the money supply by suspending the legal obligation of the Bank of England to redeem its notes in gold. The Suspension of Specie Payments in fact constituted an official announcement that for the duration of war the money supply would no longer be regulated by the requirements of convertibility.² But at no time was this point stressed sufficiently strongly to preclude the development of a controversy largely concerned to demonstrate or refute the proposition that monetary policy had departed from gold standard principles. Monetary policy is the least neglected of the history of public finance during the French wars. The literature both contemporary and modern on the subject is extensive, but most modern writings usually treat policy as incidental to another interest such as the theories of money, trade or prices. Many of those involved at the time such as Ricardo and Wheatley also seemed more interested in long-run theoretical issues.³ But while the bullion controversy certainly raised matters of profound interest for the economist, it originated as a debate about a particular policy at a particular time and attention here will be confined to that aspect of the debate. Considered in the context of war finance, the bullionist opposition to the Government rests

1. Fetter, *Development of British Monetary Orthodoxy*, pp. 4, 9 and 10.

2. See pp. 133-139.

3. Sayers, 'Ricardo's Views on Monetary Questions', pp. 79-84.

upon the proposition that the gold standard is the best, or, in 18th century terms the 'natural' way of regulating the money supply. The Bank of England supported by the Government had departed from its tenets and issued an excessive supply of credit. For some critics such condemnation appears to have been sufficient. Lord King's speeches and writings seldom go beyond a demonstration of depreciation.¹ Ricardo's writings in 1809-10 are concerned mainly with proofs of depreciation. His argument is often left there.² For MacCleod later in the 19th century the simple demonstration that the Government during the war had departed from "those principles of monetary science as laid down in the Bullion Report", principles which he described as "matters of pure geometrical demonstration", was more than enough to expose the error of its entire monetary policy.³ Others were perhaps primarily concerned lest the temporary suspension of specie payments, regarded in some circles as a successful experiment, might lead to a permanent abandonment of the gold standard.⁴ Nevertheless, the bulk of critical comment demonstrated that paper was depreciated in terms of gold and said very little else.

One of the most remarkable omissions from the opposition Government policy is an informed and full discussion of the implications for war finance of the recommendation to resume specie payments. After all, the Government had relieved the Bank of this obligation in order to avoid the constraints of convertibility and the implications of conducting the war on gold had been revealed in 1795-97.⁵ Moreover, both the Governor and Deputy Governor of the Bank of England stressed this very point in their evidence to the Bullion Committee. They observed that if the Bank had to redeem its liabilities in gold they would be compelled to restrict credit which "would be attended with injury to the public credit" or "as in the experience previous to the year 1797 produce great public distress."⁶ Yet with few exceptions bullionists tended to ignore the requirements of the Government.

Huskisson was the most conspicuous, for he certainly knew from his years at the Treasury, that credit creation could originate from Bank advances either to the public or the private sectors, and his close questioning of the Bank's representatives before the Bullion Committee succeeded in revealing that no security

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1. Fortescue, *Speeches and Writings of Lord King*; *Parly Hist.*, vol. 36, pp. 1157-57; *Parly. Debs.*, vol. 1, pp. 697-701, 715-16, 1673-74 and 1834-35 and vol. 19, pp. 529-530.
 2. Ricardo, 'Letters to the Morning Chronicle', 1809 and 1810, pp. 15-33, 131-153 and 'High Price of Bullion, 1810, pp. 51-127.
 3. MacCleod, *Theory of Banking*, pp. 219-220, see also pp. 111 and 114.
 4. Horner, *Memoirs*, vol. 2, p. 87 - letter to Grenville, dd. 28.6.1811 and Blake, 'Observations', 1810, p. 77.
 5. See pp. 133-137.
 6. *Bullion Cttee.*, 1810, pp. 89, 95, 110-112.

really existed against the "excess" issue of Bank paper to the Government.¹ One excuse for the failure of critics to consider the money supply in the context of war finance was, however, the refusal of the Bank to furnish figures which distinguished public from private securities in its portfolio. From figures supplied to it of advances to the Government, the Bullion Committee reached the puzzling and erroneous conclusion that such loans were lower as a yearly average than before the Suspension.² I can only surmise that the figures excluded the amount of exchequer bills purchased in the market and consisted entirely of normal ways and means advances; a conclusion which is supported by the Director's successful resistance to a motion moved by Harryat in the Commons requesting them to furnish figures of total exchequer bills held by the Bank. About the same time Huskisson also failed to persuade Parliament to compel the Directors to reveal the amount of commercial paper under discount.³ Thus the only figures available to bullionists consisted of the value of notes circulated by the Bank of England. Rather blindly they focussed attention on this single aggregate and in general ignored their channels of issue. Statistical blackout does not, however, really excuse the failure of the bullionists to discuss the distinction between commercial discounts and accommodation to the Treasury.⁴ I have found some examples among numerous speeches and pamphlets which really recognised the problem of war finance, significantly enough from people who were or had been connected in some way with the Treasury. For example, in their pamphlets Huskisson and the two bankers (Magens and Hoare) considered only the sale of bonds and made the assertion that the resumption of cash payments would lower the price level and diminish the Government's need to borrow.⁵ Even if we accept their doubtful assertion that the prices of goods and services purchased by the Government would decline sharply with a contraction of the money supply, their assertion completely neglects the numerous forces other than price movements which determined the demands made by the Treasury on the Bank.

Until the Government's attitude became plain, speculation about the

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1. Bullion Committee, 1810, pp. 118-119. Henry Thornton is the other conspicuous exception.
 2. Cannan, *Paper Pound*, p.56.
 3. Parly. Debs, vol. 19, pp.729-34, 760-762 and see Harryat's letter to the Times 26.4.11.
 4. Horner made the distinction when he introduced the Bullion Report to Parliament - Parly. Debs., vol. 19, pp. 820-823.
 5. Huskisson, 'The Question', 1810, pp. 144, 145 and 148; Magens, 'An Inquiry', 1804, p.44; Hoare, 'Possible Existence', 1810, pp.52-54 and 144; Lauderdale, 'Further Considerations', pp.125 and 128; and Blake, 'Observations', 1810, p.85.

possible resumption of cash payments made for uncertainty in the capital market. Before negotiations for the loan in May 1810, the Governor of the Bank refused to commit himself on the usual advances to the contractors and the Bank took precautions against Resumption by rejecting some applications for discounts in September.¹ Apparently its action caused considerable alarm in the market.² By the end of the year the Government had, however, communicated its dissent to the Bank and launched a vigorous counter attack against the critics of its monetary policy on all possible fronts.³

Naturally enough, one of the central charges levelled by Government spokesmen against bullionists was their failure to consider the problem of war finance. Perceval considered the "Committee's policy of unconditional resumption at a fixed date as equivalent to a declaration that we must submit to any terms rather than continue the war."⁴

During the Bullion Debate the Prime Minister referred to inconvertibility as "indispensably necessary to the salvation of the country and that the Peninsular War could not be carried on without it."⁵ Vansittart told Parliament that the "Restriction was a measure of public policy originally imposed and since continued for reasons connected with the safety of the state" and that Resumption would make the Bank "a burden instead of a support to the public."⁶ Castlereagh pointed out that Resumption would be "prejudicial to the public interest."⁷ George Rose and the Earl of Rosse stressed the grave danger of abridging assistance to the Government.⁸

Outside Parliament Government supporters spelled out in detail the advantages public finance had derived from Suspension. Sir John Sinclair described the functions of the Bank of England as being to advance exchequer bills which cannot be sold in the market, and to advance to contractors on the payment of instalments of the loans. He concluded that the Bank could not support the Government if the Resumption were removed.⁹ Jasper Atkinson reiterated the arguments he first used nine years before, namely that restriction existed to

1. Bank Report Book, 11, 5, 10 and Bank Minutes, 18.9.10.

2. Rosse 'Observations', 1811, p.89; Sinclair 'Remarks', 1811, p.10 and Sinclair, Works and Correspondence, p.113.

3. Bank Minutes, 27 November, 1810 and 5 December, 1810.

4. Jennings, Croker Diaries, vol. 1, pp.34-36. Perceval was particularly annoyed at Huskisson's alliance with the bullionists. In his papers there is a long unsigned analysis of the bullion question, probably from Atkinson - Perceval Papers, vol.49177, fols.203-211. Fetter, 'Politics of the Bullion Report', pp.107-111 described the Government's campaign.

5. Parly. Debs. vol.19, p.1075; vol.20, p.15; vol.24, p.287.

6. Parly. Debs., vol.19, p.958, 924, and 968.

7. Ibid, pp.954-955 and 1009-10.

8. Rosse, 'Observations', 1811, p.45.

9. Sinclair, 'Observations', 1810, pp.33 and 51.

support public credit and could not be done away with until Government expenditure diminished.¹

No bullionist, particularly men like Huskisson, Canning and Thornton, wanted his patriotism called into question by seeming to advocate anything less than complete support by the Bank for war finance, and the Government's argument that Resumption within two years might compromise war effort was not wasted on them. Henry Thornton, who had signed and probably written the Report, recognised in his speech that "the administration wished to enjoy the benefit of an extended issue of paper in their financial and political concerns" and was clearly worried about the recommendation to resume within two years. He therefore advocated "a cautious restriction of paper by the Bank of England."² Huskisson appears most anxious to recommend nothing which might impair the propagation of the war against France. Huskisson's pamphlet, which so annoyed Perceval, is far less temperate than his speeches before the House. In fact he later retracted the views he held in 1810-11.³ Canning, who took a bullionist position, also opposed the Resumption of cash payments in two years and expressed willingness to leave it "to the good sense and good intentions of the Bank and to the suggestions of the Executive Government."⁴ Even Tierney, the Whig expert on finance had doubts about the wisdom of an early resumption.⁵

At first sight it is perhaps surprising to discover that the Government did not rest their case upon the purely pragmatic argument that specie payments had been suspended to support the Treasury in the conflict against France and if Bank notes were depreciated by a mere 15% some thirteen years after Suspension then that represented yet another cost of the war. Instead of dismissing as irrelevant the bullionist contention that monetary policy had departed from the requirements of convertibility the Government made great efforts to prove that the currency was not issued to excess (in bullionist terms) and that the premium on gold and the depreciated exchange could be accounted for without reference to changes in the money supply. In fact Directors of the Bank of England and some members of the administration went as far as to deny all connection between the money supply and the price of gold or the exchange on Hamburg.⁶ Here their lack of reticence lead

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1. Atkinson 'A Letter, 1811', pp.68, 76, 78 and 102 and see Coutts-Trotter, 'The Principles', 1811, pp.75-77; Anon, 'Observations', 1812, pp.24-25.
 2. Thornton, Paper Credit, pp.348, 350 and 361. Becke wrote to Herries in 1810 and asked "how could Thornton let this report pass" - Herries Papers, vol.3, dd.13.9.10.
 3. Parly. Debs. vol.19, pp.967-985 and Smart Economic Annals, vol.1, p.420.
 4. Parly. Debs., vol. 19, p.1127.
 5. Dropmore Papers, vol. 10, p.198.
 6. Bullion Cttee., 1810, pp.96-97 and 127-128 and Parly. Debs., vol.19, pp.834, 839, 929-35 and 945.

them into theoretical errors, which economists for generations thereafter delighted to expose.¹

Vansittart and Castlereagh were actually enthusiastic or dishonest enough in the Government cause to question whether Bank notes had ever possessed a standard of value, but the serious part of the Government's case against the bullionists rested upon alternative explanations for the depreciated pound sterling.² Basically the Government and its supporters argued that the depreciated exchange and the high price of gold could be explained by the abnormal but adverse position of the balance of payments. On current account (to use modern terminology) British exports had been prevented from reaching their destinations by the Continental System and the American Embargo. While the flow of remittances abroad to pay for the unusually large volume of commodities imported to anticipate the interruption to world trade produced a deficit on the balance of trade. On capital account, the Government made heavy payments in gold to support troops in the Peninsular and as subsidies to its European allies. At the same time the uncertainties engendered by the military situation in Europe and the Napoleonic blockade lead to a hoarding of gold which raised its price.³

But all alternative explanations for the elevated price of gold or the depreciated exchange could, and indeed often were, accommodated by bullionists in precisely the same way that Viner dealt with Silberling's objections to the bullionists.⁴ Silberling argued that the depreciated exchange had been occasioned by heavy military expenditure abroad and not by excessive credit creation at home and Viner concludes his rebuttal in the following way:

"It was primarily because under the paper standard the English currency was not contracted as it would necessarily have been contracted under a metallic standard that the foreign remittances resulted in such marked depreciation of the paper pound on the exchanges."⁵

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1. Cannan, Paper Pound, p.23; Baghot described the views of the Directors as "classical by their nonsense" - cited Fetter, 'The Bullion Report', p.75 and Macleod, Central Banking, p.173.
 2. Parly. Debs. vol. 19, pp.925-927 and 990-992.
 3. See: speeches by Perceval, Vansittart, Ross, Castlereagh, Long and Samuel Thornton in the Bullion Debate - Parly. Debs. vol. 19; the pamphlets of their supporters: Anon, 'Few Facts', 1810, pp.12-13; Anon, 'A Letter', 1811, pp.29, 49,59, 65-66 and 96; Sinclair, 'Observations', 1810, pp.2,3, 16-19 and 31; Rosse, 'Observations', 1811, pp.15-16, 19-20, 26,30,37,40,42,48,68 and 73; Atkinson, 'A Letter', 1811, pp.14,40-41, 49-51, 59-66, 73,76,78 and 95-96; Hill, 'An Inquiry', pp.3, 26-29 and 78-79; Grenfell, 'A Defence', 1810, pp.4,15-16 and 34; letters to the Times: 23.4.11, 30.4.11, 16.12.12 and 24.12.12. The evidence of H.R.X, Greffulhe, Goldsmid and Lynne to the Bullion Cttee, 1810 and Liverpool Papers, vol.38425 and Herries Papers, vol. 3.
 4. Silberling, 'Financial and Monetary Policy', pp.226-228 and Angell, Studies in the Theory of International Price, Appdx. A.
 5. Viner, Studies, p.145 and Ricardo, 'Reply to Bosanquet', p.239.

Thus bullionists could with similar aplomb maintain that it was precisely because under the paper standard the currency had not been contracted as it would necessarily have been before Suspension that such matters as the closing of European and American markets, unusual grain imports, the heavy purchases of Baltic stores, the hoarding of gold, the disorganisation of foreign exchange markets, military expenditure and foreign subsidies or any other reason advanced by supporters of official policy had resulted in an increased price of gold and an adverse rate of exchange. Put in this way the argument is unanswerable. All it means is that a sufficiently vigorous contraction of credit in any situation will prevent a rise in the mint price of gold and a fall in the exchange rate. As a discussion of policy the assertion is completely unhelpful. The real question, as the Chancellor of the Exchequer pointed out in the bullion debate, is, would credit restriction have been advantageous to the country at the time?¹

Why the Government Tried to Refute Its Critics

Why the Government made so much effort to refute the idea that the currency was depreciated in terms defined by its opponents is one of the least explored and most interesting questions of the bullion controversy, particularly as specie payments had been suspended to give the Bank greater flexibility, to create credit and also because in 1819 when the Bank resumed specie payments there was a widespread acceptance among official circles of bullionist propositions they had been so concerned to refute just seven years before.² Moreover, many of the commentaries on the official case have explicitly or implicitly dismissed it as a failure to appreciate the logic of the bullionist case, and such cursory dismissals display a failure to appreciate controversies in their historical context.³

Perhaps the first point to be emphasised is the positive reverence most 18th century Englishmen felt for the gold standard. They believed that paper currency circulated only as the representative of specie and that a unit of paper currency should at all times retain an intrinsic and stable value, measurable in terms of a given quantity of precious metal. Among those who opposed the Suspension

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1. Farly. Debs., vol.19, pp.1070-1072 and Jennings, Croker Diaries, pp.34-36.
 2. Smart, Economic Annals, pp.674-678; Macleod, Theory of Banking, pp.185-221 and Horsefield, 'Bankers and Bullionists in 1819', pp.443-447.
 3. The tradition that the official case was built upon error passed right through the 19th century to more modern studies. See Viner, Studies, chs.3 and 4; Andreades, The Bank of England, pp.220-234; Macleod, Theory of Banking, pp.220-234; Thomas, Rise of Joint Stock Banking, pp.33-35; Acworth, Financial Reconstruction, p.71; Canner, Paper Pound, pp.xxxiv-xli; Quin, Banking in England, p.56; Doubleday, Financial History, p.183; Hardcastle, Banks and Bankers, p.125 and Lawson, History of Banking, p.105.

in 1797 and among bullionists the point can be illustrated easily. Fox in March of 1797 called gold and silver "the only true circulating medium" and paper "is only valuable as their representative".¹ Sheridan thought paper "was only good while convertible into cash", Pulteney that "it was certainly a fraud not to pay a man in gold and silver when gold and silver were due to him."² In 1803 Lord Peter King wrote, "It must be evident that the advantages which thus result from the use of a paper currency depend altogether upon the fact of its exactly supplying the place of that coin which it represents; and this quality can only be possessed by a currency which is immediately convertible into specie at the option of the holder."³ Lord Liverpool's Treatise on the Coins of the Realm, much quoted by Ricardo and other bullionists, stated that "gold coins had become in the practice and opinion of the people, the principal measure of property and that paper was nothing more than a fictitious capital".⁴ Mogens, Hoare and Lauderdale commenced their pamphlets by pointing out, to quote Hoare, that "the lawful currency of the realm is gold and paper is only its representative".⁵ The point was explicit in numerous critical speeches in Parliament and implicit in the writings of Ricardo, Malthus and Huskisson. Sir Philip Francis felt it was "in vain to argue with any man who proposes to think that a paper not convertible into gold is as sure a sign of wealth as specie itself. Paper has no value beyond its own limits."⁶

Among most anti-bullionists the continued reverence for the gold standard seems no less and comes through in a number of ways. First of all in the apologetic, almost timid, way the Government maintained a currency not backed by gold. Statesmen and Bank Directors almost invariably defended the departure from gold on grounds of expediency or necessity, and not because a paper currency seemed a suitable form of money supply.⁷ While they appreciated the advantages public finance and foreign trade had derived from Suspension, at no time in two decades of inconvertibility did a member of the Government, or a Director of the Bank, reject the proposition that in normal times the gold standard was the best and natural way to regulate the money

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1. Parly. Hist., vol. 33, p.75 and vol. 32, pp.1510, 1527 and 1545.
 2. Parly. Hist., vol. 33, pp. 53 and 339.
 3. King, Thoughts, 1803, pp. 5, 117 and 125.
 4. Cited by Ricardo in his 'Letter to the Morning Chronicle', 23 November, 1809 and see Liverpool Papers, vols. 38423 and 38424.
 5. Hoare, 'Reflections', 1811, p.2; Mogens, 'An Inquiry', 1804, pp.2-3 and Lauderdale, 'Further Considerations', 1813, pp.14-16.
 6. Francis, 'Reflections', 1810, pp.3-4.
 7. Parly. Hist., vol.36, p.548; Parly. Debs., vol.1, pp.1572 and 1832; vol.19, pp. 961-62, 1054 and 1075 and vol.20, p.824; Dropmore Papers, vol.6, p.28 and Bullion Cttee., 1810, p.112.

supply. On the contrary they overtly repeated their adherence to that system on any number of occasions between 1797 and 1815. Pitt in moving for the suspension of specie payments for the duration of the war told Parliament that, "The House would readily conclude it must always be their own and be his wish to restore the issue of money from the Bank to its former situation."¹ Castlereagh in the bullion debate provided the most concise and lucid statement of the Government's position. "The Committee, I trust will do me the justice to remember that I have throughout admitted a recurrence to cash payments as early as circumstances will permit, to be essential to public credit, that I have justified the existing system upon the plea alone of an over-ruling necessity, that I have not considered such a necessity as belonging to ordinary times of war, but as arising out of the new principles on which the present war has been conducted by the enemy. When the necessity ceases, I trust the system now in operation will cease with it."²

Finally, of all the pamphlets examined supporting official policy only three made overt attacks on the gold standard. Sir John Sinclair wrote in his *Observations on Huskisson's pamphlet* that "the state of Great Britain for a period of thirteen years during which a paper currency not convertible into coin was the mechanism of circulation proves beyond the possibility of doubt the advantages of the new system,"³ The Earl of Rosse emphatically rejected the "idea that Bank notes should be always convertible into coin and that money must be a universal equivalent" as the "offspring of barbarous times."⁴ Such an obvious reverence for gold rendered the Government and its supporters acutely sensitive to criticism that official policy had seriously departed from the traditional regulator of the money supply.

Undoubtedly a more important explanation of the Government's endeavour to destroy the idea that the currency was 'depreciated' originated in its anxiety to retain complete internal and external confidence in the paper pound. The question of confidence first arose when Pitt suspended specie payments in February, 1797. This was the first occasion the country had conducted its economic affairs with an inconvertible currency. A week after the Order in Council suspended specie payments, the Marquess of Lansdowne "had not yet ceased to shudder at it."⁵ Fox and his party expressed similar sentiments and Boyd had written to Pitt advising him on no

1. Parly. Hist., vol. 23, p.1028.
 2. Parly. Debs., vol. 19, p.1010.
 3. Sinclair, Remarks, 1811, p.62.
 4. Rosse, 'Observations', 1810, p.9.
 5. Parly. Hist., vol. 32, p.1566.

account to take such a drastic step.¹ The Prime Minister nevertheless resisted Baring's suggestion to make bank notes legal tender because he realised that it was impossible to support by force of law a currency not accepted by the public. In the early weeks of inconvertibility the Government remained worried about the possibility of widespread refusals to accept Bank of England notes.² Fortunately, the Suspension received full support from the business community, and the transition was in fact achieved with minimal disturbance.³

No serious question of confidence in the currency arose until the summer of 1809, when the bullionists launched a vigorous attack on the Government monetary policy. Very quickly they and their opponents publicised the notion that the paper pound could be a depreciated unit of currency. Bullionists attached very precise meaning to the terms 'excessive' and 'depreciated', but the Government, for a number of very good reasons, quickly became concerned about the effects of their propaganda on confidence in the pound. Although an inconvertible currency had functioned well enough for thirteen years many people still regarded it as an experiment and liquidity crises were very real experiences to the Government in the first decade of the 19th century. A minor loss of confidence in paper credit had been a significant cause of the commercial crisis which accompanied the outbreak of war in 1793 and a fear of French invasion in January and February 1797 occasioned an alarming run on the banks for gold. Seven years later the Government had been concerned about the Irish currency.⁴ In recent decades Englishmen witnessed the serious consequences of a loss of confidence in paper currency in the West Indies, America, France and Spain, Russia and Austria and several critics of official credit policy did not hesitate, moreover, to make invidious comparisons between the 'depreciated' Bank of England note and the French assignat or the forced paper of the Austrian Government;⁵ comparisons which the British Government did everything they could to allay. As a matter of propaganda from the beginning of the war the Government had been anxious not to publicise any weaknesses in the financial system.⁶ Thus Vansittart told Parliament that the currencies alluded to were "in

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1. Parly. Hist., vol. 32, pp. 1510, 1527 and 1529 and vol. 33, pp. 42, 53, 56, 65, 75, 326, 331, 344 and 358.
 2. Fellow, *Life of Sidmouth*, vol. 1, p.188.
 3. Mackenzie, *Historical Account of Newcastle*, 1827, p.72; Davies, *Birmingham*, p.55; Phillips, *Banks, Bankers and Banking in Northumberland and Durham*, pp.64-65; McPherson, *Annals*, 1805, p.460 and *Annual Register*, 1797, pp.177-207.
 4. See pp. 102-103 and 209-210.
 5. Chalmers Papers, vol. 18902 - memos on West Indies monetary crisis in 1803-04; Hargreaves, *Restoring Currency Standards*, pp. 1-92; Hawtrey, 'The Assignats' pp. 253-267; Seligman, *Currency, Inflation and Public Debts*, pp.13,17,25,31,35 and 39 and Parly. Debs. vol. 19, pp.1020-29 and 1156 and vol.20, pp.842,855,860, 870,1046,1049,1057 and 1058.
 6. Pitt Papers, vol.115 - Boyd, dd. 5.11.95 and vol.178 - Sinclair, dd. 13.3.96.

every instance a new paper issued by a Government already involved in debt and discredit, and struggling for an immediate resource - the notes of the Bank have for a century been established in full credit as issued by a corporation of the highest reputation for wealth and punctuality, and known not to be debtor, but creditor, to an immense amount, both to Government and to individuals."¹ Castlereagh "lamented that such an assertion should ever have been hazarded, or such a term as depreciation applied, in a parliamentary document, to the established currency of the country." I need not impress upon the minds of those to whom I address myself what in effect it must produce in Europe if such a conclusion should receive the countenance of the House of Commons."² Certainly there were pressing reasons for official anxiety about confidence in the paper pound during 1811 and 1812. Even a slight loss of confidence would have seriously hindered public borrowing and the war effort.³ One pamphleteer remarked that the fall in the price of Government bonds in 1810 could be directly related to the propaganda of the Bullion Committee, but it is difficult to prove the point because so many influences were at work at the same time.⁴

Furthermore, any loss of confidence would have exacerbated the economic crisis of 1810-12. London merchants thought so because a group of them wrote to Sir John Sinclair in 1810 complimenting him on his pamphlet attacking the Bullion Report, "which appears to them most admirably adapted to restore confidence, and allay the distrust by which the commercial world has so severely suffered during some few months. Being fully convinced that the prosperity and improvement of national and individual income, can only be secured by an abundance of circulating medium."⁵ Certainly the Government, having extended its own credit to the hard pressed mercantile community just one month before the Bullion Report was discussed in Parliament, were not anxious to aggravate an already serious economic crisis by admitting to currency depreciation.⁶

Finally, the British Government for two very good reasons wished to maintain external confidence in the pound. As a matter of propaganda Ministers opposed the publication of weaknesses in the internationally famed British credit system. Radical supporters of the French Revolution had predicted the downfall

1. Parly. Debs., vol. 19, pp. 933-934 and 959.

2. Ibid, p.1003; vol. 20, pp.9,163,875,883,968 and 1068. And see Fetter, 'Politics of the Bullion Report', pp.109-110. Horner himself was obviously worried about the possible effects of the Bullion Report and wrote to Grenville for advice - see Horner Memoirs, vol. 2, pp.34-36.

3. Horner was aware of this danger, see Horner, Memoirs, vol.2, pp.34-35 and 87.

4. Sinclair, 'Remarks', 1811, p.10.

5. Sinclair, Works and Correspondence, p.113.

6. See pp. 211-212.

of that system since 1796 and part of Napoleon's strategy had been directed to affecting such a collapse.¹ A long letter from D'Ivernois to Ferris (seen by Perceval) about the effects of the Bullion Report abroad illustrates another aspect of the psychological war between Britain and France. The letter based on a study of French newspapers and information from D'Ivernois contacts in France argues that the Bullion Report had strengthened Napoleon's resolve to maintain the continental blockade against British trade. He quoted the Paris Journal to the effect that "The day on which the London Bank will be compelled to resume will be the day on which it will feel the effects of the Berlin and Milan Decrees." D'Ivernois also asserts that the Report prompted the United States Government to assume a "haughty and peremptory tone towards Great Britain."²

External confidence had also to be maintained for the more tangible reason that the Government wished to borrow abroad. Considerable sums of foreign capital were already invested in the national debt and any fear of rapid depreciation of the pound could occasion a serious flight of capital from London. Sir John Sinclair suggested that the publication of the Bullion Report had already occasioned the withdrawal of foreign capital from the national debt.³ Furthermore, with an adverse balance of payments and a declining gold reserve, the Government found that continued short-term borrowing overseas was essential to support troops in the Peninsular. It had been difficult enough to obtain gold for the Walcheren expedition in 1810.⁴ While the problem experienced by the Government in obtaining specie or alternatively borrowing for the expenditure of British troops in the Iberian Peninsular led to a constant, and often irate correspondence between Wellington and Ministers between 1810 and 1814. Despite Wellington's complaints, the Government for their part did everything they could to meet his demands for hard currency and to facilitate the ability of his Commissaries to borrow in the Peninsular. In such difficult circumstances at home and with immense military commitments abroad, the Government understandably could not admit to or publicise the unsound state of sterling.⁵

In order to counteract the adverse publicity of the Bullion Report Ministers and their supporters made speeches or wrote pamphlets stressing the difference

1. Cunningham, *British Credit*, pp. 3-4 and 50-51.
2. Ferris Papers, vol. 3, n.d. and *Times*, 17.8.11. But for another view see Fetter, 'Politics of the Bullion Report', p.111.
3. Sinclair, 'Remarks', 1810, p.10. There is no evidence for a flight of capital in 1810-11. It is difficult to see where it could fly to in those troubled years. Sinclair was consistently concerned with this problem. He had written to Pitt about it in 1797 - Pitt Papers, vol. 178, dd.13.3.96.
4. Castlereagh, *Memoirs*, vol. 6, pp. 286-290, 304-307 and 310-314.
5. See pp. 211-212 and 274.

between the forced currencies of those countries which had experienced galloping inflations and the sound currency of the Bank of England. The careful preparation the Government devoted to its repudiation of the bullionists is convincing evidence of ministerial concern.¹ Finally, when the possibility of a dual domestic price system emerged in 1811, the Government, after some hesitation made Bank of England notes in everything but name legal tender of the realm.²

Most of the bullion controversy seems to be devoted to that not very enlightening point that the money supply had occasioned a depreciation of the paper pound in terms of gold. This attachment to gold so irritated one Liverpool merchant that he was moved to refer to it as "a superstitious reverence for the principle laid down by political writers, that the purity and weight of the coin ought at all times to be invariably preserved through the experience of the present has completely proved the fallacy and impracticableness of it, has cast such a mist before the eyes of these speculative politicians as reason and commonsense are not able to dispel."³ Such an attachment for the gold standard not only formed the basis of the bullionist critique, but also helped to explain why the Government and its supporters appeared sensitive to a line of criticism which might well have been dismissed as irrelevant. Finally, appreciating why the Government were concerned to retain complete confidence in the pound explains much more about the way in which they attempted to refute bullionist criticism of monetary policy than the oversimplified dismissal of their case as theoretically erroneous. Placing the official argument in historical context in no way excuses logical errors made by Ministers and Directors of the Bank of England, but it does at least suggest a more satisfactory explanation for the reversal of official opinion at the Resumption of Specie Payments in 1819 than MacLeod's description of it as "the final triumph of these great principles of truth and honesty."⁴

It cannot be maintained that the bullion controversy gave rise to a very useful discussion of monetary policy in the context of war finance. Both sides tended to take up irreconcilable positions for or against resumption, for or against depreciation and overlooked important questions. There were real dangers in making the Bank completely subservient to the demands of the Treasury. Moreover, the

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1. Perceval Papers, vol. 49177/203-211; Herries Papers, vol. 3, dd.13 and 27.9.10, and Fetter 'Politics of the Bullion Report', pp. 108 and 112.
 2. Parly. Deb., vol. 20, pp. 764-67, 792 and 828-29; Coppieters, English Bank Note Circulation, pp. 40 and 44; Fetter, 'Legal Tender', pp.245-248 and Huskisson Papers, vol. 38760, copy of Stanhope's Bill with Huskisson's comments, dd. 20.3.12.
 3. Booth, 'Observations', 1812, p.39.
 4. MacLeod, Theory of Banking, p.217.

experience of 1795-97 had demonstrated the effects of Government's borrowing operations on the money supply could be moderated if the Treasury arranged to sell bonds rather than bills and if the Bank refrained from holding very large amounts of exchequer bills in its portfolio. By forcing the Treasury into the market the Bank effectively restrained the rate of increase in the money supply.

From 1808 onwards the Government quite deliberately made greater and greater use of bill finance and as the Committee on Resumption noticed, the Treasury's demands on the Bank "appear to have increased with the succeeding embarrassments of the public service and the extraordinary exertions of the concluding years of the last war naturally produced an unprecedented extension of them."¹ While the Perceval and Liverpool administrations certainly faced extraordinary difficulties, neither made any real attempt to arrange their borrowing operations in order to reduce the inflationary potential inherent in making additional demands on the Bank.² To their credit, but possibly due to the influence of the Bullion Committee, the Directors warned the Chancellor from time to time of the Bank's extraordinary holdings of exchequer bills, but with little apparent effect.³ On the other hand, they continued to meet all demands made on the Bank for discounts and never attempted to counteract heavy loans to the Treasury with any contraction of credit to the private sector. Potentially at least the policies of the Bank and the Treasury could have lead to a serious inflation. Unfortunately, neither the bullionists, the Bank, nor the Government really came to grips with the problem of how the war might be financed without placing the Treasury within the rigid constraints of convertibility. Very few politicians or monetary theorists made a clear enough distinction between the Bank's advances to the private and public sectors. Nobody except Huskisson really thought about the effects of the Treasury's operations in the capital market. Almost no consideration appears to have been given to the problem of how the financial system could at one and the same time support the war and avoid the dangers of inflation. Perhaps it is fortunate that the economic depression of 1811-13 lead to some decline in private demands for credit from the Bank at a time when loans to the Treasury rose rapidly and also that the war came to an end in 1815.

The Government, the Bank and the Private Sector

Under the regime of suspended specie payments the Bank's duty to the Treasury

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1. Lords Cttee. on Resumption, 1819, p.22.
 2. Auckland expected the Bank would contract credit after the publication of the Bullion Report - Dropmore Papers, vol. 10, p.53.
 3. Bank Minutes, 28.11.11, 20.5.13, 6.10.13, 17.11.13, 6.7.14. and 8.7.14.

was to support its demands for credit, but what of the demands of the private sector? On numerous occasions the Government categorically rejected proposals that it should exercise control. Nevertheless the idea of such control was mooted in Parliament as early as March 1797. Noting that the Suspension "would take away natural restriction", John Nicholls felt it necessary "to substitute some positive restriction" and proposed to bring in a bill "limiting the amount of debts the Bank might contract" but leaving the precise amount of those debts to the discretion of the Chancellor of the Exchequer.¹ Both Bank Directors in the House were indignant at his proposals and Pitt rejected the motion.² Four years later the Earl of Suffolk suggested Parliamentary control of the note issues, this time of country banks, but again the Government opposed it.³ In December, 1803, Lord King, perceiving that Parliament would do nothing to prevent the continuance of suspension for the duration of war, proposed that the Bank's note issues should be published in the London Gazette. Even this mild measure of control by publicity proved unacceptable to the Government.⁴ Lord Henry Petty made determined efforts to secure Government control over the note issues of the Bank of Ireland but Castlereagh and Vansittart again declined to act.⁵ Finally both the bullionists and Government spokesmen rejected a recommendation for some mild measures of governmental control over the Bank's issues. The opposition insisted on the more extreme proposal of an early resumption which undoubtedly weakened support for their case.⁶ For rather different reasons they agreed with Vansittart's statement that "no man who wishes well to public credit would desire to place the Bank under control of the Treasury."⁷

With the refusal of the Government to interpose its authority, after the Suspension the Directors continued to regulate the supply of loans to the private sector in the traditional manner, with the one important distinction that they no longer paid attention to the level of their bullion reserves. The Bank's discount business, the prime source of accommodation to the private sector, continued to be managed on the basis of rules formulated in 1711. Only London firms, recommended by the Directors enjoyed the privilege of discount. Bills accepted by the Bank had to be for purposes of commerce or industry, of short maturity and for large amounts.⁸ After Suspension the number of firms discounting paper with the Bank

1. Parly. Hist., vol. 33, p.357.

2. Samuel Thornton asserted "no minister, nor any authority on earth ever had or ever should control the conduct of the directors of the Bank in giving accommodation to individual merchants by way of discount." Ibid, p.358.

3. Parly. Hist., vol. 35, pp. 1265 and 1268.

4. Parly. Debs., vol. I, pp. 1674-75.

5. Fetter, The Irish Pound, pp.25-27 and Parly. Debs., vol.I, pp. 1087-88 and 1090-94.

6. Canna Paper Pound, p.68.

7. Parly. Debs., vol. 19, p.953.

8. See pp. 93-94.

certainly increased and by the end of the war the majority of London bankers succeeded in obtaining the privilege of rediscount with the Bank.¹ The Directors permitted no relaxation of the rule confining discounts to short dated paper although the frequency of renewals caused them some concern.² After the Peace of Amiens the Directors also discovered that bribes were given to clerks in the discount office in order to persuade them to interpret rules in a more flexible way. Bribes merely provided an additional incentive to lax interpretation of the rules because clerks were already paid piece rates of 10/6d per 350 bills discounted. In February, 1804 the Directors found they were holding increasing numbers of promissory notes between traders, many below the stipulated limit of £50.³ Another sign of a departure from the traditional rules can be found in losses from bad paper during the war years. Between 1695 and 1788 the Bank's losses on commercial discounts amounted to £69,000. Over the following twenty years it lost approximately the same amount and in February, 1808 the Bank held an additional £47,000 of "doubtful" paper.⁴

Although the evidence suggests that after 1797 the Bank slightly relaxed its stringent rules for discounting bills of exchange and provided credit for less "solid persons" and for less respectable purposes than before the war, the relaxation is not enough to seriously compromise the Governor's statement to the Bullion Committee that "We never discount without these circumstances being considered namely the amount already given to the individual, the solidity of the paper and the appearance of it being issued for commercial purposes."⁵

Throughout the period 1797-1815, despite a marked rise in its accommodation to the Treasury and in the face of hostile criticism, the Bank of England continued to regulate credit to the private sector upon traditional criteria. The Directors met all demands made upon them provided the borrower could offer a first class, short dated bill of exchange payable in London and appeared willing to pay the long standing rate of 5%. Consistently and obstinately the Directors refused to regulate loans on alternative criteria suggested by their critics such as movements in the rate of exchange, the difference between the market and mint prices for gold or the level of the Bank's specie reserve.⁶

1. Clapham, *The Bank*, vol. 2, p.30.

2. *Ibid*, pp. 12-14.

3. *Ibid*, p.13; Acres, *The Bank of England From Within*, p.359 and Clapham, 'The Private Business of the Bank', pp. 84-86.

4. Clapham, *The Bank*, vol. 2, p.14.

5. Bullion Cttee., 1810, p.89 and see p.220.

6. See the evidence of the Directors Pearce, Whitmore, Harman to the Bullion Cttee., 1810.

Why the Bank adopted and abided by this simple rule which led to an unprecedented expansion in the value of commercial bills under discount during a major war is an important question that has already received several answers and I intend to discuss the range of alternative explanations now available.

An unconvincing answer is that Suspension relieved the Bank of liability to redeem its notes in gold and gave Bank Directors complete flexibility to create liabilities and, *pari passu*, to increase the Bank's profits. Accusations of this kind were made frequently by less temperate critics of the Bank of England's war time credit policy in pamphlets, newspapers and speeches.¹ Sir Henry Parnell, for example, referred to the "misconduct" of the Bank of England Directors. "Their policy is to advance the interests of those who have placed them in direction of their affairs. This duty they have fulfilled with great success. The price of their stocks their bonuses and dividends afford the best proof of the zeal and talent with which they have discharged it."²

More recently Viner put the same point tersely. "It should be obvious that there is a fatal conflict between the regulatory functions of a central bank and a determination to maintain willy nilly its accustomed portion of the country's banking business."³

In one assertion Parnell is correct; however measured, unusually large profits were made by the Bank of England during the wars with France and a rising share of gross profits came from income earned from commercial discounts.⁴ The Government certainly realised the Bank profited from Suspension and in 1807 Perceval attempted to obtain cheaper terms for its services for the Treasury.⁵ Bank Directors seemed more than a little apprehensive about charges of profiteering. A concern to anticipate public criticism and to alleviate the impact of statements expressed by David Ricardo that "the war which has pressed heavily on most classes of the community has been attended with unlooked for benefits by the Bank" probably prompted the Directors to declare lower than maximum dividends during the war years.⁶ But their caution promoted a revolt among shareholders (vigorously led by one Alexander Allardyce) who demanded distribution of all profits and publication of detailed

1. Boyd, Letter to Pitt, 1811, p.3; Baring 'Observations on Boyd', 1801, p.12; Parly. Debs. vol.1, p.1673; vol.19, pp.539, 614 and 1160 and vol. 20, pp.157 and 142; Mushet, 'Effects Produced on National Currency', 1811, pp.68-69. The charge of profiteering continued to be made long after the wars were over. McCulloch, 'Historical Sketch of the Bank of England', p.75; Quin, Banking in England, p.54 and MacLeod, Theory and Practice of Banking, p.141.

2. Parly. Debs., vol. 19, p.1043.

3. Viner, Studies, p.160.

4. Bank Charter Cttee., 1832, appdxs. 29 and 34 and Quin, The Trade of Banking, Appdx.1

5. Cttee. on the Bank, 1807 and see Vansittart Papers 31231 - Beaks dd. 15.4.15.

6. Ricardo, 'Proposals for an Economical and Secure Currency', p.52.

accounts.¹ Not even Parliament could obtain full statements of the Bank's accounts until 1832, so it is not surprising that the shareholders failed to force the hand of the Directors.² As managers of a private corporation the Directors naturally welcomed profits but the accusation that they set out to maximise profits is a gross exaggeration. The Deputy Governor told the Bullion Committee that there had been no attempt to "force notes into circulation" and the evidence supports him.³ Discount rules became only marginally more flexible and the discount rate remained constant. True Henry Thornton and others intimated to Bank Directors that 5% was below market rate, but the Governor had already told the Committee that 5% was the maximum interest chargeable under the Usury Laws.⁴ Most temperate critics of the credit policy of the Bank of England, while they concurred with David Ricardo in denying the Directors "the character for ability and discretion", probably supported the following tribute of the Bullion Committee. "The Directors of the Bank of England, in the judgement of your committee, have exercised the new and extraordinary discretion reposed in them since 1797 with an integrity and regard for the public interest according to their conceptions of it and indeed a degree of forbearance in turning it less to the profit of the Bank than it would easily have admitted."⁵

A second and more plausible explanation for the credit policies of the Bank is that the precedents and theories available to guide the Directors in regulating the supply of credit were really of very little help. For most of the 18th century the country probably enjoyed an active balance of payments and in this favourable situation not only did questions of currency management not come to the fore of economic discussion but the Bank was seldom called upon to respond to an outflow of gold or a depreciated exchange rate. Apart from the unusual and short lived crises of 1745 and 1783 the Directors had never rationed credit. Nor had they attempted to maintain a constant ratio of bullion to outstanding liabilities, but regulated advances in a purely pragmatic manner with some concern for their specie reserve.⁶ In brief the Directors had never behaved or thought of themselves as managers of a central bank. Thus when war came and Suspension effectively delivered the regulation of the money supply into their hands, they had little past experience to guide them and simply fell back on traditional practices.

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1. Clapham, *The Bank*, vol. 2, pp.40-41 and Allardyce, 'Address to the Proprietors', 1798 and 1801.
 2. Horsfield, 'The Bank and Its Treasure', p.50.
 3. Bullion Cttee., 1810, p.97. There is nothing in the discount rules or the Bank's behaviour in the 18th century to suggest it really behaved like a profit maximising firm. On the contrary it seems rather conservative and slow to take advantage of opportunities to capture a higher share of the country's banking business.
 4. Bullion Cttee., 1810, pp. 98, 127 and 143.
 5. Ricardo, 'Letter to the Morning Chronicle', 1810, p.152 and Caman, *Paper Pound*, p.53.
 6. See pp. 94-98.

Furthermore, two possible precedents for action - the economic crisis of 1793 and the discount limitation of 1795-97 - positively discouraged the Directors from further experiments in credit control.

No adequate analysis has yet been made of the causes of the commercial crisis from November 1792 to August 1793 but coincidence of the crisis with the outbreak of war in February 1793 lead some commentators to stress a causal relationship between the two.¹ Other writers and the Select Committee on Commercial Credit conclude that most of the failures occurred because of "speculative" production and trade financed by an undue extension of bank credit and there is evidence to support this view.² For example most of the bankrupts were not firms engaged in European trade which is what one would have expected from a crisis occasioned by the outbreak of war with France.³ Financial institutions had obviously not been cautious enough in their lending. Failures among banks and other credit houses were nearly double what they had been in the previous three years.⁴ All commentators are, however, agreed that the crisis quickly became cumulative and developed into a general crisis of confidence which engendered a desire for liquidity. In George Chalmers' graphic terms: "terror created distrust, distrust impeded circulation and an impeded circulation is the greatest misfortune that can afflict a commercial nation."⁵

At the Bank of England bullion reserves began to decline from February of 1792 and a depreciated exchange on Hamburg together with a rise in the market price of Spanish dollars provided strong evidence of an external drain.⁶ This drain was not, however, occasioned by an adverse balance of trade. Exports reached a record level and imports increased very little over the previous year.⁷ The drain occurred on the capital account of the balance of payments and was connected with the repatriation of foreign capital invested in the national debt.⁸ As early as May of 1792, the Directors were aware of the external drain and in October informed Pitt that gold was flowing out to Lisbon.⁹ But in the closing months of 1792 the exchange began

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1. Parly. Hist., vol. 30, p.756; Baring 'Observations on the Bank', 1797, pp.13-35; and Feavearyear, The Pound Sterling, p.165.
 2. Cttee. on Commercial Credit, 1793, pp.125-129; Gayer, Growth and Fluctuations, vol.1 p.23; Pressnell, Country Banking, p.457; Tooke, History of Prices, vol. 1, pp.176-177; Ashton, Economic Fluctuations, p.133.
 3. Pressnell, Country Banking, Appdx. 28 and Chalmers, Domestic Economy, 1812, pp. 223-226 and 229.
 4. Pressnell, Country Banking, Appdx. 20.
 5. Chalmers, Domestic Economy, 1812, p.227.
 6. Lords Cttee. on Resumption, 1797, Appdx.45 and see tables 22, 34 and 35.
 7. See Table 26.
 8. Cttee. on Suspension, 1797, Appdx.7 and Clapham, The Bank, vol.1, p.258.
 9. Ibid, p.258.

to improve with the inflow of payments for the record volume of British goods sold abroad during 1792.¹ The rate of exchange continued to appreciate despite a fall in the volume of exports in 1793 but internal demands for gold then replaced the external drain on the Bank's bullion reserve. Circulation fell by about £1 million between February and August 1793 as Bank notes were exchanged for gold, but the circulation did not contract fast enough to prevent the ratio of bullion to liabilities declining.² Yet the Bank made no attempt to protect its reserve by deliberately contracting the value of commercial paper under discount. On the contrary its holding of private securities more than doubled between February and August 1793 and income from commercial discounting reached a record level in that year.³ Nevertheless, several examples and comment suggest that the Bank did not meet all the demands for credit: it rejected a loan to the Liverpool Corporation on sealed bonds and refused accommodation to Chichester and Manchester bankers on mortgages and bonds. Presumably these banks were among the "great and opulent country banks" known by Henry Thornton to have been refused aid by the Bank.⁴

Although the Select Committee on the Crisis remained silent about the role of the Bank, subsequent Parliamentary Committees were not reticent in pointing out that the Bank might have averted or alleviated the commercial crisis. As the Bullion Committee observed: "Your Committee question the policy of thus limiting the accommodation in a period of alarm unaccompanied with an unfavourable exchange and a high price of bullion." Even Sir Francis Baring, the Bank's apologist on so many issues, criticised the Bank for not supporting "the daily demand for guineas" and George Ellison, Secretary of the Country Bankers' Association, places full blame for the liquidity crisis on the Directors who he said "prevented wholesale tradesmen in London from turning the paper in his hands into cash; this necessarily prevented him in his turn from making his usual payments to the manufacturer in the country; some large failures took place in consequence."⁶ Andreades has the view that "The Bank itself gave way to alarm contracted its issues, raised its rate of discount and looked on unmoved at the rapidly increasing numbers of failures going on around it."⁷ Predictably the Times praised the Directors for "putting down country banks", a sentiment apparently shared by Clapham.⁸ Explanation of the Bank's behaviour is,

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1. Lords Cttee. on Suspension, 1797, Appdx. 45.
 2. See Table 22.
 3. See Table 22.
 4. Clapham, *The Bank*, vol. 1, p.261 and Thornton, *Paper Credit*, 1802, p.181.
 5. Cannon, *Paper Pound*, p.44.
 6. Baring 'Observations on the Bank', 1797, pp.21-23; Lords Cttee. on Resumption, 1797 pp.284-285.
 7. Andreades, *History of the Bank*, p.188.
 8. The Times declared, "It is full time the country be purged of such nuisances" - cited Pressnell, *Country Banking*, p.457.

however, more simple. No general limitation of discounts occurred. In fact Samuel Thornton correctly contended that the Bank "had stepped forward in the mode of discount and discounted liberally" but with complete consistency the Directors refused either to advance money on long dated paper or to accept anything but the approved London securities as collateral for loans.¹ As Thornton informed the House, "it had never been their custom to advance money on mortgages or the species of security now pointed out."² In other words, despite demands for the Bank to act as a lender of last resort the Directors refused to depart from traditional policy. Discounts of short term London paper increased rapidly, but beyond this, they were not prepared to go.³

During the crisis Pitt urged the Directors to do everything they could to support private credit but eventually the Government acted to restore confidence by providing its own credit for the commercial community in the form of exchequer bills.⁴ Meanwhile the Directors had incurred a good deal of odium for failing to avert the crisis.

After the crisis months of 1793, the demands made by the private sector on the Bank declined, but the figures of commercial paper under discount began to rise again in the latter half of 1795 and reached higher levels during 1796-97.⁵ Rising demands for accommodation at the Bank was a sign not only that trade and production and prices were also rising but as the Governor observed, an indication that businessmen were "not finding that facility at the bankers they were used to do."⁶ Evidence to support his opinion is hard to find, but there are several reasons for accepting it. First of all the move into the Bank suggests that other bankers in London charged at least the same rate for discounting bills of exchange, namely 5%. As rates of return on exchequer bills moved above the legal maximum on commercial paper bankers found it profitable to shift their assets into public securities. Moreover, their ability to grant credit declined as their depositors also shifted from balances into Government bills or preferred to hold their assets as money.⁷

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1. Parly. Hist., vol. 30, p.759 and Clapham, *The Bank*, vol. 1, p.261.
 2. Parly. Hist., vol.30, p.759.
 3. See Table 22.
 4. See pp. 207-208.
 5. See Table 22.
 6. Cttee. on Suspension, 1797, p. 207 and see pp. 71-74 and Morgan, 'Additional Facts', 1796, p.49.
 7. Pitt Papers, vol. 115 - Boyd ed.26.2.97; Cttee. on Suspension, 1797, pp.66, 71 and 175; Lords Cttee. on Suspension, 1797, p.145 and Thornton, *Paper Credit*, 1802, pp. 286, 290-92 and 340. This was in fact in the familiar wartime pattern observed by Joslin, 'London Bankers in Wartime', pp.159 and 175 and see Gayer, *Growth and Fluctuations*, vol. 2, p.656.

Sir Richard Carr-Glynn's remarks about hoarding and the runs on country bankers in January and February, 1797, gives the impression that liquidity preference remained high during the early years of war.¹

Opinions that the supply of credit from the financial system fell well below the demand abound. George Ellison, Secretary of the Country Bankers' Association, told the Committees on Suspension that both the note circulation and the number of country banks decreased after 1793.² Thompson, the Hull banker, seemed certain there had been a decline of note circulation throughout Yorkshire, and Henry Thornton, by writing to a sample of country banks known to him personally, attempted to measure the variations in notes issued.³ According to Sir Francis Baring, the credit shortage really began in 1796, but Thornton's evidence to the Lords Committee suggests that "the quantity of circulating medium had been much less than the convenience of trade required" even before the close of 1795.⁴ Jeremiah Harman, a Bank Director, considered there had been a "general diminution in circulation below the needs of trade in years past".⁵ Credit shortage was certainly acute in 1796 and the early months of 1797.

In a situation where the rest of the financial system failed to meet the growing demands for credit from the private sector, traders and industrialists turned to the Bank of England, but the Bank found itself unable to provide anything like the help they required. From June, 1795 its gold reserve declined progressively and the rate of decline became very rapid at the end of 1796 and the early months of 1797.⁶ The causes of the fall in the bullion reserve have been detailed elsewhere.⁷ Here my concern is with the entirely predictable response of the Directors. Concerned for the safety of the Bank and with unavoidable obligations to the Treasury they attempted to restrain the increase in their liabilities to the private sector in order to remain within a margin of safety. Thus on December 31, 1795, the Directors announced the beginnings of general rationing of credit.⁸ Apparently, the "Bank in several ways antecedent to the announcement had narrowed discounts, and the notice was an intimation they were about to limit them still further."⁹ Whatever its immediate origins, the Bank had never practised a policy of overall discount limitation since

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1. Cttee. on Suspension, 1797, p.43 and see also p.69.
 2. Cttee. on Suspension, 1797, p.69 and Lords Cttee. on Suspension, 1797, pp.284-85.
 3. Cttee. on Suspension, 1797, p.57 and Thornton, Paper Credit, 1802, pp.283-85.
 4. Baring 'Observations on the Bank', 1797, p.43 and Thornton, Paper Credit, p.301.
 5. Cttee. on Suspension, 1797, p.182.
 6. See Table 22 and Cttee. on Suspension, 1797, pp. 5, 6, 13, 19 and 20.
 7. See pp. 110-112.
 8. Clapham, The Bank, vol. 1, p.269. The text is in Tooke, History of Prices, vol.1, p.200.
 9. Thornton, Paper Credit, 1802, p.292.

the Jacobite Rebellion. The Governor admitted its novelty and Samuel Bosanquet justified the departure from the usual policy of selective limitation on the grounds that "the demand for discounts and the number of applicants had so much increased that the Directors could not restrict the amount of their discounts within the sum they thought advisable without being liable to partiality."¹ Until the Suspension of Cash Payments at the end of February 1797 the Directors persisted with a policy of rationing the aggregate amount of commercial paper discounted.

By rationing discounts the Directors certainly exacerbated the general shortage of credit. The London money market and through the market the remainder of the banking system found that the reserve currency issued by the Bank did not increase fast enough to replace the outflow of gold and the withdrawal of balances by their depositors.² Moreover, the Bank's policy may have strengthened the already strong desire for liquidity which manifested itself in 1796 and prompted individuals to hold cash and bankers to work with higher reserves.³ Although the Directors could with accuracy claim that the Bank had not reduced loans it had merely "prevented their rising", as the Lords Committee on Suspension observed, discounts had not increased to "such an extent to make them correspond with the wants of the commercial world and a considerable degree of distress consequently ensued."⁴ Even the Directors recognized they were failing to meet a demand which could not be satisfied elsewhere.⁵

Given the demands made upon the Bank by the Treasury and the constraints of convertibility it is difficult to see what other policy the Directors could have adopted consistent with the safety of the Bank. Nevertheless their difficult situation does not seem to have been appreciated either by the Government and still less by the London money market. Discount rationing, which was after all the logical corollary of a rapid expansion of accommodation to the Treasury, found very few defenders. For example, no evidence has been uncovered that the Government accepted or appreciated the Directors' view that an expansion of loans to the public sector implied a contraction of commercial credit, unless the gold reserves were rising. On the contrary, in his correspondence with the Bank between 1793 and 1797 Pitt made no suggestion, in reply to the protests from the Directors against

1. Cttee. on Suspension, 1797, p.207.

2. Clapham, *The Bank*, vol. 1, p.269; Ashton, *Economic Fluctuations*, p.134; *Morning Chronicle*, 28.3.96 and 5.10.96; Commons Cttee. on Suspension, 1797, pp. 12 and 142 and see pp. 87-88, 121-122 and 137-138.

3. Lords Cttee. on Suspension, 1797, pp.284-85; Cttee. on Suspension, 1797, p.173 and Boyd, 'Letter to Pitt', 1811, pp.1-11.

4. Cttee. on Suspension, 1797, p.207 and Lords Cttee. on Suspension, 1797, p.381.

5. *Ibid.*, p.225 and Cttee. on Suspension, 1797, pp.12-14 and 207.

the volume of borrowing by the Treasury, that the Bank might protect its gold reserve and help the Government by a more vigorous contraction of commercial discounts.¹ In fact on more than one occasion during the period of credit stringency Pitt, approached by merchants to interpose his authority with the Bank to secure easier credit conditions in the London capital market, asked the Directors to help the merchants.² In Parliament Pitt admitted "he had at all times fairly avowed his opinion that extending the discounts was the most likely mode of alleviating the pressure of present difficulties", but "what effects his opinions had on the minds of the Directors he could not say."³ At this point Manning and Thornton, both Bank Directors, stressed the independence of the Bank in matters of commercial discounting, but Fox and Sheridan seemed inclined to think that opinions coming from a Chancellor of the Exchequer amounted to something like positive pressure.⁴ It seems fairly clear that the Directors' policy of rationing private credit did not meet with the sympathetic understanding of the Government.

In Parliament Fox and Sheridan, concerned more to terminate the war than to consider questions of its finance, mischievously suggested that the Bank had not contracted discounts enough.⁵ Samuel Hoare apparently understood but the main body of comment was decidedly critical and from interested parties virulently hostile.⁶ The Bank received some understanding from the Lords Committee on Suspension who stated that although "persons examined had expressed strong opinions on rationing" they did "not mean to decide whether the Bank Directors might not have solid reasons for their conduct" and refrained from "conveying any opinion on this doubtful and delicate subject."⁷ Less reticent, the Commons Committee claimed that "diminished accommodation to the public at a time when the circumstances seemed to require an increase of it must necessarily have been an additional embarrassment in commercial and pecuniary transactions."⁸ Surprisingly the Bullion Committee failed to mention the credit limitation in 1796 and confined its comments to the internal drain and crisis of February 1797 and castigated the Bank for not having had "courage to extend instead of restricting its accommodation

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1. Cttee. on Suspension, 1797, p.27 et seq.; Bank Minutes 1795-97 passim; Parly. Hist., vol. 33, pp. 295-323; Acres, The Bank of England, vol. 1, pp.261-270 and Macleod, Theory of Banking, pp.79-89.
 2. Morning Chronicle, 7 April and 21 October 1796; Boyd, 'Letter to Pitt', 1811, p.101 and Parly. Hist., vol. 33, pp.334-335.
 3. Parly. Hist., vol. 33, p.329.
 4. Parly. Hist., vol. 33, pp.330-32 and 358.
 5. Parly. Hist., vol. 33, pp. 36 and 44.
 6. Cttee. on Suspension, 1797, p.180.
 7. Lords Cttee. on Suspension, 1797, p.382.
 8. Cttee. on Suspension, 1797, p.142.

at that point.¹ Henry Thornton's evidence before both Committees of Secrecy contained a number of remarks by no means sympathetic to the Bank. Circulation, he claimed, had been held below the needs of trade, rates of interest on Government paper had risen and confidence impaired by credit limitation. More specifically Thornton contended, "Unless it is supposed that a considerable diminution of mercantile transactions takes place in time of war, it appears to me necessary that the Bank should increase their discounts."² While Sir John Sinclair, learning in September 1796, "with infinite regret of the very general distress which prevails in the commercial world" because of the "insufficiency of circulating medium" advised the Directors to increase the capital of the Bank and issue notes of low denomination.³ In the House of Commons the Directors were attacked by the City members.⁴ Pamphleteers accused them of wishing to bring about a Suspension of Cash Payments and even their own shareholders protested against rationing discounts for "respectable" parties.⁵

Criticism did not, moreover, remain purely negative. A number of schemes were mooted to establish new and rival credit institutions to supply the deficiency in credit. Henry Thornton had had conversations with merchants and bankers on the subject of a "new circulating medium" and knew that "some projects of this sort were in fact and have been in the minds of several bankers."⁶ One of the more famous of these projects had been suggested at a meeting of City Merchants on 4 April 1796, when resolutions were passed castigating the Bank of England for proceeding with policies "injurious to commerce" and "threatening calamities."⁷ The merchants set up a committee to devise a plan for augmenting the circulating medium. This committee included some prominent city men. Walter Boyd, the loan contractor, Sir James Sanderson, the Southwark banker, Julius Angerstein of Lloyds, two Aldermen and Sir Stephen Lushington, M.P.⁸ Their report averts to the fact that instructions confined them, "on this occasion to such measures as shall not infringe the privilege of exclusive banking granted to the Bank of England" and goes on to suggest the establishment of a credit board authorised to issue promissory notes

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1. Canner, Paper Pound, p.59.
 2. Thornton, Paper Credit, 1802, pp.280-283, 290-292, 299-302.
 3. Sinclair, 'Letters to the Bank of England', 1796, pp.13 and 16 and Parly. Hist., vol. 32, p.1540.
 4. Parly. Hist., vol. 33, pp.334 and 770-778.
 5. Boyd, 'Letter to Pitt', 1811, p.69; Anon, 'Letter to Pitt', 1796, pp.5-12 and Clapham, The Bank, vol. 1, pp.269-270.
 6. Thornton, 1802, Paper Credit, pp.280-282.
 7. The resolutions and an account of the Committee's deliberations are published as an Appdx. B of Boyd, 'Letter to Pitt', 1811.
 8. Ibid, p.90 and Tooke, History of Prices, vol. 1, p.200.

payable at six months date.¹ Boyd made very strong efforts to involve Pitt but explained the idea was "merely to bring the Directors to their senses."² The Chancellor remained aloof but met the Committee and discussed the whole scheme with them.³ Unfortunately there are no records of what transpired at that meeting.⁴ Certainly nothing positive came out of it for at the end of October Pitt again received a deputation of London merchants protesting against the general shortage of credit.⁵ Late in that year when plans were still being drawn up to alleviate the credit shortage, the Morning Chronicle noted that "every schemer has a plan for supplying the public with a circulating medium and for re-establishing a just proportion between the business done in the kingdom and the representative signs necessary for making payments."⁶ Perhaps the editor had read Jeremy Bentham's "Proposal for the Circulation of a New Species of Paper Currency" which appeared about that time.⁷ In November a plan for "An Original Security Bank" was published, and later, Sir William Pulteney M.P. proposed that Parliament establish another joint stock bank in London to rival the Bank of England.⁸

Discount limitation in 1796 appears to have aroused hostility strong enough to bring the Bank of England's monopoly under sustained and positive attack. Henry Thornton's contention that the mercantile world would not have allowed a further and severe diminution of credit to take place "without substituting a circulating medium of their own" appears to be true.⁹

Despite allegations to the contrary, the high profits made by the Bank of England during the wars seem to have been an incidental and embarrassing concomitant of the Bank's rules for discounting. Furthermore, few precedents existed to guide the formation of a suitable credit policy for the war years: the one relevant experiment in credit control between 1795-97 aroused nothing but criticism and hostility from all sides. By far the most comfortable course of action for the Directors to pursue after 1797 was one of support for both the Government and the private sector alike.

Furthermore, a consideration of relations between the Bank and the Treasury suggests that a significant part of the explanation why the Directors met all demands from the private sector from 1797 to 1815 is because they received full

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1. Boyd, 'Letter to Pitt', 1811, pp. 96-98.
 2. Pitt Papers, vol. 115 - Boyd, dd.5.3.96, 4.4.96, 14.4.96, 15.4.96, 26.2.97 and 15.3.97.
 3. Boyd, 'Letter to Pitt', 1811, p.101.
 4. Pitt however remained interested in the problem of a new circulating medium even after Suspension - Pitt Papers, vol. 273 - Western, dd.11.10.97. There is also in this volume a proposal to abolish the Statute on Usury and to regulate country bankers.
 5. Morning Chronicle, 21 October, 1796.
 6. Ibid, 1 December 1796.
 7. Stark, Bentham's Economic Writings, vol. 2, p.151.

encouragement from the Government to the point where they became in a meaningful sense agents of public policy.

This view is not conventional largely because Directors of the Bank often asserted and statesmen assented to the claim that the Bank remained independent of the Government in the regulation of commercial credit.¹ But there is no need to accept it at face value. If by simple decree the Government could suspend specie payments, it surely fell within its powers to instruct the Directors about loans to the private sector. Even if the Government refrained from the direct interposition of political authority its influence for or against the policy of credit expansion must have been crucial. The evidence shows that in several ways the Government did exert fairly strong pressure on the Directors, but always in an inflationary direction. In the regulation of commercial credit the policies of the Bank and the Treasury were one and the same. Support for this view will be derived from three sources: first from a brief review of relations between the Government and the Bank, secondly from a study of the Government's own positive help for private credit on several occasions during the war years and finally it can be seen in the Government's persistent support for the credit policies pursued by the Directors.

During the commercial crisis of 1793 the Government urged the Directors to restore confidence by lending freely.² Again during a period of credit stringency from 1795-97 the Treasury arranged its borrowing operations in order to lessen the competition with the private sector for short term funds. Throughout these difficult years Pitt remained worried about the adverse effects discount rationing by the Bank could have on trade and production and through them to tax revenue. He never appreciated the Directors' view that his financial policies entailed credit contraction to merchants and industrialists.³ Moreover, both he and the Directors were clearly concerned in case the contraction of credit by the Bank occasioned a severe economic crisis of the kind witnessed in 1793. In fact Pitt told the Commons Committee that if the circulation "was contracted suddenly and to an amount which bore a very considerable proportion to the whole circulation that the shock

8. Cope, 'The Original Security Bank', pp.50-55 and Parly. Hist., vol.33, pp.370-393. The Plan even reached Lord Liverpool - Liverpool Papers, vol.38377.

9. Thornton, Paper Credit, 1802, p.282.

1. Parly. Hist., vol. 33, pp.331-332 and 358; Parly. Debs., vol.19, p.953 and Cannan, Paper Pound, p.68.

2. Hayek, 'Introduction to Thornton, Paper Credit', p.39 and MacCleod, Theory of Banking, p.70.

3. See pp. 86-88 and 112-137.

which it might give to mercantile transactions and the individual difficulties and distresses which might result from it might have a tendency to produce general alarm among monied men."¹ Giles, the Governor, agreed that any "severe restriction would have occasioned a convulsion and distress in the entire mercantile concerns of this kingdom."² Immediately after the Order in Council of February 1797 Pitt recommended a "prudent increase of bank notes to maintain the activity of our internal traffic and the success of our external designs." The Prime Minister felt that "the only limits that ought to circumscribe the accommodation of the Bank were the extent and scale of commerce."³ For the Directors his advice could be interpreted as Government approval for credit policies most congenial to their peace of mind and profits for their shareholders, namely that all mercantile bills arising out of productive transactions, payable at short intervals, should be discounted by the Bank. Certainly, Pitt's statements in 1797 gave early expression to a view tenaciously held by the Directors before the Bullion Committee thirteen years later that the Bank should regulate credit according to the "real needs of commerce", measured by them as the demand for discounts of first class bills of exchange at a rate of interest of 5%.⁴

As time went on the Government came to appreciate the advantages of suspended specie payments not merely for the finance of war but also for the support it gave to the production and trade. Liquidity crises, always a possibility in wartime could be restrained by the Bank's acting as lender of last resort and the expansion of credit encouraged foreign trade upon which a large proportion of tax revenue depended.⁵ The arguments employed by Addington to continue the Suspension in April 1802 illustrate well the Government's attitude towards the regulation of commercial credit. Pointing to the unfavourable rate of exchange and stagnant exports the Chancellor informed the House "The entire command which we have experienced for sometime past over all foreign markets cannot be expected to continue in the same degree. Competition must exist and it is important that at a period of commencing that competition every facility should be given to the merchants of this country. By continuing the restriction for some time longer the accommodation afforded to merchants by the Bank with respect to discounts will continue."⁶ On this occasion even opposition speakers supported the Chancellor's

1. Cttee. on Suspension, 1797, p.67 and Thornton, Paper Credit, 1802, p.48.

2. Lords Cttee. on Suspension, 1797, p.263.

3. Parly. Hist., vol. 33, pp.343 and 356 and Cttee. on Suspension, 1797, pp.61 and 67.

4. Bullion Cttee., 1810, pp.89 and 97 and Horsefield, 'Duties of a Banker', pp. 14-15.

5. Rose, 'Brief Examination', 1799, p.69.

6. Parly. Hist., vol. 36, p.541 and see Parly. Debs., vol. 2, p.346.

views that the resumption of cash payments might be disadvantageous for the nation's commerce.¹

On several occasions during the war years the Government itself made loans to businessmen in order to support and stabilise economic activity. Its unusual interventions again show that the Government both before and after the Suspension opposed any kind of deflationary credit policy.

A severe commercial depression afflicted the economy in the early months of 1793. An unusual number of banks failed in 1793 which undoubtedly did a great deal to intensify the widespread loss of confidence and increased the number of bankruptcies.² Even houses of "great solidity" did not escape and the discredit of paper currency led to "great difficulty in procuring the usual advantages on bills of exchange, particularly those of a long date." Many merchants held goods which they could not sell and when orders to manufacturers were interrupted unemployment increased.³

Despite Government requests the Bank refused to make advances on long dated bills. Thus in April the Select Committee on Commercial Credit urged the Government to intervene "to prevent consequences of the most serious national importance."⁴ Earlier Henry Thornton had visited Pitt and Sir John Sinclair had written to Henry Dundas urging the Government to come forward and relieve the stagnation of commercial credit. Dundas in reply told Sinclair that the Government had already been paying "great attention to the subject" but would be pleased to receive specific proposals from him.⁵ Sinclair then sent a plan to Pitt which suggested the issue of Exchequer Bills to the merchants on the security of their goods.⁶ Huskisson was also very anxious for the Government to do something positive.⁷ At the end of the month this same plan was put forward in the House of Commons by the Select Committee.⁸ Two members of the Cabinet opposed the idea of public aid and Fox felt it "unsatisfactory to see the Government obliged to take up what the Bank of England would not touch."⁹ Pitt replied that "the Bank had declined interfering, the species of security to be given was not such as the Bank

1. Parly. Hist., vol.36, pp.542-48.

2. Chalmers, Domestic Economy, 1812, p.223 and Pressnell, Country Banking, Appdx.20.

3. Gtee. on Commercial Credit, 1793, pp.126 and 127.

4. Ibid, p.129.

5. Pitt Papers, vol.183 dd. March 1793 and Sinclair's Correspondence, vol.2, Appdx.1.

6. Pitt Papers, vol. 178, undated memo from Sinclair and Sinclair's Correspondence, vol.1, pp.87 and 320.

7. Melville, Huskisson Papers, pp.19-21.

8. Parly. Hist., vol.30, p.739.

9. Parly.Hist., vol.30, p.762 and Parly. Debs., vol.19, pp.530 and 534.

had been accustomed to receive."¹ Parliament accordingly authorised the Government to lend up to £5 million to merchants on the security of goods deposited in warehouses at the principal ports. Eventually only £2 millions of exchequer bills were issued in response to 238 applications for aid.² Whatever doubts may have existed about the propriety of Government intervention, subsequently most commentators praised the measure. George Chalmers wrote, "The issuing of Exchequer bills was an uncommon but very salutary measure. The whole nation was supported and soothed."³ Sir William Pulteney told Sinclair that failures had been stopped "even by bringing in the bill."⁴ McPherson described it as working "like a charm" and Baring criticised the Bank for its reticence in coming forward but waxed enthusiastic about the Government's aid.⁵ Even bullionists, otherwise so overtly critical of Governmental credit policies, liked the measure.⁶

By the summer of 1793 the statistics for monthly bankruptcies exhibit a marked decline and by the end of the year public faith in paper credit seemed restored. It is not surprising to find the Government gained confidence in the expedient of issuing Exchequer bills as a remedy for economic crises. In May 1793 it gave the Liverpool Corporation permission to issue their own negotiable notes as loans to the merchants of that port.⁷ In June 1795, the Government obtained Parliament's permission to issue up to £1½ million of Exchequer bills to relieve merchants who had sustained losses from insurrections at Grenada and Saint Vincent.⁸ Again Fox objected but Pitt expatiated on the salutary effects of supporting the merchants with public credit.⁹ On this occasion just under £1 million was loaned to the West India Merchants, repayable in three equal instalments over 2 years, but the following year the Government loaned a further £600,900 under the same Act and prolonged the period for repayment until July 1800.¹⁰ Apparently more public loans were made to merchants trading to the West Indies in 1797, after planters and merchants had applied to Sir John Sinclair to intercede on their behalf. Sinclair wrote to Perceval who persuaded the Committee on Trade to grant the necessary aid.¹¹

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1. Parly. Hist., vol.30, p.760 and Adolphus, History, vol.5, pp.400-401.
 2. Exch.E.406/166; Pitt Papers, vol.302 and Reports of the Commissioners for Issuing Exchequer Bills, 1793, p.2.
 3. Chalmers, Domestic Economy, 1812, pp.320 and 236-237.
 4. Sinclair's Correspondence, vol.1, p.369.
 5. McPherson, Annals, 1805, p.269 and Baring, 'Observations on the Bank', 1797, p.21.
 6. Cannan, Paper Pound, p.59.
 7. Checkland, 'West India versus American Traders', p.147 and Pieton, Memorials of Liverpool, pp.268-69 and 33 G.3 c.31.
 8. Commons Jnl., vol.50, p.591; McPherson, Annals, 1805, p.350 and Checkland, 'West India versus American Traders', p.147.
 9. New Annual Register, 1795, pp.135-136.
 10. McPherson, Annals, 1805, p.316.
 11. Sinclair's Correspondence, vol.1., p.114.

In the autumn of 1799 the failure of mercantile houses at Hamburg precipitated a minor commercial crisis. The Monthly Magazine put the speculation in sugar and coffee as the cause of widespread failure.¹ In October it noted that the Bank had agreed to give assistance to those British merchants connected with insolvent houses abroad and hoped it would be "sufficient to enable such Houses as are really solvent and respectable to overcome their temporary embarrassments."² Whatever the Bank did to alleviate the position, Parliament also took a hand and appointed Commissioners to issue up to £500,000 in Exchequer Bills to the merchants in Liverpool and Lancaster.³

Although Addington refused requests from traders in 1803, public money was loaned to West India merchants at Liverpool in 1807 and the East India and Hudson Bay Companies in 1808.⁴ No further assistance appears to have been granted by the Government to the commercial community until the spring of 1811.

From the summer of 1810 to the spring of 1812 the British economy passed through the most serious economic crisis of the war.⁵ In March 1811 the Chancellor of the Exchequer referred to numerous appeals for assistance and moved for the appointment of a Select Committee to inform Parliament on the extent of distress and to suggest a remedy.⁶ A week later the Committee reported as to the causes of the crisis and recommended the Government should once again issue Exchequer bills to support commercial credit.⁷ The causes of the crisis which emanated basically from the closing of markets in Europe and the Americas to British trade have been analysed elsewhere and Garden, Chairman of the Glasgow Chamber of Commerce, traced for the Committee the connection between the export trades, manufactures and the banks. As he observed it, exporters, excluded from accustomed markets had not been able to pay manufacturers when their bills fell and the banks having discounted or advanced money on mercantile bills could not extend further credit. This produced a want of confidence which occasioned still more distress.⁸ Both Garden and the Chancellor of the Exchequer agreed that production should go on even on a limited scale until markets abroad reopened again.⁹ Perceval "had no

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1. Gayer, *Growth and Fluctuations*, vol. 1, pp.34 and 53; *Monthly Mag.*, 1799, p.762 and Checkland, 'West India versus American Traders', pp.147-148.
 2. *Monthly Mag.*, October 1799, p.843.
 3. *Commons Jnl.*, vol.55, p.752; Ficton, *Memorials of Liverpool*, pp.285-286; Ashton, *Economic Fluctuations*, p.136 and Tooke, *History of Prices*, vol.1, pp.233-236.
 4. *Parly. Debs.*, vol.2, pp.346-347; vol.10, pp.712-713; vol.11, p.68 and vol.19, p.530.
 5. Gayer, *Growth and Fluctuations*, vol.1, p.59 and vol.2, pp.541, 549 and 569 and Crouzet, *L'Economie Britannique*, vol.2, part 4.
 6. *Parly. Debs.*, vol.19, p.123.
 7. *Ctee. on Commercial Credit*, 1811, pp. 370-371.
 8. *Ibid.*, pp. 367-369 and see pp. 303-307.
 9. *Ibid.*, pp. 367-369. and *Parly. Debs.*, vol.19, pp.330-331.

doubt that the ingenuity and exertions of the merchants and wants of consumers would ultimately find means to obviate in great degree the difficulties and disadvantages at present existing."¹ Samuel Whitbread and others felt temporary relief was merely putting off "the evil day" and did not foresee the prospect of European markets being reopened to British merchants in the near future.² Percival appeared prepared to take the risk and told Parliament, "The most that could happen was that it would leave the commerce of the country at the expiration of the twelve months in no better state than that in which it was at present."³ Despite vigorous opposition, Parliament agreed to follow the recommendations of the Select Committee and authorised the Government to issue up to £6 million of exchequer bills in support of commerce. It granted a longer period for repayment than at the outbreak of war and subsequently extended the period still further.⁴ On this occasion the issue of exchequer bills apparently did not play as large a part in alleviating the commercial crisis as the issue of 1793. Merchants took up less than a quarter of the authorised issue and relief from the economic crisis came with the reopening of European markets in 1813.⁵

On occasions of crisis during the wars with France, the Government intervened in support of the commercial community with loans. The first occasion, in 1793, was to restore confidence in paper credit. Between 1795 and 1797 it granted relief to merchants who sustained losses from warfare in the West Indies. In the autumn of 1799 a timely loan rescued Liverpool merchants from the effects of failures among their connections in Hamburg. Further loans were granted to merchants in 1807-08. Finally, during the spring of 1811, the Government again made credit available to British merchants and manufacturers who wished to hold goods while markets in Europe and the United States were artificially closed to them. Such assistance had not been given before in the 18th century.⁶ While public support for commerce appears pragmatic and ad hoc in character this series of interventions does indicate that the Government was not prepared to countenance widespread mercantile failures through a want of credit. Such actions had not been taken before in the 18th century and the Government's positive help for the private sector could certainly be interpreted by the Bank as being favourable to a liberal credit policy in the case of its own discounts.

1. Parly. Debs., vol. 19, p.331.

2. Ibid, pp. 495 and 597 and Dropmore Papers, vol. 10, pp.126-127.

3. Ibid, p.331,

4. 51 G.3. c.15; 52 G.3 c.137; Parly. Debs., vol.22, pp.432 and 436 and vol.23, pp. 772-773.

5. Annual Register, 1811, p.24; Tooke, History of Prices, vol. 1, p.317; Monthly Mag, 1811, p.100; Clapham, The Bank, vol. 2, pp.34-35 and Report of the Commissioners for Issuing Exchequer Bills, 1811.

6. Sinclair, History of the Public Revenue, 1802, p.287.

Finally, it can be shown that the criteria used by the Directors to regulate credit for the private sector were not only accepted by the Government as appropriate to the needs of war but received strong official backing whenever they came under attack. To critics alarmed at the rapid rise in the circulation of Bank notes, Ministers (from Pitt in 1797 to Hawkesbury and Addington in 1803 and to Perceval in 1811) insisted that the increased trade and production required the extended circulation. Furthermore, they categorically rejected the recommendation that the Bank should regulate credit by averting to the state of the foreign exchange and the price of gold. For bullionists, of course, a rise in the market above the mint price of gold and a depreciation in the exchange provided presumptive evidence of excessive credit creation and reasons for the contraction of liabilities by the Bank of England. Although members of the Government never went as far as the Directors to deny all connection between the money supply and the price of gold or the rate of exchange, for reasons of war propaganda, they resisted the dangerous suggestion that the currency suffered from depreciation and repeatedly insisted the elevated prices of specie and foreign currency could be explained almost entirely by autonomous movements in the balance of payments.

As early as 1803 Hawkesbury refused to accept King's analysis "as to the causes of the unfavourable state of the exchange. It was by no means to be attributed to the issue of paper from the Bank but in a greater degree to the immense sums which were necessarily sent out of the country at the time for the payment of subsidies, and in consequence of the alarming scarcity which then prevailed."¹ In his speech on the Irish Bank Restriction Bill in February of 1804, Castlereagh for the Government argued that depreciated paper was partly a consequence of the appreciated value of gold, at that time scarce in Ireland from widespread hoarding.²

During the bullion controversy no Minister talked as foolishly as the Governor of the Bank who could not see, "how the amount of Bank notes issued can operate upon the price of bullion or the state of the exchange and therefore I am individually of opinion that the price of bullion or the state of the exchanges can never be a reason for lessening the amount of Bank notes."³ Both Castlereagh and the Prime Minister admitted that the rate of exchange could appreciate or prices might be lower if credit were restricted, but argued on pragmatic grounds against the adoption of such a policy during the war.⁴ Ross and Vansittart appear

1. Parly. Debs., vol. 1, pp. 1675-76. King's views are in Fortescue, *Speeches and Writings of King*, pp. 210-214.
 2. Parly. Debs., vol. 1, p. 1091.
 3. *Bullion Cttee.*, 1810, pp. 96-97.
 4. Parly. Debs., vol. 19, pp. 999, 1003 and 1071.

at first sight to have adopted the Bank's position but a careful reading of their speeches reveals that they aimed, and in fact succeeded, in proving there had been no discernable inverse relationship between changes in the value of notes issued by the Bank and the price of bullion or the rate of exchange.¹ Rose failed, however, to realise that his "summary of facts alone" (largely a survey of the country's balance of payments position) did not appear "most completely to contradict the experience on which the Bullion Committee profess to rely, in support of their opinion, that increase of bank paper has raised the price of gold and lowered the exchange."² Nor did the facts fully support Vansittart's fifteenth resolution. "That the situation of this kingdom in respect of its political and commercial relations with foreign countries, as above stated, is sufficient without any change in the internal value of its currency, to account for the unfavourable state of the foreign exchanges, and for the high price of bullion."³ As Viner pointed out, the money supply certainly exerted some positive influence and a strong enough contraction of the money supply even in the highly unusual circumstance of 1810-12 could have lowered the price of gold and appreciated the exchange.⁴

By far the most able and lucid exposition of the Government's position came from Castlereagh. "The whole case of the Bullion Committee" for credit restriction he said, "is built upon the assumption that we live in normal times and that we may conduct ourselves upon accustomed principles. The Committee have laid it down that the Bank ought to be guided in the amount of their issues by the state of the exchanges and the price of gold; this must mean that they are to counteract the influence of the exchanges by this means. If this is to be done, the quantity of circulating medium is not to depend on the internal wants of the country; it is not to be kept up to its accustomed amount, with such additions from time to time as the augmented extent of our transactions may require; but it is to be regulated with reference to our external intercourse, and the exchanges influenced by the power of the enemy." Thus the Bank would be required to "contract its issues to such an extent as to give an artificial value to the paper currency, from its scarcity, equivalent to the advance of price on gold. This may check the gold from going out of the kingdom, but at what sacrifice? at the risk of convulsion, we should remember what has been the lot of the country under the Restriction Bill, and not

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1. Parly. Debs., vol. 19, pp. 834 and 839.
 2. Ibid, p.839.
 3. Ibid, vol. 20, p.73.
 4. Viner, *Theories*, p.145.

throw unmerited odium on a system which carried the empire through such mighty difficulties. We should never forget, that this measure, by supplying the country with a circulating medium of undoubted credit, proportioned to its wants has, for the first time, solved the problem of reconciling national prosperity with a state of war."¹

Not only did the Government take roughly the same position as the Bank during the bullion controversy, Ministers repeatedly defended the conduct of the Directors against radical critics who accused them of profiteering.² In 1803 the Foreign Secretary complimented the Directors as "a body who far from meriting any reflection upon their conduct had uniformly discharged the trusts reposed in them with prudence, caution and circumspection", and George Rose described them in 1811 as "gentlemen acting under severe responsibility who have no personal interest to sway their judgement."³

Finally, in the summer of 1811, the Government reposed further confidence in the Directors by making Bank notes, de facto, legal tender.⁴ For nearly fifteen years following the Suspension Bank notes remained the private debts of the Bank of England.⁵ In 1797 Pitt had resisted the suggestion that they should be made legal tender; the act of Suspension merely stipulated the Bank notes would be accepted by the Government in payment of taxes.⁶ Other creditors remained free to refuse payment in Bank notes and retained the legal right to enforce payment of debts in legal tender coin, but until 1811 there is only one recorded case of a claim for specie being enforced by the courts.⁷ From 1809 there was a sharp rise in the paper premium on gold coin and several speakers in the bullion debate mentioned the "trade in guineas" and the "double pricing" of commodities. Nevertheless Vansittart pushed forward his resolution, "That the promissory notes of the said Company" (the Bank of England) "have hitherto been and are at this time held in public estimation to be equivalent to the legal coin of the realm and generally accepted as such in all pecuniary transactions to which such coin is lawfully applicable."⁸ In the summer of 1811 Lord King exercised his legal right and tested this resolution by demanding payment of rents "in Bank notes of a sum sufficient to purchase the weight of standard gold requisite to discharge the rent."⁹ The implications of

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1. Parly. Debs., vol. 19, pp.986-1010 and speeches by Perceval and Vansittart, vol. 19, pp.895, 966-967 and 1069-72.
 2. Ibid, pp. 870 and 1076.
 3. Cited in Viner, Studies, p.167.
 4. The Bills making Bank of England notes de facto legal tender are careful not to use the term. 51 G.III, c.127 and 52. G.III. c.50.
 5. Coppieters, English Bank Note Circulation, p.35.
 6. Parly.Hist., vol.32, pp.1516,1528,1530,1539,1546, & 1567-68 and vol.33,pp.353-54.
 7. Fetter, 'Legal Tender', p.242 and Coppieters, English Bank Note Circulation,p.38.
 8. Parly.Debs., vol.20, p.70.
 9. Fetter, 'Legal Tender', pp.247-248.

King's action immediately became obvious to all. His Lordship had raised the possibility of widespread refusals on the part of creditors to accept Bank notes as payment for their claims. If this occurred the Bank's circulation would have to be restricted until the premium on gold coin disappeared and Bank notes became once more generally acceptable. But the Government refused to be intimidated by King's challenge and sponsored a bill which made Bank notes in everything but name legal tender. Stanhope's Act of July 1811 prohibited the payment of a premium on gold coins and suspended the legal right of creditors to the property of debtors who offered notes instead of gold coin.¹

Conclusion

During the wars with France the monetary policy of the central authorities permitted and even encouraged a fairly rapid expansion in the money supply. Why the Treasury and the Bank persisted with a policy, regarded by its critics as inimical to the economic interests of the country, is a question often answered out of historical context by writers interested more in economic thought than in the process of policy formation at the beginning of the 19th century. That Statesmen and Directors proceeded from false assumptions to wrong conclusions cannot be too strongly denied, although after Keynes few modern economists would be as prepared as their classical and neo-classical predecessors to dismiss the official logic as heretical stupidity. But the question really demands an answer outside the framework of controversies about economic theory.

Variations in the money supply were brought about by the borrowing operations of the Treasury (largely uncontrolled by the Bank of England) and through the extension of Bank credit to the private sector. After the experience of 1793-97, it is clear that the Government was not prepared to conduct the finance of war within the constraints imposed by convertibility. The Government demanded unstinted support from the Bank for its foreign and financial policies and statesmen tended to regard suggestions for the resumption of specie payments in wartime as unpatriotic.

As for the extension of Bank credit to the private sector, the Government refused to exercise direct control over the Directors, who proceeded to meet all demands made upon them for loans provided borrowers could meet the Bank's

1. Coppieters, *English Bank Note Circulation*, pp.40-44; Fetter, 'Legal Tender', pp.245-246 and *Parly. Debs.*, vol. 20, pp.828-829.

traditional criteria for credit-worthiness. Their rules for discounting bills of exchange were hardly modified - the Bank continued to insist on first class security, bills of large amount and of short maturity for the purposes of industry and trade. By maintaining these rules, and a rate of discount of 5%, the Directors claimed the Bank could not create an excessive supply of credit and that it met the real needs of the economy for finance.

Radical critics of the Bank were disposed to argue that the Directors sought only to serve the interests of their shareholders and forced notes into circulation. Within the Corporation shareholders accused them of being too attentive to the public interest to the detriment of profits. Although the Bank made high profits during the war years, the charge of profiteering is an altogether simple minded explanation for the policy of credit expansion. Moreover, temperate critics like Ricardo and Thornton were not moved to make the charge, nor did the Bullion Committee, otherwise so critical of the Bank.

A more convincing explanation of the Bank's policy is that only twice before the outbreak of the wars with France, had the Bank ever rationed credit to the London commercial community. Throughout the 18th century, in peace and war, through successive commercial crises, the Bank of England consistently discounted all first class bills of exchange of the required security at 5%. But in 1793, when gold reserves fell below the level regarded as critical, the Directors failed to satisfy the sudden increased demand for discounts occasioned by a liquidity crisis at the outbreak of war. Throughout 1796 and the early months of 1797 the Bank's gold reserve again dropped to a level considered unsafe by the Directors and they deliberately and explicitly rationed discounts and thereby occasioned a general contraction of credit throughout the economy. Credit restriction in 1793 and 1796-97 incurred the tacit disapproval of the Government who had urged the Directors to help the commercial community. Parliamentary Committees were overtly critical of its policies and some London businessmen hostile enough to threaten the establishment of a rival institution. Both the traditional and most comfortable course for the Directors to follow after the Suspension consisted in meeting the demands made upon them for credit.

This policy which involved an unprecedented expansion of commercial discounts received the support of His Majesty's Government, a support important and positive enough to make it clear that the credit policy of the Government and the Bank of England was one and the same. The Suspension which gave the Bank the opportunity to create credit was a Government measure. True Pitt introduced it primarily for the exigencies of public finance, but the Government maintained Suspension in a

form which gave the Bank maximum encouragement to expand its liabilities to the private sector. Next it prolonged specie payments until the end of the war, and after the Peace of Amiens the Directors knew the resumption of specie payments would not be suddenly imposed on the Bank. Government policy removed, not only the traditional check of convertibility on excessive note issues by the Bank, but also its need to maintain even a minimum gold reserve during the war years.

Furthermore, the Government, sensible of the advantages derived by the Treasury in the form of tax receipts and lower interest rates, from liberal accommodation to the private sector, gave advice and exerted its influence in a direction which fitted in with the predilections of the Directors. Pitt had been critical of credit restriction in 1793 and 1796 and advised the Directors to help merchants in 1797. In 1802 Addington refrained from the immediate resumption of cash payments in case deflation had adverse effects on trade. When their credit policies were under sharp attacks from bullionists the Government rejected the idea that the Bank should regulate issues by averting to the foreign exchange or the price of gold. Castlereagh, Rose and the Prime Minister all claimed that the exigencies of commercial warfare required a liberal credit policy. In the House of Commons Statesmen repeatedly defended the Directors against the charge of profiteering. Every opportunity was taken to indicate that the Directors had the full confidence of the Government. In December of 1811 the Liverpool Administration stretched confidence to the extent of making the notes of a 'private company' in all but name, legal tender of the realm. On five occasions during the wars the Government itself made substantial loans to the commercial community in the form of Exchequer bills; indicating again that Governmental policy was that money supply should be expanded not only to support the war needs of the Government, but also to meet the requirements of the private sector.

During the period 1793-1815, the opposition to the Government's monetary policy was more coherent, sustained and better organised than opposition to any other aspect of war finance. Why it failed even to modify official policy is an interesting question. First, it should be observed that the Government suspended specie payments in 1797 in difficult circumstances and as a temporary measure. After the country showed itself fully capable of managing its economic affairs with an inconvertible currency, the maintenance of Suspension, as indispensably necessary for the finance of war, muted criticism. Opposition emerged only when the price of gold or the rate of exchange suggested that the creation of credit had become "excessive". But in 1799-1801, during the period of bad harvests, the attacks of

Boyd and his followers hardly reached Governmental circles and in 1802-04 the Cabinet refused to treat the views of Lord King with any real seriousness.

Not until twelve years after the Suspension did the Government face opposition which could not be ignored and between 1809-12 it resisted a long and sustained attack from the bullionists. Their failure to exercise any noticeable impact upon what was potentially an inflationary policy can perhaps be put down to the somewhat rigid stand bullionists took on the causes of depreciation and their rather extreme recommendation to resume cash payments within two years. For several reasons, unconnected with the usual explanation of theoretical error, the Government reacted violently both to the Bullion Committee's recommendations and the adverse publicity the whole controversy had upon internal and external confidence in the pound.

Although the bullion debate raised matters of profound theoretical importance it cannot really be maintained that the views of either side really helped to solve the concrete policy problem of how the Government could finance a global war, unhampered by the constraints of convertibility and at the same time avoid the dangers of rapid inflation. By focussing on the issue of depreciation, as defined by the bullionists, both sides failed to discuss techniques and criteria for the regulation of the money supply in any given situation. In fact the Bullion Committee rejected any such suggestion in these words. "Your Committee have understood that remedies or palliatives of a different nature, have been projected; such, as compulsory limitation of the amount of Bank advances and discounts, during the continuance of suspension. But, in the judgement of your Committee, such indirect schemes for palliating the possible evils resulting from the suspension of cash payments would prove wholly inadequate for that purpose, because the necessary proportion could never be adjusted, and, if once fixed, might aggravate very much the inconveniences of temporary pressure, and even if their efficacy could be made to appear, they would be objectionable as a most hurtful and improper interference with the rights of the commercial property."¹ Their failure could have been serious as the war continued because the methods adopted by the Treasury to borrow money became increasingly inflationary and the Bank failed either to check the demands of the Chancellor or to moderate their impact by some contraction of credit to the private sector. Fortunately the war ended in 1815. Finally the bullionists never really met the Chancellor's challenge when he asked his critics: "What would be the effect in this country under all the circumstances of the present times, if the Bank of England were to withdraw its paper, paper which it had been said formed the whole circulation of the country? Would it not ruin the manufacturers? Would it

1. Canning, Paper Pound, p.68.

not destroy agriculture? Would it not dry all those sources of wealth which enabled this country to make exertions proportioned to the exigencies of the awful period in which we lived? And for what object was Parliament to incur the risk of all these dreadful calamities? Why, for the purpose of making an experiment to bring the rate of exchange nearer to par?"¹ Hyperbole no doubt, but the Minister very properly demanded an examination of the advantages and disadvantages of the policy and to that subject we now turn.

1. Parly. Debs., vol. 19, pp.966-67 and 1072.

AN APPRAISAL OF DEBT MANAGEMENT.Introduction

During and since the French wars, the Statesmen and officials who managed the Government's borrowing operations have had their efforts subjected to a great deal of criticism. Much of it consists of ill-informed assertions which often degenerate into political vituperation. This can be ignored, as can indeed almost all arguments by comparison or analogy. For example, Chancellors of the day were often condemned or praised for borrowing money at higher or lower rates of interest than their predecessors in charge of the finances in other wars. Since even the most capable of Chancellors could exercise only a marginal influence on the price obtained for bonds, (the rate of interest being determined on the whole by factors outside the control of the Treasury), comparisons between the cost of money in one war and another indicate very little about the efficiency of debt management.

Perhaps the most extensive and persistent discussion of debt management during the war years concerned the size of the debt itself. On one side of the controversy are arraigned the prophets of woe, many of whom like Tom Paine, Cobbett and other radicals, opposed the war altogether. Many more disliked the whole system of funded borrowing because it raised the power and affluence of the Bank of England, the Stock Exchange and loan contractors. Their antipathy is really to the City of London. In general this body of opinion, appalled by the rapid accumulation of the national debt, the size of the loans and the mounting burden of interest payments predicted ruin, national bankruptcy, the collapse of the whole financial system and other dire consequences unless the Government ceased borrowing altogether. The more positive, combined their gloomy forecasts with recommendations, not as one might expect to finance the war with taxes, but with implausible schemes for the immediate redemption of a large portion of the

debt.¹

On the other side of the controversy supporters of the Government, some no doubt handsomely paid by the Treasury for their efforts, attempted in print and in the House of Commons to counteract the dangerous talk of potential financial chaos. Their arguments were more telling because substantially correct. As they pointed out, the nominal capital of the debt really indicates very little at all and for proofs of the country's ability to meet the demands made by the Government for loans men needed to look to the nation's resources and production. Usually they coupled this injunction with as many statistics as they could muster to demonstrate that trade, industry and agriculture all flourished and that incomes had risen since the onset of war. As supporters of the Government they were moreover not slow to observe that radicals, by their propaganda, hoped to bring about the downfall of the financial system they so ominously predicted, but they rejoindered that the British system, which rested upon consent, could not collapse as long as the Government continued to abide by the rules and conventions for borrowing money.²

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1. The references for these general statements can be found in the speeches of people like Fox, Tierney and Sheridan before the House of Commons and Lauderdale and King before the House of Lords. Outside Parliament the arguments can be found in that favoured 18th century medium of communication, the pamphlet. At the Goldsmiths Library of the University of London are literally hundreds of pamphlets on the themes outlined above. I will cite a selection of the more famous. See Anon, 'Proofs of Ruin', 1795; Paine, 'Decline and Fall', 1796; Morgan, 'Facts', 1796; Martin, 'A Letter', 1796; Morgan, 'An Appeal', 1797; Anon, 'Observations on the National Debt', 1797; Anon, 'Two Letters Addressed to a British Merchant', 1797; Anon, 'Political Salvation of G.B.', 1796; Lauderdale, 'A Letter', 1798 and 'Present Measures', 1798; Anon, 'A Proposal for Liquidating 66.6 million of the 3%'s', 1798; Bird, 'Proposals for Paying off the National Debt', 1799; Morgan, 'A Comparative View', 1801 and Anon, 'Essay on the Funding System', 1803.
 2. Nearly every budget speech opened with a statement by the Chancellor that the country was in a flourishing state and possessed the resources to prosecute the war. Pamphlets from supporters of the Government to refute the critics' gloomy predictions are also numerous. See: Chalmers, 'Strictures on Paine', 1796; Playfair, 'A Real Statement', 1796; Broome, 'Observations on Paine', 1796; Smith, 'An Examination of Paine', 1796; Vansittart, 'An Inquiry', 1796; Wakefield, 'Observations on the Credit and Finances', 1797; Anon, 'Reflections on the Present State of G.B.', 1797; Anon, 'Tests of National Wealth', 1798; Charnock, 'A Letter on Finance', 1798; Anon, 'Tests of National Wealth', 1797; Wakefield, 'Facts', 1800; Anon, 'Financial Facts of the 18th Century', 1801; Courtenay, 'Present State of Finances', 1803; Harries, 'A Reply', 1803; Chalmers, 'An Estimate of the Strength of G.B.', 1804; Rose, 'Brief Examination', 1806; Vansittart, 'Substance of a Speech', 1809 and Parker, 'Theory of the National Debt', 1809.

Although the Government and its supporters undoubtedly had the better of this particular argument, the accumulation or size of the debt is largely irrelevant to an investigation of its management, and the voluminous controversy in the press, in pamphlets and in Parliament probably diverted critical attention away from a proper and useful scrutiny of day to day Treasury policies. Although the controversy is often lively, it is of very limited use to the student of public finance, because it takes place at the level of generalities and is often an argument for or against the war. The only legitimate way to understand and appraise the management of the debt between 1793 and 1815 is to place it firmly in its historical context. It is essential to bear in mind the constraints of the financial system, the difficulties of borrowing in wartime and the general aims of policy. During the war years the Government introduced several measures, including most important of all the Suspension of Cash Payments, designed to alter the legal and institutional framework of the money market in its favour. At the same time, operating within the environment, the Treasury also tried to take advantage of the limited number of opportunities open to it in order to borrow as cheaply as possible.

Given the financial system the Treasury could bring about marginal reductions in the cost of borrowing in four ways. First it could control the flow and composition of securities offered to the market in order to take advantage of variations in demand. Next it could stimulate competition. Thirdly, by pressing stocks of higher denomination on the market the Chancellor left the way open for conversion operations which diminished the cost of borrowing over the long run. Finally, the Government had the option of abandoning the Sinking Fund at the outbreak of war, which if taken would have reduced the total supply of bonds offered to the market.

The Flow of Securities

Before 1797 the Treasury was not in a position to take advantage of the possibilities for alternating between funded and unfunded borrowing, by selling bills whenever bond prices seemed depressed and funding bills whenever bond prices appreciated again. Under pressure from the Bank and anxious about the large and unpredictable accessions of military bills onto the market, Pitt was mainly concerned to contain the floating debt as much as possible. His funding operations over the years 1794-97 seem to be more a response to credit restriction by the Bank and the accumulating debt of the military departments, than a

considered technique of debt management.

After the Suspension, and with reforms to the format of the Navy bill and to the estimates submitted by the military services, the employment of unfunded borrowing became a real possibility. Yet between 1798 and 1807 the Treasury used it only to a limited extent and may have been over cautious in not marketing bills followed by funding operations as the way of forcing 4% and 5% stocks upon the market. Funding also possessed the merit of reducing the loan and a smaller loan generally stimulated competition in the capital market. From 1807-15 the technique of unfunded borrowing on the security of future revenue became an important part of the annual borrowing operations which included a loan, one or more funding operations and the mortgaging of future revenue in order to finance current expenditure through the issue of bills.

Some critics, appalled by the rapid accumulation of floating debt during the early and closing years of the war have argued that at times the Treasury pushed unfunded borrowing to excessive lengths.¹ Yet a large part of the increase in the unfunded debt can be attributed to presence of an English Army in Europe and the large scale issues of bills by the Army and Navy. Military expenditure, not included in the provisions made by Parliament for its finance, certainly complicated the task of debt management and formed no part of the Treasury plans for financing the war effort. Only after 1808 did the Treasury deliberately resort to bill finance on any significant scale. Even then it would be difficult to prove that the employment of unfunded borrowing over the latter years of the war occasioned any rise in the overall cost of borrowing; in fact the opposite seems more likely. The only valid case than can be made against unfunded borrowing is that it exacerbated the wartime inflation. Perhaps the Government might also be criticised for its failure to reform the estimating techniques employed by the services, techniques which complicated the Treasury's task of debt management and lead directly to wasteful expenditure.

To discern just how well the Treasury timed the release of securities to the capital market is by no means easy, largely because the question is concerned not simply with facts but involves an understanding of numerous predictions made by the Chancellor and his advisers between 1793 and 1815. In

1. Morgan, 'An Appeal', 1797, pp. 11-12, 16, 21, 31-33 and 42; Morgan, 'A Comparative View', 1801, pp. 40, 48, 49, 62 and 70; Senator, vol.16, pp.250-52; Parly. Debs., vol.2, p.144 and vol.22, pp.1203-04 and 1209 and James, State of the Nation, pp.20-21.

these highly unstable years the apparent failure ex post of a particular loan or funding operation cannot in all fairness be condemned if it can be attributed to factors the Treasury could neither control nor reasonably anticipate. Looked at in this light Pitt can be criticised severely for not delaying the loan of 1793 until after the commercial crisis and reprimanded for minor mistakes in 1796 and 1805. Petty failed to time the loan of 1806 to coincide with the payment of dividends in April, while Vansittart appears to have been guilty of three serious errors of judgement between 1813 and 1815, which transferred a great deal of money from taxpayers into the pockets of loan contractors and bondholders. This is not a lengthy catalogue of error and on the whole the Treasury appears to have regulated the flow of securities onto the market with proper attention to the public interest.

Competition

When it is observed that no less than 11 out of the 26 loans floated between 1793 and 1815 were not subject to competition tender it is perhaps easy to agree with those writers who have dismissed competition as "a mere facade" and to condemn the Treasury for not taking more advantage of one of the few methods available to it for raising the price of bonds sold to the market. But it is necessary to bear in mind that competition constituted only one among several alternative and conflicting ways open to the Treasury for affecting reductions in the cost of borrowing. For example, if the Chancellor opted to time the sale of bonds so that loans overlapped with each other or with funding operations, competition often ceased to be possible, but the public might well have gained more from successful timing than it lost from the absence of competition. Similarly it could pay the Chancellor or sacrifice competition for the advantages of selling bonds of 4% and 5% denomination or, if it seemed to him that the Government obtained a better bargain, by allowing contractors to combine for particular loans.

The Treasury could do little to insist upon competitive tenders when offered only a single bid or faced with determined collusion among loan contractors. Moreover, it did not pay to push competition to the point where contractors made losses and the entire capital market revised upwards its estimate of the risks involved in speculating in public securities. Yet Chancellors of the period, with the possible exception of Perceval (advised by Huskisson), still appear unduly conservative in experimenting with ways of stimulating competition

by such devices as dividing the loan, by strategic funding operations and perhaps by occasionally diverting revenues from the Sinking Fund in order to reduce the net supply of bonds marketed over the year. Nevertheless, on the evidence now available, not more than two of the eleven departures from competition during the French wars can be termed indefensible. Both occurred when Vansittart was in charge of negotiations in 1813 and 1814.

The Denomination of Bonds

Between 1793 and 1815 only a small proportion of the money borrowed by the Government came from the sale of bonds other than consols.¹ The advantage of selling bonds of higher denomination consisted in the opportunities it presented for affecting long term reductions in the interest bill through conversion operations. Already during the war years several writers rebuked the Treasury for marketing too many consols compared with other stocks.² After the war when bond values appreciated and when falling prices made interest payments on the national debt a greater real burden to taxpayers, this line of criticism, by then fully developed in the writings of McCulloch and other economists, became more widely understood and vehemently expressed.³ But before any support is given to the views typified by McCulloch it is essential to raise two basic qualifications. First, the range of possibilities open to the Treasury should be elucidated and secondly the precise advantages, both in the short and the long run, of marketing 4% and 5% bonds must be more clearly defined.

On the first point all the evidence outlined above suggests that possibilities for selling stocks other than consols were considerably more limited than the Treasury's critics ever allowed. As Parker correctly observed "contractors have uniformly opposed the funding of debt in stocks bearing a high rate of interest."⁴ They frequently resisted the Chancellor's attempts to float the loan in stocks of 4% or 5% denomination, and at negotiations for the loan of 1806 the contractors even persuaded the Chancellor to change his offer between different 3% stocks because they claimed 3% reduced were less marketable than

1. See Table 14.

2. Morgan, 'Facts', 1796, pp.15-17 and 'An Appeal', 1797, p.24; Anon, 'Political Salvation of G.B.', 1797, pp.73-74; Sinclair, History of the Revenue, 1802, vol.1 p.457; Elliot, 'Financial Remarks', 1807, p.23 and Hamilton, 'An Inquiry', 1812, pp.245, 246, 251 and 255.

3. Anon, 'Inquiries on National Debts', pp.75-79 and 83; Hopkins, Great Britain, pp.72, 74-76, 80, 90-91 and 161-162; McCulloch, Treatise on the Funding System, pp.448, 465 and 474; Ricards, 'Financial Policy of War', pp.32-35, 76, 79, 80 and 82 and Hargreaves, The National Debt, pp.97, 108, 109, 111 and 121.

4. Parker, 'Theory for Determining the Value of the National Debt', 1809, p.6.

consols.¹ On two occasions they displayed extreme reluctance to experiment with any new forms of public securities such as debentures which first Huskisson and later Vansittart attempted to sell.² Nor was their refusal simply a matter of conservatism. Throughout the war years between 60% and 70% of the national debt consisted of consols which gave that stock a much wider potential market than any other asset. The lower price of consols widened the market still further and added to the opportunities for speculation and the prospects for capital gains.³ Certainly the stock exchange favoured consols for its dealings and time bargains were conducted in no other stock.⁴ Whenever the Treasury gave the wider market the option of subscribing to different kinds of bonds it invariably opted for 3% stock.⁵ No doubt investors over the 18th century had been well schooled in the risk of conversion attendant upon the purchase of 4% and 5% bonds and knew that consols seldom rose above par and were, therefore, a more secure investment.⁶

In the face of marked antipathy Pitt, during the early years of the war, and Perceval, during his tenure at the Treasury, certainly made determined efforts to push unpopular stocks onto the contractors, with however only a limited amount of success. But for a decade from 1797 to 1807 and for the closing years of the war (1812-15) the accounts of loan negotiations give no indication that the Chancellor even attempted to force 4% and 5% stocks onto the contractors. It may be that the relatively large loans of those years made such a course impossible, or possible only at the expense of frustrating the system of competitive tender.

Throughout the war the Treasury achieved far greater success in marketing unpopular stocks through the medium of funding operations. Unlike a loan contract when converting bills into bonds the Government dealt directly with the wider and more atomised market, in which few opportunities existed for collusive refusal to accept particular types of public securities. Moreover, bill holders had good reasons to be less reluctant than contractors to purchase bonds. Often they were banks and each bank would take only a small amount of the stock and was usually in a position to take more time than contractors in disposing of it to a wider circle of clients.⁷ After 1806 with the greater reliance

1. Bank Report Book, 25.3.06.

2. See pp. 154 and 162-163.

3. Ricardo, 'Essay on the Funding System', 1820, p.184 and Hargreaves, National Debt, p.113.

4. Pitt Papers, vol.183 - Thornton, dd.31.4.99.

5. See pp. 124, 144 and 163.

6. Elliot, 'Financial Remarks', 1807, p.10.

7. See pp. 55-56.

on bill finance funding bills into bonds became a definite part of debt management and gave the Treasury greater opportunities for marketing 4% and 5% stocks.

Between 1822-54 conversion operations affected a saving of £3.6 million in the interest bill which averaged about £28.6 million a year.¹ McCulloch calculated that if the Treasury had persisted with stocks other than consols between 1793 and 1815 the annual saving might have been pushed up to £10 million.² Perhaps the Treasury could have succeeded in marketing 4% and 5% bonds in the face of the antipathy of the capital market but only at the cost of additions to the annual interest bill until their conversion at some time in the future into consols. As Ricardo pointed out the ultimate gain to taxpayers from borrowing in stocks of high denomination depended on their relative prices compared with consols at the point of sale.³ For example, in February, 1796, when 5% consols were at par, money could be borrowed in the market at £4. 14. 0% in 4% bonds and at £4. 5. 8. % in consols. In April, 1805, to take another example, borrowing in 5% bonds cost 5½%, but only £5. 2. 1. % in 3% stock. Of course this differential between stocks varies with changes in the demand and supply for public securities, but if prices of 3% and 5% bonds are compared for dates just prior to all loan negotiations conducted during the war years it can be shown (on the assumption that the Treasury's decision to borrow in the higher stock would not have depressed its value) that the Government would have paid 11/5d% more for the privilege of raising money in the unpopular stock.⁴ But to have persisted with 4% or 5% bonds would undoubtedly have depressed their value still further below consols. It would probably have frustrated the system of competitive tender and may have raised the rate of interest on loans by as much as 1%. Any increase in interest involved the imposition of more taxes at a time when Chancellors found it difficult to discover productive sources of tax revenue.

Furthermore, McCulloch and his fellow critics should in all fairness have tried to appreciate the time horizon of Pitt and his successors at the Treasury who regarded all bonds issued during the war years as having a clearly defined maturity. At the end of a certain number of years every debt would, so they expected, be redeemed through the operation of the Sinking Fund. Chancellors

1. Cttee. on Income and Expenditure, 1828, p.562 and Chisholm Rept., 1868-69, pp. 794-95.

2. McCulloch, Treatise on the Funding System, p.574.

3. Ricardo, 'Essay on the Funding System', p.184.

4. Calculated from bond prices cited at Table 19.

of the Exchequer had no clear notion of when the war would end, or when 5%'s would rise sufficiently above par to present the Treasury with opportunities for converting debt to lower rates of interest. Their problem, as they perceived it, was to weigh the possible gain of affecting reductions in the interest bill through conversion operations sometime after the war against the disadvantage of paying more interest at least while the war continued and possibly longer. To illustrate the point, let us take the loan of 1804. Addington then had a choice of borrowing in consols or a 5% stock. The duration of the war seemed indefinite. He expected bonds issued in 1804 to be redeemed after 40 years through the operation of the Sinking Fund. If he opted for consols the State could expect to pay £227 in interest over the life of a single bond, but by choosing 5% stock, the Chancellor would have increased the total interest paid to £243. At that point of time he could not be certain that a possible conversion of the higher stock after the war would effect a sufficient reduction in the total interest bill to compensate for additions to taxes in wartime. Of course from the high vantage of the mid 19th century when the Sinking Fund had been dismissed as a "delusion", it was easy to argue that "the grand error of our Finance Ministers consisted in their attempting to secure an inconsiderable present advantage at great ultimate cost."¹ During the war the problem appeared to be considerably more complex and the possibilities for marketing stocks other than consols much more limited than critics are wont to admit. Perhaps, however, critics could argue that the Sinking Fund deluded Chancellors at the time into not attending assiduously enough to such options as were available to them. I will now consider the whole question of the Sinking Fund in relation to debt management from 1793 to 1815.

The Sinking Fund

Bonds worth £447 million were sold by the Treasury between 1793 and 1815 and over the same period £176 million bonds were purchased by another public body, the Commissioners for the Sinking Fund.² As bonds were perpetual annuities, legally redeemable only at the option of the Government, the decision to borrow

1. Anon, 'Inquiries of National Debts', p.83 and McCulloch, Treatise on the Funding System, p.474.
 2. See Table 4.

and pay back money at the same time is prima facie curious. Repayment of debt in wartime represented, moreover, a complete departure from traditional policies for debt management; yet the policy received unanimous approbation from contemporaries and condemnation from almost all who subsequently examined the finance of the French wars. Disapproval of the wartime Sinking Fund has been not merely universal but absolute. McCulloch referred to the policy as a "miserable juggle", and Doubleday as a "contemptible hocus pocus". Lord Grenville, who supported it during the war, later called it "the greatest of all misconceptions" and Newmarch "a hallucination".¹ Even recent and more detached studies by authors like Hargreaves, Acworth and Rees remain in this tradition.²

Since 1786 Pitt had allocated surplus revenue from taxes towards the redemption of the National Debt but at the outbreak of war the whole purpose of his Sinking Fund obviously needed to be immediately re-examined. Yet throughout the war years and for some time thereafter the Treasury persisted in buying and selling bonds during the financial year even though the budget surplus had disappeared and it was open to the Government to terminate the whole policy of debt redemption at any time.

Almost all criticism of the operation of the Sinking Fund between 1793 and 1815 leans heavily upon Hamilton's essay, 'An Inquiry Concerning the Rise and Progress, the Redemption and Present State of Management of that National Debt', written in 1812. Perhaps the most important section of this essay is that concerned to demolish the ideas of Richard Price.³ Price had published his views of what the Government should do in wartime, and was definitely opposed to any suspension of the Sinking Fund. He considered that war in fact increased the efficacy of a Sinking Fund because in wartime money was borrowed at higher rates of interest and bonds bearing elevated rates of interest would be redeemed in less time than debt with the same initial Sinking Fund but contracted at a lower rate of interest.⁴ A simple example will clarify his views: a loan of £10 million at interest of 6% would be redeemed by a Sinking Fund equal to 1% of the loan, or £100,000 in 33 years. If the rate of interest was only 3% with the same initial

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1. McCulloch, *Treatise on the Funding System*, p.482; Doubleday, *Financial, Monetary and Statistical History*, p.177; Grenville, 'Essay on the Sinking Fund', p.7. and Newmarch, 'On the Loans Raised by Pitt', p.25.
 2. Hargreaves, *National Debt*, pp.110,121 and 148; Acworth, *Financial Reconstruction*, pp.42-44 and Rees, *Short Fiscal History*, pp.16-17.
 3. Hamilton, 'An Inquiry', 1812, part 3, chs. 1 and 2.
 4. *Ibid.*, p.188; Cone, 'Price and Pitt's Sinking Fund', p.244 and Hargreaves, *National Debt*, pp.91-95, 97, 101 and 104.

1% Sinking Fund, redemption would take 47 years. Under the Price plan when the cost of borrowing rises the absolute sum transferred annually to the Sinking Fund also rises and obviously accelerates debt repayment. But Price neglected to mention the annual charges involved. If the rate of interest rose to 6% the Government would have to meet every year interest and Sinking Fund payments of £700,000 compared with £400,000 if the rate of interest remained at 3% and the overall cost of amortizing a loan of £10 million at an interest rate of 6% would be nearly a third higher.¹ War made a Sinking Fund more efficacious simply because under the Price plan more money would be transferred to it annually for redeeming debts. He overlooked the fact that additional income required must be obtained either by the imposition of new taxes or borrowed. In wartime with the disappearance of surplus revenue from taxation all allocations to the Sinking Fund could be financed only with borrowed money. If the annual income for the Sinking Fund is borrowed at the same rate of interest as the original loan the Government will simply be adding to the national debt an amount identical to that redeemed in any given year. If money is borrowed at a rate of interest higher than that formerly paid on redeemed bonds the amount of the national debt and the interest bill will increase.

Even before the war the patent absurdity of some of these arguments had been revealed.² Later it was easy for Hamilton and his followers to show how Price had become confused by compound interest to the point of arguing as if it alone provided the Government with funds to redeem debt. But if our concern is not Richard Price but Government policy, one crucial question about the Sinking Fund and debt management has never been adequately answered. We must surely enquire as to how far Pitt and his fellow Chancellors shared the opinions of Price. Was the Sinking Fund maintained in operation in wartime for the reasons Price suggested, or were there other and perhaps more sensible arguments for its retention? The question needs emphasis because Hamilton and his followers have tacitly and sometimes explicitly assumed that because Price was wrong Governments of the day also suffered from his delusions. Upon examination, their condemnation of the Sinking Fund is often based upon little more than a refutation of the worst errors of Richard Price.³

Yet the evidence that the men in charge of finances during the

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1. Hamilton, 'An Inquiry', 1812, pp.188-189.
 2. Anon, 'The Annual Bill', 1787, pp.404 and 408 and Hargreaves, National Debt, pp. 98-99.
 3. Hargreaves is quite explicit on this point - see National Debt, pp.104 and 112.

French wars shared Richard Price's more eccentric views on the Sinking Fund seems very thin. On the contrary, their budget speeches demonstrate how well aware they were that income for the Sinking Fund had to come from taxation or had to be borrowed.¹ Nor did they hold some of the other more outlandish misapprehensions often attributed to them. To credit statesmen of the calibre of Pitt, Perceval and Huskisson with an incapacity to perceive the Sinking Fund had not in fact reduced the size of the National Debt, is to malign their intelligence.² Had not Pitt established his original Sinking Fund with surplus revenue? Mistakes were certainly made in the way the debt was managed between 1793 and 1815, but Treasury policy was perhaps not quite as stupid as some critics have made it appear.

If the Sinking Fund did not in fact decrease the national debt, what then was its function in war time? On several occasions Pitt publicly answered this very crucial question in the following words. "All other wars left a burden to posterity the successful institution of the Sinking Fund has made a most material alteration to that system."³ "We ought to consider", he said in 1797, "how far the effort we shall exert will enable us to transmit the inheritance of posterity unencumbered with those burdens which would cripple their vigour."⁴ To relieve posterity from the burden of taxation Pitt had decided as early as May 1790 "We ought to aim at providing new funds not just for the interest but also sufficient so that the period of the discharge of the debt may not be altered."⁵ "Our debt may be considered", he told Parliament, "as an annuity for a limited number of years."⁶

Pitt made provisions in 1786 to pay off the existing capital of the National Debt over a finite number of years.⁷ Six years later at the beginning of the war he introduced legislation designed to make all future debt contracted by the State into terminable annuities. Pitt's scheme committed the Government to impose taxes for each loan floated after 1792, sufficient to pay interest and to redeem it over a period of 45 years. Under his plan money for the repayment of the principle of all loans was to come from additional taxes equal to 1% of the nominal capital of the loan together with the continued payment of annual interest on redeemed bonds.⁸ Although Pitt persisted with the curious

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1. Parly.Hist., vol. 33, p.1052; vol.34, p.997 and Parly.Debs., vol.11, p.264.
 2. Chalmers, 'Strictures', 1796, p.24 and Martin, 'A Letter', 1796, p.14.
 3. Parly.Hist., vol.34, p.1059.
 4. Ibid, vol.33, p.1041.
 5. Pitt Papers, vol.187 - dd. 14.5.90.
 6. Parly.Hist., vol.34, p.1060.
 7. Chisholm Rept., 1868-69, pp.711-712.
 8. Ibid, p.712; Vansittart, 'An Inquiry', 1796, p.37 and Hamilton, 'An Inquiry', 1812, pp.144 and 199.

administrative device of allocating interest on redeemed bonds into a fund to redeem more bonds, the essential idea behind his legislation was to impose taxes sufficient to place all future loans into a regular course of redemption.¹ As George Rose, Pitt's assistant at the Treasury, lucidly wrote in 1806 "every debt is now reduced to an annuity and a large proportion of the persons in existence at the time of debt being created must in the ordinary course of nature live to see the end of it."²

Pitt aimed to relieve posterity from the burden of interest payments on the National Debt, a goal which received the universal approbation of his contemporaries and his legislation provided a model for all subsequent policy regarding the Sinking Fund.³ Critics who lectured the Governments of the day for failing to see "the only means of redeeming the National Debt is to reduce expenditure and increase taxes" or to perceive "a Sinking Fund can only operate in peace time" were mistaken if they supposed such an elementary point could not be perceived at the time.⁴ Moreover, their criticism is beside the point because Pitt, Addington, Perceval and Vansittart saw the Sinking Fund as a device for making provision (even in the midst of war) for the ultimate and foreseeable redemption of the entire National Debt.⁵

No other interpretation can make sense of their speeches and legislation after 1792. For example, when Addington, in 1802, repealed the provisions of the original Sinking Fund Act of 1786 which promised relief from taxation when £4 million of bonds were being redeemed annually, he explained to the Commons they had a choice of providing for the repayment of more debt or affording the country relief from taxation. With but a few dissenting voices in favour of tax relief, the Chancellor secured Parliamentary approval for continuing to use the dividends paid on redeemed debt to buy up still more bonds.⁶

When Grenville's Government assumed office in 1806 they determined to avoid the imposition of more taxes. Lord Henry Petty, the new Chancellor of the Exchequer, produced a plan which proposed borrowing money to pay both interest and the Sinking Fund on all future loans. Petty's "New Plan of Finance" involved a modification of existing Sinking Fund policy under which sufficient taxes were imposed to redeem every loan over a set period of time. He met the objection

1. Fairman, *An Account of the Funds*, 1816, p.180.
2. Rose, 'Brief Examination', 1806, p.21 and see Daeres@Adams Papers, vol.7, memo dd. 24.10.01.
3. McCulloch, 'Treatise on the Funding System', p.487; Ricardo, 'An Essay on the Funding System', pp. 152 and 175; Parly.Hist., vol.36, p.890; Parly.Deb., vol.6, p.619 and vol.11, pp.262-264.
4. Hamilton, 'An Inquiry', 1812, p.205 and Grenville, 'An Essay', p.12.
5. Wakefield, 'Observations', 1797, p.32.
6. Parly.Hist., vol.36, pp. 451 and 890-95.

that he had departed from Pitt's policy by proposing to continue "war taxes" and to employ them to redeem bonds when peace came. Petty's plan, which did not survive the fall of the Ministry of All Talents, represented a modification, not a departure from Pitt's ideas. Under it loans raised or bonds sold during the war would be redeemed in peace time with taxes the public had already been told by the Government to regard as temporary. The National Debt remained an aggregation of annuities but the time taken for their redemption was lengthened.¹

Perhaps nothing better illustrates the essential point of Government policy with regard to debt redemption than Perceval's scheme of 1808 which gave Government creditors the option of exchanging their bonds for life annuities payable out of the Sinking Fund.² Finally, almost at the end of the war the Government again felt a limit had been reached as far as the imposition of taxes was concerned, and introduced further modifications to the Sinking Fund. Among other provisions (not germane to the present discussion) Vansittart proposed to divert income from the Sinking Fund towards the payment of interest and redemption charges on loans contracted after 1813.³ Both Lord Liverpool and his Chancellor pleaded the necessity of respite from taxation, but in addition they argued that the income of the Sinking Fund could become excessively large. To devote £30 million a year in peace time to debt repayment was, Vansittart thought, undesirable.⁴

Although Vansittart thought it politically expedient to present his plan as a "restoration" of Pitt's original intentions, which were to set limits to the annual sum devoted to debt redemption, his critics were not impressed and insisted he had departed from the great man's later ideas.⁵ Baring, Thornton, Huskisson and Petty also observed that the Government, by diverting the income of the Sinking Fund, had broken faith with public creditors who had loaned money to the Government on the understanding that a defined, but progressively increasing, amount of money would be devoted to the repayment of debt each year.⁶ Vansittart, argued however that Government creditors had no right to expect dividends paid on debt contracted before 1786 would continue to be employed to redeem loans contracted after that date, and insisted that part of the income of the Sinking

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1. Auckland Papers, vol. 34457 - Granville, dd. 2.12.06; Petty, 'Substance of a Speech', pp. 37 and 70-77; Parly. Debs., vol. 9, pp. 427, 813-815 and Elliot, 'Financial Remarks', 1807, pp. 47-49.
 2. Chishelm Rept., 1868-69, pp. 712-713 and Parly. Debs., vol. 11, p. 262.
 3. Liverpool Papers, vol. 38363 - memo, dd. 19.12.12 and Hamilton, 'An Inquiry', 1812, p. 150.
 4. Parly. Debs., vol. 24, p. 1083 and vol. 25, p. 766.
 5. Silver, 'Observations on Vansittart', 1813, pp. 315-318 and Huskisson, 'Substance of a Speech', 1813, pp. 20-22 and 25-35.
 6. Parly. Debs., vol. 24, pp. 1102 and 1096 and vol. 25, pp. 352 and 769 and Huskisson, 'Substance of a Speech', 1813, pp. 209-16.

Fund could be diverted without violating public faith.¹

Huskisson, probably the most reliable guardian of Pitt's intentions, clarified for the last time the character of the war time Sinking Fund. Its operation had, he argued, "made loans equivalent to annuities, repayable over 45 years."² Contractors had been induced to offer better terms to the public because redemption was clearly provided for in each loan contract.³ He criticised Vansittart for being over-concerned with temporary respite from taxation; "Pitt would never shrink from imposing taxes."⁴ Huskisson concluded by recommending that taxes be continued after the war to redeem the National Debt.⁵

Once Pitt had persuaded Parliament and the country to regard bonds as debts of defined maturity, it was difficult for anyone to see anything very illogical in redeeming them with borrowed money. After all, if the British Government had traditionally contracted debts in terminable rather than irredeemable annuities, the Treasury would have been compelled even before 1793 to repay and borrow money at the same time. Yet legally the choice remained with the Government, or as Petty put it "the Sinking Fund income could be used as the country likes."⁶ Had the annuity concept been abandoned at the outbreak of war no revenue would have been raised between 1793 and 1815 to redeem debt and loans could have been reduced by a corresponding amount. Why then was the annuity concept persisted with in war time when the Treasury could well have reduced the total sum borrowed by the amount it issued to the Commissioners for the Sinking Fund?

Answers in terms of deluded statesmen are again unconvincing, and better explanations can easily be found. First of all, Governments of the day regarded the Sinking Fund as a device to allay the fears of Parliament and the country about the growing size of the National Debt. From even a cursory reading of contemporary newspapers and pamphlets it becomes apparent how people living at the end of the 18th century were very much less sanguine than we are today about the National Debt. Public concern became widespread after the American War when the nominal capital of the debt had increased by 100% in little over 6 years.⁷

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1. Hamilton, 'An Inquiry', 1812, p.225; Parly. Debs., vol.24, p.1086.
 2. Huskisson, 'Substance of a Speech', 1813, pp. 208-209.
 3. Ibid, p.211.
 4. Ibid, pp. 231 and 241.
 5. Ibid, pp. 244-247.
 6. Parly. Debs., vol.8, p.579.
 7. Grenville, 'An Essay on the Sinking Fund', pp.18-20; Morgan, 'Comparative View', 1801, p.32; Binney, British Public Finance, pp.113 and 114 and Hargreaves, 'National Debt', p.91.

At that time Sir Robert Peel wrote a pamphlet to show "the apprehensions which have surrounded the debt are unjustified" and William Playfair was another to disprove the prevalent notion of the debt "as the great disease of the constitution".¹ Against a background of unease Pitt in 1786 introduced plans for the redemption of the National Debt. Previous attempts to establish Sinking Funds had foundered because statesmen had diverted their income to other uses.² In order to assure the public that his Government was serious Pitt promised Parliament his Sinking Fund would be inviolable.³ By statute and administrative arrangements he endeavoured to keep his promise.⁴

When the Government began in 1793 to borrow on a larger scale than ever before apprehensions about the absolute size of the National Debt became excited anew. Prophets of woe appeared on every side employing false analogies from private debt to argue "the country was on the verge of bankruptcy" or "brought to the brink of ruin" by the immense size of the National Debt.⁵ As William Frend said of these pundits "they confidently asserted and arithmetically proved we are ruined."⁶

More realistic and significant apprehensions were aroused by the possible effects of the taxes imposed to pay interest to Government creditors. "The evils already produced by taxes to pay interest on funds are likely to prove fatal to our national prosperity" exclaimed one writer in 1799.⁷ His fears were frequently echoed both inside and outside Parliament and gave rise to a lively and continuous discussion on the accumulation of the National Debt. What is striking about this discussion is the consolation derived by almost all participants from the Sinking Fund. Pessimists who thought the burden of debt unbearable, and optimists, who argued it had diminished with the general rise in income, both found solace in contemplating the ultimate redemption of the debt.

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1. Peel, 'The National Debt', 1787, pp. 1 & 4 and Playfair, 'An Essay on the National Debt', 1787, p.3.
 2. Sinclair, 'History of the Revenue', 1802, vol.1, pp.496-499 and Chisholm Rept., 1868-69, pp. 711-712.
 3. Grenville, 'An Essay on the Sinking Fund', p.59; Parly.Hist., vol.30, pp.560 and 1359 and vol.36, p.459 and Parly.Debs., vol.6, p.61.
 4. Huskisson, 'Substance of a Speech', 1813, p.207; Rose, 'Brief Examination', 1806, pp.21-24; Hamilton, 'An Essay', 1812, p.141 and Binney, British Public Finance, p.114.
 5. See pp. 222-223.
 6. Frend, 'The National Debt', 1817, p.17.
 7. Bird, 'Proposals for Paying Off the National Debt', 1799, p.16.

"The experience of this country has shown", wrote Wakefield in 1797, "that a debt which would at one time have overpowered the resources of the nation may at another from its increased agriculture, manufactures and commerce be scarcely felt as a burthen." Three years later he felt "happy in the conviction that debts are in regular course of payment."¹ Most of those who felt uneasy about the immense National Debt also derived at least some comfort from the idea that it would not exist for ever.

Members of the Government appreciated the importance of the Sinking Fund in allaying public disquiet about the rapid growth of the National Debt. Their papers indicate an almost obsessive interest in schemes to reduce the debt.² Their speeches eulogised the Sinking Fund and stressed constantly how its income was sufficient to pay off the existing debt over the foreseeable future. Their Annual Finance Resolutions invariably contained a paragraph to the effect that the income of Sinking Fund bore a rising proportion to the outstanding debt.⁴ "Your Committee", said a Parliamentary report of 1797, "have great satisfaction in contemplating the large means which are now annually employed for the redemption of public debt."⁵

Public opinion was certainly a proper concern for Governments trying to maximise yields from taxes. The Treasury classified all taxes imposed between 1793 and 1815 into "war taxes" which it supposed would terminate with the war and "permanent taxes" imposed to meet the interest on loans. Pitt certainly realised how useful the Sinking Fund had been in persuading people to expect relief even from the permanent taxes within their own lifetime. As he more than once said it "animated the hopes of commercial men."⁶ When Philip Francis expressed some criticism of the Sinking Fund in 1806, he was challenged by Castlereagh "to recollect any period in the history of the country when discontent was less apparent and when the nation submitted with more share of manliness and even satisfaction to every sacrifice the exigency has imposed."⁷

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1. Wakefield, 'Observations', 1797, p.60 and Wakefield, 'Facts', 1800, p.33.
 2. Pitt Papers, vols. 107, 275 and 276 contain numerous papers and memos on the subject. See also; Huskisson Papers, vols. 38759 and 38760; Liverpool Papers, vol. 38256; 38363 and 38366; Vansittart Papers, vol. 31237; Auckland Papers, vol. 34457 and Dropmore Papers, vol.8.
 3. Parly.Hist., vol.33, pp.1052-1053, vol.34, p.977, vol.36, pp.890-895 and 1129; Parly.Debs., vol.3, p. 528 and vol.8, p.574.
 4. Annual Finance Resolutions are printed in appendices to Parly. Debs.
 5. Cittee. on Financial State of the Nation, 1797, p.217.
 6. Pitt Papers, vol.197, dd. 14 December 1800 and Parly.Hist., vol.31, p.1314.
 7. Parly. Debs., vol.6, p.626.

Thus one positive achievement of the Sinking Fund was to divert the attention of industrialists, farmers and commercial men away from gloomy contemplation of the National Debt and to create a climate of opinion which reduced their strong inclination to evade tax.

Undoubtedly the most telling criticism of the policy of maintaining a Sinking Fund in wartime was that it wasted public money and in the long run led to higher levels of taxation. Between 1793 and 1815 the Government both raised loans and redeemed debt and was, therefore, repaying its creditors with borrowed money. Thus whenever the price at which the Treasury sold bonds fell below the price the Commissioners of Sinking Fund paid for bonds, the difference presented a loss to the public which could have been avoided if the policy had been abandoned. Since loan contractors demanded a premium for the risks and trouble attached to marketing a loan, the Treasury often sold bonds at lower prices than it paid for them.¹ Losses were, however, not inevitable and depended upon general movements in security prices. If prices fell, following a loan, the Government might still profit, despite the premium paid to contractors.²

Hamilton and his followers have produced various calculations of the losses occasioned by the policy, "borrowing on higher terms in order to redeem a part of the debt upon lower terms."³ Most of their calculations are, however, based on untenable assumptions which tend to exaggerate the losses occasioned by the operation of the war time Sinking Fund. Perhaps the correct way to calculate the immediate cost to the Government is to try to show increases in the annual interest bill occasioned by redeeming debt with borrowed money. On my figures this amounted to not more than £3.3 million a year, or 15% of total interest paid on the debt.⁴

Even this calculation neglects the effects the purchase of bonds by the Commissioners for the Sinking Fund had upon their selling price. Treasury opinion held that Sinking Fund kept up the price of bonds and enabled loans to be floated on better terms.⁵ Against this view Hamilton argued that "If payment be

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1. Anon, 'Letter to Pitt', 1796, p.50; Grenville, 'An Essay on the Sinking Fund', p.9 and Hargreaves, 'National Debt', pp. 110-111.
 2. Ricardo, 'An Essay on the Funding System', 1820, p.171.
 3. Hamilton, 'An Inquiry', 1812, p.200; Boase, 'Disadvantages', 1807, p.11; Chisholm Rept., 1868-69, pp. 718-719 and McCulloch, 'Treatise on the Funding System', 1863, p.485.
 4. Calculated from statistics of expenditure 1793-1815 in Chisholm Rept., 1868-69.
 5. Parly. Hist., vol.31, p.1314; Parly. Debs., vol.3, p.528, vol.6, p.657 and vol.11 p.262; Vansittart, 'An Inquiry', 1796, p.30 and Huskisson, 'Substance of a Speech', 1813, pp. 223-224.

made by means of borrowing it can produce no alteration in the price of bonds at all. Demand and supply cancel out."¹ Ricardo disagreed and maintained the larger loan, occasioned by expenditure on a Sinking Fund, encouraged contractors to sell omnium forward before negotiations opened which depressed bond prices and, since the contractors' bids were largely determined by the prices of bonds on the day of the contract, this raised the overall cost of borrowing.² His view deserves respect because it belongs not only to a famous economist but to a prominent loan contractor. Other contractors were, however, more disposed to agree with the Treasury view.³ Finally it could be argued that smaller loans might have reduced the cost of borrowing by stimulating greater competition among contractors. Grenfell suggested using the revenue of the Sinking Fund for just this purpose in 1814, but Vansittart retorted that he had made a better bargain without such a measure.⁴

Even if demand and supply did cancel out and greater competition might have been stimulated, the conception of a Sinking Fund as a device for transforming the national debt from perpetual to terminable annuities constituted a completely new element in the capital market after 1786, and one which must have increased the price offered by contractors for bonds. Many of whom seem more disposed to agree with the Treasury view than Ricardo. The maintenance of an inviolable Sinking Fund gave assurances to Government creditors and the money market that the supply of new bonds would not reach unlimited amounts. They also knew the income of the Sinking Fund would not be diverted towards tax relief, but instead employed year after year to buy up ever increasing amounts of bonds, providing at least some demand whenever a creditor wished to realise his assets. In war time, when price fluctuations were violent, the Sinking Fund also provided an element for stabilisation.⁵ When Petty, Perceval and Vansittart diverted the income of the Sinking Fund their policy occasioned alarm for its effects on the capital market and they were accused of breaking faith with those who had loaned money to the Government.⁶ While arguments of this kind can never be conclusive we cannot dismiss the view that the operation of the

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1. Hamilton, 'An Inquiry', 1812, p.193.
 2. Ricardo, 'Essay on the Funding System', 1820, p.171; McCulloch, 'Treatise on Funding System', p.485.
 3. Boyd, 'Letter to Pitt', 1811, pp.42-43; 'Reflections on the Financial System', 1812, p.11 and Baring in Parly. Debs., vol.25, p.352.
 4. Parly. Debs., vol.28, pp.66-68.
 5. Ricardo admitted this - see 'Essay on the Funding System', p.173.
 6. Parly. Debs., vol.9, p.815, vol.25, pp.352, 766-771, vol.24, pp.1096 and 1102 and Silver, 'Observations on Vansittart', 1813, pp.315-318.

Sinking Fund during the French wars may actually have reduced the overall cost of borrowing.

Those who managed the country's finances in the wars against France have incurred persistent but in my view unjustified criticism for their retention of the Sinking Fund between 1793 and 1815. I have attempted to show that they did not suffer from the same delusions as Richard Price. Nor can it be dogmatically maintained, if the purposes and functions of the Sinking Fund are set out, that this aspect of debt management was without advantages to the country in financing the French wars.

Some criticism of the way the Sinking Fund operated is, however, entirely valid. The Exchequer transferred income to the Commissioners for the Sinking Fund quarterly and their purchases of bonds, contrary to what Sinclair supposed, were spread evenly over each quarter.¹ Average daily payments were roughly comparable and the Commissioners bought stock whenever the transfer books at the Bank were open. They appear to have made no deliberate attempt to reduce the cost of borrowing by purchasing stocks the Treasury intended to offer contractors immediately before negotiations for loans. More often than not the Commissioners arranged their purchases to interfere as little as possible with the agreement. If, for example, the Treasury planned for a loan in consols, they purchased 3% Reduced Stock or South Sea Annuities in the weeks before negotiations and on one occasion the Commissioners incurred Parliamentary criticism for buying 4% bonds before a contract concluded in 3%'s.² When Perceval was at the Treasury and trying to persuade the market to accept 4% stock, as an inducement he applied the Sinking Fund to buy up large amounts of the same stock both before and after the loan.³ But in general the Commissioners wisely avoided purchasing stocks of higher denomination which could with profit be converted into 3%'s after the war.⁴

Nevertheless, more sophisticated and continuous use might have been made of the Fund to stimulate competition, to persuade contractors to accept bonds of higher denomination and to influence more positively the terms of the loan.

When the war ended the Government found itself in receipt of £13 million

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1. Accounts of Commission for the Sinking Fund were published annually in Commons Jnl.,; Sinclair, 'History of the Revenue', 1802, vol.1, p.530 and Cttee. on the Bank, 1807, p.100.
 2. Sinking Fund Accounts and Parly.Hist., vol.32, pp.805-806.
 3. Accounts and Papers, 1890-91, p.39.
 4. Vansittart, 'An Inquiry', 1796, p.34.

of taxes set aside for debt redemption, Ricardo and others were very much in favour of using the money as Pitt had intended to make substantial reductions in the National Debt.¹ But the times did not favour high taxation. Prices had fallen. Agriculture was in a state of depression and the Parliament of landowners, no longer lead by men like Pitt, were unwilling to pay taxes for the remote benefits of debt redemption. Once the policy had been abandoned and a rising national income made taxes easier to pay, men forgot the anxieties of their forebears and began to scoff at the steps they took to protect them from the burden of the National Debt.

1. Ricardo, 'Essay on the Funding System', p.172 and Select Cttee. on Income and Expenditure, 1828, p.566.

MONETARY POLICY AND THE PRICE LEVEL

The Causes of Price Inflation

The general level of prices moved upward fairly sharply over the war years. Measured on Gayer's index the average rate of increase for the two decades 1793-1813 amounted to 3.3% per annum.¹ The precise responsibility of official monetary policy for the general price increase has been debated since 1800 with fairly inconclusive results. Most economists, politicians and a good number of merchants alive at the time propounded definite opinions on the subject, but their comments were not marked by any real analysis of the ways in which changes in the money supply might have affected prices, but consist for the most part of unsubstantiated assertions and counter assertions about the responsibility of this or that factor.

Price movements did not attract much attention before 1800, but two bad harvests in 1799 and 1800 and a rapid rise in food prices produced widespread interest in the subject.² Most writers agreed that the deficient harvests provided a sufficient explanation for rising prices, but some gave consideration to the currency as a factor aggravating the situation. Writers who detected the influence of the banking system found it in the encouragement that easy credit conditions gave to speculation in grain and other foodstuffs. Their views reflected a popular prejudice that country banks helped farmers to hoard their crops in order to raise prices.³ Malthus rejected the point that a liberal supply of cheap credit facilitated speculation. Corn factors, he thought, performed the useful function of equalising prices over time and so prevented an even greater rise in the price of food.⁴ Moreover, he and other writers argued that credit had expanded because prices had risen and there had been no excess issue of Bank credit because the paper price of gold remained close to the mint prices.⁵ Henry Thornton's book, which appeared in 1802, is a very illuminating

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1. See Table 33.
 2. Tooke, *History of Prices*, Vol. 1, pp. 213-225 and Galpin, *Grain Supply*, pp. 9-32.
 3. Gilbert Blane, 'An Inquiry', 1800, pp. 37 and 449; Boyd, 'Letter to Pitt', 1811, pp. 50-56 and Friend, 'The Effects of Paper Money', 1801, pp. 17-19.
 4. Malthus, 'High Price of Provisions', 1801, pp. 193, 196-198 and 201.
 5. Baring 'Observations', 1801, pp. 9-11, 22-24 and Anon, 'Brief Observations', 1801, p.15.

account of how variations in the supply of money might influence prices.¹ It is far and away the best contemporary treatment of inflation theory. But on the empirical question Thornton has committed himself to very little. He thought that the limitation of credit in 1795 had decidedly affected prices, but he felt the supply of currency had had little influence on prices in 1800 or 1804 because "this enhancement is to be charged to an increase of paper is not equally to be admitted for it is plain that other causes have powerfully operated, namely a state of war, new taxes and two bad harvests which by raising the price of bread have in some degree lifted up that of labour and of all commodities."²

Parliamentary Committees also gave detailed consideration to rising food prices, but paid no attention in their investigations to the influence of the currency although several conjectures were made subsequently in the debates.³

Francis Horner in his review of Thornton's book observed that the relationship between money and prices was the most important question raised by inconvertibility, but noted that "a high and growing state of prices did not afford satisfactory proof of an undue excess in the quantity of circulating medium; because the state of prices is a very complex subject and is known to us very vaguely."⁴ No doubt the relationship is complicated but it can hardly be claimed that the discussion of the problem in 1800 had proved enlightening.

Although the state of the Irish currency in 1803-1804 again raised the question, the final and most important discussion during the war years took place during the bullion controversy.⁵ Just a few quotations will illustrate the essential premises of the bullionist argument. First they claimed that an increased supply of currency must produce a general rise in prices. Lauderdale considered that his assertion that an increased supply of paper "must produce a rise in prices can hardly be disputed."⁶ Henry Thornton "had never found any man who, when the simple proposition was put to him whether an augmentation of paper had a tendency to reduce its value or raise that of commodities had been so singular as to refuse his assent to the proposition." Yet neither he nor the other bullionists "meant to say that equal quantities of paper would affect the value of equal quantities in exactly the same degree."⁷ Secondly the bullionists argued that the depreciation on

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1. Thornton, *Paper Credit*, 1802, pp. 194-197 and 224.
 2. *Ibid*, pp. 194, 216-217, 263 and 316 and *Parly. Hist.*, Vol. 35, pp. 638-639.
 3. *Lords and Commons Cttee. on the High Price of Provisions, 1800-1804* and *Parly. Hist.*, Vol. 35, pp. 611, 616, 793, 838 and 1265-1269.
 4. Fetter, *Economic Writings of Francis Horner*, pp. 34 and 77.
 5. Fetter, *The Irish Pound*, pp. 65-87.
 6. Lauderdale, *'Depreciation Proved'*, 1811, p. 169.
 7. *Parly. Debs.*, Vol. 19, p. 897.

gold measured the degree to which the paper currency had in fact raised prices. Malthus, for example, demonstrated that the market¹ of gold exceeded the mint price of gold by 17% and then observed "almost all British commodities of home growth and consumption have experienced a marked rise which if not fully equal to 17% falls very little short of it."¹

Their opponents replied in two ways. Some were content to say that bullionists had produced no proof that the general level of prices had in fact risen, and gave examples where prices had fallen.² Most explained rising prices as they had explained the premium on gold and the depreciated exchange by suggesting alternative reasons why prices had gone up. They referred the bullionists to deficient harvests, indirect taxation, high prices of imports and the excessive costs of transporting goods to Britain.³ All their points are accurate enough. Bullionists seldom collected price statistics to document their assertions.⁴ Rising costs and deficiencies in the supply of foreign and home produced commodities undoubtedly exercised an important influence on prices, an influence that bullionists very often overlooked or simply ignored. But they in no way invalidate the basic bullionist contention that the supply of credit had exerted an independent influence on prices. Ricardo, in his polemical fashion put their case succinctly enough; 18% which he had shown to be the premium on gold also equalled "the rise in the price commodities occasioned by the depreciation of paper. Above all such rise may be either traced to the effects of taxation, to the increased scarcity of the commodity or to any other cause which may appear satisfactory to those who take pleasure in such inquiries."⁵

After the war the controversy continued and in some writings credit policy received the status of the prime cause of rising prices between 1793-1815. Thus an unsigned article in the Quarterly Review held "the constant and invariable connexion of increase of price with the Bank Restriction, is a forcible proof of such a relation as that of cause and effect between the two phenomena."⁶ The writings of Lowe and Tooke aimed to refute such extravagant claims by emphasizing the multiple influences which operated on prices. Lowe explained that "prices

1. Malthus, 'Review of the Controversy', p.452 and see also Hoare, 'An Examination', 1811, pp.72 and 105; Ricardo, 'Letter to the Morning Chronicle', 1809, p.21; 'Reply to Bosanquet', 1810, p.293 and Parly.Debs., vol.19, pp.810, 1024 and 1085.

2. Young, 'An Inquiry', 1812, pp.113-116; Booth, 'Observations', 1815, pp.8-9 and Parly.Debs., vol.19, pp.938-939 and 1003.

3. Atkinson, 'A Letter', 1811, pp.51 and 59; Hill, 'An Inquiry', 1810, pp.56 and 82; Bosanquet, 'Practical Observations', 1810, pp.45-48, 93-101; Anon, 'Letter to Koster', 1811, p.16; Prentice, 'Thoughts', 1811, pp.4-13 and Sinclair, 'Observations', 1810, pp.12, 15-20 and 52.

4. Except Horner and Parnell in Parly.Debs., vol. 19, pp.810 and 1029.

5. Ricardo, 'Reply to Bosanquet', 1810, p.239.

6. Cited by Gregory, Introduction to Tooke, History of Prices, p.37.

were affected by causes altogether distinct from our paper currency, such as the demand for men for the public service and the insufficiency of our growth of corn to our consumption. The rise in prices after 1802, was most apparent in the commodities for the supply of which we depended on the Continent. Of these corn formed an example on a great scale, and, on a smaller, wool, timber, hemp, tallow." When Lowe investigated "the quantum of the addition to our prices, caused by the non-convertibility of our currency" he did so in the familiar bullionist way by measuring the degree to which the market rose above the mint price of gold.¹

Tooke's analysis of the problem is a very thorough attempt to distinguish the various forces operating on the price level during war years. He examined data covering numerous individual prices, and elucidated the demand and supply factors operating in particular markets. Tooke relegated the influence of war, technical progress and population growth on the level of prices to minor positions. His general conclusion ascribed the high prices of the war years to three factors; the frequent recurrence of seasons of an unfavourable character, the destruction of and obstruction to foreign sources of supply and the greatly augmented cost of transporting commodities overseas.² "These causes separately and collectively account for so large a proportion of the high and low prices of the last thirty years to leave no ground for imputing to the alterations in the system of our currency any effect beyond the difference between paper and gold." When isolating the influence of the money supply on the price level Tooke takes up precisely the same position as Ricardo and Malthus in 1811 and "leaves nothing more to be ascribed to the Bank restriction than so much as is marked by the difference between paper and gold. That difference must no doubt be considered as the criterion and measure of depreciation of Bank notes."³

Macleod writing in 1858 thought that Tooke had understated the influence of currency on prices, but Jevons who noticed the "insufficiency of all explanations yet given of the state of prices in the early part of the century" praised Tooke's efforts "to disprove all prevailing notions of the extraordinary influence of the currency."⁴ Later in the 19th century Cunningham felt "it may be

1. Lowe, Present State of England, 1822, pp. 100, 105 and 106.

2. Tooke, Thoughts and Details, 1824, pp. 69-106 and 376, and Tooke, History of Prices, Vols. 1 and 2 and Part 4, Chs. 1-6.

3. Tooke, Thoughts and Details, 1824, pp. 377 and 126.

4. Macleod, Theory of Banking, pp. 180-181 and Jevons, Investigation in Currency and Finance, pp. 130-131.

impossible to gauge the precise amount of mischief which was due to this cause, in particular we can only note it as a serious aggravation."¹

More recently several studies have also attempted to discover how far note issues of the Bank of England were responsible for the increase in prices. Silberling correlated his price index with total advances made by the Bank on a graph and noticed that "major variations in prices precede those of Bank advances which furnishes presumptive evidence that the credit of the Bank was not in any degree if at all responsible for the price fluctuations." He concluded that "credit inflation during the regime of inconvertible paper was primarily facilitated by the operation of a vast number of practically unregulated provincial banking institutions."² From his examination of the same data Angell reached the same conclusion. "The price of things in general - inflation - was due to the policies of government financiers and to the exonerated country banks. Inflation, though unavoidable, was greatly and needlessly exaggerated by the country banks."³

Morgan in his study also noted with Silberling "there are indications that changes in the position of the Bank follow price changes," and that "An increase in the note issue would be the natural consequence of this rise in prices and activity and the Bank would only be a passive agent in it."⁴ While Gayer's study "The Growth and Fluctuations of the British Economy" held that "monetary phenomenon can be most usefully regarded as reflexions of more deep seated movements and in general it may be said that the banking system behaving for the most part passively supplied the commercial, industrial demands that confronted it."⁵

No contemporary critic of Government policy conducted a satisfactory empirical study of the influence of credit on prices. In this respect the writings of Lowe and Tooke are not a real advance on the views of Ricardo and Malthus. Tooke simply described and weighted, in a perfectly arbitrary manner, all the factors which might have influenced prices during the war years. His analysis was certainly a salutary refutation of a very crude type of quantity theory which held credit policy almost entirely responsible for price changes during the war years, but it cannot be claimed that Tooke in any way measured

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1. Cunningham, *Growth of Industry and Commerce*, Vol. 3, p. 699.
 2. Silberling, 'British Prices and Business Cycles', pp. 241 and 246 and 'Financial and Monetary Policy', pp. 420-421.
 3. Angell, *Theory of International Prices*, pp. 479 and 486.
 4. Morgan 'Some Aspects of the Bank Restriction', p. 210 and *Central Banking*, p. 47.
 5. Gayer, *Growth and Fluctuations*, Vol. 2, pp. 559, 638 and 642.

the influence of changes in the money supply on prices.

Furthermore, correlations between the note issue of the Bank of England and indices of wholesale prices of the kind contained in the articles of Silberling and Morgan, are also not very illuminating. Silberling's price index is not a sensitive enough instrument and he really requires a monthly or weekly rather than an annual time scale for this type of statistical analysis. Moreover, fluctuations in the liabilities of the Bank of England cannot represent variations in the money throughout the economy.¹ Finally, even with an improved time scale and fairly accurate figures on the money supply and a sensitive price index, correlations between the two are of little help in distinguishing cause from effect. It could be the case that the Bank initiated a price inflation by facilitating an overall increase in the money supply and then its note issues or total advances simply validated or followed rising prices thereafter. You cannot deduce causes from a sequence of changes. Unless changes in the money supply are very large there is no reason to expect prices to rise immediately and the time lag between increases in the supply of bank credit and movements in prices may be considerable.² Borrowing and spending or spending and borrowing may not occur in close sequence and Morgan's and Silberling's demonstration that "major variations in prices precede those of bank advances" or "there are indications that changes in the position of the Bank follow price changes" indicates little about cause and effect.

Although available analyses of the wartime inflation can be criticised in various ways, the question of whether the banking system, operating within the framework of a liberal monetary policy, exerted an autonomous pressure on the price level or simply validated a general rise in prices which originated from other sources is a question which demands some kind of answer. Although in any dynamic situation it is simply not possible to isolate and measure the influence on prices of any single variable such as changes in the money supply. Several powerful forces certainly operated on prices from the side of supply during the war years. Given the role of agriculture in the national economy, (it amounted to about one third of the national product), perhaps the most important short run influence on prices came from deficient harvests. According to Tooke about a third of all grain harvests between 1793 and 1815 fell below average, several quite seriously and the effects of bad weather on food prices were exacerbated

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1. Silberling, 'British Prices and Business Cycles', p. 240 and Morgan, 'Some Aspects of the Bank Restriction', pp. 205-207.
 2. Friedman, 'The Supply of Money and Changes in Prices', pp. 242-246 and 249-251.

by the difficulties of procuring foreign grain in wartime.¹ Furthermore, grain not only provided the basic ingredient of the country's staple food but also supplied foodstuffs for animals and the major raw material for industries such as brewing, distillation and starch. In turn animal husbandry supplied inputs for the soap, leather, candle and chemical industries. The ramifications of harvest failures were widespread.²

Dislocations in international trade also exerted a significant influence on the price level, primarily through imports. At the outbreak of war retained imports amounted to about 21% of the national income.³ Dependence on foreign sources of supply for foodstuffs and raw materials had grown steadily over the 18th century. The national beverages, tea, coffee and cocoa were not domestically produced and formed a high proportion of the import bill. In the first two decades of the 19th century about 5% of the country's grain consumption came from foreign sources and in years of bad harvest this proportion might rise as high as 12%.⁴ Englishmen relied entirely on the Empire for their sugar, citrus and dried fruits and on the Irish for small quantities of dairy produce. Textiles depended heavily on overseas sources of supply for their basic raw materials. Woollens less so than the other textiles, although the fine wool of Spain and Portugal was particularly important to the high quality sector of the industry located in the West country.⁵ Nearly half of the flax used in the linen industry came from abroad and the cotton and silk industries depended completely on foreigners for their raw materials.⁶ While the dyestuffs section of the industry could not have functioned without imports of cochineal, madder and indigo, neither could the shipbuilding or construction and investment goods industries have carried on without supplies of Baltic and American timber.⁷

Inflationary conditions were not confined to Britain during the wars with France and wherever they appeared in Europe and the United States they tended to raise the prices of foodstuffs and raw materials purchased by British merchants.⁸

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1. Tooke, *Thoughts and Details*, 1822, pp. 376-377; Tooke, *History of Prices*, Vol. 1, pp. 8, 14 and 15 and Galpin, *Grain Supply*, pp. 17, 44, 79, 93, 111 & 128.
 2. Ashton, *Economic Fluctuations*, pp. 26, 34, 37 and 43.
 3. Robinson, 'Changing Structure of the British Economy', p. 458.
 4. Galpin, *Grain Supply*, pp. 196-199.
 5. Hartwell, *The Yorkshire Woollen Industry*, pp. 43-44 and Morris, *West of England Woollen Industry*, p. 83.
 6. Warden, *The Linen Trade*, pp. 436-437 and 659.
 7. Colquhoun, *Treatise on Wealth*, 1812, p. 90, placed the value of timber cut down annually at £1.6 millions. The official value of timber imported in 1800 was £693,000.
 8. Warren, *Wholesale Prices*, pp. 120-123; Hamilton, *War and Prices in Spain*, p. 173; Labrousse, *Esquisse du Mouvement des Prix*, pp. 98, 105, 141 and Young 'An Inquiry', 1815, pp. 170-175.

Of course the competition among belligerent powers for war materials such as timber, hemp, canvas and iron pushed up their prices still further.¹ Moreover, the depreciated exchange, particularly during the years after 1808, also added considerably to the import bill.²

Between 1793 and 1815 France and her allies and, after 1808, the United States attempted on several occasions to arrest the flow of imports to Britain. Economic blockades by hostile powers did not, however, succeed in cutting off supplies for protracted periods of time, although the repercussions were fairly serious in 1800, 1807 and 1810-12. The effects of economic warfare were rather to force trade outside its usual channels and to make purchases abroad by British merchants highly erratic. Whenever importers anticipated an embargo or blockade on trade with a particular source of supply, they stockpiled, sometimes on a considerable scale. Whenever exports markets opened up again British industries increased their demands for raw materials rapidly. Whenever the Navy inaugurated a crash programme of shipbuilding demands for timber, flax, hemp, iron and copper expanded immediately. Largely as a result of political factors wartime demands by British importers became highly unstable and subject to sudden increases which inevitably forced up prices. Prices of colonial foodstuffs also experienced the effects of erratic foreign demand. During the war years the Navy successfully arrested trade between Europe and the French and Dutch possessions in the West Indies. As a result the supply of coffee, sugar, spices and tea fell into British and American hands. Provided markets in Europe remained open high profits could be made, particularly during the Revolutionary War, from the sales of these foodstuffs through Hamburg. The export demand reduced the supply and pushed up prices in the domestic market. On the other hand when markets in Europe became closed or satiated the British market became glutted with colonial produce and prices fell precipitously.

Finally, the effects of economic warfare were to force trade outside its usual channels. Imports reached the country by circuitous routes and by devious or improvised means.³ With the normal and direct channels of trade often closed, costs of freight and marine insurance naturally rose even further above the high levels already reached because of Government competition for shipping services.⁴

1. Gayer, *Growth and Fluctuations*, Vol. 2, pp. 641-643.

2. See Table 34 and pp. 273-274.

3. See pp. 280-288 and 291.

4. Tooke, *History of Prices*, p. 115.

Two other forces should be mentioned on the supply side, although it is difficult to assess their influence. First, the adjustment of production to a war economy is seldom achieved smoothly. Manpower had to be mobilised and capacity switched or created for military purposes. Unless supply was highly elastic the reorganisation of production undoubtedly had some effect on prices.¹ Secondly, available indices show a marked upward movement in money wage rates over the war years. How far wages exercised an autonomous influence on prices and were not simply a response to factors on the demand side is impossible to analyse. In particular cases something like the modern "wage push" may have operated, but in an economy where individual bargaining was the norm and where attempts to combine into unions were vigorously repressed by the Government as Jacobinism, it is hardly necessary to look for inflationary pressures from labour. Although such statistical correlations do not dismiss the possibility that labour costs exerted positive and independent pressure on prices, the figures do show that for most of the war years, wages lagged behind prices.²

It seems more promising to look for the sources of inflationary pressures between 1793 and 1815 on the side of demand, where the usual distinction between consumers, Government and investment expenditures should help to clarify the discussion. It is on the demand side that the role of the banking system can be most conveniently analysed.

Before the advent of hire purchase and other forms of consumers' credit the majority of households, without personal savings, found it difficult to live beyond their incomes or to maintain real living standards during a period of inflation. Wages, the principal source of private consumption, lagged behind prices and there is no reason to expect that other social groups whose incomes came from profits, interest and rents exerted an autonomous influence on the price level in a period of high taxation. The new income tax transferred reduced private consumption and as a flat rate levy it probably had little effect on saving. Its burden fell almost entirely upon the expenditures of the upper and middle classes.³ Indirect taxes fell on the mass of the population and restrained consumption. Duties on commodities, particularly the highly progressive assessed taxes may even have prompted the upper class to save.⁴ Paradoxically, indirect taxes did not, as some contemporaries imagined, generate continuous inflationary

1. Tooke, *History of Prices*, p. 92; Lowe, *Present State of England, 1822*, pp. 271-273 and Blake, *Observations on the Effects Produced by Expenditure, 1823*, pp. 48, 69 and 77.
 2. See pp. 265-267.
 3. See pp. 423-424.
 4. See pp. 317-318 and 462.

pressure. Their immediate impact was rather to transfer purchasing power from households to the Treasury. Only when indirect taxes actively promote demands for higher incomes do they contribute a wage-price spiral. With an unorganised labour market, virtually no facilities for consumers' credit and a high level of taxes of a type which probably reduced expenditure rather than saving, private consumption seems unlikely to have exerted any significant pressure on the price level between 1793 and 1815. This conclusion is borne out by revenue statistics which show that in general per capita consumption of a wide range of foodstuffs, industrial commodities and luxury goods either declined or rose slowly during the war years.¹

During a period of war, defence expenditure is likely to be a potent source of inflation. Statistics of military expenditure show that it increased from £5.3 million in 1788-92 to £59.7 million during the last five years of war, 1811-15 and total Government expenditure rose from £17.0 million to £109.9 million over the same period.² One must, however, when assessing the importance of Government in the wartime inflation, be precise about its responsibility. Total public or military expenditure is not really helpful and exaggerates the Government's role. Only the addition to public expenditure above its pre-war level is relevant to an analysis of the inflationary potential of wartime expenditure and only that part of the additional income collected for war which was employed for the purchase of domestic factors of production, goods and services exerted an influence on prices.

Approximately 37% of the additional public income collected between 1793 and 1815 was employed as interest payments, pensions and for debt redemption.³ Only if the State transferred income from those with a higher propensity to consume could this expenditure be described as inflationary. In fact transfer payments at the end of the 18th and beginning of the 19th centuries probably exerted a deflationary influence on prices. A further portion of Government disbursements, impossible to quantify, went on foreign goods and services. For an analysis of the inflation this cannot be regarded as equivalent to total

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1. I divided the quantities taxed of a range of consumers' goods by total population for 1791, 1801, 1811 as recorded in Deane, *British Economic Growth*, p.5. My conclusions were as follows: No rise in per capita consumption of: crown glass, pleasure horses, malt, salt, silk, British and imported spirits, houses with more than 10 windows and wine. Slow rise in per capita consumption of: beer, candles, carriages, leather and paper. A definite rise in per capita consumption of: coffee, male servants, soap and tobacco.
 2. See Table 38 and Chisholm Rept., 1868-69.
 3. This ratio is a comparison of increments to public revenue with increments to transfer payments.

payments on Government account of the balance of payments.¹ In so far as imports purchased by the Government bid up prices abroad to the private sector, public expenditure exercised some inflationary influence. If transfers to military personnel abroad and loans and subsidies to allies in Europe and America were met directly or indirectly from domestic supplies, they affected prices. Only that part of military expenditure and transfers on Government account of the balance of payments which resulted in the purchase of foreign goods and services reduced the pressure of public expenditure on the domestic price level. Unfortunately it is not possible to isolate the proportion of wartime Government expenditure on domestic factors, commodities and services but if we exclude this problem then the rise in Government expenditure which could prima facie effect prices appears far smaller than the gross aggregates first suggest.²

To assess the possible inflationary impact of Government expenditure it is, however, necessary to take account of its finance. If expenditure is financed from taxes which involve a transfer of purchasing power from the private to the public sector, the effect on prices will be neutral. The State simply spends an amount equivalent to the fall in private expenditure. Alternatively if the Government borrows voluntary savings from its citizens, savings which would otherwise have been loaned to private investors, aggregate expenditure again remains constant; the command over resources simply changes hands. In both these cases, only if the Government taxes idle savings, if taxes lead to dissaving, or it borrows funds which would otherwise have been hoarded, does additional public expenditure exert an influence on prices. Tooke assumed that all public finance represented a diversion of purchasing power from private citizens to the Treasury and ignored the third inflationary source of finance, namely the monetization of public securities by the banking system.³ When the Government borrowed directly from private banks, a diversion of purchasing power did occur. Assuming that bankers were not prepared to lower their reserve requirements when accommodating the State, they simply substituted public for private securities in their portfolios and private investors found, either they were not prepared to pay the higher rates of interest charged by their banks or they simply could not obtain loans in competition with the Government. But when the Government borrowed

1. See Table 38.

2. See Table 38.

3. Tooke, *History of Prices*, pp. 91-92.

from the Bank of England, the Bank created reserve currency and as Bank notes passed into the tills of private banks, the banking system obtained the means for a general expansion in their liabilities. Thus, whenever the Treasury borrowed directly from the Bank of England its action increased the total money supply and created conditions for inflationary pressure on prices.

Thus, measures of inflationary pressure exerted by the State should include only additional wartime expenditure on domestic resources financed by money borrowed from the Bank of England. From the figures set out in Table 32 it can be seen that the impact on prices of Government expenditure was far less than the crude aggregates suggest at first sight. Of course the conclusion rests upon a number of arguable, and perhaps some implausible, assumptions but even on assumptions less favourable to the Government, the figures do provide some notion of the possible impact of public expenditure on the price level during the war years.

Unfortunately, measures of private capital formation are not available, but random data covering some sectors of the economy indicate that investment in fixed capacity probably proceeded at an unusual pace for a period of war.¹ Comparisons with previous wars cannot be made but Ashton seems inclined to believe that war normally restrained any rapid rise in the rate of capital formation.² Furthermore, circulating investment in commodity stocks, shipping, banking and insurance services for the world economy also appears to have increased rapidly during the period 1793-1815.³ Although figures cannot be found to quantify it, it is not unreasonable to conclude that private investment provided the primary source of inflationary pressure during the war years.

But the question remains as to how far liberal monetary policy encouraged the private sector to push investment expenditures beyond the level where resources could sustain them to the point where competition for scarce factors and commodities simply pushed up prices. Did the banking system stimulate an unwarranted level of private investment expenditure?

Before 1797 the need to hold specie reserves set flexible but, nevertheless, definable limits to the capacity of the banking system to extend credit. During previous wars and the first four years of the Revolutionary War the extension of loans to the Government and the rise in the rate of interest presaged some shortage of finance for private investment.⁴ After Suspension the limits to the

1. See Tables 1 and 36.

2. Ashton, *Economic Fluctuations*, pp. 81, 83 and 104.

3. See pp. 281 and 309.

4. See pp. 86-88, 170, 173-174 and see Tables 12 and 22.

expansion of bank advances were set by the note issues of the Bank of England. Possibilities for credit creation became in fact limitless but the Directors enforced some degree of restraint by discounting all first class bills, of short maturity, at 5%.¹ There is no evidence that the Bank actively solicited customers or tried to maximise profits but over the years 1793-1815 its bills and notes discounted for the private sector increased in value at the unprecedented rate of 8.1% a year. Total liabilities (advances to both public and private sectors) expanded at the slower rate of nearly 6% per annum.² As the Directors readily admitted, nothing like this level of accommodation could have been afforded if specie payments had been maintained.³ Moreover, Horner as Chairman of the Bullion Committee clearly appreciated that a rate of interest of 5% provided an inadequate safeguard against excessive credit creation, particularly in a period of rising prices. He pointed out to the Governor and Deputy Governor of the Bank: "You have stated that the control which guards the public against any excess in issues is that no person would be disposed to pay at the rate of 5% for the use of their notes if his occasions did not require such an advance; might not such a person be disposed to obtain this accommodation from the Bank if any prospect offered itself to his speculation by which great profit might be derived from the use of capital so obtained." The Governors' unsatisfactory reply was that "No accommodation is given to speculators." Harman, one of the Directors, seems to have appreciated Horner's point a little better because he admitted that a rate of 4% might occasion an excess issue of notes.⁴ But the Bank had never employed the discount rate to regulate the money supply and the Usury Laws prevented the Directors from charging more than 5%.

After 1797 the Bank never made any attempt to ration its accommodation to the private sector, but simply satisfied demand provided borrowers met its traditional criteria for advances.

No statistics are available to measure the rate at which the rest of the banking system contracted liabilities. Nor, and this is more^{to} the point, is there conclusive evidence to support the conventional view that London and particularly country bankers used the opportunity provided by the Suspension of Specie Payments to lend indiscriminately to take more than the usual risks or in that ambiguous phrase "to force their notes into circulation."

Attacks on the behaviour of bankers predated the Suspension. In several commentaries country banks became the scapegoat for the crisis of 1793.⁵ Boyd

1. See pp. 93-94.

2. See Table 22.

3. Bullion Cttee., 1810, pp. 96-97 and 143.

4. Bullion Cttee., 1810, p. 89.

5. See pp. 199-200.

and his followers blamed them for aggravating the rise in prices during the bad harvests of 1799-1801.¹ Atkinson thought that the granting of overdrafts by London bankers to their country correspondents had been carried to "an injurious extent."² While depression of 1810-1812 attacks on country bankers became really virulent. Chalmers described them as "an excrescence upon our commercial dealings."³ Grenfell referred to the 'evils' of country bank circulation and even Sinclair thought there ought to be some check on it.⁴ In the House of Lords they were condemned by two Earls. Lauderdale considered that "country banks were all issuing as much paper as they could circulate."⁵ Stanhope was more moderate but still critical. "There were many country bankers undoubtedly who were men of large property and of the security of whose notes there could be no doubt; but there were others who issued notes to a large amount although they were not worth £500 in the world."⁶

After the war Wakefield told the Committee on Agriculture that "Up to the year 1813 there were banks in almost all parts of England, forcing their paper into circulation at an enormous expense to themselves; and, in most instances it had been done to their own ruin."⁷ In 1828 Parnell considered "the loss which the country has sustained since 1792 by the country banks not making good their engagements, has been quite enormous," and Taylor knew "some bankers destitute of the requisite judgement and caution. These persons not unfrequently brought ruin upon themselves, loss to some of their neighbours and disrepute on the banking system."⁸

Two American economists are among the modern proponents of this tradition. Silberling accepts uncritically the opinions of Wheatley, whom he regarded as displaying "commendable originality and a firm grip upon realities in laying the blame for such needless expansion of British credit where it mainly belonged on the unregulated extravagance of country banking."⁹ Angell reiterates this point of view, "innumerable and weedlike country banks" whose activities were "essentially speculative."¹⁰ Careful scholars like Feavearyear and Clapham appear disposed to accept such criticism.¹¹

1. See pp. 242-243.

2. Atkinson, 'Thoughts', 1802, p. 33.

3. Chalmers, 'Considerations', 1811, pp. 162 and 169.

4. Grenfell, 'A Defence', 1810, p.41 and Sinclair, 'Remarks', 1811, p.31.

5. Smart, Economic Annals, Vol. 1, p. 302.

6. Parly. Debs., Vol. 20, p. 835.

7. Cttee. on Agriculture, 1821, pp. 213-214.

8. Parnell, 'Observations', p.30 and Taylor, A View of the Money System, 1828, p.107.

9. Silberling, 'Financial and Monetary Policy', pp. 416-417 and 'British Prices and Business Cycles', pp. 242-243.

10. Angell, Theory of International Prices, p. 479.

11. Feavearyear, The Pound Sterling, pp.181 and 194 and Clapham, Bank of England, Vol. 2, p.21.

Silberling's point that "the country banks found the door open to unusual facility in the extension of their credit", is accurate enough if by 'unusual' he means that banks were less restricted in affording credit than they had been under the gold standard.¹ Although there are no statistics to test it, informed contemporary opinion favoured the view that banks lowered their reserve requirements after Suspension. Thompson, who ran the Hull branch of Smith, Payne and Smiths thought it "not necessary for a country bank to be provided with the same amount in bank notes in proportion to his issues as he was before restriction liable to keep gold."² Wilkins, the Brecon banker, admitted he had lowered his reserve.³ While Tritton of Barclays, Thomas Richardson, the bill broker, and Walter Boyd all held the view that the practice of working with lower reserves was general.⁴ Their opinions presumably convinced the Bullion Committee, of whom four were bankers, to "believe that the total amount of unproductive stock of all the country banks consisting of specie and Bank of England paper is much less at this period under a circulation vastly increased in extent than it was before the restriction of 1797."⁵

Part of the explanation of why the reserve ratios declined was, however, because improved institutional arrangements reduced the risk of operating with lower reserves. Several economies in the use of reserve currency were established or improved upon during the French wars. Immediately after Suspension London bankers obtained discount facilities at the Bank of England.⁶ Clearing arrangements between London banks and the Bank of England were systematically improved, as were the clearing arrangements between the London banks themselves.⁷ Cooperation among country bankers within particular localities also developed.⁸ With the establishment of bill brokers and a more reliable Stock Exchange as integral parts of the London money market opportunities for bankers to lend money at call and short notice increased.⁹ As Bosanquet observed, such economies enabled bankers "to lower very considerably their stock of notes and to place the same productivity in bills and other securities."¹⁰

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1. Silberling, 'Financial and Monetary Policy', p. 399.
 2. Bullion Cttee., 1810, pp. 115-116.
 3. Cttee. on Bank Charter, 1832, Q.1757.
 4. Bullion Cttee., 1810, pp. 140-141 and 147, and Boyd, Letter to Pitt, 1811, pp. 19-20.
 5. Canning, Paper Pound, p.62.
 6. Cttee. on Suspension, 1797, p.71.
 7. Bullion Cttee., 1810, pp. 124-125 & 151; Commons Cttee. on Resumption, 1819, pp. 248, 320-322 and Tooke, Thoughts and Details, 1822, p.34.
 8. Pressnell, Country Banking, pp. 195 and 214.
 9. Bullion Cttee., 1810, pp.147-148; King, History of London Discount and Market, pp. 9 and 27 and Duguid, The Stock Exchange, 1900, pp.53-54.
 10. Bosanquet, 'Practical Observations', 1810, p.55.

Historians, inclined to subscribe to the old established view that private bankers behaved recklessly during the French wars, are perhaps over impressed with the rapid growth in the number of country banks and the extent of bankruptcy among them between 1793 and 1815. There seems, however, no need to share the apprehension of contemporaries about the rapid development of new economic institutions or to describe the development of banking with bucolic similes such as "weed" or "mushroom like" growth.¹ It would be difficult to sustain an argument that some proportion of banks established after 1793 were unnecessary. Banks were an integral and necessary part of the industrial revolution. Did not the volume of foreign and perhaps internal trade about double during the war years? Increased production required the financial services which came with the spread of banking.

At first sight statistics of bank failures appear to provide a more reliable basis for the condemnation of bankers. Yet the figures are not without ambiguities and are frequently misleading. To begin with a bank stoppage was not the same thing as a bank failure. The former implied only a temporary inability to meet liabilities, and many reported failures often settled their debts without actually going bankrupt.² Contemporary assertions about the extent of bankruptcy among bankers were frequently based on faulty statistics and should be treated with scepticism.³ Pressnell's figures do, however, indicate a rise, compared with pre-war years, in the annual average number of banks which went bankrupt during the French wars.⁴ Before his improved statistics are interpreted as evidence of reckless credit expansion by bankers, a number of alternative interpretations should be canvassed. First, a rise in the number of bankrupts is no indication of the actual extent of bankruptcy. Small firms might have failed owing relatively small sums of money. Next, given the normal risks attendant on a banking business in the early 19th century, a rise in the number of banks pressages an increase in bank failures. By expressing the number of failures in particular years as a percentage of the total number of banks in operation, the extent of bankruptcy appears much less alarming.⁵ To really appraise the incidence of bankruptcy among bankers, one needs to compare figures of bankruptcy statistics for all sectors of the economy, but such information is not available. Some increase in the extent of failures among bankers could, moreover, be

1. Angell, *Theory of International Prices*, pp.477-480.

2. Pressnell, *Country Banking*, pp. 144 and 445-448.

3. Chalmers, *Domestic Economy*, 1812, p.229 and McPherson, *Annals*, Vol.4, 1805, p.266.

4. Pressnell, *Country Banking*, p.536.

5. Gregory, *Westminster Bank*, p.6. did the calculation for the years 1808-1830. The proportion of failures among bankers appears to have been higher after the resumption of specie payments.

expected with the rapid and widespread establishment of new economic institutions.

Finally, it is possible to suggest reasons other than the reckless behaviour of bankers for some of the failures that occurred. As Pressnell demonstrated, many were not 'structural' but 'cyclical' - that is the causes of failure could be ascribed less to internal mismanagement, and more to unpredictable external circumstances.¹ Of seven London banks which failed in the depression years 1810 to 1812, something is known of the case histories of three and this evidence suggests that failure occurred in each case not as a consequence of mismanagement but because adverse political conditions in the world economy precipitated failures among the banks' merchant clients.² Furthermore, the failure of London banks invariably involved country correspondence and vice versa. For example, the failure of Brickwoods in July of 1810 occasioned the bankruptcy of 5 banks in the south west of England and closures among the Liverpool correspondents of Devaynes, Dawes and Noble led to the collapse of that firm in the same month.³ In January of 1812 Boldero and Lushington went bankrupt and involved banks in the north west.⁴ Alternative interpretations of why bankruptcy among bankers was more common do not prove that bankers did not lack the necessary prudence in the management of their concerns; they simply cast doubt upon the more crude assertions which have been made about the cupidity and recklessness of their behaviour.

My investigation into the behaviour of the banking system aimed to see if it actively encouraged investment expenditure by the private sector during the war years and thereby exerted pressure on the price level. My conclusions cannot be other than impressionistic, based as they are upon scraps of ambiguous evidence. First of all it is clear that during the inflation the legal maximum rate of interest charged by the banks probably stimulated demands for loans as the real cost of interest charges declined. Moreover, the spread of banks and the habit of banking may well have induced a higher level of lending and borrowing. Freed from the constraints of convertibility the Treasury and the Bank of England provided the rest of the banking system with ample reserve currency at a time when banks were already disposed to work with lower reserves. The liabilities of the Bank almost certainly increased at a more rapid rate than production. After 1797 not only did the central authorities exercise no check on credit creation but bankers knew that the Bank of England or the Government were usually prepared to come to their aid in periods of economic crisis, a factor

1. Pressnell, *Country Banking*, pp. 448-451.

2. *Times*, 9 July, 1 and 9 August, 1810 and 3 and 14 January, 1812 and Anon, 'An Expose', 1814, pp. 74-76.

3. *Times*, 9 July, 1810 and Greig, ed., *Farington Diary*, Vol. 6, p.213.

4. *Times*, 3 and 14 January, 1812.

which undoubtedly increased their confidence in lending.

Although the evidence is not really sufficient to support the kind of charges made by contemporaries, often prejudiced against banks, or the rather extreme views of Silberling and Angell, it does appear as if the banking system took advantage of the opportunities afforded by the Suspension to become more liberal in lending. Certainly no evidence exists that bankers imposed restraints upon the investment activities of their clients. The orthodox Keynesian view that the money supply rises in response to expenditures and not the other way round is not fully applicable to the period 1793-1815. It can be argued that private expenditures were to some degree stimulated by the liberal monetary policy. Increases in the price level of the magnitude achieved during the French wars could not have been realised by increases in velocity alone.¹ Furthermore, without the armoury of direct controls available to a modern administration, control of the money supply constituted the only feasible way open to the Government to preserve some measure of price stability. Instead it removed the restraint imposed by inconvertibility, (a restraint which had been effective enough to prevent rising prices in previous wars) and substituted no other control on the money supply. On the contrary the Government and the Bank of England gave encouragement to the banks to expand their liabilities. The Government's monetary policy certainly permitted prices to rise and in an important sense can be held at least partly responsible for their upward movement between 1793 and 1815.

This conclusion does not mean that the policy was "reckless, extravagant or anti social" to quote some of the usual epithets used to describe it. To support such assertions we need to look beyond the discount policies of the Bank of England, the borrowing operations of the Treasury and the rather inconclusive evidence on reserve ratios and bankruptcy to the economy and its problems. We need to enquire if the operations of the banking system actually had adverse social and economic effects.

2. Some Consequences of Price Inflation

An explanation of the nature and extent of Government responsibility for the wartime inflation cannot, as it often did, in the 19th century, serve as a condemnation of credit policy. It is necessary to discuss some of the advantages

1. Friedman, 'The Supply of Money', pp. 242-261.

2. Schumpeter, 'English Prices and Public Finance', pp. 23-24.

and disadvantages of allowing prices to rise. Perhaps the best way to proceed is by a review of contemporary opinion on the subject. Much of their discussion has an obviously modern ring because it consisted of assertions and counter assertions about the iniquitous effects of inflation on particular social groups. In Ricardo's terse prose "Every man is injured or benefited by variations in the volume of the circulating medium in proportion as the fixed demand on him in money exceed those fixed demands which he may have on others."¹ On these criteria particular groups were selected as worthy of sympathy for the injurious effects they had suffered from the inflation. The professional classes received a good share of attention. Hoare and Huskisson expressed sympathy with their plight but Hill remained antipathetic because he considered the "genteel employment over-stocked anyway."² Torrens put the economist's argument for ignoring professional people. "If their services", he wrote, "are as efficiently performed in a depreciated currency as when paid in one of undiminished value this is a clear gain to the public."³

Close to the heart of many a classical economist came the rentiers. Ricardo accused the Bank "of enhancing the price of provisions and every necessary of life," and so "injuring the public annuitant and all those persons whose incomes were fixed and who were consequently not able to shift any part of the burden from their own shoulders."⁴ Malthus felt "of all the description of persons in the state the public creditor appears to us to be the most deeply and cruelly injured."⁵ Francis Horner when he introduced the Bullion Report to the Commons hoped "I shall not hear argued in any quarter that the depreciation of the currency is productive of a positive advantage to the public as it enables the Government to discharge interest on the national debt at a reduced rate."⁶ Perhaps the sympathy so strongly expressed for public annuitants was a little misplaced. Their income had lagged behind prices but they could not only expect a reversal of this trend but to make capital gains on their investments at the end of the war. Public annuitants were only a small group who in general were not among the poorer sections of British society. Only about 9% of the interest

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1. 'Letter to the Morning Chronicle', 6 September, 1810, pp. 135-136 and 137-138.
 2. Huskisson, 'The Question', 1810, p.19; Hoare, 'Examination', 1811, pp.65 and 66 and Hill, 'An Inquiry', 1810, p.59.
 3. Torrens, 'A Comparative Estimate', 1812, p.61.
 4. 'Letters to the Morning Chronicle', 2 August, p.21 and 6 September, 1809, p.138.
 5. Malthus, 'Review of Controversy', 1811, p.466.
 6. Parly. Debs., Vol. 19, pp. 829-830.

paid on consols, for example, accrued to people with less than £1,000 in the funds.¹

Existing indices indicate that wages lagged behind prices during the war years.² Although many economists and politicians seem solicitous enough about the effects of inflation on the incomes of rentiers few of them appreciated that rising prices had occasioned real distress among working people. Hoare tried to evoke some pity for the "poor worn down helpless mechanic and common labourer," and Mushet knew that unlike other groups they had no "no means to shift the load from off their own shoulders."³ Mushet's point was not widely appreciated because it was all too readily assumed that poor relief maintained real standards among the working class.⁴ Historians have, however, recognised that the inflation made the French wars an uncomfortable time for working people. The Hammonds considered that "fluctuations of prices fell of course with special severity on the poor whose wages could not keep pace with them" and Cole noted the "persistent rise in prices which was ceaselessly beating down real wages."⁵

No doubt part of the working class agitation to maintain real wages during the war years was stimulated by the inflation. Parliament received petitions from a variety of trades, many were concerned primarily with the dilution of labour by evasions of the apprenticeship laws, of with the effects of machinery on the wages of old crafts. Nevertheless it is apparent from reading the petitions and the evidence of operatives examined by Parliamentary Committees that technological displacement and labour dilution were felt with added severity because the cost of living was rising.⁶

Most of the appeals and pressure for wage regulation failed, and working men turned frequently to riots, strikes and even violence in order to maintain living standards. Government industrial policy was to allow local poor relief to mitigate the most severe hardships of rising prices and to resist the attempts of workingmen to bid up wages by refusing to act on their behalf, by political intimidation and by legal oppression.⁷

1. These facts are based upon my analysis of Consol Ledgers at the Bank of England Archives (sets 9 and 12). At 5 July, 1792, the National Debt (nominal capital) amounted to £228 millions and consolidated annuities (consols) were £104 million. Only 9% of Consols was held by people or institutions with holdings less than £1000. At that time there were 48,495 separate accounts in Consols. See also Prentice, *Thoughts*, 1811, pp. 42-44.

2. See pp. 265-266.

3. Hoare, 'Examination', 1811, pp. 65-66 and Mushet, 'An Inquiry', 1810, p. 62.

4. Malthus, 'Price of Provisions', 1800, p. 198 and Sinclair, *Observations*, 1810, pp. 39-40.

5. Hammonds, *Town Labourer*, p. 109 and Cole, *Short History*, p. 43. 593-609

6. Commons Jnl. Vols. 61, 66, 74; Cttees. on Calico Printers, 1804, pp. / and 1806, 1155-1163; Parly. Hist. Vol. 32, pp. 700-702 and Parly. Debs. Vol. 6, p. 168, Vol. pp. 202, 249, 392 and 395.

7. Davies, *Birmingham*, pp. 73, 85, 91-94, 104 and 119-120.

Thus manufacturers and farmers obtained active political support in restraining the upward movement in wage rates. The Government did not attempt to curb a wage inflation or indeed to serve the interests of entrepreneurs, but its industrial policy framed for political reasons happened to combine against the interests of workmen to maintain stable real wages.

One possible objection to the policy of credit expansion is that inflation may reduce savings and occasion a movement of funds away from fixed interest public securities on a sufficient scale to bring about a sharp rise in the cost of public borrowing. In the absence of an enquiry into the motives of individual investors nothing conclusive can be said for or against this objection. One relevant statistic is the turnover of Government stock, because an increased rate of turnover would provide presumptive evidence for a movement out of public into other assets. I calculated a turnover ratio from a sample of 100 accounts in Consols for each year of the French wars by expressing the nominal value of the amount sold by the end of the year as a percentage of nominal value at the beginning of the year. The turnover ratio showed no tendency either to rise or to correlate with changes in the price level during war years.¹ Moreover, the relatively modest rise of 1.1% in the annual average rate of interest does not suggest that the Government had very serious difficulties in attracting investment in its bonds.² Finally it can be suggested that both the institutional arrangements of the market for long term capital and characteristics of investors in the national debt activated against any serious movement away from fixed interest bearing securities. In the early 19th century markets for long term capital were local, while investors in public securities usually lived in and around London.³ Their investment horizons probably seldom extended to industrial property, the obvious hedge against inflation, partly because risks were greater and partly because industry was not financed by means of negotiable shares but by methods which involved participation and full liability. The range of alternatives open to public annuitants anxious to protect their real investment

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1. The source is Consol Ledgers at the Bank of England archives (sets 9 to 12) covering the period 1792 to 1818. For each year from 1793 to 1815 I selected at random 100 accounts. I added up the nominal value of the capital at the beginning of the year and the sales throughout the year for each account and compared the two. I should point out that the Bank itself separated accounts of people it classified as "dealers" from accounts of holders. I made no analysis of the behaviour of the dealers. p. 229.
 2. See Table 19 - calculation based on Consol yields - Ashton, 'Some Statistics',
 3. Consol Ledgers sets 9 and 12. The Bank's records contain the name, address and "quality" (status) of those who held and dealt in bonds. Of course many people who normally lived outside the Home Counties may have registered their holdings at an address in or near London. But on the assumption that the addresses recorded at the Bank indicate at least something about the location of bond holders I analysed a random sample of 500 of the 48,495 accounts for Consols in 1792 and discovered 359 had addresses in London and the Home Counties.

income against inflation were confined to land and the shares of the City Corporations, insurance companies, London dock and waterworks corporations and canal companies.¹ Many of these securities often yielded a fixed return and hardly provided a hedge against inflation; the differential return between them and public securities was not as wide as the modern differential between bonds and ordinary shares.² Further the number of such shares available in the market at any one time was limited.³ Perhaps that is why the floating of several new joint stock companies in London in 1801 and 1808 was so eagerly received, their shares provided the Home Counties investors with a feasible opportunity to maintain a stable real income.⁴

My study of the holders of Consols indicated that the majority were not given to hasty transfers, but tended to retain their investment in the funds over fairly long periods of time disregarding both fluctuations in the general level of prices and changes in the capital value of their stock.⁵ Their behaviour was rational because experience had shown that at the end of the war an investor might expect an appreciation in the capital value of his stock and with the fall in prices of his investment income as well.

On the other hand, apart from the social consequences, definite advantages attended the lag of wages behind prices. Contemporary writers certainly noticed that the redistribution of income between wages and profits created opportunities for higher levels of saving and capital accumulation. Bentham worked out the

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1. Finkelstein, 'British Share Prices', p. 92. . . .
 2. Pressnell, 'The Rate of Interest', pp. 211-214.
 3. English, A Complete View, 1827, pp. 29-31 listed 156 Joint Stock Companies formed before 1824 which were still in existence in 1827. These Companies had a nominal capital of nearly £48 million and an aggregate issue of approximately 765,000 shares.
 4. Hunt, The Development of the Business Corporation, pp. 15-16 and Tooke, History of Prices, Vol. 1, pp. 277-278.
 5. Consol Ledgers sets 9 and 12 for 1792-98 and 1812-18. Again it is necessary to emphasise that the Bank's records after 1798 distinguished "dealers" from "holders". For the period 1792-98 I extracted from the ledgers 674 accounts of people who seemed to be dealers in bonds. At 5 July, 1792 they were less than 2% of Consol holders but held nearly 7% of the nominal capital of Consols. The Bank separated nearly 600 accounts of "jobbers" in the funds between 1798 and 1804 but the Bank's definition of a dealer is narrower than mine. For 1812 there is a memo in Lord Liverpool's Papers (38363) which is a breakdown of Consol holders. It described £73 million of the £401 million classified as "fluctuating stock". Speculators seem to be a small group, holding a small proportion of the debt but who presumably exercised an important influence on bond prices.

advantages of 'forced saving' and his hypothesis was taken up by Thornton in 1802.¹ Torrens and Malthus described the advantages of "a fall in the value of the circulating medium which alters the distribution of wealth in favour of the productive classes."² While Bosanquet opposed the return to specie payments in 1811 on the grounds that wages might lag behind prices in a downward direction.³

Contemporary discussion provokes two questions. Was there a profit inflation and what precisely were its advantages? To establish the fact comprehensive records of profits, money wages and commodity prices for different industries are required, and nothing of the sort is available. Profit series for four industrial firms were discovered but even this meagre evidence is not usable because of the definitions employed for profits.⁴ Income tax data are also unhelpful. Professor Hamilton attempted to demonstrate that 'a profit inflation' had been a feature of industrial growth in the second half of the 18th century correlating price and wage rates.⁵ He used prices that are entirely domestic and proceeded on the assumptions that changes in wage rates represent changes in earnings and that the productivity of labour did not decline. Hamilton's method is a valid way of showing that labour's share of the national income declined but his data are insufficient to support a thesis that the Industrial Revolution was financed through the inflation of industrial profits, largely because the price index employed by Hamilton is heavily weighted with agricultural commodities.⁶ Furthermore, his assertion that "the rates of pay of artisans and labourers engaged in building have proved to be representative of general wages" is doubtful.⁷ Although it is valid enough to show that Hamilton did not state his arguments precisely and that his data were deficient the counter claim, made by Felix, that profit inflation "was not much in evidence" or even "non-existent" seems pretentious to make without a more thorough examination of available material.⁸ For the purposes of this argument I have examined published data for the period 1793 to 1815.

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1. Hayek, 'Note on the Development of the Doctrine of Forced Saving', pp. 123-133; Stark, ed., Bentham's Economic Writings, Vol. 3, pp.344-351 and Thornton, Paper Credit, 1802, pp.236-238.
 2. Torrens, 'A Comparative Estimate', 1812, pp.54,56,58 and 65-67; Malthus, 'Depreciation of Paper Currency', 1810, pp.364-365 and 371 and 'Review of the Controversy', 1811, p.462.
 3. Bosanquet, 'Practical Observations', 1811, p.105.
 4. See Hartwell, The Yorkshire Woollen Industry; appdx.on Gott; Raistrick, A Dynasty of Ironfounders, p.297 and Birch, 'The Carron Company', pp.260-261.
 5. Hamilton, 'Profit Inflation and the Industrial Revolution', p.323 and 'Prices and Progress', p.329.
 6. Felix, 'Profit Inflation and Industrial Growth', pp.454-57.
 7. Hamilton, 'Profit Inflation and the Industrial Revolution', p.324.
 8. Felix, 'Profit Inflation and Industrial Growth', pp.443 and 462.

A comparison of the rate of change of wages (as computed by Wood and Tucker) with the rate of change of domestic wholesale prices (as computed by Gayer) reveals the lag of wages behind prices during the war years.¹ But highly aggregate correlations of this kind can be misleading because movements in the index of domestic wholesale index are dominated by the price of wheat and are influenced also by changes in the price of imported commodities. It is more useful to compare prices and wage rates for particular sectors of the economy. While this is just about possible for agriculture the paucity of data for the industrial sector makes the exercise more inconclusive.

From statistics recorded by Tooke, Beveridge, Marshal and James for agriculture, I constructed three weighted indices to represent movements in the prices of food grains, dairy produce, meat and raw wool.² For the war period the shortage of data on agricultural wage rates and considerable regional variations in the available figures makes the employment of a national wage index of the kind constructed by Bowley a dubious procedure. I preferred to use wage rates for individual counties where the information seemed reliable and where the number of recordings covered at least 25% of the war years.³ I then compared wage indices with agricultural prices county by county on graphs and reached the following conclusions. Grain, meat, dairy produce and wool prices displayed a definite upward trend over the war years. In Sussex, Wiltshire, Norfolk and Lincolnshire there was a marked lag of wages behind prices throughout the war. For Kent and Huntingdonshire the lag also persisted but is less marked. In Staffordshire and Cumberland, wages apparently caught up with prices round about 1803-05.

The information is limited and wage rates are not the same as earnings, but in general the published figures do support a conclusion that the share of gross income accruing to the agricultural labourers fell in the war years. This view accords with the observations of contemporaries on the conditions of the agricultural labourers during the inflation.⁴ Reports in the Farmers Magazine are particularly instructive for any study on the question of labour. Very few of the reports from the English counties complain either of high wages or labour scarcity before 1814.⁵ In sharp contrast reports from the Scottish counties

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1. Tucker, 'The Wages of London Artisans'; Wood, 'The Course of Average Wages' and Gayer, *Growth and Fluctuations*, Vol. 1, pp. 468-469.
 2. Beveridge, *Prices and Wages*; Tooke, *History of Prices, and Thoughts and Details, 1822*; Marshal, *A Digest* and James, *History of the Woollen and Worsted Industries*. These are wholesale or retail prices. Strictly speaking I require farm prices, but there is no reason to expect trade margins to rise. See Appdx. 1.
 3. Bowley, 'Agricultural Wages', Malthus, 'The Measure of Value', *Lords Cttee. on Grain, 1814* and *Cttee. on Agricultural Distress, 1821*.
 4. Malthus, 'Observations on the Corn Laws', 1815, p. 6; Young, *Annals*, 1801, p. 271; Torrens, 'A Comparative Estimate', 1812, p. 56; *Farmers Magazine*, 1807, p. 346 and *Cttee. on Agricultural Distress, 1821*, p. 215.
 5. *Farmers Magazine*, 1803, pp. 218 and 248 and 1806, p. 401 are the only exceptions I could find.

between 1802 and 1808 commented frequently on high wages, but by the end of 1808 the Scottish magazine correspondents noticed the salutary influence the trade depression had upon agricultural wages.¹ Until food prices began to fall rapidly after 1814 there are few complaints of high wages from Scotland.²

For the industrial sector highly aggregate correlations again seemed likely to mislead, particularly as the comparable data of prices and wages for particular industries are extremely scarce. I compared the following series on graphs.³

1. Prices of bricks from Beveridge with Bowley's index of wages in the London building trades.
2. Prices of candles from Beveridge with Tucker's index of wages of London artisans.
3. Prices of woollen cloth from Beveridge with Bowley's index of wages in the Leeds woollen industry.
4. Prices of laths from Beveridge and files from Lloyd with Wood's index of wages in Sheffield.
5. Prices of cotton yarn from Ashton and fustian from Beveridge with Wood's index of wages in Manchester.
6. Prices of iron from Tooke with Wood's index of wages in Sheffield.
7. Prices of lead, tin and copper from Tooke with Tucker's index of wages for London artisans.
8. Prices of stockings from Beveridge with Wood's index of wages for Leicester.
9. Prices of shoes from Beveridge with Tucker's index.

From this imperfect sample of domestic price and wage data it seems possible to draw the following tentative conclusions. For building materials, candles, metals, metal products, iron and hosiery industries the lag of wages behind prices was persistent and marked throughout the war years. For the woollen and leather industries the lag lasted until after Peace of Amiens and thereafter wages moved ahead of prices. For cotton textiles wages rose faster than prices.

Apart from the scarcity of data, several qualifications should be made. The figures collected by Bowley and others refer to wage rates and not earnings.

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1. Farmers Magazine, 1802, pp.237-238; 1803, p.237; 1804, pp.235, 437, 496.
 2. Ibid, 1814, pp. 231, 252, 367, 382, 390, 493.
 3. My sources for wage and price data were Bowley, 'Building Trades' and 'Worsted and Woollen Manufacture'; Tucker, 'Wages of London Artisans'; Wood, 'The Course of Average Wages'; Beveridge, 'Prices and Wages'; Lloyd Cutlery Trades; Ashton, 'Some Statistics of the Industrial Revolution', and Tooke, History of Prices and Thoughts and Details, 1822. See Appdx.

They are, however, often weighted by the wages of skilled workers whose earnings are likely to have risen more rapidly during a period of war and industrialisation. Many of the prices used represent payments for goods purchased on contract which would slow up the rate of change in prices. Thus if anything the data employed in the analysis would underestimate the lag of wages behind prices. Finally the period 1793 to 1815 was one when British industries were adopting more capital intensive methods of production, a process which normally shifts the share of industrial output in favour of profits. Thus even in the cotton industry where wages moved ahead of prices, if the higher ratio of capital to labour increased sufficiently to offset rising wage rates, the share of profits in net value added by the cotton industry may in fact have risen over the war years. With the exception of cotton wages appear to have lagged behind prices during the French wars.

Contemporary opinion that the price inflation redistributed income from wage earners to farmers, businessmen and property owners in general receives support from available statistics. In other words the evidence suggests that an increased share of a rising national income probably accrued to those classes with a higher propensity to save, who undertook investment, purchased public securities and paid the larger share of taxation. Thus inflation had several advantages. The Government found it easier both to tax and borrow money for the war; producers could pass on indirect taxes when prices were rising; yields of direct taxes were automatically increased and the burden lessened with the transfer of real income to producers; and finally the real burden of interest payments on the national debt declined. No wonder Keynes considered "to allow prices to rise by permitting a profit inflation is, in time of war, both inevitable and wise."¹

Within the capitalist group inflation had the further effect of transferring income from lenders to borrowers. Debtors gained and creditors lost from the inflation insofar as interest rates failed to reflect changes in the price level.² Exactly what this income redistribution implied for the British economy can be explored a little further. Malthus, Torrens and other economists regarded it with some favour as a transfer to the "productive" or "industrious" classes. Presumably what they had in mind was the encouragement debt depreciation gave to

1. Keynes, *Treatise on Money*, Vol. 2, p.114. Keynes advised Governments to tax away the rise in wages and profits.

2. Kessell, 'Inflation Caused Wealth Redistribution', p.128.

investment. Their argument might be put in this way. The transfer of income from creditors to debtors arose because debtors contracted debt at a fixed rate of investment, prices then rose, their real profits went up and created possibilities for productive investment. There are three assumptions to the argument: borrowers were, generally speaking, producers, money was more likely to fructify in their hands than in the hands of their creditors and the depreciation of interest payments encouraged borrowing for productive investment. Historians who have placed the entrepreneur and re-investment at the centre of the process of capital accumulation during the Industrial Revolution would, however, agree with Malthus and Torrens but to gauge the importance of inflation they should investigate and where possible quantify debtor-creditor relations throughout the economy, a task beyond the scope of this thesis. But a few suggestions can be made.

Short term borrowing was usually undertaken at fixed rates of interest because bankers and other lenders could not legally charge more than 5% and with rising prices the real cost of short term borrowing declined. Manufacturers and farmers relied on short term loans from the banks for their day to day payments, and Pressnell pointed out that "protracted short term borrowing added up in time to long term borrowing."¹ Inflation must, however, have been of particular benefit to those producers who financed most of their activities on short term credit. They included traders of all kinds who found the real cost of holding stocks diminished as prices rose. Bullionists often argued that the liberal monetary policy encouraged 'speculative' investment in commodity stocks, but they exaggerated the extent of speculation. Moreover, the exigencies of the war economy demanded a higher level of investment in commodity stocks.

Certain types of long term borrowing were also contracted at fixed rates of interest. For example, enterprises which borrowed on mortgages gained from inflation. Mortgages were utilised mainly for financing agricultural capital and public utility enterprises. For example, funds required for enclosures, the construction of turnpike roads, improvements to inland waterways and the building of canals and docks were often financed in this way.² Apparently mortgages became more difficult to raise during the war years. Inflation and the interest to be earned on bonds hindered the accumulation of capital financed by this form of borrowing, but those already in receipt of mortgage found that their re-investible

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1. Birch, 'The Carron Company', pp. 70-72; Hall, 'Note on the Carron Company', p. 45; John, *The Industrial Development of South Wales*, pp. 40, 43, 44 and 47-49; Hamilton, *The Industrial Revolution in Scotland*, p. 276 and Pressnell, *Country Banking*, pp. 322, 326, 333, 335 and 348.
 2. Pressnell, *Country Banking*, pp. 350 and 381 and John, *Industrial Development of South Wales*, pp. 44 and 45.

surplus grew with the depreciation of interest charges.¹ The inflation must have stimulated the high rate of investment in internal communications and agriculture which occurred during the war years.²

Less is known about how industrial entrepreneurs obtained funds for fixed capital formation. From the available evidence it appears unlikely that they borrowed long term at fixed rates of interest. Thus the depreciation of interest burdens was probably of more benefit to agriculturalists and traders than to manufacturers.

One further relationship of relevance to the study of the effects of the inflation is that between landowners and farmers, particularly as the great bulk of agricultural land was rented at the beginning of the 19th century.

While the available information is probably sufficient to warrant the conclusion that farm rent moved upwards over the war years, it is nothing like adequate enough to say what happened to the relative share of landowners in gross agricultural income.³ From available figures and comments it looks as if rent lagged behind prices in the war against Revolutionary France from 1793-1802. But in the years immediately after the peace of Amiens, landowners took their opportunities on the renewal of leases to increase rents by considerable amounts. Reports in the Farmers Magazine published between 1802 and 1810 suggest that a doubling or tripling of rents was not uncommon but by 1808 the more spectacular increases in rent were apparently over. Reports from the counties no longer commented upon the movement in rent with quite the same amazement, and in September 1808 the Farmers Magazine published "An Inquiry into the Causes of the Late Rise in the Value of Land."⁴ Two years later rents again lagged behind prices and a contributor suggested the widespread fixing of rent to the price of grain.⁵ In June of 1811 the Agricultural Intelligence noticed "the continued decline of rents in most counties," and complaints of rising rents were seldom published by the Farmers Magazine in the closing years of the war.⁶

1. Cttee. on Usury, 1818, pp. 8, 11, 20 and 197.

2. See Table 36 ; Cttee. on Agricultural Distress, 1821, p. 74; Farmers Magazine, 1805, pp. 60-62 and 507; 1808, pp. 315-317.

3. Lords Cttee. on Grain, 1814, p. 115; Cttee. on Agriculture, 1821, pp. 49, 92-93, 200 and 264 and O'Brien, 'British Incomes', p. 264.

4. Hunt, 'Agricultural Rent in South East England', pp. 100-102 and 106-107 and Farmers Magazine, 1802, pp. 265 and 268; 1803, pp. 113 and 123; 1806, pp. 100-101, 122, 311 and 391; 1807, pp. 111, 243 and 427 and 1808, pp. 124 and 311.

5. Farmers Magazine, 1810, pp. 500 and 503.

6. Farmers Magazine, 1811, p. 117.

In a system of cultivation where the bulk of land was leased for periods of years one would expect the share of landowners in gross agricultural output to decline during a period of rising prices. From contemporary comment, including the opinions of landowners, it appears that this is exactly what happened between 1793 and 1802 and probably again at the end of the war. By how much the landowners share declined is impossible to measure but it was probably not appreciable. Landowners who appeared before committees on agricultural distress after 1814 seem to have regarded the war as an unrelieved period of prosperity. They certainly never complained about any lag of rents behind prices. There seems to have been no obvious or marked redistribution of income between landowners and their tenants, which if it had occurred on any scale might possibly have lowered the rate of saving and fixed investment in the agricultural sector.¹

1. I am making the unverifiable assumption that agricultural investment was undertaken on the whole by landowners rather than their tenants.