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INTERNATIONAL CAPITAL FLOWS AND DOMESTIC  
ECONOMIC FLUCTUATION: THE UNITED STATES  
DURING THE 1830's

presented by

MILTON ESBITT

has been accepted towards fulfillment  
of the requirements for

PH. D. degree in ECONOMICS

A large, stylized handwritten signature in black ink. The signature is written over a horizontal line. Below the signature, the words "Major professor" are printed in a small, sans-serif font.

Date November 19, 1970





## ABSTRACT

# INTERNATIONAL CAPITAL FLOWS AND DOMESTIC ECONOMIC FLUCTUATION: THE UNITED STATES DURING THE 1830'S

By

Milton Esbitt

This dissertation shows how important components in the structure of the American economy and the economic relationships between America and Great Britain enabled economic disturbances on one side of the Atlantic to be transmitted to the other.

In examining the structural elements of the American economy two questions arose the treatment of which in previous works was found to be incomplete. What were the effects of the fiscal and monetary policies of the Jackson-Van Buren administrations on the economy? Secondly, what was the relationship between changes in the supply of specie and changes in the money supply, especially bank money and what were the causes of these specie inflows in the mid-1830's?

The dissertation is divided into four parts. The first focused on the structural elements which made the



American economy receptive to external disturbances. Attention was placed on the financing of the Anglo-American trade. The second part examined the effects of the fiscal and monetary policies of the federal government on the performance of banks. The third part deals with the Panic of 1837, the immediate events that led to it and the recovery process which followed. The final section covers the deflation period of 1839-1844, its causes and the forces which brought it to an end. A comparison of the 1839-1844 deflation with others of the ante-bellum period concludes the dissertation.

Three hypotheses were tested. The first examined the relationship between the British money market and Anglo-American trade. The results were inconclusive primarily because of a lack of sufficient data. The second hypothesis examined the relationship between changes in the supply of specie and changes in the supply of money. It was shown that there was no support for the often assumed relationship between these two variables. Regression analyses using annual data and first differences were used in testing these hypotheses. The final hypothesis dealt with the question of whether Deposit banks performed differently than other banks and the factors contributing to the differences. Deposit banks in general did pursue a more expansionary lending policy than non-deposit banks and movements in Treasury deposits were more important than

movements in specie in explaining this difference. A series of Chi square tests were used for this hypothesis.

A large number of aggregate and disaggregate series dealing with both the American and British economies were used. New series were developed for American foreign exchange rates as well as domestic exchange rates. Estimates were also developed for the condition of Deposit and non-deposit banks in the various states and the major cities.

The dissertation showed that given the structure of the Anglo-American trade and particularly the relationships between American and British money and capital markets, economic disturbances were transmitted from one country to the other. The financial panic of 1837 was mainly due to pressures emanating from Great Britain but aggravated by internal factors in America. The collapse of the British money and capital markets in 1839 and the cotton market brought down the superstructure of Anglo-American trade. This in turn led to the deflation in America which lasted until 1844.

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## TABLE OF CONTENTS

	Page
LIST OF TABLES . . . . .	iv
LIST OF APPENDICES . . . . .	viii
 Chapter	
I. INTRODUCTION . . . . .	1
The Existing Analysis . . . . .	1
The Anglo-American Economies and the Transmission of Economid Disturbances . . . . .	3
II. BANKING AND ECONOMIC ACTIVITY DURING 1833 AND 1834 . . . . .	14
The Second Bank of the United States and the State Banks . . . . .	15
Banking and Economic Activity During "Biddle's Contraction" . . . . .	30
III. CREDIT, MONEY AND SPECIE IN THE 1830'S . . . . .	36
Domestic Trade and Credit . . . . .	36
Anglo-American Trade and Credit . . . . .	44
Specie Flows and the Money Supply . . . . .	48
The Federal Government and the Supply of Money and Credit 1834-1835 . . . . .	69
Appendix to Chapter Three . . . . .	80
IV. THE GROWTH OF AGGREGATE DEMAND IN THE MID-1830'S . . . . .	83
Cotton and the American Economy in the Mid-1839's . . . . .	83
Specialization, Urbanization and the Growth in the Mid-West and East . . . . .	89
State Governments and the Growth of Transportation Infrastructure . . . . .	97



Chapter	Page
V. THE END OF PROSPERITY . . . . .	110
Federal Fiscal and Monetary Policies in 1836 .	112
The New York Money Market in the Last Half of 1836 . . . . .	146
The British Money and Commodity Markets During 1836 . . . . .	152
VI. COTTON, SPECIE AND THE FINANCIAL CRISIS OF 1837	168
Grain, Cotton and the Anglo-American Money Markets . . . . .	169
Suspension of the New York City Banks . . .	186
VII. THE AFTERMATH OF THE PANIC: DISLOCATION AND RECOVERY . . . . .	200
Dislocation and Its Economic Costs . . . .	200
The Movement Towards Recovery in the United States . . . . .	212
Resumption and Recovery . . . . .	227
VIII. THE BRITISH MARKETS AND THE PANIC OF 1839 . .	255
The British and Continental Markets: Grains and Specie . . . . .	256
The End of the Recovery: America in 1839 . .	265
The End of an Era: The Panic of 1839 . . .	276
IX. THE BECALMED YEARS: 1840-1843 . . . . .	292
Reaching a Temporary Botton, 1840 . . . .	293
The Revival of Late 1840 and 1841 . . . .	299
The American Economy Reaches Botton: 1842- 1843 . . . . .	309
The Path to Recovery: 1843-1844 . . . .	317
The 1839-1843 Recession in Historical Perspective . . . . .	328
X. CONCLUSIONS . . . . .	345
Excess Demand and Economic Growth . . . .	345
A Summary of the 1833-1843 Period . . . .	347
Concluding Comments . . . . .	359
BIBLIOGRAPHY . . . . .	363
APPENDICES . . . . .	381

## LIST OF TABLES

Table	Page
2.1. Comparison of the Second Bank of the United States and the Safety Fund Banks of New York State, Major Assets and Liabilities, 1831-1834 . . . . .	16
2.2. Major Assets and Liabilities of the Second Bank of the United States, Monthly August 1833-October 1834 . . . . .	21
2.3. Major Assets and Liabilities, Banks of Massachusetts, Pennsylvania, Rhode Island, North Carolina, New York City, and the Second Bank of the United States, 1833-1834 . . . . .	27
3.1. Per cent of the Variation in the Money Supply and Bank Money Explained by Variations in the Total Supply of Specie and Bank Specie Holding, 1830-1845 . . . . .	60
3.2. Percentage Change in Major Assets and Liabilities State Banks by Region, 1835-1837 . . . . .	66
3.3. Percentage Change in Major Assets and Liabilities of Banks in Selected States and Cities, 1834-1837 . . . . .	67
4.1. Per cent Distribution of State Debts Outstanding in 1838 by Purposes for which Incurred . . . . .	99
4.2. Percentage Changes in Selected Economic Series, 1830-1836 . . . . .	104
5.1. Capital Stock and United States Treasury Deposits of Deposit Banks Around June 1, 1936 . . . . .	113
5.2. The Relationship Between Changes in United States Treasury Deposits and the Major Assets and note Circulation of Deposit Banks, June-December 1836 . . . . .	115

Table	Page
5.3. Interstate Transfer Drafts Issued and Payable Between June 23, 1836 and December 15, 1836 . .	121
5.4. The Relationship Between Net Interstate Transfer Flows and Changes in the Major Assets and Note Circulation of Deposit Banks Between June-August, 1836 and October 24-November 7, 1836 . . . . .	124
5.5. The Relationship Between Net Interstate Transfer Flows Necessitated by the Distribution Act and Changes in the Major Assets and Note Circulation of Deposit Banks Between October 24-November 7, 1836 and December 1836 . . . . .	126
5.6. Comparison of the Changes in Major Assets and Liabilities of Deposit Banks in Land Sale and Non-Land Sale States, July-October 1836 . .	136
5.7. Distribution of Specie in State Banks, By Region, 1835-1836 . . . . .	144
5.8. Major Assets and Liabilities of Deposit Banks New York City July 1836-July 1837 . . . . .	147
6.1. The Amount of Treasury Deposits in the Several States During June and December, 1836, and the Amounts Due and Received by the States Under Sections 12 and 13 of the Deposit Act of June 23, 1836 . . . . .	181
6.2. Amount of Money Transferred From New York City Deposit Banks for the First Three Payments of the Distribution . . . . .	187
7.1. Percentage Changes in Selected Price Series 1835-1838 . . . . .	203
7.2. Percentage Changes in Bank Lending, Specie Holdings and Current Demand Liabilities, Selected Banks, April 1837-June 1838 . . . .	220
7.3. Estimates of State Expenditures and Receipts, per Capita and Aggregate for All States 1830-1845 . . . . .	240
8.1. Average Annual Prices and Volume of Grain Imports United Kingdom, 1830-1845 . . . .	257

Table	Page
8.2. Percentage Changes in Selected United States Price Series, Monthly 1839 . . . . .	266
8.3. Major Assets and Liabilities of Selected Banks 1838-1840 . . . . .	270
8.4. Ratios of Current Demand Liabilities and Demand Deposits to Bank Specie Holdings in Selected Banks 1839 . . . . .	280
9.1. Prices of United States State of New York, and New York City Bonds at New York City February 1842-March 1843 . . . . .	319
9.2. Imports Into the Port of New York, 1833-1844 .	323
9.3. Comparison of Three Ante-Bellum Economic Disturbances, 1818-1822, 1837-1843, 1857-1860 . . . . .	333
A-1. United States Balance of Payments, 1830-1845 .	383
A-2. Federal Receipts, Expenditures, Annual and Gross Deficits and Surpluses, 1830-1845 . . .	384
A-3. Receipts From Public Land Sales by the United States, Quarterly, 1830-1845 . . . . .	385
A-4. United States Exports of Flour, Corn and Meal, 1830-1845 . . . . .	386
A-5. Interstate Transfer Drafts Issued for the Distribution of the Surplus Revenue . . . .	387
B-1. Estimates of Major Assets, All United States Banks, 1829, 1833-1845 . . . . .	389
B-2. Estimates of Major Liabilities, All United States Banks, 1829, 1833-1845 . . . . .	390
B-3. Selected Assets and Liabilities of Federal Deposit Banks, 1834-1837 . . . . .	391
B-4. Comparison of Percentage Changes in Major Assets and Liabilities of Selected Deposit Banks and Banks of the States or Cities in which they are Located, 1834-1847 . . . .	392
B-5. Monetary Conditions in the United Kingdom, 1830-1845 . . . . .	394

Table	Page
B- 6. Estimates of the United States Money Supply, 1833-1845 . . . . .	395
B- 7. Average Short-Term Interest Rates in London and New York Money Markets and the Bank of England Discount Rate, Monthly, January 1834-December 1844 . . . . .	396
B- 8. Foreign Exchange Rates, Dollars and Pounds, January 1834-December 1843 . . . . .	399
B- 9. Value of the Pound Sterling in Dollars . . . .	402
B-10. The Condition of the New York City Banks, July 1834-May 1844 . . . . .	403
B-11. Major Assets and Liabilities of the Leading New York City Deposit Banks, February-July, 1837 .	404
B-12. Quarterly Indicators of Monetary Conditions in the United Kingdom, 1833-1842 . . . . .	405
B-13. Major Liabilities of the New York City Banks, January 1837-May 1838 . . . . .	406
B-14. The Condition of the New York Safety Fund Banks, 1831-1837 . . . . .	407
B-15. Prices of Domestic Exchange at New York, January 1835-September, 1842 . . . . .	408
C- 1. Estimates of United States Cotton Prices, 1830-1845 . . . . .	412
C- 2. United States Cotton Production and Consumption, 1830-1845 . . . . .	413
C- 3. Anglo-American Trade, 1830-1845 . . . . .	414
C- 4. Cotton Consumption and Production, United States and the United Kingdom, Percentage Changes, 1830-1845 . . . . .	415
C- 5. Monthly Prices of Short-Staple Cotton, New Orleans and England, January 1834-January 1845 . . . . .	416

## LIST OF APPENDICES

Appendix	Page
Appendix A . . . . .	382
Appendix B . . . . .	388
Appendix C . . . . .	411



## CHAPTER I

### INTRODUCTION

#### The Existing Analysis

The third decade of the nineteenth century was one of change, sometimes turbulent, for the American economy as well as for American political life. Most of this decade was passed under the warmth of good times.<sup>1</sup> The last three years and the first three of the next decade were times of instability which, by 1839, developed into a depression, supposedly second in magnitude to that of the "Great Depression" of this century.<sup>2</sup>

Most of the works dealing with the economy during the period focused on the conflict, in which Jackson and Biddle were the star actors in a many plotted drama, pitting the new money interests of Wall Street and the old of Philadelphia, the supporters of banking which would aid public and private groups in the construction of developmental investments such as the transportation infrastructure, and those who believed that banks should continue primarily as "commercial" banks.<sup>3</sup> Finally, we had those who supported a hard currency, one based on specie and devoid of bank notes not completely redeemable in specie, and those who, for whatever reason, believed that banks



should have the privilege--some held the right to issue bank notes.<sup>4</sup>

Besides the works dealing with the political-economic conflict over banking, there have been but two which have dealt with the depression with the use of economic analysis.<sup>5</sup> In 1954, R.C.O. Matthews in his, "A Study in Trade Cycle History," placed a large part of the blame for the depressed economic conditions prevalent in the United Kingdom and the United States during the last years of the 1830's and the first of the 1840's on actions emanating from the United States.<sup>6</sup> As we shall see, he underestimates the crucial role which the money and capital markets of the United Kingdom--mainly centered in London--had in determining the economic health of the Anglo-American economies. Walter B. Smith, writing a year earlier had recognized this dependence.

Easy money in England in the early 1830's stimulated the merchandise trade by making merchantile credits available to American merchants, by facilitating a period of prosperity in England which rebounded to the benefit of American producers, and lastly by touching off a wave of loans to American States and corporations which brought prosperity to the United States and also assisted the process of paying for these imports.<sup>7</sup>

Peter Temin in his recently published book, "The Jacksonian Economy," has shown that much of the works dealing with this period overstated the importance of the United States Bank and the policies of the Jackson and Van Buren administrations in the economic fluctuations of the 1830's.

Partly because of his stress on the use of aggregate monetary

data, however, he moved to the opposite direction and, as we shall see in Chapters three to six, underestimated the effects of the fiscal and monetary policies of these administrations on the American economy during these years.<sup>8</sup>

In his analysis Temin assumes that increases in the amount of specie available to the banks led to an expansion of the American money supply which in turn led to the growth of economic activity. This approach, however, implies that there was no problem as far as the demand for these loanable funds were concerned. As we shall show in this work there was an asymmetrical relationship between the availability of credit facilities and economic activity, an expanding supply was necessary for continued economic expansion, but the existence of such facilities did not necessarily ensure an expansion of economic activity.

#### The Anglo-American Economies and the Transmission of Economic Disturbances

During the 1830's and 1840's, the American economy was dependent on cotton exports for a majority of its foreign exchange earnings, and on the London money and capital markets for short-and-long-term international capital supplies.<sup>9</sup> Moreover, these capital inflows were vital to the growth of the domestic money supply and credit markets.

This work will examine how, given the structure of Anglo-American trade and particularly the relationships between the American and British money and capital markets,

economic disturbances could be transmitted from one country to the other. More specifically, by examining the relationships between the American and British economies and the mechanism which transmitted economic shocks from one country to the other, we will attempt to show that: (1) the monetary panic of 1837 was due mainly to pressures emanating from Great Britain but with internal factors in America aggravating the situation; (2) the collapse of the London money and capital markets in 1839 brought down with it the British cotton market and the superstructure of the Anglo-American trade, which in turn brought on the depression in America in late 1839. The severity and the length of the depression indicates that the structure of the American economy contained critical faults which enabled the shock waves from Great Britain to have such drastic effects on the American economy.

These statements are in conflict with the conclusions of Matthews and in part those of Temin. This is primarily due to the fact that one's viewpoint and eventually the conclusions derived from a particular analytical study is shaped not only by when, but also by where in the causal process one enters.<sup>10</sup>

Matthews focused his attention on the British export industries and the relative importance of fluctuations in the American market on this important sector of the British economy.<sup>11</sup> But, as already noted, he overlooked the crucial

role which the London money and capital markets played in financing British exports to the United States. An analysis is incomplete which states that the sharp drop in British exports to the United States was the primary cause of the 1839 downturn in Great Britain, when the decline in exports was mainly due to monetary conditions in Great Britain.

Temin, as Matthews, does not fully taken into account the importance of the British money and capital markets to the health of the British economy. It was the vitality of the British economy, especially its cotton textile industry; and on capital and money markets that permitted the continued expansion of the American economy.

During the mid-1830's economic growth in the United States was characterized by an excess demand, at full employment, for domestically produced goods. At the same time there was an excess demand for money needed to finance the growth in demand for goods. Both of these excess demands were met by an excess supply, in terms of the ability of the American market to absorb them, of securities which flowed across the Atlantic in ever increasing amounts during the mid-and late-1830's. The excess demand for goods grew out of the expanding cotton market, the willingness and ability of state and local governments to undertake vast internal improvement projects and the increasing specialization of the American economy.<sup>12</sup> The British economy, its cotton, its money and capital markets, and its manufacturing

industries stood in the middle, purchasing American cotton and supplying the goods, and short-and-long-term credits needed by the expanding American economy.

### The Transmitting Mechanisms

Disturbances could be transferred from one country to the other because of the relation between their respective money supplies and capital markets. The American and British money supplies consisted mainly of specie, bank notes, and demand deposits, the latter two supposedly convertible on demand into specie (gold and silver coins). Though the existing monetary systems in both countries resembled the gold standard in their adjustments to specie flows, there were differences of varying importance.

The United States was legally on a bi-metallic standard though the Coinage Acts of 1834 and 1837 by overvaluing gold, soon resulted in the country's being on a defacto gold standard.

The American mint ratio of 15 to 1 clashed with a ratio of about 15 1/2 to 1 prevailing on world markets so little gold came to it for coinage, and the United States was in effect on a silver standard. The Coinage Acts of 1834 and 1837 reversed this disparity by setting a new mint ratio of very nearly 16 to 1. Since the United States was now valuing silver less highly relative to gold than was the world market, little silver was offered for coinage, and the United States was in effect on a gold standard.<sup>13</sup>

An examination of specie imports and coinage both before and after these acts casts doubt on this assertion but does indicate that silver did become relatively less

important than it had been before 1834.<sup>14</sup> The importance of these acts lies in the fact that they, for all practical purposes tied the American and British money supplies together through what has been called the specie-flow mechanism.

The two most common types of gold standard systems--perhaps specie standard would be a more accurate term--are the 100% reserve system and the fractional reserve system.<sup>15</sup> In the former there is a one to one relationship between the issuance of bank demand liabilities--banknote and demand deposits--and the supply of specie. In the latter, bank demand liabilities are issued in some multiple of the specie supply. During the period under study both the United States and the United Kingdom had fractional reserve systems, but as there was no single note issuing body in the United States or legally specified ration, there was no one particular ratio which applied.<sup>16</sup>

Under a fractional reserve system fluctuations in specie would cause fluctuations in the amount of bank notes in circulation though it is important to realize that these movements of reserves and bank notes do not necessarily have to follow one upon the other. Willett shows that variations in bank specie holdings did not cause a concomitant immediate change in the banks current demand liabilities.<sup>17</sup>

Normally with a specie standard, a country with a deficit in its balance on current account tended to lose

specie. The United States, however, between fiscal years 1832 and 1837 inclusively, incurred a deficit on current account every year while at the same time importing specie each year as we see from Appendix Table A-1. The United States was able to do this because of its ability to borrow both short-and-long-term capital in the London and to a lesser degree Continental markets.

As long as the United States continued to have access to these credit markets the balance of payments could be balanced through short-and-long-term capital imports. Avoided therefore, were massive specie outflows and an economic contraction which would have been the alternative if it had not been for the capital inflows.

These capital flows were crucial, as we shall see, to the economic stability of the United States during this period.

In the spring of 1837, American and British firms in the Anglo-American trade were unable to obtain new short-term credits, or to refinance credits due for payment. The resulting scramble for liquidity, combined with the exportation of specie arising from the exchange rates being forced to the specie export point, due to a lack of cotton bills, proved too much for the Eastern banks. The New York City banks were under the greatest pressure, not only losing specie to England but also losing specie because of the distribution of the Federal surplus. The end result was the monetary panic and the bank suspensions of 1837.

By the middle of 1839, the flow of specie from Great Britain to the Continent, to pay for grain imports necessitated by poor harvests, produced a contraction in the London money markets which was more severe than that of the winter and spring of 1837.<sup>18</sup> This monetary stringency contributed in large part to the collapse of the British cotton market. The resulting collapse of the structure which supported the Anglo-American trade, especially the drying up of the long-term capital inflows to the United States, goes a long way towards explaining the causes of the depression which overwhelmed the United States in late 1839.

In the next nine chapters we will examine those events and processes on both sides of the Atlantic which brought about the expansion of the American economy in the mid-1830's; the financial panics of 1837 and 1839, and the deflation which overtook the American economy in 1839 and lasted until 1844.

Chapters II through IV will cover the period between 1833 and 1836; the so-called "Biddle's Panic," and the boom of 1834-1836. Attention will be focused on the structural elements which made the American economy so receptive to external disturbances emanating from the Eastern side of the Atlantic. In Chapter V we will see what effects the fiscal and monetary policies of the Jackson administration had on the American economy during these years and especially the events of 1836.



The Panic of 1837 and the factors bringing it about will be examined in Chapter VI. Chapters VII and VIII will examine the recovery period of 1838 and 1839 as well as the events leading to the panic of the latter year.

The deflation period of 1838-1843 and the possible causes of the upturn in late 1843 and 1844 will be the subject of Chapter IX. In Chapter X we conclude by reexamining the ground we have covered and the conclusions we have drawn from this work showing the nature and causes of the economic fluctuation experienced by the American economy during these years.

Throughout this work we will use not only information dealing with the economy as a whole such as wholesale commodity prices series, foreign trade statistics, land sales and estimates of the money supply; but also data dealing with one particular sector or section of the economy such as canal traffic, price series for particular cities and the condition of banks in various cities and states. We use both types of data not only because they provide a check on each others reliability but also, and more importantly, because the latter type of information enables us to examine significant developments in the economic history of this period which cannot be seen by using just the estimates of over-all economic activity.

## FOOTNOTES

### CHAPTER I

<sup>1</sup>Recent research has shown that the down-turn of 1833-1834 was of less real magnitude than originally thought. See Jacob P. Meerman, "The Climax of the Bank War: Biddle's Contraction, 1833-34," Journal of Political Economy, Vol. 71 (August, 1962), pp. 378-388.

<sup>2</sup>Milton Friedman and Anna J. Schwartz, The Great Contraction (Princeton: Princeton University Press, 1965), p. 3. We shall examine the magnitude of the "depression" in Chapter IX.

<sup>3</sup>For the politics of the period see Glyndon G. Van Deusen, The Jacksonian Era, 1828-1848 (New York: Harper and Brothers, 1957), and Arthur M. Schlesinger, Jr., The Age of Jackson (Boston: Little Brown and Company, 1945). For the Bank War and the general economic conditions of the period see Walter B. Smith, Economic Aspects of the Second Bank of the United States (Cambridge: Harvard University Press, 1953), and Frank Otto Gatell, The Jacksonian and the Money Powers, 1829-1840 (The Berkeley Series in American History, Chicago: Rand McNally and Company, 1967).

<sup>4</sup>For the monetary theories and banking practices prevalent before the Civil War see Harry E. Miller, Banking Theories in the United States Before 1860 (Cambridge: Harvard University Press, 1927); Joseph Dorfman, The Economic Mind in American Civilization (2 Vols., London: George G. Harrap and Company, Ltd., 1947), II, Chap. 23. Dorfman notes that William Gouze, one of the leading monetary writers of the period believed that there should be no bank notes at all, just specie, p. 608. Fritz Redlich, The Molding of American Banking (2 Vols., New York: Hafner Publishing Co., 1947, 1953). Arthur M. Schlesinger, Jr., The Age of Jackson, Chap. 10.

<sup>5</sup>Ira Ryner, "On the Crisis of 1837, 1847, and 1857, in England, France, and the United States," University of Nebraska Studies, Vol. V #27 (1905). Reginald C. McGrane, The Panic of 1837: Some Financial Problems of the Jacksonian Era (Chicago: The University of Chicago Press, 1924).

Samuel Rezneck, "The Social History of an American Depression, 1837-1843," American Historical Review, Vol. XL, No. 4 (July, 1935), pp. 662-687. Note that all these works do not differentiate between 1837 and 1839.

<sup>6</sup>R.C.O. Matthews, A Study in Trade Cycle History (Cambridge: Cambridge Press, 1954).

<sup>7</sup>Smith, p. 87.

<sup>8</sup>Peter Temin, The Jacksonian Economy (New York: W. W. Norton and Company, Inc., 1969). It must be noted in passing that the accuracy of the aggregate series used are never seriously questioned.

<sup>9</sup>We will not examine directly the question of what role cotton played in fostering economic growth in the United States during the period through the process of export based growth. For earlier "strong" statement and a later modified view of this position by its leading proponent see Douglass C. North, The Economic Growth of the United States: 1790-1860 (New York: W. W. Norton and Company, Inc., 1966), pp. 68-74, and Douglass C. North, Growth and Welfare in the American Past (Englewood Cliffs, New Jersey, Prentice-Hall, Inc., 1966), p. 84.

<sup>10</sup>It would be difficult to convince most historians that World War I would not have occurred if there had been no assassination at Sarajevo.

<sup>11</sup>See the criticism of Matthews' conclusions in Jeffrey G. Williamson, American Growth and the Balance of Payments: 1820-1913 (Chapel Hill: The University of North Carolina Press, 1964), pp. 204-205.

<sup>12</sup>Williamson, pp. 185-186; Thomas D. Willett, "International Specie Flows and American Monetary Stability, 1834-1860," The Journal of Economic History, Vol. 8 (March, 1968), pp. 28-50, especially pp. 32-34.

<sup>13</sup>Leland B. Yeager, International Monetary Relations (New York: Harper and Row, 1966), p. 252.

<sup>14</sup>See George R. Taylor, The Transportation Revolution: 1815-1860 (New York: Holt, Rinehart, Winston and Co., 1951), pp. 328-329. For information on specie imports and coinage, see Hunt's Merchants' Magazine, March, 1844, p. 249; April, 1844, p. 376.

<sup>15</sup>See Yeager, Ch. 4.

<sup>16</sup>Between 1830, to 1833, the ratio of specie to current demand liabilities, bank notes and demand deposits, for the Second Bank of the United States varied between a low of 17 per cent and a high of 32 per cent. Between 1834 and 1839, it varied from 17 per cent to 54 per cent. For Boston banks the comparable figures are nine per cent to 21 per cent and 10 per cent to 23 per cent. Smith, p. 47. For an interesting attempt to explain why these ratios varied see Thomas D. Willett, "International Specie Flows and American Monetary Stability, 1834-1860," The Journal of Economic History, Vol. 28 (March, 1968), pp. 28-50. We will see in Chapter III, that reserve ratios as now understood, did not apply to most banks in the United States during this period.

<sup>17</sup>Willett, Journal of Economic History, Vol. 28, pp. 39-40.

<sup>18</sup>During the last half of 1839, the average market rate of discount in London and the Bank of England discount rate reached the highest levels for the fifteen years between 1830 and 1845. Matthews, pp. 199, 201; and Thomas Tooke, History of Prices, and of the State of the Circulation, From 1839 to 1847 (London: Longman, Brown, Green, and Longmans, 1848), pp. 440-442.

CHAPTER II

BANKING AND ECONOMIC ACTIVITY DURING  
1833 AND 1834

Except for the slight recession of late 1833 and 1834, the period between 1833 and 1837 was one of economic growth and prosperity. This was the result of economic and noneconomic factors, both domestic and foreign, which interacted to bring about a rapid growth in America's demand for goods and services. This growth in demand was for both consumption and investment purposes. But only part of it could be met from domestic sources.

Generating the demand and providing at least some of the output needed to supply it was the increasing economic specialization of the American economy. The two most visible signs of this specialization in the 1830's were the expanding cotton market and the boom in the construction of canals and later, railroads. The changing and growing money and credit structure in America combined with massive specie imports to finance the growth in aggregate demand and supply.

In this and the two chapters that follow we will examine the 1834-1837 boom period and analyze the factors, both real and monetary which brought it about. This chapter

will examine the "Bank War," in which the Second Bank of the United States lost its role as the fiscal agent for the federal government. Our attention will center on the effects which this had on the economy during 1833 and early 1834. We will also look at the probable effects of the "Bank War" on the structure and performance of the banking system. Chapter III will explore how the credit and banking system of the United States and its relationship with that of Great Britain supported the growing volume of trade in these years. Finally, in Chapter IV we will conclude our analysis of the boom by seeing how increasing economic specialization supplied the impetus for the economic prosperity of the mid-1830's.

### The Second Bank of the United States and the State Banks

#### The Second Bank of the United States and the Supply of Bank Money Prior to 1833

The Second Bank of the United States was able, by virtue not only of its size but more importantly because of its position as the fiscal agency of the United States Treasury, to control the quantity of notes issued by the state chartered banks. In Table 2.1 we have a comparison of the size of the Bank in relation to that of all the Safety Fund Banks of New York State. (See page 16.)

Commercial banks when extending loans or discounting commercial paper issued bank notes or created demand deposits. These current demand liabilities could come into the

TABLE 2.1.--Comparison of the Second Bank of the United States and the Safety Fund Banks of New York State, Major Assets and Liabilities, 1831-1834.<sup>a</sup>  
(Millions of Dollars)

Bank and Date	Loans and Discounts	Circulation	Deposits <sup>b</sup>	Current Demand Liabilities (2 + 3)	Specie	Bank Expansion Multiplier <sup>c</sup>
<u>1831</u>						
SBUS	\$44.1	\$16.2	\$6.8	\$23	\$10.8	2.1
NYS	11.2	5.9	1.6	7.5	.4	18.7
SBUS/NYS	394%	274%	425%	307%	2700%	11%
<u>1832</u>						
SBUS	\$66.3	\$21.3	\$2.6	\$23.9	\$ 7.0	3.4
NYS	32.8	12.0	5.8	17.8	1.7	10.5
SBUS/NYS	202%	177%	45%	134%	412%	32%
<u>1833</u>						
SBUS	\$61.7	\$17.5	\$2.3	\$19.8	\$ 8.9	2.2
NYS	35.6	12.2	7.9	20.1	1.8	11.2
SBUS/NYS	173%	143%	29%	98%	494%	20%
<u>1834</u>						
SBUS	\$54.9	\$19.2	\$5.1	\$24.3	\$10.0	2.4
NYS	43.7	15.4	8.4	23.8	2.2	10.8
SBUS/NYS	126%	125%	61%	102%	454%	22%

<sup>a</sup>January 1 of each year.

<sup>b</sup>Private deposits.

<sup>c</sup>Ratio of Current Demand Liabilities divided by the amount of specie. The reciprocal of this is known as the reserve ratio.

Sources: SBUS: The Statistical History of the United States From Colonial Times to the Present (Stamford, Conn.: Fairfield Publishers, Inc., 1965), p. 623. Series X 6, 12, 14, 15. New York Safety Fund: Robert C. Chaddock, The Safety Fund Banking System in New York, 1829-1866, U.S. National Monetary Commission 61st Congress, 2nd Session, Document No. 581, 1910, pp. 296-297.

possession of the S.B.U.S. in one of two ways. First, the S.B.U.S. acquired these current demand liabilities through the normal course of its banking operations, especially in the domestic and foreign exchange markets, in both of which it was dominant.<sup>1</sup> Second, being the fiscal agency of the Treasury, its holdings of state bank notes and checks increased as a result of the inflow of government deposits, at its various branches, arising out of the payment of import duties and land sales revenue.

As long as the Bank maintained its position as a net creditor of the state banks it was able to control the money issues of the latter by presenting for redemption in specie or specie funds, to the issuing banks the bank notes or checks which the bank held.<sup>2</sup> The loss of these reserves by the state banks, given the nature of a fractional reserve banking system, could cause an indirect but greater contraction of the money supply. The bank, on the other hand, could find itself a net debtor to the state banks during periods of government debt retirement when in its role as fiscal agent for the treasury it redeemed these debts. It was also in such a position when it extended its own loans and discounts more than the state banks did. Walter B. Smith believed that the Bank was normally a creditor until the middle of 1834.<sup>3</sup> Gallatin, on the other hand, wrote that the bank had lost its ability to control the money supply earlier, during 1832-1833,



When its discounts and other investments were increased from fifty-five to sixty-five millions. It is obvious that it is only by keeping its discounts at a lower rate--in relation to capital--than those of the state banks that these can be its debtors, and that it is only by enforcing the payment of the balances that it can keep them within bounds and thus regulate the currency.<sup>4</sup>

How effective was the Bank in controlling the money issues of state banks? Furthermore, how important was its portfolio transactions to the health of the money markets? It should not be forgotten that the Bank by varying the size and composition of its portfolio,<sup>5</sup> could and did influence the condition of the money markets in the United States. Though the answers to these questions--if they are obtainable--are interesting in and of themselves, they are necessary to an understanding of the importance of the Bank to the monetary systems and especially the relationship between the elimination of the Bank as a regulator of the monetary system and the monetary expansion of the mid-1830's.

The simplest way of measuring the effectiveness of the S.B.U.S. in regulating the money supply is to compare the rates of monetary growth before and after 1834. Assuming for the moment that we have sufficient information for this task, this procedure means that if the annual rate of monetary expansion was  $X$  per cent in the years between, say 1830 and 1833, and it increased to  $X + N$  per cent in the period 1834 to 1837, the increase was due to the removal of the S.B.U.S. as the regulator of the state banks.

This procedure, however, first assumes that the only significant changes in the monetary system of the United States as well as the economy in general centered around the changing role of the S.B.U.S. As we will see in this and the next chapter, this assumption is incorrect. This line of reasoning furthermore assumes--and this point is often overlooked--that even if the S.B.U.S.'s role was not altered, it would not have changed its banking policies in response to changing economic conditions, especially the cotton boom and the large inflow of specie and British capital. We can, on the other hand, reject these assumptions and assume that the monetary expansion of the mid-1830's would have been of the observed magnitude regardless of whether the bank was rechartered or not.

What then do we do with this N per cent difference? Probably the best expedient is to accept the fact that we cannot realistically estimate what the monetary expansion would have been if the S.B.U.S. had been rechartered. It should be noted however, that without one bank acting as the fiscal agency for the Treasury, there was no nationwide, centralized control over the issuance of bank money.

#### The Bank War and Biddle's Contraction

On July 10, 1832, President Jackson vetoed the bill for rechartering the Bank.<sup>6</sup> It was not, however, until the end of the following summer, after the reelection of Jackson

that "Biddle's Contraction," the S.B.U.S.'s response to the governments actions, started.

Toward the end of July, 1833, rumors were circulating in Washington about the plans being made to remove government deposits from the bank. On September 20th, the semi-official Washington Globe printed the following:

We are authorized to state that the deposits of the public money will be changed from the Bank of the United States to the state banks, as soon as necessary arrangements can be made for that purpose, and that it is believed, they can be completed in Baltimore, Philadelphia, New York, and Boston in time to make the change by the first of October, and perhaps sooner, if circumstances should render an earlier action necessary on the part of the government. It is contemplated, we understand, not to remove, at once, the whole of the public money, now on deposit in the Bank of the United States, but . . . it shall be gradually withdrawn by the usual operations of the government.<sup>7</sup>

Action soon followed rumor for on September 26, an order was issued telling the collectors of the revenue not to deposit government funds in the S.B.U.S.<sup>8</sup> During the month of October, public deposits including those of state and local governments at the S.B.U.S. fell by seventeen per cent.

During the late summer of 1833, prior to the official actions of the Treasury department, the S.B.U.S. began to prepare for such actions. In August 1833, the bank placed a lid on further discounting on notes, limited bills of exchange to ninety days and permitted its western offices to purchase only short-term domestic bills drawn on Atlantic coast cities. This last action increased the bank's claims

TABLE 2.2.--Major Assets and Liabilities of the Second Bank of the United States, Monthly, August 1833-October 1834.  
(millions of dollars)

Date	Dis- counts	Dom- estic Bills	Total Loans & Dis- counts <sup>a</sup>	Specie	Total of Loans Discounts & Specie	Pub- lic Dep- osits	Pri- vate Dep- osits	Total Dep- osits	Circu- lation	Cur- rent Demand Liab.	Due From State Banks <sup>b</sup>	Private Deposits & Circulation
Aug. 1833	43.2	20.9	64.2	10.0	74.2	7.6	10.1	17.7	18.9	36.6		29.0
Sept.	43.4	19.3	62.7	10.2	72.9	9.2	9.4	18.6	18.4	37.0	+.3	27.8
Oct.	43.2	17.4	60.6	10.7	71.3	9.9	8.0	17.9	19.1	37.0	+2.3	27.1
Nov.	41.1	16.1	57.2	10.3	67.5	8.2	7.3	15.5	18.5	34.0	+2.4	25.8
Dec.	38.8	15.7	54.4	9.8	64.2	5.2	6.8	12.0	18.6	30.6	+2.2	25.4
Jan. 1834	38.6	16.3	54.9	10.0	64.9	4.2	6.7	11.0	19.2	30.2	+1.5	25.9
Feb.	37.5	17.3	54.8	10.5	65.3	3.1	6.7	9.8	19.3	29.1	+1.4	26.0
March	37.4	18.8	56.2	10.4	66.6	2.6	7.3	9.9	18.5	28.4	+.1	25.6
April	36.1	18.7	54.8	10.2	65.0	2.9	7.2	10.1	17.5	27.6	+.6	24.7
May	35.2	18.5	53.7	11.2	64.9	3.2	7.0	10.2	16.6	26.8	+1.4	23.6
June	34.7	17.5	52.2	12.3	64.5	2.7	6.9	9.6	16.6	26.2	+1.6	23.5
July	34.4	16.6	51.0	12.8	63.8	2.6	6.3	8.9	16.6	25.5	+.4	22.9
Aug.	34.7	13.9	48.7	13.6	62.3	2.5	6.8	9.3	16.5	25.8	-.5	23.3
Sept.	34.9	12.2	47.1	13.9	61.0	2.2	6.8	9.0	15.3	24.3	-.4	22.1
Oct. 1834	35.1	10.9	46.0	15.6	61.6	2.0	6.9	8.9	15.6	24.5	-.8	22.5

<sup>a</sup>May not equal total because of rounding.

<sup>b</sup>+ = Net due, - = Net owing to state banks.

Sources: U.S. Congress, Senate, 23rd Congress, 2nd Session, Senate Document 17, pp. 222-224. Burke Adrian Parsons, British Trade Cycles and American Bank Credit: Some Aspects of Economic Fluctuations in the United States, 1815-1840. (Unpublished Ph.D. Dissertation, Department of Economics, University of Texas), p. 287. Niles National Register, Volumes 46 and 47.

on Eastern banks. These were needed when the government deposits were drawn down making the Bank a debtor of (state) banks receiving government deposits. On September 24th, the order given to the Western branches was extended to certain Eastern and Southern branches.<sup>9</sup>

Though its holdings of domestic bills of exchange continued to fall, no action was taken on discounts until October 8th, when the bank's board of directors ordered a reduction of \$5.8 million in discounts. This was followed on January 23, 1834 by another directive to cut discounts by an additional \$3.3 million. Between August 1833, when the S.B.U.S. first started its curtailment policies and July 1834, when the S.B.U.S. ended this policy, its loans and discounts fell by \$13.2 million.<sup>10</sup>

With the vetoing of its charter renewal by Jackson, the Second Bank of the United States, to prepare itself for the transfer of the Treasury deposits to the state banks, curtailed its lending activities. During this period of contraction which lasted from August 1833 to July 1834, the bank's loans and discounts fell by about twenty-one per cent. In the next section we will see how the banking system and the economy in general fared during this period. Our task is made more difficult, however, by the near record specie imports of 1834, which went mostly into expanded bank reserves.

Banking and Economic Activity During  
"Biddle's Contraction"

The effects of the actions of the S.B.U.S. on the banking system were of two types: first the response of the other banks to the curtailed leading activities of the S.B.U.S.; and secondly the possible effects which the transfer of the Treasury deposits had on the lending activities of the state banks, both those that received these deposits and those which did not. It is the sum total of what did happen in the banking system, taken together with developments outside of it which produced the economic difficulties of late 1833 and 1834 which has been called "Biddle's Contraction."

It is difficult to obtain a clear picture of how the banking system responded to the actions of the S.B.U.S. The first problem we face is the lack of sufficient data on aggregate bank lending during this period. The second and more important difficulty is the massive specie inflows during fiscal 1834 which minimized the contractionary effects of the actions of the S.B.U.S.

The available aggregate estimates of bank lending go only as far back as 1834 and these are not very complete. The data given includes estimates which had to be made for approximately one-quarter of the state banks because they did not submit returns. Though January 1, 1834 is given as the reporting date, many state banks filed reports with

their state governments months before this date and sometimes a few months after.<sup>11</sup>

The second problem arises out of the massive specie inflows which took place during this period. This perhaps can be more clearly seen if we first attempt to hypothesize what would happen to the banking system in response to the curtailment policy of the S.B.U.S. assuming that there were no changes in the United States supply of specie.

Assuming that the state banks did not alter their leading policies and that there was no significant change in the supply of specie in the United States, the curtailment of the S.B.U.S.'s leading activities meant a contraction in the supply of money. The extent of this contraction depends on and in what proportion loan repayments were made with the demand liabilities of the S.B.U.S. and the state banks.

If the loans were repaid with checks drawn on the S.B.U.S., or its own bank notes, the contraction in the money supply consisted of a reduction in the current demand liabilities of the S.B.U.S. Repayments made with checks or bank notes of state banks, had the same direct effect on the money supply. Indirectly, however, there was a difference. If loan repayment increased the net creditor position of the S.B.U.S. vis a vis the state banks, it could redeem their current demand liabilities for specie.<sup>12</sup> The reduction in specie reserves if not offset by fresh

inflows, could cause a multiple contraction in the current demand liabilities of the state banks.

During the same period in which the S.B.U.S. cut back its loans and discounts by \$13.2 million, its specie holdings increased by \$2.8 million. If we assume that this increase was at the expense of the state banks or the non-banking sector of the economy without any compensating specie importation, the money supply must have contracted. The amount of the contraction depended on the origin of the specie inflow to the S.B.U.S.

If the specie came from the non-banking sector of the economy, the contraction of the money supply was equal to the amount of the specie transfer. If it came from the state banks either directly through redemption of current demand liabilities or indirectly through the public, there may have been a multiple contraction in the money supply. This occurred if banks reacted to specie losses by curtailing their own lending activities.

Fortunately for the S.B.U.S. and the state banks there were massive specie imports during this time. In fiscal 1834, the United States had net specie imports of about \$15.8 million compared to inflows of about \$4.4 million in the previous fiscal year. Since the S.B.U.S. increased its specie holdings by \$4.9 million during fiscal 1834, it is obvious that the increase in its holdings was not at the expense of the state banks in general.



What happened to the supply of money and credit during the period of the S.B.U.S.'s contraction, given these specie inflows? Lacking aggregate data on bank lending for 1833 we are forced to use what fragmentary information is available. This information is given in Table 2.3.

While the S.B.U.S.'s contraction may have induced a parallel move by the other Pennsylvania banks, those of New York City and Massachusetts expanded their lending activities but the absolute size of the S.B.U.S.'s and Pennsylvania's contractions more than offset the expansion of these banks. The net effect was a decrease in the amount of credit available in the Eastern money markets. Interest rates on short-term commercial paper in New York and Boston which had averaged between five and one-half per cent and seven per cent during 1831-1832 and the first half of 1833, rose to 15 per cent by the end of the year and by the end of January 1834 they were at 24 per cent per annum. For the next ten months we find no rates listed but rather the following comments, "business unsettled, rates high and variable." By the end of 1834 the short-term interest rate had fallen to eight per cent.

The money supply grew during 1834 and the means by which it grew indicate that state banks took up the slack left by the contractionary policies of the S.B.U.S. The money supply is estimated to have increased by \$4.4 million during the year. This increase appears to have been entirely

TABLE 2.3.--Major Assets and Liabilities, Banks of Massachusetts, Pennsylvania, Rhode Island, North Carolina, New York City, and the Second Bank of the United States,<sup>a</sup> 1833-1834.

Location & Date	Loans and Discounts	Per cent Change	Specie	Per cent Change	Circu- lation	Per cent Change	Private Deposits <sup>b</sup>	Per cent Change	Demand Liab. <sup>c</sup>	Per cent Change
<b>Mass.</b>										
Oct. 1833	45.3		.9		7.9		3.7		11.6	
May 1834	47.2	+ 4%	1.2	+33	7.6	- 4	4.9	+32	12.5	+ 8
<b>Penn.<sup>d</sup></b>										
Oct. 1833	31.6		3.9		10.4		9.8		20.2	
Oct. 1834	28.3	-10%	3.4	+17	7.6	-27	9.0	- 9	16.6	-18
<b>Rhode Is.</b>										
Oct. 1833	9.2		.40		1.3		1.5		2.8	
Oct. 1834	9.6	+ 4%	.47	+17	1.3	0	2.3	+53	3.6	+29
<b>No. Car.</b>										
June 1833	2.4		.24		.98		.40		1.38	
June 1834	1.8	-25%	.08	-67	.96	- 2	.42	+ 5	1.38	0
<b>Georgia</b>										
Jan. 1833	7.6		1.3		3.1		.98		4.1	
Oct. 1834	7.7	+ 1%	1.8	+38	3.7	+19	1.0	+ 2	4.7	+15
<b>N.Y.C.</b>										
<b>Safety Fund Banks</b>										
Nov. 1823	23.6		1.0		4.2		7.0		11.2	
Jan. 1835	30.4	+29%	4.4	+340	5.0	+16	9.5	+36	14.5	+29
<b>Second Bank of the U.S.</b>										
Oct. 1833	60.6		10.7		19.1		8.0		27.1	
Oct. 1834	46.0	-24%	15.6	+46	15.6	-18	6.9	-14	22.5	-17

<sup>a</sup>These are the only banks, excluding individual New York City banks, for which this information could be found.

<sup>b</sup>Except for the Second Bank of the United States and the New York City Safety Fund Banks, the sources do not differentiate between private and public deposits. Massachusetts and Rhode Island also listed deposits on interest which were not included in these figures.

<sup>c</sup>Sum of Private deposits and circulation.

<sup>d</sup>Excludes the Second Bank of the United States.

Sources: States: U.S. Congress, House, 26th Congress, 2nd Session, House Document No. 111. New York City: New York State, Assembly, Report of the Bank Commissioners, 60th Session, Document No. 78, p. 18 Second Bank of the United States: Table 2.2.

in the form of bank current demand liabilities. The aggregate supply of specie increased by \$16 million during the year yet the banks were estimated to have increased their specie holdings by \$17 million.<sup>13</sup> The increase in the money supply was thus mainly in the form of bank money. Since the S.B.U.S. current demand liabilities fell by about \$7.8 million during this period, the increase in the amount of bank money emanating from the state banks must have been on the order of about \$13 million.<sup>14</sup>

The expansion in the current demand liabilities of the state banks meant that there must have been an expansion in bank lending activities. We have already seen one possible explanation for this, the massive specie flows into the banking system during 1834. There is another possible explanation for this expansion, the shifting of Treasury deposits from the S.B.U.S. to the state banks chosen as deposit banks.

The transfer of Treasury deposits could have affected the supply of money and credit in the following ways:

1. the shifting of deposits could have entailed a shifting of specie to banks with lower reserve ratios.

2. without its role as the fiscal agency for the Treasury, it was more difficult for the S.B.U.S. to maintain its creditor position vis a vis state banks. Thus it was more difficult for it to control the money issues of the state banks, assuming it still wanted to.

3. the Treasury department may have given the deposit banks incentives to expand their lending activities.

We will see in Chapter V that the shifting of Treasury deposits usually entailed a shifting of specie. In late 1833 and 1834 this meant a shifting of specie from the S.B.U.S. to state deposit banks. We can see from Table 2.3 the state banks did have lower reserve ratios and thus potentially higher expansion multipliers than the S.B.U.S.<sup>15</sup> Excessive reliance should not be made for this explanation. We will see in Chapters III and VIII that bank expansion ratios were not important determinants of increased banking activities.

Without Treasury deposits the S.B.U.S. lost an important means of maintaining its creditor position vis a vis the state banks. In Table 2.2 we saw the gradual deterioration in the S.B.U.S. creditor position during 1834.<sup>16</sup> But the shifting of Treasury deposits meant more than a diminishing in the ability of the S.B.U.S. to control the bank money issues of the state banks. In Chapter three will see that the Treasury department gave official blessing to the deposit banks to use the new Treasury deposits as the basis for expanded lending activities.

During the summer of 1833 the Treasury department began to transfer its funds from the S.B.U.S. to selected state banks. The S.B.U.S. responded to this and other actions of the Treasury and the Jackson administration by

curtailing its lending activities. This contraction was felt in the Eastern money markets but because of massive specie flows into the banking system from abroad the supply of money actually grew. The shifting of Treasury deposits to the state banks, even without any substantial change in the supply of specie, apparently moderated the effects of the S.B.U.S. contraction. The conditions in the money markets indicate, however, that without the specie imports the situation could have been much more serious than it actually was. We will now turn our attention to the condition of the American economy during this period.

#### Economic Activity During "Biddle's Contraction"

The economy experienced some difficulty during the last half of 1833 and especially during the winter and spring of 1834. How much of this entailed a downturn in economic activity is difficult to say. Niles National Register carried articles about the difficulty of obtaining money, falling prices and wages and layoffs.

A large reduction of wages must be submitted to by the working people, generally, or dismissal from employment ensue. The reduced money-value of all sorts of products, and the difficulty of obtaining money are such, that one or the other must take place.<sup>17</sup>

A month after this was printed, Niles carried a report of widespread layoffs in the textile industry and those supplying it in the Providence region. McMaster in his work on the United States wrote about similar problems in

Philadelphia and the pressure which a lack of money applied to wages.<sup>18</sup>

We must remember, however, that the political struggles of the Jacksonian period, of which the conflict over the rechartering of the S.B.U.S. was a facet, were reflected in the press. The papers supporting the S.B.U.S. blamed the government for the economic disturbances and in the process exaggerated what happened. The anti-bank papers reciprocated. Smith placed the events in perspective when he wrote:

The embarrassments of 1833-1834 were undoubtedly exaggerated by the press, by the Bank, and by the government. A crisis was even then dear to the journalists, and they made the most of this one. When looked at in the light of the production figures, the credit stringency of 1833-1834 does not appear catastrophic. Commodity exports continued to mount, imports increased, and internal commerce expanded. About the worst that seemed to happen in this period was a slackening in the rate of economic growth.<sup>19</sup>

So far it seems that the struggle between the S.B.U.S. and the federal government was mainly to blame for what happened to the economy in this period.<sup>20</sup> But this gives an incomplete picture of what happened. The New York Evening Post--a pro-Jackson paper--is quoted by Van Deusen as having

Admitted that the decline in cotton prices abroad, the exaction of cash duties on imported goods and the failure of the sugar crops in the South were in part to blame.<sup>21</sup>

Because of the Tariff of 1832, there was a shift in the timing for the payment of duties. Prior to this law,

importers paid at about the same time as they received payment from their customers. With the new law, importers paid the duties before they had been paid by their customers.<sup>22</sup> Thus, quite independently of the conflict between the bank and the government, there was an increased demand for money.

The increased demand for money was perhaps most seriously felt in New York. Imports into the port of New York rose by 31 per cent during fiscal 1834 while that for the nation as a whole rose by about seven and one-half per cent.<sup>23</sup> New York City was the center of security trading in the United States. Large amounts of stock had been purchased, mostly from the Southern states of Louisiana, Alabama and Mississippi, with the expectation of resale in the London and continental capital markets. The struggle over the S.B.U.S. made the London market wary of American securities. Individuals and firms, dealing in these securities found themselves "locked'in," that is, unable to sell them without incurring losses. Niles National Register recognized the effect of this on the money market when it reported that:

They may indeed have been enabled to borrow to a considerable extent on the credit of these stocks, but it cannot be doubted that a large amount remains on hand, and has absorbed a corresponding portion of the capital or credit of this city.<sup>24</sup>

The worst of this appears to have ended by the spring of 1834. Stock prices began to turn up in the United States

and securities again flowed across the Atlantic contributing to the large specie imports of 1834.

In the late summer of 1833 the United States Treasury began to shift its deposits from the Second Bank of the United States to a group of selected chartered state banks. The reaction of the S.B.U.S. to this and other actions of the Jackson administration was the so-called "Biddle's Contraction." The curtailment of bank's lending policies were felt throughout the money and credit markets of the East. Adding to the pressures on these markets were the increased credit demands arising from the Tariff of 1832 and falling security prices in London and in the New York and Boston markets. The severity of the curtailment was reduced by the inflows of specie and the apparent expansion of banking activity on the part of the state banks.

The economic effects of the contraction appear to have been slight, causing most likely a slowing down in the growth of output. The longer-run effects of the struggle over the S.B.U.S. depended on what the deposit banks and state banks in general were to do given the Treasury deposits and the weakened ability of the S.B.U.S. to exercise some control over their money creation activities. We will see in later chapters that an additional result of the conflict between the Bank and the government was a change in the portfolio policies of the S.B.U.S. which was to have serious consequences for it and for the economy in 1837, 1839 and finally in 1841.



## FOOTNOTES

### CHAPTER II

<sup>1</sup>See Smith, p. 234.

<sup>2</sup>Specie funds were deposits and notes held by one bank at another bank, which were payable in specie and held as a substitute for specie.

<sup>3</sup>Smith, p. 53.

<sup>4</sup>Quoted in Hammond, p. 438-439.

<sup>5</sup>A bank's portfolio consists of its holdings of income and non-income earning assets.

<sup>6</sup>For a discussion of the political moves surrounding the bill for rechartering the Bank, the Presidential veto and subsequent Congressional action, see, besides Hammond, Thomas Payne Govan, Nicholas Biddle, Nationalist and Public Banker, 1786-1844 (Chicago: University of Chicago Press, 1959). Jean A. Wilburn, Biddle's Bank (New York: Columbia University Press, 1967). For contemporary sources, see Frank Otto Gatell, The Jacksonians and the Money Power 1829-1840.

<sup>7</sup>Washington Globe, September 20, 1833, reprinted in Niles National Register, Vol. 45, September 21, 1833, p. 51. See also, Smith, p. 160 and Frank Otto Gatell, "Secretary Taney and the Baltimore Pets: A Study in Banking and Politics," Business History Review, Vol. 39 (1965), pp. 208-209.

<sup>8</sup>Smith, p. 160. For a discussion of the use of Treasury drafts by the state deposit banks see Gatell, Business History Review.

<sup>9</sup>The branches were at Burlington, Utica, Buffalo, Pittsburgh, Natchez, and New Orleans. The discussion is based on Smith, p. 160. Bills of exchange drawn by importers or jobbers on retailers often were for 120 day maturity.

<sup>10</sup>See Table 2.2, and Smith pp. 160, 172.

<sup>11</sup>As examples of the nonuniformity of bank reporting dates, the banks of Rhode Island filed reports in October 1833 while those of Massachusetts and Pennsylvania filed in November. See The Financial Register, Vol. 1, pp. 346-347. This problem is found when using all the available aggregate annual monetary series which involve bank assets or liabilities.

<sup>12</sup>See Table 2.2 for the S.B.U.S.'s net creditor-debtor position vis a vis the state banks.

<sup>13</sup>Source cited in Appendix Table B-7.

<sup>14</sup>Temin, pp. 71, 186.

<sup>15</sup>As we will explore in more detail in Chapter III, this analysis assumes that bankers, given increased reserves were willing, and able to expand their lending activities and thus the supply of bank money.

<sup>16</sup>According to Smith, the S.B.U.S. was a net debtor to state banks almost continuously between August 1834 and August 1835. Smith, p. 173.

<sup>17</sup>Niles National Register, March 1, 1834, p. 5. Note how this description parallels the classic analysis of falling prices due to a contracting money supply.

<sup>18</sup>Niles National Register, April 5, 1834, p. 84. John B. McMaster, A History of the People of the United States, Vol. VI (New York: D. Appleton and Company, 1906), p. 220.

<sup>19</sup>Smith, pp. 171-172. Meerman considered the period to have been one of a mild recession. Meerman, Journal of Political Economy, Vol. 71, p. 386.

<sup>20</sup>Temin in his discussion of "Biddle's Contraction," deals only with the effects of the actions of the S.B.U.S. Temin, pp. 59-64.

<sup>21</sup>Van Deusen, p. 84, quoting the New York Evening Post, January 14, 21, 25, and February 4, 1834. Schlesinger, p. 529 lists the paper as pro-Jackson.

<sup>22</sup>Smith, p. 166; Niles National Register, March 29, 1834, p. 74.

<sup>23</sup>Appendix Table A-1 and Table 9.2.

<sup>24</sup>Niles National Register, March 29, 1834, p. 74; Smith, p. 171.

### CHAPTER III

#### CREDIT, MONEY AND SPECIE IN THE 1830'S

By the end of 1834, the American economy had recovered from the disturbances of the winter and spring and was involved in a boom, common to both sides of the Atlantic, which lasted until early 1837. The focus of this chapter is on the monetary side of the American economy, on the growth of the banking and credit system which facilitated the growth in demand and production during the mid-1830's. Though this chapter concentrates on the role of money and credit, we will see that real factors cannot be divorced from monetary factors.

In the first part of this chapter we shall see how the merchantile credit system in America and Great Britain supported the expanding volume of production and trade. The second part of the chapter will focus on the massive American specie inflows during these years, their causes and their relationship to the supply of money and credit.

#### Domestic Trade and Credit

Credit provided the lifeblood for the entire stream of commerce. Starting from the manufacturer, be he domestic or foreign, to the final consumer and from the supplier

of raw materials to the manufacturer. The credit instruments used were normally of two types, open book credits and drafts. The former consist of,

. . . Entries in the account books of businesses, appearing as an account receivable on the books of the seller and as an account payable on the books of the buyer.<sup>1</sup>

Sometimes these were converted into promissory notes, I.O.U.'s.<sup>2</sup>

A draft is a written order to pay, drawn by the seller--the drawer--requiring the party on whom it is drawn, the buyer of the goods--the drawee--to pay on demand, this being a sight bill. If payable at a stipulated time in the future, it was a time draft, drawn at the place where the drawee received the goods, requiring him to pay a definite sum of money to the order of a specified person or to the bearer.<sup>3</sup> Normally time drafts ranged from one to three months in the cotton trade, up to nine months in the retail trade. When endorsed by the drawee or his agent the time draft became an acceptance which made it a more marketable instrument.

The draft was normally discounted at a local bank. The drawer thus receiving his funds less the discount rate charged by the bank without having to wait until the draft matured. Sometimes a merchant arranged a line of credit--accommodation--at a bank so that he was ensured of being able to discount a specified amount of bills at the bank.<sup>4</sup>

Let us assume that a merchant in Cincinnati purchased goods from a jobber in New York City. The jobber must likely obtained these goods on credit from importers or the selling agencies of domestic manufacturers, often with drafts maturing in six to eight months.<sup>5</sup> The jobber in New York City drew a draft on the Cincinnati buyer. After being accepted by the latter or his agent, the jobber discounted it at his bank. The draft normally had a maturity of from six to nine months.

The merchant in Cincinnati then extended credit, either by the use of book credit or by drawing a draft, to a country storekeeper. It appears that book credit was used unless the Cincinnati merchant could discount the draft it drew on the storekeeper. This later procedure seems unlikely unless the draft was endorsed by the Cincinnati merchant and discounted at a bank which was extending him a line of credit, or the country storekeeper had made arrangements for credit with some merchant in Cincinnati. Finally the country storekeeper normally extended book credit often for six months or longer, to his customers. In the South the pattern was similar. Inland factors dealt with country storekeepers and the larger planters while the storekeepers in turn dealt with the smaller planters and farmers.<sup>6</sup>

When the bill drawn on the Cincinnati merchant became payable he obtained a check from a Cincinnati bank

or a draft drawn on a New York City firm. The Cincinnati bank obtained balances in a New York City bank when it purchased drafts, also called bills of exchange, drawn on New York City firms or banks when the latter purchased western products or securities.

The accepted method was (for Western or Southern banks) to buy up claims payable in the East and send them to New York for collection, leaving the proceeds there on deposit. By this means, balances were built up in New York to be drawn against in payment for purchases made in the East.<sup>7</sup>

Drafts were also used in the place of bank money to make payments. Used in this manner, drafts, by enabling each dollar of bank money and specie to support more transactions, increased the velocity of circulation of the money supply.<sup>8</sup>

Throughout this entire chain of commerce, banks performed the vital functions of discounting drafts and providing the means of making payment on maturing drafts. This was accomplished either by buying drafts which the banks then sold to their customers or used to build up balances in the distant trading centers where their customers most frequently traded.

#### The Cotton Trade and Credit

In the Anglo-American trade of the ante-bellum period, cotton played a crucial role. It was the base, directly or indirectly, on which a large amount of domestic bills of exchange was generated. Furthermore, it was

the main source of foreign exchange earnings for the United States prior to the Civil War.<sup>9</sup>

The cotton industry, from the growing of cotton to the sale of textiles, depended on credit facilities provided by banks and the major money markets of the United States and Great Britain as well as those of the continent. Without the monetary expansion which took place in the United States and Great Britain during the mid-1830's it is doubtful that the cotton trade would have grown as much as it did. On the other hand, the fluctuations in inventories and prices of both raw and manufactured cotton would have probably been less if credit was not so easily obtainable.

To obtain the land, slaves, and other factors of production needed for the growing of cotton, planters borrowed from cotton factors and bankers. The cotton factors supplied the working capital needed by the planters to carry them from the planting to the harvesting seasons and sometimes through a bad crop. Normally it was in the form of a line of credit extended by the factor or by the use of promissory notes drawn on the planter which the factor discounted at a local bank.<sup>10</sup> The banks, besides supplying credit indirectly through the cotton factors, also supplied funds directly, especially the money needed for capital purchases such as land and slaves.

The new settlers in the western country took up large tracts of land, which together with their negroes,

they mortgaged to the new banks for loans with which to carry on their planting industry.<sup>11</sup>

By 1835 and 1836, some of the states in the Southwest were setting up banks which had as their main function the supplying of long-term, and, later on, short-term credit to the cotton planters and dealers. In Mississippi, Missouri, and Arkansas, the entire debts outstanding in 1838 were contracted for banking purposes. Ninety-seven per cent of the state debt of Louisiana and 72 per cent of the state debt of Alabama were similarly contracted.

When harvested the cotton was shipped from the interior to the Southern cotton ports and from there to Boston to supply the growing textile industry of New England or to the cotton markets of England and the Continent, mainly Liverpool and Harve. For the latter markets it was normally sent directly but sometimes transhipped via New York City.<sup>12</sup>

In the South, the cotton was usually purchased by local factors or agents of Northern houses. The factor sometimes purchased the cotton for his own account, but usually he was operating as an agent for a Northern or British house. The agent of the Northern house on the other hand, purchased cotton for the account of the house or on consignment for some foreign house. It appears that British firms had little direct dealings in the Southern market, preferring rather to operate through American firms



or their own branches located in the North which operated as an ordinary American house in the cotton market.<sup>13</sup>

The factor or agent, when purchasing cotton for a Northern or foreign house, drew a bill on it and discounted it at a local bank. These bills were normally drawn for dollars as there was little demand in the South, perhaps excepting New Orleans, for sterling bills, which were the type of bills drawn on British houses. Bruchey notes, however, that Alexander Brown and Company had its agents in the South first draw sterling bills and then buy back the bills from the cotton sellers. The sterling bills were then sent North to the foreign exchange markets.<sup>14</sup> Drafts drawn on Northern firms were discounted at a local bank. They were then sold to someone needing exchange on the North or shipped North by banks to build up their working balances in Northern banks. The Northern house, as soon as it received notice that the cotton had been shipped to Europe or to the North, drew a bill on the foreign firm which it represented or its own agent in Europe. The sterling bill was then sold in the foreign exchange market of New York or other Eastern import centers.<sup>15</sup>

Regardless of how the sterling bills were drawn, they were paid with the proceeds of cotton sales by the Liverpool firms on which the bills were usually drawn. Sometimes the bills were paid by bankers for these firms. This however was not the end in the chain of credit

transactions extending from the cotton fields of the South to the mills of England.

It was customary in Great Britain for the cotton to be sold not directly to the spinners but rather to a cotton broker who in turn sold it to the manufacturers. In these transactions the cotton importers drew bills on the brokers and after being accepted discounted them at the banks which considered such bills as first class paper.<sup>16</sup> Most likely short-term credit was also used to facilitate the purchases of the cotton from the broker.

By the mid-1830's, "an increasingly great proportion of all cotton shipped to Liverpool," was done so on British account.<sup>17</sup> The credit markets of Great Britain, and to a lesser extent those of America were vital to the cotton trade. This was true not only short-term credit, but as we have seen for longer-term credit which was used to finance the purchasing of the land and slave labor needed to grow the cotton. So far we have seen the use of credit to finance the growing and marketing of the raw cotton, but credit was also needed to finance the sale of the finished and semi-finished textiles. More generally it was vital to the flow of consumer and capital goods between the United States and Great Britain, and it is to the role of credit in the American import and British export trades that we now turn our attention.

The Anglo-American Trade and Credit

By the mid-1830's the financing of the American import trade from Great Britain was based on credit extended by seven British merchant banking houses, the so-called Anglo-American houses. Six of these were located in London and the seventh in Liverpool. Except in times of serious financial difficulty, these firms had sufficient resources so that they did not need to discount bills with the Bank of England or with bill brokers. We shall see in the first half of Chapter V that when these houses needed aid in 1837, it was not forthcoming in sufficient amounts to maintain the solvency of some of them. For the moment we shall concentrate on how they furnished credit for the American trade as well as for America's trade with South America and Asia.

The Anglo-American houses established branches or agencies in America. When an American importer wanted to buy goods in Great Britain he obtained a letter of credit from one of these branches or agencies. This letter of credit enabled him or his agent in Britain to draw bills, usually for four months, on the London office of the Anglo-American house. These bills were then used to purchase goods in Great Britain.<sup>18</sup>

At first the documents of a transaction, such as invoices, were sent directly to the agents of the Anglo-American houses in America. The American importer could

not obtain title to the goods until he or his bank paid for the shipment. But gradually it became more common for the documents to be sent directly to the importers. The Anglo-American houses also began to extend lines of credit, called "open credits." Sometimes large American merchants were able to obtain open credits with several Anglo-American houses, and use the credit obtained from one house to pay off bills due at another.<sup>19</sup>

British exporting merchants were also dependent on the availability of credit. They purchased goods for sale in America or elsewhere either on their own account or as agents for others. Bills of exchange were drawn on them with maturities ranging from four to six months. After being accepted, they were discounted by the drawer at bill brokers or banking houses. As an indication of the expansion of credit in Great Britain, the total value of bills of exchange created in the United Kingdom rose from £ 198.2 million in 1830 to £229.5 million in 1835 and £280 million in 1836.<sup>20</sup>

The credit markets of Great Britain were important not only to the trade of that country with America, but also for America's trade with South America and Asia. Bills of exchange drawn on the Anglo-American houses were used in place of American specie to pay for goods American merchants purchased in these regions. The Second Bank of the United States during the last half of the 1820's began to use its

own bills instead of sterling bills. But the Bank was able to do this only as long as it could obtain credit in Great Britain. As a result of this substitution of British credit, directly and indirectly, for American specie, America's specie losses to Asia were drastically reduced by the end of fiscal 1827.<sup>21</sup>

Credit was the lifeblood in the chain of manufacturing and trade which stretched from the factories of England and New England to the farmers, planters and workers in America and from the grain fields of the mid-West and the cotton fields of the South to the cities of the North and those across the Atlantic. By the mid-1830's,

. . . the machinery had been established whereby Liverpool and London--especially London--should become the essential pivots in the financing of the American import as well as export trade.<sup>22</sup>

In the appendix to this chapter we have the results of a series of regression equations dealing with the relationship between the British money market and the Anglo-American trade. The variables used were, the value of inland bills of exchange created in England and Wales, United States imports from Great Britain, United States cotton exports to Great Britain, and British exports of cotton textiles. These equations and the analysis behind it attempted to provide quantitative support to the qualitative statements we have just seen on the importance of British credit to the Anglo-American trade. Unfortunately, the data does not furnish such support.

Why is this so? It may be that the qualitative estimates of the importance of the British credit market were wrong. But we will see in later chapters other information, both quantitative and qualitative which also indicate the importance of British credit. One other possible explanation centers on the variable used for conditions in the British credit market.

Two series were available as indicators for the British credit market, the value of inland bills of exchange created in the United Kingdom and the market rate of discount in London. The former gave better results in terms of  $R^2$  than the latter and it was therefore used.

Unfortunately, the value of bills of exchange created was very large relative to that of the other series used. Exports of British Textile manufactures were, at the most, about 10 per cent of the value of the bills created. United States imports from Great Britain were about six per cent while the value of total United States Cotton exports were of the same order of magnitude. We will also see in Chapter V that except in times of financial difficulty, the major Anglo-American houses did not discount bills with bill brokers or the Bank of England. Finally, there is also the question of whether inland bills excluded those drawn by British sellers on export merchants as well as those drawn on the Anglo-American houses by American cotton sellers.

Taking into account all these factors, the lack of statistical confirmation of the hypothesis of the importance of British credit to the Anglo-American trade cannot be considered as proof of the lack of such a relationship. It does indicate that unless new quantitative data on the financing of the Anglo-American trade and the British export trade can be developed we may never have acceptable proof as to the validity of this hypothesis.

The credit structure which supported trade, both domestically and internationally, was being built on a shifting foundation. As long as prices continued to rise, expectations would be fulfilled and commitments could be met. But the potential always existed for the collapse of trade if prices fell or credit facilities dried up.

Crucial to the expansion of trade was the ability of the banking systems on both sides of the Atlantic to meet the demands placed on them for money and credit. In Chapter V we will look at the growth of the joint-stock banks in Great Britain. In the remaining section of this chapter we will examine the relationship between the massive specie imports into the United States during the mid-1830's and the growth in the supply of money and credit.

#### Specie Flows and the Money Supply

Prior to fiscal 1834 American net specie flows fluctuated between a net export of \$2.6 million in fiscal 1825 and a net import of \$4.5 million in fiscal 1833.<sup>23</sup>

Starting with the near record imports of fiscal 1834, there were large net imports which lasted through fiscal 1838. Our attention will center on the sources of these inflows and the relationship between changes in these flows and changes in the money supply.

Enough has been written in recent years on the relationship between the money supply and economic activity to make one wary of attempting to demonstrate such causal relationships during the 1830's. However, an analysis of the American economy during these years is structured by hypotheses implicitly dealing with these relationships.

Temin assumes that it was changes in the money supply which led to changes in prices. Increases in the money supply resulted in individuals holding excess money balances which they spent on goods and services. As domestic production could not keep pace with the growth of demand, prices rose.<sup>24</sup> Our position is that there is an asymmetrical relationship between money and economic activity. While the growth of aggregate demand can be dampened by an insufficient supply of money and credit, the availability of these funds does not mean that there is a demand for these funds. Banks can have their reserves increased, but this does not automatically mean that they will expand their loans nor that these loans lead to a growth in aggregate demand. The money supply increased because there was a demand for more money to buy goods, capital and consumption,



and services, and the banks were able to accommodate the demand.

The monetary data available for this period is in annual form. This does not permit the statistical analyses needed to demonstrate causal relationships between the money supply and economic activity.<sup>25</sup> However, in conjunction with banking statistics for particular groups of banks, this data will enable us to draw some conclusions on the relationship between specie flows and the money supply, especially bank money.

We shall first look at the sources and causes of these specie flows. This will entail an examination of specie export and import points. Then we will attempt to determine the relationship between these specie flows and the money supply.

#### Sources of Specie Imports in the Mid-1830's

The two main sources of specie inflows for the United States during the 1830's were Mexico and the Continent, England and France. Silver was exported by Mexico as a commodity just as the United States was exporting Cotton. The movement of short and long-term capital between the Continent and the United States, or its absence, primarily determined the flow of specie across the Atlantic.

Temin wrote that,

Most of it (specie) came from Mexico, with imports from various Latin American countries adding to the flows. In the 1820's the inflow of silver from Mexico

and Latin America was offset by an outflow to Asia. This balance was destroyed in the 1830's by a small rise in the imports from Mexico and a larger fall in the specie exports to China.<sup>26</sup>

The drop in specie exports to China resulted from the previously mentioned substitution of British sterling bills and later those of the S.B.U.S. for silver in the China trade. Temin's own data, however, casts serious doubts on the validity of these assertions. Specie losses to Asia fell sharply in fiscal 1828 and from that year through fiscal 1833 the United States lost approximately 70 per cent more specie to the Continent than to Asia.<sup>27</sup>

Mexico was the largest single source of specie during the 1830's but the Continent was not far behind. More significantly, the United States shifted from a net exporter of specie to the Continent in the first years of the 1830's to a net importer during the mid-1830's. Between fiscal 1830 and 1833 inclusively, the United States lost \$6 million in specie to the Continent. During the 1834-1836 period the United States imported \$15 million in specie from the Continent, this being equal to about 79 per cent of the imports from Mexico.<sup>28</sup> The American specie supply in the mid-1830's increased not primarily because of the shifting in the financing of the China trade and a slight rise in Mexican exports, but because of the shift in the direction of specie flows from the Continent. To better understand these latter specie movements we will examine the factors determining specie flow points and the conditions where they would be operative.

Prior to the Coinage Act of 1834, an American ten dollar gold piece the Eagle, contained when minted, 247.5 grains of pure gold, while the British Sovereign, a one pound gold coin, contained 113.001 grains of pure gold. Thus the gold par, the exchange rate between British and American gold coins, was \$4.565 to £1.<sup>29</sup> The price of silver in terms of gold was 15.1 at the United States mint while in London the price was a little lower, ranging between 15.5 and 15.7 to 1. Silver was thus overvalued at the United States mint and it flowed into the United States even when the exchange rate was at the gold par.

Equilibrium was the rate at which the flow of silver--not the less profitable flow of gold--would not be profitable. This rate was five per cent above the gold par in fiscal 1834.<sup>30</sup>

Exchange rates were quoted either in dollars and cents per pound or as a percentage premium or discount from the nominal par of \$4.44. Prior to the Coinage Act of 1834 the gold par of \$4.565 was equal to about two and three-quarters per cent premium while the silver par was \$4.79 or about seven and seven-eighths per cent above nominal par.<sup>31</sup> After the Coinage Act of 1834 the mint ratio was brought more in line with the market price ratio, but gold became slightly overvalued at the mint. The gold exchange ratio became \$4.871 or about nine and three-quarters per cent premium. In January, 1837 the mint ratio was again slightly altered. The exchange rate became \$4.866 or about nine and one-half per cent premium.

The specie export point is the exchange rate at which it becomes cheaper to ship specie to London than purchase sterling bills of exchange. The specie import point is the exchange rate at which it becomes cheaper to ship specie to America than purchase dollar bills of exchange. To determine these points we add or subtract, as the case may be, the cost of shipping specie to the mint ratio. In the 1830's this cost was estimated at two to three per cent of the value of shipping specie.<sup>32</sup> After the Coinage Act of 1834 this meant that the specie export point was about 12 per cent premium while the specie import point was about six and three-quarter per cent premium above nominal par.

The exchange rate fluctuated between these export and import points, the actual market rate determined by the demand and supply for pounds. The demand and supply for foreign exchange is derived from the autonomous transactions in America's balance of payments. Debit transactions with the sterling area giving rise to a demand for sterling and credit transactions giving rise to a supply of sterling.<sup>33</sup> Long-term and short-term capital inflows kept the dollar-pound exchange rate below the specie export point even with the recurring trade deficits of the mid-1830's.

Short-term capital inflows resulted primarily because of differences between interest-rates in America and Great Britain. As an example of this assume that short-term interest rates in New York exceed those in London by four

per cent per annum. British investors could borrow money in London and lend it in New York at the higher interest rate.

How were these funds transferred to New York? We find no mention of dollar bills drawn on New York firms or other American firms. British investors might have purchased American securities that were about to mature and return them to America for redemption in dollars. But more and more American securities were being sold in London payable in sterling. The main means of transferring funds appears to have been the shipment of specie. As it was estimated to cost between two and three per cent in value to ship specie across the Atlantic, the interest rate differential of four per cent was sufficient to justify such shipments being made. When the short-term interest rate in New York exceeded that in London by more than the cost of shipping specie, British investors transferred specie to New York. According to Temin, this accounted for the massive imports of specie from the Continent during 1834.<sup>34</sup>

The sale of American securities in Great Britain and the Continent also led to the importation of specie. Just as with short-term investments, foreign investors had few means for transferring funds to America. Securities were purchased, say by British investors either from agents of the American seller or from a firm such as the Barings' acting as investment bankers for American borrowers. The

former means of sale, direct placement, normally resulted in the shipment of specie. The Baring's purchased the securities from the issuing body, perhaps with the proceeds from the sale of sterling bills in the New York and other American foreign exchange markets. They then sold these securities in London. Such transactions did not necessarily result in specie imports unless the sale of sterling bills drove the exchange rate below the specie import point.

America was fortunate in that foreign capital markets were receptive to these securities. The repayment of the federal debt made American securities attractive to British investors who had been hurt by the defaulting of South American securities during the mid-1820's. Part of this attraction was based on a misconception as to the legal responsibility of the federal government for the debts of the state and local governments. Since the federal government had at the start of the new nation assumed state debts it was assumed that it still could. Easy money conditions in London and the boom in the British and Continental economies increased the ability of foreign capital markets to absorb these securities.<sup>35</sup>

From below the border and across the Atlantic specie flowed into the United States during the mid-1830's. Unlike the 1820's when most of the Mexican specie went to Asia and the Continent, during the mid-1830's most of this specie was retained and specie flows to the Continent were reversed.

This was due to a change in the financing of the China trade and specie imports from Great Britain and France. Easy money conditions in Great Britain contributed to these changes. But what was the relationship between the specie inflows and the growth in the supply of money and credit in America? It is to this question that we now turn our attention.

### Specie and Money

The money supply consisted of gold and silver coins, and bank money, bank notes and demand deposits. Specie imports increased the money supply in two ways:

1. Directly as gold and silver coins and perhaps bullion which was minted into coins entered into circulation;

2. Indirectly as specie increased the reserves on which the banking system based its expansion of bank money.

We shall first look at these channels through which specie flows changed the money supply and then determine the importance of these channels.

Using Temin's monetary estimates we find that between 1830 and 1836 inclusively, changes in the public's holdings of specie accounted for 12.9 per cent of net changes in the money supply. In the 1834-1836 period it accounted for 19.5 per cent of the net changes.<sup>36</sup> In 1835 and 1836, however, the public was able to expand its holdings of specie at the expense of the banks. The increase in the public's

specie holdings exceeded specie imports and domestic production. If specie inflows were important in determining changes in the money supply its chief role lay in its relation to bank money.

During most of the 1830's the relationship between bank specie holdings and bank money was determined by bank charters and existing concepts of prudent bank management. Generally, bank charters contained restrictions, not reserve requirements, on the amount of bank notes and what we now call derivative deposits which a bank could have outstanding.<sup>37</sup> These restrictions were some multiple, usually three to five times, a bank's paid in capital.<sup>38</sup>

Usually exempted from these restrictions were primary deposits made in specie. A problem with this was that,

Men continued to think of deposits as simply something deposited, regardless of the fact that in actual practice bookkeepers in banks were making deposits include what had been borrowed at the bank and left there to be checked out.<sup>39</sup>

All deposits, primary and derivative, tended to be exempt from charter restrictions.

Legal restrictions in practice usually applied only to note circulation.<sup>40</sup> If a bank had issued notes up to the limit set by its charter, increases in specie could not enable it to issue more bank notes. Even if the bank had not issued notes up to its charter limit, it did not need additional specie to do so since legislatures, businessmen and bankers assumed that paid in capital was synonymous with



specie.<sup>41</sup> As far as demand deposits were concerned their was little relation, if any, between specie holdings and the amount outstanding. In general, there was little legal or practical relationship between increases in bank specie holdings and increases in the supply of bank money. As far as the ratio between specie and bank notes was concerned, "bankers themselves declared that no one general ratio existed."<sup>42</sup>

It was not until the last few years of the decade that charter restrictions were changed to reserve requirements, and then only haltingly. The Virginia Banking Law of 1837 and the New York Free Banking Act of 1838 contained legal reserve requirements instead of restrictions tied to bank capital, however, these applied only to bank notes. The Louisiana Banking Act of 1842 included demand deposits in the bank liabilities which had to be fractionally backed by specie. But it was not until the National Banking Act of 1863 that uniform reserve requirements existed for some body of banks.<sup>43</sup>

The relationship between the supply of money, especially bank money, and the supply of specie was tenuous at best, but Temin asserts that the money supply, particularly bank money, changes in response to changes in the supply of specie.

The factor leading to an expansion of the monetary stock . . . was the rise in the stock of specie. . . .

In a monetary system based on specie reserves, an increase in these reserves . . . can have no other effect.<sup>44</sup>

Temin was led to this conclusion because he assumed that banks during the 1830's operated with reserve requirements as banks do today.

When we look at Temin's data on the money supply and its components we find that they do not justify the assertion of any simple relationship between specie changes and changes in the money supply. In Table 3.1 we have the results of a series of regression equations using the aggregate money supply ( $M_s$ ) and bank money ( $M_b$ ) as dependent variables and total specie ( $S_t$ ) and bank specie holdings ( $S_b$ ) as the independent variables. Temin's data is used in both annual and first difference form. An examination of the results obtained from the annual data suggest that auto correlation exists and thus overstating the observed relationship between the dependent and independent variables.

The problem of auto correlation arises because both variables grew over time. This is a situation often found when using time series for regression analysis. One elementary way of eliminating or at least minimizing this problem is by using first differences of the variables. Annual data take the form of  $M_{s_t}$ , where  $t$  indicated the year. With first differences, instead of  $M_{s_t}$ ,  $M_{s_t} - M_{s_{t-1}}$  is used, thus we use changes rather than the annual data themselves.<sup>45</sup> When first differences are used the

TABLE 3.1.--Per cent of the Variation in the Money Supply and Bank Money Explained by Variations in the Total Supply of Specie and Bank Specie Holding, 1830-1845.

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Total Money Supply and Total Supply of Specie<sup>a</sup>

Annual Data	$R^2 = .37^*$ $DW = .74^{**}$
First Differences	$R^2 = .03^{**}$ $DW = 1.84^*$

Bank Money and Bank Specie Holdings<sup>b</sup>

Annual Data	$R^2 = .209^{**}$ $DW = .846^{**}$
First Differences	$R^2 = .034^{**}$ $DW = 2.23^*$

<sup>a</sup>Regression Equations:

Annual Data

$$M_s = 121.9 + 1.05 S_t \quad R^2 = .37$$

(.37)

$DW = .74$

First Differences

$$M_s = 5.42 + .77 S_t \quad R^2 = .03$$

(1.18)

$DW = 1.84$

<sup>b</sup>Regression Equations

Annual Data

$$M_b = 89.97 + 2.01 S_b \quad R^2 = .209$$

(1.04)

$DW = .846$

First Differences

$$M_b = 15.84 - .62 S_b \quad R^2 = .034$$

(.88)

$DW = 2.23$

---

\* Statistically significant at the .05 level.

\*\* Not statistically significant at the .05 level.

The concept of significance refers to the probability of a test procedure's rejecting true hypotheses, in this case that the variables are not related. If we employ a 95 per cent procedure, then in the long run the chances are that we will reject true hypotheses only five per cent of the time. Observed results whose probability of occurrence given the truth of the null hypothesis, the variables are related, is less than five per cent are called "significant." Edward J. Kane, Economic Statistics and Econometrics (New York: Harper and Row, 1968), p. 210.

Source: Peter Temin, The Jacksonian Economy (New York: W.W. Norton and Co., Inc., 1969), pp. 71, 159.

coefficients of determination are drastically reduced indicating that time dependency between the variables was present to a significant extent.

If Temin's assumption about the relationship between changes in specie and the money supply is correct, we should find large coefficients of determination between the monetary and specie variables, but we do not.<sup>46</sup> Using annual data, variations in the total specie supply explained only 37 per cent of the variation in the total money supply. The relationship is even lower when we look at bank specie and bank money, 20.9 per cent. When we minimize the effect of time dependency by using first differences the specie variables explain only about three per cent of the variations in the supply of money and bank money. Obviously it was not factors on the supply side, i.e., specie flows, that were the main determinants of the growth in the American money supply during the 1830's.

Why were bankers so concerned about specie losses if increases in specie were not that crucial in determining the level of bank money? There were two reasons for this concern. The first arose out of the nature of a fractionally backed money system. The second arose from legal restrictions placed by the federal government on the convertibility of bank notes it would accept.

With a fractionally backed money system, bankers and their customers knew that a bank could not meet all

the specie demands which could be placed on it. But convertibility was important if bank notes were to circulate at par and if depositors were to have confidence in the bank. How could bankers avoid a run on their specie holdings? Only if a bank had enough specie could it avoid such a run. We have already seen, however, that there was no uniformly accepted concept of enough specie, that is, the ratio between specie and bank notes.

What was sufficient specie in practice appears to have depended on:

1. the general economic situation, especially the foreign exchange market;
2. the confidence which the bank's main customers have in it;
3. the actions of other banks in the city and in the major commercial centers of the nation;
4. and the bankers' confidence in the ability of his customers to meet their obligations to the bank.

If specie was leaving the country because of balance of payments problems, it would be very difficult for banks in the Eastern commercial centers to continue paying out specie. It was just such a problem which contributed to the suspension of New York City banks in 1837.

If a bank lost substantial amounts of specie its main depositors might decide to withdraw specie while it was still possible. Even if a bank was not losing specie,

any indication of potential specie losses could start a depositor's run on a bank and then spread to other banks. This was one of the factors contributing to the suspension of the United States Bank of Pennsylvania in 1839.

The actions or inactions of other banks were also important in determining the ability of a bank or a group of banks to not suspend. In 1837, a depositors run started in New York City when two banks ran into serious trouble. Soon there was a run on the other city banks. With the suspension of the New York banks, other banks suspended in order to retain what specie they had. In 1839 the United States Bank of Pennsylvania tried to force the banks of New York to suspend but it was not successful. The reverse happened again in 1841 when the United States Bank was forced to suspend.<sup>47</sup>

Finally much depended on the confidence which the bank had in its customers. Would they withdraw their deposits at the first sign of trouble? If so, a banker might decide to suspend before this happened. In New England and New York City the business and banking community believed that it was the obligation of banks to maintain convertibility even if this meant a contraction in the supply of money and credit. This we will see may help to explain the pattern of bank suspension in 1838 and 1841.

The second factor causing bankers and the business community to be concerned over the specie holdings of the

banks were the Treasury regulations passed in 1835 and 1836. These required convertibility for all bank notes used in transactions with the Treasury. Regulations governing the deposit banks also contained specie requirements and as we will see in Chapter V, set up reserve ratios between specie and bank note issues.

The banking system operated under asymmetrical pressures, increases in specie holdings did not necessarily mean that they could or would expand their demand liabilities. Losses of specie, on the other hand, brought into question the ability of a bank to maintain convertibility. This meant that the notes of the bank might not circulate at par and more importantly that large depositors might withdraw their funds from the bank. If specie was not that vital in determining the supply of bank money, what other factors might have been important?

#### Economic Activity and the Money Supply

As we have seen bank money was the major component of the money supply yet its relationship with bank specie holdings was very tenuous. Perhaps bankers expanded their lending activities and thus the supply of bank money mainly in response to the demands of their customers and their own expectations on the profitability of making such loans. If this is true we should expect to find a differential pattern of bank performance. Banks in sections of the country which were growing rapidly should have expanded their activities

more than banks in regions which were less intimately connected with the boom of the mid-1830's. Deposit banks which were urged by the Treasury to expand their activities might have expanded more than non-deposit banks.

The more extensive the economic boom, be it based on cotton, lumber, construction, speculation in grain lands or the merchandising trade, the more extensive the expansion of banking activity. The regions which were experiencing the most rapid economic expansion, namely the West and Southwest--the cotton states of the Gulf Coast and lower Mississippi Valley--were those in which the growth of banking activity were the greatest. This is shown in Table 3.2. Within regions, certain states which were more directly involved in the economic boom than others of the region, showed the same differential pattern of bank growth. See Tables 3.2 and 3.3 for a comparison of this pattern.

In New England, loans and discounts increased by 25 per cent, total demand liabilities by 22 per cent. In Maine where there was a land boom based on lumber, the comparable figures were 77 per cent and 53 per cent. The same pattern will be found in comparing New York City with New York State and the mid-Atlantic region as a whole. Georgia banks expanded their activities more than the banks of the south-Atlantic region taken as a whole. In the south-West New Orleans banks lagged behind the banks in the region taken as a whole. This should be expected as the



TABLE 3.2.--Percentage Change in Major Assets and Liabilities State Banks by Region, 1835-1837.<sup>a</sup>

Region	Loans and Discounts %	Specie %	Circu- lation %	Deposits %	Circula- tion and Deposits %
New England	25	19	12	32	22
Mid Atlantic	24	-50	23	17	33
South Atlantic	40	38	69	95	76
Southwest	79	48	72	103	85
West <sup>b</sup>	162	115	136	369	216
United States <sup>c</sup>	48	-13	44	55	48

<sup>a</sup>Data given in for near the first of the year.

<sup>b</sup>Includes Ohio.

<sup>c</sup>Estimates based on Appendix Tables B-1 and B-2, 44%, -14%, 43.5%, 53%, 48%

Source: Thomas S. Berry, Western Prices Before 1861 (Cambridge, Mass: Harvard University Press, 1943), p. 588.

TABLE 3.3.--Percentage Change in Major Assets and Liabilities of Banks in Selected States and Cities 1834-1837.

Location & Period	Loans and Discounts %	Specie %	Circu- lation %	Deposits %	Circula- tion and Deposits %
<u>Maine</u>					
Jan. 1835					
Jan. 1837	77	177	36	113	53
<u>Rhode Island</u>					
Oct. 1834					
March 1837	40	-48	49	-7	13
<u>New York State<sup>a</sup></u>					
Jan. 1835					
Jan. 1837	48	58	52	57	54
<u>Pennsylvania<sup>b</sup></u>					
Nov. 1834					
May 1837	64	-30	36	2	17
<u>Virginia</u>					
Jan. 1835					
Jan. 1837	59	30	56	71	65
<u>Georgia</u>					
Oct. 1834					
April 1837	117	61	117	190	132
<u>Ohio</u>					
Jan. 1835					
Jan. 1837	86	88	60	382	118
<u>New York City</u>					
Jan. 1835					
Jan. 1837	51	7	94	28	48
<u>New Orleans</u>					
June 1835					
Jan. 1837	58	10	55	62	59

<sup>a</sup>Excludes New York City banks.

<sup>b</sup>Excludes Second Bank of the United States.

Sources: Penn., Georgia, Maine, Virginia, R.I.: U.S. Congress, House, 26th Cong., 2nd Session, H.D. 111. New York State: U.S., Congress, House, 31st Cong., 1st Session, H.E.D. 68, p. 372-3. Ohio: Berry, p. 588. New York City: N.Y.S. Assembly, Report of Bank Commissioners, 58th Sess., Doc. 74, 60th Sess., Doc. 78. New Orleans: Hunt's Merchants' Magazine, Oct. 1842, p. 361.

New Orleans banks were managed conservatively in comparison with the state financed land banks of the region.<sup>48</sup>

There is also a difference between the performance of state banks in general and those which held government deposits. Within a few days of the announcement of the government's policy to use state banks as depositories for government funds, these banks were urged to use the newly gained funds to support an expansionary lending policy.

A circular letter of the Treasury Department to the deposit banks on September 26, 1833, said, 'The deposits of public money will enable you to afford increased facilities to commerce and to extend your accommodations to individuals.' It also recommended, 'merchants engaged in foreign trade,' as the most deserving recipients of extended credit.<sup>49</sup>

The available data, found in Appendix Table B-4, support the hypothesis that deposit banks did expand their lending activities more than banks in general. Between January 1835 and November 1836, the loans and discounts of deposit banks increased by 143 per cent while note circulation rose by 168 per cent; in comparison, the average for all banks were 48 and 44 per cent respectively. In Chapter V we will examine the performance of deposit banks in more detail.

The Federal government had an influence on the supply of money and credit that was more encompassing than its relations with the deposit banks. We shall conclude this chapter by looking more closely at how the monetary

and fiscal policies of the government influenced the supply of money and credit during the boom period of the mid-1830's.

The Federal Government and the Supply of  
Money and Credit 1834-1835

At the same time the Federal government was encouraging the expansion of the money supply, it was also attempting to replace the existing paper money with hard money, specie and large denomination bank notes convertible into specie. The first major attempt to substitute specie for the existing money supply was the Coinage Act of 1834. The Act contributed to the massive specie inflows of 1834 but because the new mint ratio overvalued gold at the mint,

It became impossible for the administration to substitute specie for notes of small denomination, for silver coins . . . were worth more in the bullion market than at the mint.<sup>50</sup>

In the next two years Congress and the Treasury department attempted to eliminate small denomination bank notes from the money supply and make the remaining bank notes completely convertible into specie. The executive and legislative branches of the Federal government followed the practices of the period and ignored the growing importance of demand deposits in the money supply.

During 1835 and 1836, the Treasury department sent directives to the Treasury officials responsible for collecting and disbursing government funds, as well as to the

deposit banks. These directives were designed to remove smaller denomination bank notes from circulation and to make those notes which would thereafter circulate, convertible on demand into specie. On April 6, 1835, a Treasury circular informed all collecting and receiving officials that: (1) they could not receive bank notes in denomination of less than five dollars starting after September 30, 1835, and that public officials could not pay out such notes after May 1, 1836; (2) after July 4, 1836, the government would not accept or pay out notes of less than ten dollars; (3) the deposit banks were ordered to make one-fifth of every payment which did not exceed \$500 in gold, if so required by the creditor; and (4) they were requested to cease issuing notes below the denomination of five dollars by July 4, 1836 and below ten dollars by March 3, 1837.<sup>51</sup>

On April 14, 1836, Congress passed an Act prohibiting the government from paying out notes of less than ten dollars and after March 1837, no notes of less than twenty dollars would be paid out. (Note that the previous Treasury circular of 1835 should have prevented this, starting in July.) It also sought to insure the complete convertibility of all currency used by the government by ordering "that the United States government should not pay out any banknote of any denomination unless the same were payable on demand in gold or silver coin at the place where issued."<sup>52</sup> Several states had already passed laws prohibiting the issuance of notes of small denominations.<sup>53</sup>

These laws, at both the state and federal level affected bank specie holdings, but not the supply of bank money. The banking system lost approximately six billion dollars in specie during 1835 and 1836. This loss of specie at a time when the United States was a net importer of specie and the high levels of coinage at the mind indicates that the public increased its demand for specie. While the banks were losing specie to the public the supply of bank money rose by \$76 million, again demonstrating the tenuous relationship between bank specie and bank money.<sup>54</sup>

The fiscal policy of the Federal government during these years had an important effect on the supply of money and the long-term capital markets, both domestic and foreign. Federal fiscal policies during this period centered on the problem of what to do with the mounting Federal surplus. This question occupied more and more of the attention of the executive and legislative branches when for all practical purposes the national debt was eliminated by the end of 1834.

The Federal government found itself running budgetary surpluses every year from 1830 to 1836.<sup>55</sup> The surpluses were the result of the economic prosperity of the period which led to rising imports and increasing custom's receipts. The Compromise Tariff of 1833 lowered duties and receipts but land sales expanded tremendously in 1835 and 1836 resulting in the largest Federal surpluses prior to 1866.

Whether the surpluses would be inflationary or deflationary depended on what the government did with them.

At first the surpluses were used to retire the Federal debt. The outstanding debt of the United States government at the end of 1830 was approximately \$39 million. Between the end of that year and the end of 1832, the debt had been reduced by approximately \$32 million, and by the end of 1834 it was less than \$50,000.

Repayment of the national debt affected not only the money supply but the supply of long-term credit as well. As the debt was reduced the supply of income earning assets available to investors decreased. This "closed an important field of conservative investment and returned funds to investors who then had to find other uses for them."<sup>56</sup> Investors found these alternative sources of income earning assets in state and private securities for internal improvements and banks, and in urban and rural real estate.

The redemption of the national debt also built up the credit standing of American securities in England and on the Continent. Foreign investors believed that the Federal government would be ultimately responsible for the repayment of state debts as it did after the Revolutionary War. With the Federal debt eliminated it seemed to the foreign investors that the Federal government was in a better position to assume state debts if that eventuality arose. Finally the mere fact that a government had repaid

its debts impressed British investors who had been singing in the mid-1820's by South American bond issues.

The net effect of debt retirement on the money supply appears to have been minimal. Repayment of domestically held debt involved a transfer of funds from those paying duties and purchasing bonds to those owning government securities.

Repayment of the foreign held debt--approximately \$13 million in 1830--entailed either the generation of an export surplus or refinancing with other types of debt instruments.<sup>58</sup> If both of these did not supply the necessary foreign exchange earnings, the only remaining alternative was the exportation of specie. From Appendix Table A-1, we see that there was a deficit in the balance of payments on current account for every year between 1831 and 1837. Only in 1831, however, was there a net specie out-flow, and Smith attributes this to the policies of the Second Bank of the United States and not to debt repayment.<sup>59</sup>

In 1832, when the national debt was reduced by \$17 million, the London capital market eased. This enabled American state and local governments as well as some private corporations to float issues in London, thus supplying the foreign exchange needed to finance the repayment of the foreign held national debt as well as the deficit on current account.<sup>60</sup> The repayment of the foreign held national debt was generally accomplished by refinancing with other securities.



After the Federal debt had been largely paid off, the continuing Federal surpluses were deposited in various selected state banks. We have already seen that these deposit banks did pursue a more expansionary lending policy than banks in general. In Chapter V we will more closely examine the relationship between the Federal surpluses in 1835 and 1836 and the growth of the money supply.

The expansion of bank money, the major component of the money supply, was due not primarily to specie flows but the response of banks to the credit needs of a growing economy. The Federal government contributed to this expansion by shifting deposits from the S.B.U.S. to deposit banks. It also, however, increased uncertainty about the stability of the money supply by not rechartering the S.B.U.S. and by its actions concerning the type of notes which it would accept.

## FOOTNOTES

### CHAPTER III

<sup>1</sup>Eli Shapiro, Ezra Solomon and William L. White, Money and Banking, Fifth Edition (New York: Holt, Rinehart and Winston, Inc., 1968), p. 52.

<sup>2</sup>Stuart Bruchey, Cotton and the Growth of the American Economy: 1790-1860 (New York: Harcourt, Brace and World, Inc., 1967), pp. 225, 231.

<sup>3</sup>Shapiro, Solomon and White, p. 53.

<sup>4</sup>Bruchey, p. 246.

<sup>5</sup>Norman Buck, The Development of the Organization of Anglo-American Trade, 1800-1850 (New Haven: Yale University Press, 1925), p. 160. Paul F. McGouldrick, New England Textiles in the Nineteenth Century (Cambridge: Harvard University Press, 1968), p. 42.

<sup>6</sup>Bruchey, p. 224.

<sup>7</sup>Joseph E. Hedges, Commercial Banking and the Stock Market Before 1863 (The John Hopkins University Studies in Historical and Political Science Series, Vol LVI, No. 1, Baltimore: The John Hopkins University Press, 1938), p. 65.

<sup>8</sup>Buck, p. 82. An examination of the Bostwick papers excerpted in Bruchey shows that for interstate transactions, Bostwick made payment with checks. For intrastate settlements, Bostwick also used drafts. Bruchey, pp. 247-249, 252, 254, 255, 258, 263.

<sup>9</sup>North, Economic Growth, Table A-VIII, p. 233.

<sup>10</sup>See Stuart Bruchey, pp. 222-225.

<sup>11</sup>Matthew B. Hammond, "The Cotton Industry" American Economic Association Publication, New Series #1 (New York: McMillan, 1897), p. 71. For a discussion of the relationship between state banking in Louisiana and the cotton industry see Stephen A. Caldwell, A Banking History of Louisiana (Baton Rouge: Louisiana State University Press, 1935), p. 54.

<sup>12</sup>Bruchey, pp. 222, 227.

<sup>13</sup>Buck, pp. 82, 86.

<sup>14</sup>Bruchey, p. 229.

<sup>15</sup>Buck, p. 87.

<sup>16</sup>Buck, p. 55.

<sup>17</sup>Buck, p. 87.

<sup>18</sup>Buck, pp. 154-155.

<sup>19</sup>Buck, p. 157. Arthur H. Cole, "Evolution of the Foreign Exchange Market of the United States," Journal of Economic and Business History, Vol. 1, No. 3 (May, 1929), p. 402.

<sup>20</sup>See Appendix Table B-5.

<sup>21</sup>Buck, p. 158; Smith, pp. 89, 142.

<sup>22</sup>Cole, Journal of Economic and Business History, Vol. I, p. 399.

<sup>23</sup>See Appendix Table A-1.

<sup>24</sup>Temin, pp. 82-83.

<sup>25</sup>Lead-lag relationships between changes in the money supply and changes in aggregate indices such as GNP or the C.P.I. are not sufficient to determine causal relationships. See comment of James Tobin in Controlling Monetary Aggregates (Federal Reserve Bank of Boston, September, 1969), p. 22.

<sup>26</sup>Temin, p. 80.

<sup>27</sup>Losses to the Continent were \$12 million, those to Asia \$7 million. See Temin, p. 81.

<sup>28</sup>Temin, p. 81.

<sup>29</sup>Temin erroneously listed \$4.65 as the gold par. Temin, p. 65.

<sup>30</sup>Temin, p. 66. A five per cent premium on silver meant a London price ratio of 15.7:1.

<sup>31</sup>According to the Financial Register, the silver par was eight per cent while a House report listed it as ranging between seven and eight per cent. See Financial Register, Vol. 1, p. 79, and source cited for Appendix Table B-10, p. 656.

<sup>32</sup>Margaret G. Myers, The New York Money Market, Vol. 1 (New York: Columbia University Press, 1939), p. 74.

<sup>33</sup>Paul T. Ellsworth, and J. Clark Leith, The International Economy, Fourth Edition (New York: The Macmillan Co., 1969), pp. 343-344. Autonomous transactions are those undertaken for their own account and not to settle payment imbalances.

<sup>34</sup>Temin, p. 64.

<sup>35</sup>Smith, pp. 30, 175.

<sup>36</sup>These estimates are derived by subtracting estimated bank specie holdings from the estimated total specie supply. The specie series used are those of the Comptroller. Using an alternative series constructed by Temin the comparable figures are 15.2 per cent and 21.2 per cent. See Temin, pp. 184, 189-190 for a discussion of these two specie series.

<sup>37</sup>A deposit resulting from the lodgement of currency or its equivalent is called a primary deposit. A deposit arising from the exchange of a bank debt for the debt of others is called a derivative deposit. Eli Shapiro, Ezra Solomon and William L. White, Money and Banking, Fifth Edition (New York: Holt, Rinehart and Winston, Inc., 1968), pp. 124-125.

<sup>38</sup>Hammond, pp. 188, 558.

<sup>39</sup>Hammond, p. 688.

<sup>40</sup>Hammond, pp. 188-189, 688, 690.

<sup>41</sup>Hammond, pp. 131-137, 696-697.

<sup>42</sup>Hammond, p. 695.

<sup>43</sup>We will see in Chapter V that Section 8 of the Deposit Act gave the Secretary of the Treasury the power to fix what amounted to reserve ratios for the deposit banks.

<sup>44</sup>Temin, pp. 77-78.

<sup>45</sup>Kane, pp. 44, 46, 359-360; and Robert Ferber and P. J. Verdoorn, Research Methods in Economics and Business (New York: The Macmillan Company, 1962), pp. 336-337, 384-386.

<sup>46</sup> $R^2$ , the coefficient of determination, shows the percentage of variation in the dependent variables (that on the left-hand side of the regression equation), which is explained by variations in the independent variable (those on the right-hand side of the equation). The number in brackets under the regression coefficient is the Standard Error of the Estimate. This is a means of estimating the probability that a particular regression coefficient was produced from a population where the observed relationship is nonexistent. If we used, as in these two equations, annual data for 16 years, and if the regression coefficient is at least 2.145 times its standard error of the estimate, then the regression coefficient would be expected to occur five times out of 100 purely as a result of chance. D.W. is the Durbin-Watson statistic which measures the possible existence of auto-correlation, that is the extent to which a variable has been omitted or that there is a correlation of the various time series with themselves; i.e., the different values of the variable are related over time. Where the D.W. statistic is given, this indicates that the hypothesis of the existence of autocorrelation has been rejected at the five per cent significance level. In economics, the existence of auto correlation means that we accept more frequently than we should the statistical significance of the regression coefficient. Kane, pp. 360-361, 368; Ferber and Verdoorn, pp. 87, 95-97.

<sup>47</sup>See Smith, pp. 226-227.

<sup>48</sup>We will see in the next Chapter that most of the outstanding debts incurred by the states in this region were for the formation of banks set up to facilitate the growing and sale of cotton.

<sup>49</sup>David Kinley, The Independent Treasury of the United States and Its Relations to the Banking of the Country (Washington: National Monetary Commission, 1910), p. 29. Also see Harry N. Scheiber, "The Pet Banks in Jacksonian Politics and Finance, 1833-1841," Journal of Economic History, Vol. 23, No. 2 (June, 1963), p. 199.

<sup>50</sup>Paul Studenski and Herman E. Krooss, Financial History of the United States, Second Edition (New York: McGraw-Hill Book Co., Inc., 1963), p. 109. See also Schlesinger, pp. 126-127.

<sup>51</sup>Kinley, p. 31; Niles, April 11, 1835, p. 92; and March 5, 1836, p. 11.

<sup>52</sup>Dewey, p. 228.

<sup>53</sup>Schlesinger, p. 128.

<sup>54</sup>Appendix Table, B-2, B-7.

<sup>55</sup>See Appendix Table A-2.

<sup>56</sup>Hammond, p. 454. Also see Albert Gallatin, Suggestions on the Banks and Currency of the Several States (New York: Wiley and Putnam, 1841), pp. 32-33.

<sup>57</sup>Edward G. Bourne, The History of the Surplus Revenue of 1837 (New York: G. P. Putnam's, 1885), p. 14.

<sup>58</sup>Paul B. Trescott, "The United States Government and National Income, 1790-1860," Trands in the American Economy in the Nineteenth Century, Studies in Income and Wealth, Vol. 24 (Princeton: Princeton University Press for the National Bureau of Economic Research, 1960), p. 352.

<sup>59</sup>Smith, p. 92.

<sup>60</sup>See Appendix Table A-2 and Smith, p. 158.

## APPENDIX TO CHAPTER III

The following regression equations represent an attempt to use the available information to determine the importance of British credit to the Anglo-American trade. As already mentioned in Chapter III, the value of inland bills of exchange was used to indicate conditions in the British credit market. Both the original data and first differences were used. It should be noted that although an  $R^2$  of .67 was obtained for the relationship between exports of United Kingdom textiles and inland bills of exchange, the use of first differences reduced the  $R^2$  to .259.

Equations were run in the form of  $Y = f(X)$  and  $X = f(Y)$ . The coefficient of determination,  $R^2$  is the same for both, but by looking at the regression coefficients we may obtain more insight into the causal relationships.<sup>1</sup>

### I. United Kingdom Export of Cotton Textiles ( $Y_1$ ) and Inland Bills of Exchange, ( $X_1$ ).

First differences are  $Y_2$  and  $X_2$  respectively.

$$Y_1 = 62.8 + .64 X_1 \quad R^2 = .67* \\ \quad \quad \quad (.120) \quad \quad \quad DW = 1.108**$$

$$Y_2 = 2.12 + .425 X_2 \quad R^2 = .259* \\ \quad \quad \quad (.20) \quad \quad \quad DW = 2.405*$$

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<sup>1</sup>Kane, pp. 242-244.

$$X_1 = 15.1 + 1.05 Y_1 \quad R^2 = .67^{**} \\ (.195) \quad DW = 1.05$$

$$X_2 = 2.906 + .609 Y_2 \quad R^2 = .259^* \\ (.286) \quad DW = 1.69$$

II. United States Imports From Great Britain ( $Y_3$ ) and Inland Bills of Exchange.

First Differences and  $Y_4$  and  $X_2$ .

$$Y_3 = -.043 + .1716 X_1 \quad R^2 = .175^{**} \\ (.099) \quad DW = 1.509^*$$

$$Y_4 = -4.2 + .306 X_2 \quad R^2 = .139^{**} \\ (.212) \quad DW = 1.694^*$$

$$X_1 = 203.6 + 1.02 Y_3 \quad R^2 = .175^{**} \\ (.59) \quad DW = .3122^{**}$$

$$X_2 = 6.78 + .453 Y_4 \quad R^2 = .139^{**} \\ (.313) \quad DW = 1.493^*$$

III. United States Cotton Exports to the United Kingdom ( $Y_5$ ) and Inland Bills of Exchange.

First Differences are  $Y_6$  and  $X_2$ .

$$Y_5 = -97.21 + 1.86 X_1 \quad R^2 = .27^* \\ (.816) \quad DW = .855^{**}$$

$$Y_6 = 32.14 - .777 X_2 \quad R^2 = .045^{**} \\ (.992) \quad DW = 3.216^{**}$$

$$X_1 = 194.4 + .145 Y_5 \quad R^2 = .27^* \\ (.064) \quad DW = .816^{**}$$

$$X_2 = 7.28 - .058 Y_6 \quad R^2 = .045^{**} \\ (.074) \quad DW = 1.538^*$$

Sources: United Kingdom Exports of Cotton Textiles and United States Cotton Exports to the United Kingdom: Appendix Table C-3.

United Kingdom Bills of Exchange: Appendix Table B-5.



United States Imports From Great Britain: The  
Statistical History of the United States, Series  
U. 142, p. 553.

## CHAPTER IV

### THE GROWTH OF AGGREGATE DEMAND

#### IN THE MID-1830'S

The banking system was willing and it appeared able to meet the growing demands placed on it during the mid-1830's for money and credit. In this chapter we will examine those factors which generated this demand.

Aggregate demand in the United States grew as a result of the process of expanding economic specialization which meant a widening of the market nexus thus further increasing the demand for money and credit. Economic specialization and its concomitant, increasing economic efficiency was stimulated primarily by four forces during this period:

1. expanding cotton production in the South;
2. the settlement of new grain lands and cities in the mid-west;
3. the growth of manufacturing and urban centers in New England and the mid-Atlantic states;
4. the expanding network of roads, canals and railroads, often financed by state and local governments, which connected the growing sections of the nation.

Which of these were of paramount importance is difficult to say. Before proceeding to examine these factors we will look at one hypothesis dealing with this question. D.C. North in his "Economic Growth of the United States," wrote that,

Cotton was strategic because it was the major independent variable in the interdependent structure of internal and international trade. The demand for western foodstuffs and northeastern services and manufactures were basically dependent upon the income received from the cotton trade. . . . The cotton trade was the immediate impetus for . . . regional specialization, and the growth of cotton incomes in the 1830's was the most important proximate influence upon the spurt of manufacturing growth of that decade.<sup>1</sup>

In a more recent work, "Growth and Welfare in the American Past," North appears to have modified his hypothesis. In answering the question of what factors brought about the growth of the American economy during the antebellum period he concluded that,

We must first observe that industrialization in the northeast, though important, cannot claim full credit. . . . It is clear that all three major regions contributed. In both the West and the South, incomes rose with more efficient agriculture and with migration into new and richer lands. . . . It was the whole American economy that was responsible for the accelerated growth.<sup>2</sup>

This does not mean that North still does not believe that cotton was important, for a few pages prior to the above statement he wrote that,

Cotton made the big difference in the economy after 1815, ruling as king in the South and exerting an important influence in the national pattern of development.<sup>3</sup>

From these two comments we might conclude that cotton was important, that without the growth in the cotton market in the mid-1830's the growth of the American economy might have been less than it was.<sup>4</sup>

Cotton and the American Economy  
in the Mid-1830's

Our interest in the cotton market lies in its relation to the boom of the mid-1830's and the panics and deflation of the late 1830's and early 1840's. In this chapter we will concentrate on the former period, later chapters will cover the latter.

What factors contributed to the rise in cotton prices during 1834-1836? What effect did the growth of the cotton market have on the American economy in general? These are the questions which will concern us in the next few pages.

The main purchaser of American cotton was Great Britain and it was the economic health of that country that determined the course of the American cotton industry.<sup>5</sup> The grain harvests in Great Britain were crucial in this respect. During the mid-1830's the British grain crops were good and this stimulated the demand for American cotton.

Good harvests by lowering grain prices increased the real income of British consumers and thus increased the demand for British textiles.

The primary cause of the rise in the price of cotton in the years prior to 1836 was the rise in demand in Britain deriving from a series of good harvests. Not all British cotton goods were consumed at home, and there were presumably other factors influencing the demand for cotton, but the rise in the home demand was the most systematic inflationary factor.<sup>6</sup>

Indirectly, good grain harvests, through their effect on the money markets of Great Britain increased the demand for British textiles and thus for raw cotton. Good harvests meant that little specie had to be exported to purchase grains. This facilitated the easy money policies pursued by the Bank of England during these years. It was easier for British textile exporters to obtain credit just as it was easier for the manufacturers to obtain credit to purchase raw cotton.

The health of the American cotton industry depended on conditions in the grain fields and money markets of Great Britain. In 1837 and 1839 we will see the vital importance of these factors to the American cotton industry and the American economy in general.

The importance of cotton to the American economy, as North indicated, lay in the income its production and sale generated for the American economy as a whole. Cotton also contributed to the growth of the American economy through its role as the main source of foreign exchange earnings during these years. Finally, there is also the likelihood that rising cotton prices contributed to the inflow of British capital, especially to the Southern states.

Cotton gave the planters the purchasing power to buy domestic and imported manufactured goods and foodstuffs from the mid-Western states. Northern merchants, concentrated in New York supplied the South with much of the manufactured goods it purchased. This demand for manufactured goods stimulated production and income in the East thus contributing to the East's increasing specialization and urbanization. They also supplied the shipping and ancillary services needed to ship the raw cotton from the South to the textile mills of New England and Europe as well as the reverse trade in manufactured goods.<sup>7</sup>

Though much has been written in recent years to cast doubts on the assumption that the mid-West was an important supplier of foodstuffs to the South, little in these works had dealt specifically with the New South.<sup>8</sup> Yet it was in the New South, those states bordering on the Gulf Coast and the Mississippi river, that we had the most rapid growth in population during the 1830's. Moreover, by 1833 this region supplied about 52 per cent of the total cotton produced in the United States and the average for the 1834-1837 period was about 59 per cent.<sup>9</sup>

The New South might have been a food deficit region of some magnitude given its population growth. Where could this food have come from? One cannot simply assume that the food came from the surplus regions of the Old South. It may have been more expensive to ship food from the

interior of the Old South lying east of the Alleghenies than to ship it down the Ohio and Mississippi river system or across the Erie Canal and down the coast. We do not know how much of the produce of the mid-West shipped down the Ohio-Mississippi system never reached New Orleans, but was consumed by plantations along the river valley. Finally we do not know how much of what was shipped from New Orleans went to ports along the Gulf Coast.<sup>10</sup> Until much more is known about the production of foodstuffs, and the coastal and inland trade of the New South, we cannot reject the hypothesis that it was an important market for the produce of the mid-West during the 1830's.

Besides generating incomes outside the South as well as within it, cotton was important because it was the main source of exchange earnings for the United States in these years. Exports of cotton accounted for about 36 per cent of total United States exports in 1833; in the next three years it accounted for 49 per cent, 65 per cent and 71 per cent, respectively, of total United States exports.<sup>11</sup> The bills of exchange arising from the export of cotton helped to pay for expanding United States imports as well as to meet some of the needs for repaying short-term debts and the interest on the long-term debt. We will see in later chapters that fluctuations in cotton export earnings had serious consequences for the foreign exchange markets and the Eastern banks in 1837 and 1839.

The booming cotton market also helped the sale of American securities in Great Britain and the Continent. Rising cotton prices and the continuing flow of cotton bills increased the confidence of foreign investors to American securities. This was especially true for the securities issued by the states of the New South. The proceeds of the securities sold by these latter states were mainly used to set up banks to finance the expansion of cotton growing and marketing.<sup>12</sup> By purchasing these securities British investors might have been conscious of the aid they were giving to their textile industry, but we have no information to indicate that this was so.

Cotton was important to the boom of the mid-1830's. It provided the main source of foreign exchange earnings during the period and contributed to the climate which induced foreign investment in the United States. As we noted in the beginning of this chapter, cotton was important in stimulating regional specialization, but we do not know how important. Finally we do not know when the process of regional specialization and increasing economic efficiency became independent of cotton, if it did, during the 1830's.

#### Specialization, Urbanization and Growth in the Mid-West and East

##### The Mid-West

During the 1830's the mid-West was the most rapidly growing region in the nation. Except for the New South,



its population growth of 108 per cent was more than twice that of any other region of the United States.<sup>13</sup> The growth of the mid-West was facilitated by an expanding transportation system which aided the flow of settlers into the region and the outflow of its produce.

The demand for the produce of the mid-West grew rapidly during this period. Expanding population, both in farm areas and urban centers provided a growing intraregional demand which was increased by interregional demand. With expanding markets there was expanding specialization which meant in turn more urban centers to meet the needs of the farmers.

It was during the 1830's that cities such as Chicago, Cleveland and Detroit grew from towns of less than 2,500 inhabitants to small cities of 4,500, 6,100, and 9,100 respectively. A vital factor contributing to the growth of urban centers was access to river, lake or canal transportation. The population of Lexington, Kentucky grew by only 17 per cent during the decade while that of Louisville, one hundred miles to the West on the Ohio River grew by 106 per cent.<sup>14</sup>

How much of the growth in population in both agricultural and more urban regions of the mid-West, took place during the early and mid-1830's is unknown. The population figures are for census years and we have to rely on more

indirect information if we are to shed some light on the time pattern of this growth.

We do have some information on Chicago which indicates that most of the growth took place prior to the last years of the decade, but we have no basis to generalize from this information. We have previously seen that the population of Chicago grew from less than 2,500 in 1830 to 4,470 in 1840. According to the Report of the City Controller of Chicago for 1887, the population of that city was 4,170 in 1837.<sup>15</sup> Thus between 1830 and 1837, most of the decade increase in Chicago's population took place. F. Cyril James, in his history of banking in Chicago wrote that,

The total value, at the prices then current, of the land in the present city limits of Chicago had reached a figure of \$10,500,000, an amount 60 times as great as its total value in 1830.<sup>16</sup>

Public land sales in the mid-West reached an antebellum peak in 1836, having increased by 685 per cent between 1833 and 1837.<sup>17</sup> How much of this increase reflected increased population is unknown. Moreover, public land sales in the 1837-1839 period were above the levels of 1830-1833 so that there may have been significant population increases during these latter years as well.

The population of the mid-West grew rapidly during the 1830's, and it is possible that much of this increase took place during the early and mid-1830's. Most likely

the rate of population increase declined in the last three years of the 1830's.

The problem of insufficient data confronts us again when we look at the growth of agricultural output in the mid-West during the 1830's. Much of the regions output never reached the market place in that it was consumed by the producers. Another substantial portion was consumed by the inhabitants of the growing towns and cities of the mid-West. What information we do have, deals with inter-regional flows and perhaps reflects only a small portion of the growth in output that did take place.

Interregional shipping data show a rapid expansion of trade but one must be careful in their use. Receipts on all Ohio canals, for example, rose by 330 per cent between 1830 and 1836, but we do not know how much of this increase was due to the opening of new canals or the extension of existing ones. Between 1834 and 1836, the increase was 40 per cent, perhaps this is a more accurate indicator of the growth in output.<sup>18</sup> Of course we still do not know what proportion of these receipts arose from the shipments of goods from the East.

From fiscal 1830 through fiscal 1836, the value of receipts of produce from the interior at New Orleans rose by 77 per cent, but we do not know the origins or composition of the shipments. Furthermore, we do not know how much of the shipments down the Ohio-Mississippi system was

purchased before reaching New Orleans. The tonnage of vessels employed on the western rivers increased by slightly over 142 per cent between 1830 and 1836.<sup>19</sup>

Information on East-West trade is even scantier. Estimates of Eastbound shipments via the Erie Canal did not commence until 1836. The tonnage of vessels registered at all ports on the Great Lakes and the Saint Lawrence River increased by almost 329 per cent between 1830 and 1836 with 69 per cent of the increase taking place in the 1833-1836 period. In comparison, only 28 per cent of the increase of tonnage on Western rivers took place during the same period.<sup>20</sup>

The volume of trade between the mid-West and other sections of the nation increased greatly during the early and mid-1830's. This reflected increasing production and income. In turn this meant an expanding market for eastern manufacturers and merchants.

#### Expansion in the East

Growth in the mid-Atlantic states and New England in the early and mid-1830's arose from increasing specialization of trade and manufacturing and from increasing urbanization. The demand factors giving rise to this came from the expanding markets of the South and mid-West as well as from the growing commercial and manufacturing centers of the East itself.

Industrial output grew during the early and mid-1830's, but not enough to match the growth in demand. The estimated output of the New England textile industry rose by 200 per cent between 1830 and 1836. Surprisingly, however, only 40 per cent of this increase came during the boom years of 1834-1836.<sup>21</sup> Iron production increased by 65 per cent during the 1830-1836 period with half of this coming in the 1834-1836 period.<sup>22</sup> Total anthracite coal production increased by 290 per cent during the 1830-1836 period, but again only about 38 per cent of this increase coming in the 1834-1836 period.<sup>23</sup> The pattern of growth in industrial output during the boom years is one of the reasons for the rapid rise in prices and increasing imports during this period. Domestic production could not keep pace with the growth in demand.

Mercantile trade expanded greatly during these years. More and more goods flowed through the Eastern ports destined for the markets of the interior and the South. This trade generated income and employment in the Eastern seaports as well as the interior distribution centers which were part of the channel of trade from the factories of Great Britain and New England to the farmers and planters of America.

Paramount among the mercantile centers was New York. It was the entreport for the cotton trade and the growing markets of the interior which was opened up to the city by

the Erie Canal. While total United States imports rose 75 per cent during the 1833-1836 period, imports into the port of New York rose by 110 per cent. New York's share of total imports rose from 54 per cent to 65 per cent during the same period.<sup>24</sup>

The increase in trade was reflected in the burgeoning population and wealth of New York City.

New York, thanks in considerable degree to the rapid expansion of its suburb, Brooklyn, the increase in trade following the completion of the Erie Canal, and its growing dominance of the import trade, grew most rapidly of the Four Great Eastern Seaports and contributed the largest share, especially in the 1830's, to the country's urbanization.<sup>25</sup>

The city's population increased by 62 per cent during the decade while that of Boston, Philadelphia, and Baltimore rose by 38 per cent, 37 per cent, and 26 per cent respectively.<sup>26</sup>

The wealth of the city also grew rapidly but there is a problem in using this information. A great fire in the city in December 1835 led to a large increase in the number of buildings constructed in 1836 at the then higher prices. The number of buildings erected in New York City rose from 877 in 1834 to 1,259 in 1835 and to 1,826 in 1836.<sup>27</sup> The assessed value of real property in the city rose by 140 per cent in the 1830-1836 period with 88 per cent of this increase in the 1834-1836 period. The assessed value of personal property rose by 81 per cent, with 69 per cent of this being in the 1834-1836 period.<sup>28</sup> The

growth of New York City reflected the importance of urbanization to the growth of the American economy during the 1830's.

Urbanization in the East depended on the expanding market economy and access to the growing transportation system. In New York State, the Erie Canal was a major agent of urbanization, and not just for New York City. During the first ten years of the canal's operation, household textile manufactures in New York State fell by about 47 per cent, on a per capita basis it was 55 per cent.<sup>29</sup> As one travels westward along the canal, the rate of urbanization of cities along the canal increased. During the 1830's, the population of Albany increased by 39 per cent while that of Troy, Schenectady, Utica, Rochester and Buffalo increased by 66 per cent, 58 per cent, 54 per cent 119 per cent and 109 per cent respectively. For New York State as a whole, population increased by 27 per cent.<sup>30</sup>

In New England, mill towns were also growing. The population of Fall River, Lowell and Lynn increased by 60 per cent, 220 per cent, and 54 per cent respectively while that of Massachusetts rose by 21 per cent during the decade. In Maine, the boom in lumber, deriving from expanded urban construction and shipbuilding, was reflected in the growth of cities such as Augusta on the Kennebec River and Bangor on the Penobscot. Both cities grew from less than 2,500 in 1830 to 5,300 and 8,600 respectively by the end of the decade.<sup>31</sup>

Urbanization was a two-sided process. The expansion of the cotton industry in the South and the settlement of new grain lands and the beginning of new urban centers in the mid-West stimulated the growth of urban centers in the East. Urbanization itself further increased the need for economic specialization not only in the growing mercantile and manufacturing centers in the East but also in the regions which supplied these centers with raw materials and foodstuffs.

A common thread throughout our discussion of the economies of the South, mid-West and East was the increased economic specialization. Demand factors, especially in the South and mid-West were important in bringing about this specialization but the everwidening transportation net furnished the underpinning for it. The expansion of this infrastructure continued throughout the decade with the peak in both canal and railroad construction being reached in the last years of the decade and the first of the next. It now remains for us to determine the extent of this construction during the mid-1830's and the role of the state governments in financing it.

#### State Governments and the Growth of Transportation Infrastructure

State governments played an important role in the financing of internal improvements during this decade. Aid was extended in the form of bond issues to finance public



or semi-public projects, land grants, tax remissions, granting of banking privileges and the purchase of privately issued bonds.<sup>32</sup> In Table 4.1 we have the percentage distribution of state debts by purposes for which they were originally contracted. Canals, railroads and turnpikes accounted for 68 per cent (\$109.7 million) of the debts outstanding in 1838. Note that in every state outside of the New South, excluding Maine, the majority of the debt incurred was for internal improvements. In the New South banking was the main purpose for which state debts were incurred.

There is little information available on the extent of canal and railroad mileage built during the 1830's. According to Taylor, about 2,000 miles of new canals were constructed in the 1830's, the total mileage increased by 165 per cent during the decade. Estimates of railroad construction vary greatly and are believed not to be reliable for measuring annual changes. There are two estimates of railroad mileage during the 1830's, those of Poor and Shuman, the former showing an increase of 2,279 miles while the latter estimates the increase as being 2,225 during the 1830's.<sup>33</sup>

The internal improvements of the 1830's depended on the availability of long-term credit, especially British, and on domestic banking facilities.<sup>34</sup> We will see in later chapters that the monetary panic of 1837 did not seriously

TABLE 4.1.--Per Cent Distribution of State Debts Outstanding  
In 1838 By Purposes For Which Incurred.<sup>a</sup>

State	Banking	Canals	Railroads	Turnpikes	Misc.
Alabama	72	0	28	0	0
Arkansas	100	0	0	0	0
Illinois	26	08	64	0	02
Indiana	12	57	22	10	0
Kentucky	27	35	35	05	32
Louisiana	97	002	02	0	01
Maine	0	0	0	0	100
Maryland	0	49	48	0	2
Massachusetts	0	0	100	0	0
Michigan	0	47	49	0	04
Mississippi	100	0	0	0	0
Missouri	100	0	0	0	0
New York	0	73	21	0	06
Ohio	0	100	0	0	0
Pennsylvania	0	61	18	09	11
So. Carolina	0	27	35	0	38
Tennessee	42	004	52	02	0
Virginia	0	57	32	05	05
TOTAL	31	35	25	05	05

<sup>a</sup>Will not necessarily equal 100% because of rounding.

Source: United States, Bureau of the Census, Tenth Census of the United States, 1880, Report on Valuation, Taxation, and Public Indebtedness in the United States, Vol. 7, pp. 526-554.

disturb the inflow of long-term capital, thus states and private corporations were able to continue these projects. The collapse of the Anglo-American trade structure in 1839 signaled an end to these capital imports. The disorganization of domestic banking with its widespread suspensions and failures made it difficult for these projects to utilize the funds they had in banks. When the funds already in the pipelines were used up, the projects generally ground to a halt. The decline in construction coming at a time when other sectors of the economy were already facing falling demand conditions contributed to the severity of the deflation which lasted until 1844. The existence of many unfinished projects and defaulted bond issues made recovery that much more difficult. Access to foreign capital markets and dependence on domestic banks perhaps led to excess construction in the 1830's and to the inability to revive construction, especially in the west, during the 1840's.

Various policies were implemented by states to induce banks to work with their internal improvement projects.

When extensive new canal construction was undertaken in Ohio in 1836, the Commercial Bank (of Lake Erie) was named as a disbursing agent . . . the state Treasurer cooperated by receiving the bank's own notes in receipt to takes, agreeing to 'give them such direction in small lots as would prevent their early return' for redemption.<sup>35</sup>

After the monetary panic of 1837, some banks found themselves required to underwrite bond issues and sometimes they became

lenders of last resort to the state. These practices also occurred before 1837, the most notable example being the chartering of the United States Bank of Pennsylvania in 1836.<sup>36</sup>

State financing of internal improvements tended to be inflationary. At the full-employment situation existing in the mid-1830's, debt financing could only be non-inflationary if:

1. It resulted in no new money creation or any increase in the velocity of circulation of money, and if,
2. Bond purchasers curtailed their consumption by the amount of the bonds and the resources so released were transferred to the issuers of the bonds.

These non-inflationary conditions were not fulfilled. The sale of bonds to banks and foreigners normally meant an increase in the money supply. Furthermore, it is highly unlikely that non-bank bond purchasers in the United States curtailed their consumption by a parallel amount. We saw that the retirement of the federal debt released funds which flowed into alternative investments such as state bonds issued to finance canals and railroads. Such purchases were done not out of current income but from an alteration in individuals wealth. Debt financing of canals and railroads were inflationary in the 1830's. They resulted in increases in the supply of money without any significant transfer of resources.

Let us look a bit more closely at the inflationary effects of investments in internal improvements. First we must look at the composition of this investment. In the 1830's the emphasis in internal improvements shifted from canals to railroads. Perhaps most of the routes suitable for canals were already developed or in the process of so being. During the boom years of the mid-1830's there was a slight decline in canal investment while that on railroads rose significantly. For the decade as a whole, railroad investment rose by 1,000 per cent while that for canals rose by 91 per cent. By the end of the decade investments in railroads exceeded those on canals whereas in 1830 they were only about 21 per cent of canal investment.<sup>37</sup>

Investment in internal improvement projects generated income in the areas where the construction was taking place and in the domestic capital goods industries supplying equipment for the construction of the project and its rolling stock. If we assume that a dollar spent on capital goods had a greater multiplier-accelerator effect on the economy than a dollar spent on construction labor, then the shifting of funds from canals to railroads might have intensified the inflationary pressures during the mid-1830's. The shift to railroad construction also intensified the balance of payments problem as almost all of the iron imports during the 1830's consisted of rolled iron used as rails.<sup>38</sup> Finally, if workers were attracted away from agriculture into the construction of these

projects this might have led to a less rapid growth of agricultural output increasing the prices of foodstuffs.

So far we have examined the magnitude and possible inflationary effects of internal improvement investments during the 1830's. Countering these inflationary pressures were the increased economic specialization and economic efficiency resulting from reduced transportation costs and widening markets. It appears though, that the net effect of these investments was to intensify the inflationary pressures in the early and mid-1830's.

Aggregate demand expanded in the mid-1830's primarily because of the growing demand for Southern cotton and the settlement of the mid-West. This induced growth in the East as mercantile trade and manufacturing industries responded to the demand emanating from the interior and the South. Urbanization in the East as well as in the mid-West also contributed to the process of specialization and growth. The building of the transportation infrastructure quickened specialization and urbanization while contributing to the growth in demand.

The picture of the American economy we have examined in this chapter is one of prosperity, as can be seen in Table 4.2. Yet as early as the spring of 1835 we begin to find some uneasiness in the press. In May, 1835 Niles' National Register carried the following editorial statement, "We shall offer a selection of articles as to what is going

TABLE 4.2.--Percentage Changes in Selected Economic Series 1830-1836.

	(all positive) Percentage Change 1830-1836	Percentage Change 1834-1836
Warren & Pearson Wholesale Price Index (1830 = 100)	25	26
Export Price Index (1830 = 100)	554	22
Import Price Index (1830 = 100)	9.6	6.1
Western State Terms of Trade (1825 - 26 = 100)	60	36
Money Supply	163	60
Bank Current Demand Liabilities	162	48
Bank Lending (Total loans)	n.a.	44
Number of Banks	n.a.	12
Imports	187	63
Exports	73	22
Public Land Sales (Acreage)	960	330
Cotton Prices (New Orleans) <sup>a</sup>	81	38
Cotton Exports	140	44

<sup>a</sup>Peak price in 1834-1835 production year.

n.a. = not available

Sources: Rows 1-4, 9-10, 13 Douglass C. North, The Economic Growth of the United States, 1790-1860 (New York: W.W. Norton & Co., Inc., 1966), pp. 140, 242, 255, 233, 234. Rows 5, 6 Peter Temin, The Jacksonian Economy (New York: W.W. Norton & Co., Inc., 1969), pp. 71, 86. Rows 7, 8, 11. The Statistical History of the United States From Colonial Times to the Present (Conn: Fairfield Publishers, Inc., 1965), pp. 624-625, Series X20, X22; p. 239, Series J 43. Row 12 Source Cited, Appendix Table C-5, Series A.

on in the way of speculation. Verily, the people are mad!"<sup>39</sup>  
The pro-Jackson New York Evening Post, blaming the banks, warned the New York business community about the eventual outcome of the speculation taking place.

We believe that the community intoxicated with the favors of the banks, as with a cup of a modern Circe, have lost sight of providence, and are blindly rushing into a state of things from which they will not be easily retrived. A crisis is approaching, and it is near at hand, to which the panic and pressure of last year (1834) will be a trifling in comparison.<sup>40</sup>

In the last four months of the year a much more ominous development took place. The Baring Brothers, one of the leading firms in the Anglo-American trade, began to curtail their operations. "The basic assumption was that prices of merchandise and securities were so high that reaction was inevitable."<sup>41</sup>

The growth of the Southern cotton industry, the construction of canals and railroads and the trade in imported goods depended on the health of two foreign markets, the British cotton and money markets. It would be in these markets that the difficulties of the late 1830's and early 1840's had their roots.



## FOOTNOTES

### CHAPTER IV

<sup>1</sup>North, Economic Growth of the United States, pp. 67, 167.

<sup>2</sup>North, Growth and Welfare in the American Past, p. 84.

<sup>3</sup>North, p. 76.

<sup>4</sup>For a discussion on the effects of cotton and slavery on American economic development and growth see Alfred H. Conrad, et. al., "Slavery as an Obstacle to Economic Growth in the United States: A Panel Discussion." The Journal of Economic History, Vol. 27, No. 4 (December 1967). The readers attention is also called to footnote eight of this chapter.

<sup>5</sup>Peter Temin, "The Causes of Cotton-Price Fluctuations in the 1830's," Review of Economics and Statistics, Vol. XLIX (November, 1967).

<sup>6</sup>Temin, Review of Economics and Statistics, Vol. XLIX, p. 470.

<sup>7</sup>Stuart Bruchey, Cotton and the Growth of the American Economy: 1790-1860 (New York: Harcourt, Brace and World, Inc., 1967), p. 226. For a discussion of some of the Southern attempts to bypass the Northern merchants and shippers see Herbert Wender, "Southern Commercial Conventions, 1837-1859," John Hopkins University Studies in Historical and Political Science, Series XLVIII, No. 4, 1930.

<sup>8</sup>For an example of the difficulties involved in measuring the trade of the mid-West with the South see Albert Fishlow, "Ante-bellum Interregional Trade Reconsidered," Postscript on Antebellum Interregional Trade," and Robert W. Fogel, "A Provisional View of the 'New Economic History,'" "American Interregional Trade in the 19th Century," in Ralph Andreano, ed., New Views on American Economic Development (Cambridge: Schenkman Publishing Co., Inc., 1965).

<sup>9</sup>The population of the New South rose from 727,000 in 1830 to 1,471,000 by 1840, a 102 per cent increase. The comparable figures for the entire South are 3,774,405 in 1830 and 4,749,875 in 1840, a 26 per cent increase. See North, Economic Growth of the United States, p. 257, and Statistical History of the United States, p. 13, Series A-123-180. Cotton production data from The Commercial Review of the South and West, Vol. 4, No. 1, September 1847, p. 86.

<sup>10</sup>The population of Natchez rose from less than 2,500 to 4,200 during the 1830's. Mobile's population rose from 3,194 to 12,672 in the same period. George R. Taylor, "American Urban Growth Preceding the Railway Age," The Journal of Economic History, Vol. 27, No. 3 (September, 1967), p. 315.

<sup>11</sup>North, Economic Growth of the United States, p. 233.

<sup>12</sup>North, p. 195.

<sup>13</sup>Statistical History of the United States, p. 13, Series A-123-180.

<sup>14</sup>Taylor, The Journal of Economic History, Vol. 27, pp. 315, 338.

<sup>15</sup>Richard T. Ely, Taxation in American States and Cities (New York: 1888), p. 488.

<sup>16</sup>F. Cyril James, The Growth of Chicago Banks: The Formative Years, 1816-1896, 2 Vol. (New York: Harper and Brothers, 1938), I, p. 103.

<sup>17</sup>North, Economic Growth of the United States, p. 256.

<sup>18</sup>North, p. 250.

<sup>19</sup>North, pp. 250-252.

<sup>20</sup>North, p. 250.

<sup>21</sup>Lance E. Davis and Louis H. Stettler III, "The New England Textile Industry, 1825-1860: Trends and Fluctuations," Output, Employment and Productivity in the United States After 1800 (New York: National Bureau of Economic Research Studies in Income and Wealth, Vol. 30, National Bureau of Economic Research, 1966), p. 221.

- <sup>22</sup>Taussig, Quarterly Journal of Economics, Vol. 11, p. 379.
- <sup>23</sup>Hunt's Merchants Magazine, Vol. 8, December, 1842, p. 458.
- <sup>24</sup>Appendix Table A-1 and Table 9.2.
- <sup>25</sup>Taylor, The Journal of Economic History, Vol. 27, p. 336.
- <sup>26</sup>Taylor, p. 311.
- <sup>27</sup>Niles' National Register, May 11, 1840, p. 164.
- <sup>28</sup>Niles' National Register, August 19, 1843, p. 388.
- <sup>29</sup>George R. Taylor, The Transportation Revolution (New York: Rinehart and Company, Inc., 1951), p. 213.
- <sup>30</sup>Taylor, The Journal of Economic History, Vol. 27, pp. 313-314 and Statistical History of the United States, p. 13, Series A-123-180.
- <sup>31</sup>Ibid.
- <sup>32</sup>See Carter Goodrich, Government Promotion of American Canals and Railroads, 1800-1890 (New York: Columbia University Press, 1960), and George R. Taylor, The Transportation Revolution, 1815-1860, Chs. 2, 3, 5.
- <sup>33</sup>For canal estimates see Taylor, Transportation Revolution, p. 52. Railroad estimates and the difficulties involved in their use are found in E. R. Wicker, "Railroad Investment Before the Civil War," Trends in the American Economy in the Nineteenth Century, pp. 505, 506.
- <sup>34</sup>Because of the importance of the London market, more and more states and private promoters denominated their bonds in sterling with interest and principle payable in London. See Alfred D. Chandler, Jr., "Patterns of American Railroad Finance, 1830-1850," Business History Review, 28 (September, 1954), p. 250.
- <sup>35</sup>Harry N. Scheiber, "The Commercial Bank of Lake Erie, 1831-1834," Business History Review (Spring, 1966), p. 57.
- <sup>36</sup>Smith, pp. 178-179; F. Cyril James, p. 147.

<sup>37</sup>Canal investment reached a peak in 1840 while railroad investment peaked in 1839. The former rose from \$7.5 million to \$14.3 million, the latter from \$1.6 million to \$17.7 million. See H. Jerome Cranmer, "Canal Investment, 1815-1860," Trends in the American Economy in the Nineteenth Century, Studies in Income and Wealth, Vol. 24 (Princeton: Princeton University Press for the National Bureau of Economic Research, 1960), pp. 555-556; Albert Fishlow, American Railroads and the Transformation of the Antebellum Economy (Cambridge: Harvard University Press, 1965), pp. 385-399.

<sup>38</sup>Frank W. Taussig, The Tariff History of the United States, Eighth Edition (New York: Capricorn Books, 1964), p. 126.

<sup>39</sup>Niles' National Register, May 9, 1835, pp. 167-168.

<sup>40</sup>Ibid.

<sup>41</sup>Hidy, p. 203.

## CHAPTER V

### THE END OF PROSPERITY

Strains in the American economy began to appear during the first half of 1836. Continuing speculation and uncertainty over the disposition of the Federal surplus fed the uneasiness developing in many quarters over the future course of the economy. The New York State Bank Commissioners in their report of January, 1836, warned about the excessive speculation then going on.<sup>1</sup> In April, Niles' was warning about a forthcoming crisis arising from the Federal surplus and its depositing in the deposit banks.<sup>2</sup> The Washington Globe, a semi-official spokesman of the Jackson administration warned the deposit banks to be more conservative in their practices.

The present state of the currency imposes upon the leading deposit banks the obligation of lessening their loans, calling upon other banks for regular settlements and payments of balances in specie, and thus giving check to their too extended operations, to the raging mania for wild speculations and over-trading, and thus restore a more wholesome state in the currency of the country.<sup>3</sup>

The uncertainty and tightness in the Northern money markets, compounded by the strains placed on the New York City banks after the disastrous fire of December 1835, was gradually intensified by events in the South.<sup>4</sup>

The war in Texas curtailed Mexican specie exports to New Orleans. In 1835 these amounted to about \$8.3 million, in 1836 they fell by 46 per cent to \$4.5 million.<sup>5</sup> Further aggravating the specie position of the New Orleans banks, was the poor sugar crop of 1836.<sup>6</sup> Fortunately for the South and the American economy in general, the cotton market remained buoyant throughout most of the year, though prices were below their 1835 highs.

In this chapter we will examine the domestic and foreign factors which brought the boom of the mid-1830's to its peak and prepared the ground for the panic of 1837. The money markets in America and Great Britain were to bear the brunt of the difficulties during the year. The American banking system was dealt a series of destabilizing blows by the fiscal and monetary policies of the Federal government. Adding to these problems, especially for the Eastern banks, was the worsening situation in the British financial community. Poor grain harvests and difficulties with some joint-stock banks led to a tightening of credit by the summer of 1837. It was only a matter of time before this was transmitted to the American money markets and eventually the commodity markets on both sides of the Atlantic. In the first half of this chapter we will examine the effects of the Deposit Act and the Specie Circular on the banks during the year. In the second half we will look at the situation in Great Britain.

Federal Fiscal and Monetary Policies  
in 1836

On June 23, 1836, President Jackson signed the "Act to Regulate the Deposits of the Public Money." Less than a month later, on July 11, 1836, the Secretary of the Treasury, Levi Woodbury, sent a notice, the "Specie Circular" to all receivers of public funds and to the deposit banks. Of the two actions, the first was to be far more important in its effects on the banking system and the economy during the year that followed. In a later section of this chapter we will examine the relationship between the Specie Circular and banking activity in the last half of 1837. It is to the Deposit Act that we now direct our attention.

The Deposit Act and the Deposit  
Banks During 1836

The Deposit Act consisted of two parts. The first, contained in sections one through twelve of the Act, dealt with the selection and regulation of deposit banks. The second, sections thirteen and fourteen, set forth the conditions governing the distribution of the Federal surplus which was scheduled to commence on January 1, 1837.<sup>7</sup> Of the twelve sections that comprised the first part of the act, sections one, four, five, eight and eleven were the most important.

Section one provided that a bank could hold government deposits only up to three-fourth's of the bank's paid in capital. In Table 5.1 we have a listing of deposit banks

TABLE 5.1.--Capital Stock and United States Treasury Deposits of Deposit Banks Around June 1, 1836.  
(\$000)

Bank	Capital Stock	U.S. Treasury Deposits	Maximum Treasury Deposits Allowed Under the Deposit Act <sup>a</sup>
Maine Bank	305	185	228
Commercial B. Portsmouth	102	143	76.5
Commonwealth B. Boston	500	1085	375
Merchants' Bank Boston	1125	1098	844
Bank of Burlington, Vt.	150	54	112.5
Farmers and Mechanics Bank, Hartford	447	47	335
Mechanics' Bank New Haven	473	35	355
Arcade Bank, Providence	300	113	225
Mechanics and Farmers' Bank, Albany	442	185	332
Bank of America, N.Y.C.	1001	3781	1501
Manhattan Co., N.Y.C.	2050	4727	1538
Mechanics' Bank, N.Y.C.	1000	4186	1500
Girard Bank, Philadelphia	2992	2604	2244
Moyoamensing Bank, Phila.	186	400	140
Union Bank of Mary, Balti.	1846	996	1385
Franklin Bank, Baltimore	555	353	416
Bank of the Metropolis, Washington	500	137	375
Bank of Virginia and Branches	3240	335	2430
Bank of the State of N.C. Planters and Mechanics'	1206	80	905
Bank of South Carolina	1000	409	750
Planters Bank of the State of Georgia	535	248	401
Bank of Augusta, Georgia	900	163	675
Branch Bank of Alabama, Mobile	2255	1717	1691
Commercial Bank of New Orleans	2987	1121	2240
Union Bank of Louisiana at New Orleans	7151	1890	5363
Merchants and Manufacturers' Bank, Pittsburgh	600	93	450
Franklin Bank, Cincinnati	1000	594	750
Commercial Bank, Cincinnati	1000	478	750
Clinton Bank, Columbus, Ohio	289	441	217
Savings Institute, Louisville, Kentucky	97	476	73
Union Bank of Tennessee	2107	676	1580
State Bank of Indiana	1280	1196	960
Agency of Com. Bank of Cincinnati at St. Louis		2388	
Planters' Bank of Mississippi	4149	2432	3112
Bank of Michigan, Detroit	448	1378	336
Farmers and Mechanics Bank, Detroit	200	1036	150

<sup>a</sup>Seventy-five per cent of paid in capital. We are assuming that the entire capital stock of each bank was paid in, this was not always true.

Source: U.S. Congress, Senate, 24th Congress, 1st Session, Senate Doc., No. 423.



around June 1, 1836, their capital stock and the amount of government deposits which each held. All of the deposit banks in the East coast financial centers, Boston, New York and Philadelphia, held excess treasury deposits. In the interior and the South the single deposit banks in the states of Kentucky, Indiana and Alabama held excess deposits as did the two deposit banks at Detroit Michigan. As a result of this and other requirements of the Deposit Act, the number of deposit banks more than doubled during 1836 and,

The Treasury had to order the transfer of \$18.3 million out of a total of \$34 million on deposit in June, 1836.<sup>8</sup>

The shifting of Treasury deposits could cause these banks losing deposits to contract their lending, and perhaps their customers might not be able to renew loans or obtain their accustomed lines of credit. The loss of Treasury deposits might also entail a loss in specie, though not necessarily in a one to one ratio. Deposit banks might have adjusted to these specie losses by curtailing their lending activities and their note circulation. The information given in Table 5.2 substantiates these conclusions.

The loss of Treasury deposits apparently was a more contractionary factor, insofar as bank lending was concerned, than the loss of specie. A majority, 53 per cent, of the banks which lost such deposits decreased their lending while only 32 per cent of the banks which lost

TABLE 5.2.--The Relationship Between Changes in United States Treasury Deposits and the Major Assets and Note Circulation of Deposit Banks, June-December 1836.

A. Treasury Deposits and Bank Lending

		Loans and Discounts		Number of Banks	
Treasury Deposits					
+	44 <sup>+</sup>	(76) <sup>a</sup>	14 <sup>-</sup>	(24)	58
-	9	(47)	10	(53)	19
Number of Banks	53		24		77
$\chi^2 = 4.82^*$					

B. Treasury Deposits and Specie Holdings

		Specie Holdings		Number of Banks	
Treasury Deposits					
+	40 <sup>+</sup>	(69)	18 <sup>-</sup>	(31)	58
-	6	(32)	13	(68)	19
Number of Banks	46		31		77
$\chi^2 = 10.61^*$					

C. Treasury Deposits and Note Circulation

		Note Circulation		Number of Banks	
Treasury Deposits					
+	25 <sup>+</sup>	(44)	32 <sup>-</sup>	(56)	57
-	2	(12)	15	(88)	17
Number of Banks	27		47		74
$\chi^2 = 5.315^*$					

D. Specie and Bank Lending

		Loans and Discounts		Number of Banks	
Bank Specie					
+	32 <sup>+</sup>	(70)	14 <sup>-</sup>	(30)	46
-	21	(68)	10	(32)	31
Number of Banks	53		24		77
Not significant at $p = .05$					

<sup>a</sup>Per cent of total banks in given row.

<sup>b</sup>Three banks had no note circulation.

\*Statistically significant at 5% level.

Chi Square ( $\chi^2$ ) is a statistic that can be applied to estimate the probability that the observed relationship between rows and columns is not due solely to sampling variations (chance), but actually exists. At a probability level of 5%, the  $\chi^2$  with one df is 3.841. If the calculated  $\chi^2$  exceeds this, we can reject the null hypothesis and accept the alternative hypothesis that there is a statistically significant relationship between the columns and rows. For a discussion of chi-square analysis see Robert Ferber and P. J. Verdoorn, Research Methods in Economics and Business (New York: The Macmillan Company, 1962), pp. 73-77.

Sources: United States, Congress, Senate, 24th Congress, 2nd Session, Senate Document No. 21.

specie contracted their lending activities. Increases in Treasury deposits also had the same relative effect. We will later see that section eleven might account for part of the relative importance of Treasury deposits.<sup>9</sup>

Part two of the second section of the Deposit Act required that all deposits to the credit of the United States be counted as specie deposits. If desired by the drawer, all claims against government accounts at the deposit banks had to be paid in specie. This provision, part of the administration's attempt to have a hard currency, was reinforced by section five which provided that a bank could not be selected nor remain as a deposit bank unless it redeemed its notes in specie. The section also provided that no bank shall:

Be selected or continued . . . which shall after the fourth of July . . . issue or pay out any note or bill of a less denomination than five dollars . . . ; nor shall the notes or bills of any bank be received in payment of any debt to the United States which shall, after the said fourth day of July . . . issue any note or bill of a less denomination than five dollars.<sup>10</sup>

These requirements should have had some affect on the bank note circulation of the deposit banks. It did, but in a way not readily apparent. The deposit banks shifted the composition of their demand liabilities away from bank notes and into demand deposits. An examination of Appendix Table B-3 shows this shift in the composition of demand liabilities. In the first half of the year note circulation rose only slightly more than demand deposits

in per cent change. In the last half of the year, with the rapid growth in the number of deposit banks and the expansion in lending, demand deposits grew more rapidly than note circulation. Between June and November the ratio of demand deposits to note circulation rose from 58 per cent to 64 per cent. In Table 5.2 we see this shift in a different light. A majority of all deposit banks curtailed their note circulation. Even those banks that had increased Treasury deposits, 56 per cent also decreased their note circulation between June and the end of the year.

The effects of sections two and five of the Deposit Act were to increase the demand for specie on the part of the banking system, especially the deposit banks. The prohibitions against small bank notes also increased the public's demand for specie. Further adding to the specie needs of the deposit banks was section eight which gave the Secretary of the Treasury the power to require the deposit banks to keep in their vaults an amount of specie which he deemed necessary in order to protect government deposits.<sup>11</sup>

What was the pattern of deposit bank specie holdings during 1836 and did it differ from that of the other state banks? The specie holdings of deposit banks taken as a whole increased during 1836 but so did that of state banks in general. The United States Bank of Pennsylvania, on the

other hand lost over \$5 million in specie during the year. Using the Treasury estimates of bank specie holdings we find that bank specie increased by \$2.9 million or nine per cent during the year, an alternative estimate of such holdings registers a \$8.8 million increase, or 28 per cent.<sup>12</sup> Deposit banks increased their specie holdings by \$5.3 million, or 53 per cent.<sup>13</sup>

We can tentatively conclude, given the conflicting estimates of aggregate bank specie holdings, that deposit banks increased their specie holdings to a greater extent than non-deposit banks. Since the aggregate of net specie imports and specie losses incurred by the United States Bank of Pennsylvania exceeds any estimate of increased bank specie holdings, we can also conclude that the public did increase its specie holdings during 1836.

Up to this point, the sections of the Deposit Act focused on the current demand liabilities and specie holdings of the deposit banks. Section eleven however, contained a provision which could induce banks to expand their loans or at least alter the composition of their income earning assets so as to increase their net returns. Whenever a bank held, during any quarter, government deposits exceeding one-quarter of its paid-in capital, it had to pay the government interest at the rate of two per cent per annum on these excess deposits. Referring to Table 5.1 we see that all the banks as of June 1, were affected by

this regulation. As we previously noted, this provision could have been one factor contributing to the strong relationship between Treasury deposits and bank lending.

The first eleven sections of the Deposit Act dealt with the regulation of banks which held Treasury deposits. By themselves, the regulations were sufficient to disarrange the banking system, at least for the time needed to select new deposit banks and shift Treasury deposits, and perhaps even longer. It was section thirteen, however, together with the Specie Circular, which bore the contemporary blame for many of the problems which befell the American economy in early 1837.

The Deposit Act: The Distribution of  
the Federal Surplus

Section thirteen provided that:

The money which shall be in the Treasury of the United States on the first day of January, eighteen hundred and thirty-seven, reserving the sum of five millions of dollars, shall be deposited with the several states, in proportion to their respective representation in the senate and the house of representatives.<sup>14</sup>

The effect of this distribution on the banking system depended on the magnitude of the interstate and intrastate transfers which were required under the act and the means of transfer. If the deposit banks of each state held government deposits equal to the amount of funds that were to be transferred to the state, or if the pattern of government expenditures and receipts were such that the

deposit banks could obtain the necessary funds for the transfer, then the payment of the distribution would not necessitate interstate transfer of funds. Even if no interstate transfers were required, the deposit banks still faces the potential loss of specie reserves if the state depository banks differed from the Federal.<sup>15</sup>

Our task will be to determine the magnitude and purposes of the transfers undertaken between the passage of the Act and the end of December and to determine what effects they had on the banking system. We will postpone until the next chapter an analysis of the role which the Act had, or supposedly had, in the monetary panic of early 1837.

The Secretary of the Treasury on December 26, 1836 submitted a report to the Senate which dealt with the transfers ordered since June 23.<sup>16</sup> Between the passage of the Act and this report, \$38,039,385 in transfer drafts were issued, of which \$25,129,385 were payable by the end of December.<sup>17</sup> Of the latter amount, 68 per cent or approximately \$17.1 million were drawn for interstate transfers, as shown in Table 5.3. It is incorrect to assume that most or all of these transfers were undertaken solely because of the provisions of Section thirteen. The Secretary estimated that compliance with Section one necessitated \$18.3 million in transfers. Furthermore, between the passage of the Act and December, the government received about \$22.5 million

TABLE 5.3.--Interstate Transfer Drafts Issued and Payable Between  
June 23, 1836 and December 15, 1836.<sup>1</sup>

Inflow	Outflow									
	Mass.	N.Y.	Pa.	Md.	Mich.	Ohio	Ind.	Miss.	La.	Total
Me.	215	227.5								442.5
N.H.	285	190.0								475.0
Vt.	35	130.0								165.0
Mass.		50.0			550					600.0
R.I.		290.0								290.0
Conn.		<u>d</u> 660.0			160					820.0
N.Y.					<u>b</u> 670				<u>l</u> 300	970.0
N.J.		<u>e</u> 572.0	46							618.0
Pa.		<u>a</u> 500.0	<u>f</u>		500	<u>j</u> 700			<u>m</u> 200	1900.0
Del.		80.0								80.0
D.C.	50	1410.0	645	465	20	100				2690.0
Md.		90.0								90.0
Va.		<u>g</u> 2300.0								2300.0
N.C.		<u>h</u> 650.0								650.0
S.C.		<u>i</u> 780.0								780.0
Ga.		700.0								700.0
Tenn.		200.0						200	100	500.0
Ky.						<u>k</u> 490	880			1370.0
Ohio					260		300			560.0
Ind.						300				300.0
La.						800				800.0
Total	585	<u>c</u> 8829.5	691	465	2160	2390	1180	200	600	17100.5

<sup>1</sup>Includes drafts payable on demand and drafts payable in 1836 but extended to 1837.

<sup>a</sup>\$400,000 was sent to the Mint.

<sup>b</sup>\$450,000 to New York City, \$220,000 to upstate New York banks.

<sup>c</sup>All from New York City

<sup>d</sup>\$100,000 due but not paid in 1836.

<sup>e</sup>\$ 50,000 due but not paid in 1836.

<sup>f</sup>\$100,000 due but not paid in 1836.

<sup>g</sup>\$700,000 due but not paid in 1836.

<sup>h</sup>\$ 50,000 due but not paid in 1836.

<sup>i</sup>\$100,000 due but not paid in 1836.

<sup>j</sup>\$100,000 due but not paid in 1836.

<sup>k</sup>\$390,000 due but not paid in 1836.

<sup>l</sup>\$100,000 due but not paid in 1836.

<sup>m</sup>\$100,000 due but not paid in 1836.

Sources: United States Congress, Senate, 24th Congress, 2nd Session,  
Senate Document No. 29, pp. 8-20.



in new revenue, "most of which, being at first paid into the banks where an excess already existed . . . has also been . . . placed under transfer to some other banks."<sup>18</sup>

It was also estimated that \$12 million of the transfers drawn were required to meet the normal expenses of the Federal government.<sup>19</sup> It seems clear that little in the way of specific transfers were undertaken to prepare for the distribution. In his report, the Secretary of the Treasury commented that:

The other and last process of transfers for the apportionment of the deposits among the States in the prescribed proportions, so as to be gradually and seasonably ready for payments to each State next month, and quarterly thereafter during the year has made but little progress since June.<sup>20</sup>

In examining the actions of the deposit banks during the last half of 1836, it may be best to divide the last six months into two sub-periods. The first, from July to November, covers the period when the banks did not know the amount, nor to whom they would lose deposits because of the distribution. It might be expected that banks in states which were experiencing net transfer outflows, primarily, because of Section one of the Deposit Act and the financing of government expenditures, pursued a less expansionary policy than those in net inflow states. It has already been shown in Table 5.2 that deposit banks losing Treasury deposits did generally pursue a less expansionary policy.

During the second period, November and December, the deposit banks knew about the drafts which were to be

drawn on them and could prepare themselves accordingly. On the first of November they were informed as to amount of drafts which were to be drawn on them in 1837 as well as the states which would present the drafts.<sup>21</sup> No mention was made of the specific banks which were to receive the deposits.

What could banks do to prepare themselves for those drafts? Their general course of action could entail a rearrangement of the assets so as to increase their liquidity. Furthermore, banks might attempt to get exchange on firms or banks in the states which would be presenting the drafts. They could also curtail their lending to those firms which were doing business in the states presenting the drafts. In summary, they could increase their liquidity as well as try to increase their creditor, or decrease their debtor, position vis a vis banks in the states which would be drawing on them, come January.

We shall first look at the period extending from the end of June to October 24-November 7, the latter dates being chosen so as to minimize the effects of banks preparing themselves for the distribution. This information will be found in Table 5.4. There were 46 banks in those states which had net transfer inflows during the last half of 1836; of these banks, 39, or 85 per cent increased their lending, in comparison, 19, or 58 per cent of the banks in the outflow states increased their lending. Changes in

TABLE 5.4.--The Relationship Between Net Interstate Transfer Flows and Changes in the Major Assets and Note Circulation of Deposit Banks Between June-August, 1836 and October 24-November 7, 1836.

A. <u>Transfer Flows<sup>a</sup> and Bank Lending</u>				
		Loans and Discounts		Totals
Inflow	+	39 <sup>+</sup> (85) <sup>b</sup>	7 <sup>-</sup> (15)	46
Outflow	-	19 (58)	14 (42)	33
Total		58	21	79
Calculated				
$\chi^2 = 6.61$				
B. <u>Transfer Flows and Specie Holdings</u>				
		Specie Holdings		Totals
Inflow	+	31 <sup>+</sup> (67)	15 <sup>-</sup> (33)	46
Outflow	-	21 (64)	12 (37)	33
Total		52	27	79
Not significant at $p = .05$				
C. <u>Transfer Flows and Note Circulation</u>				
		Note Circulation		Totals
Inflow	+	23 <sup>+</sup> (51)	22 <sup>-</sup> (49)	45
Outflow	-	9 (27)	24 (73)	33
Total		32	46	78
Calculated				
$\chi^2 = 5.39$				

<sup>a</sup>States with Net Transfer Inflows: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, Pennsylvania, Delaware, North Carolina, South Carolina, Georgia, Tennessee, Kentucky, and Louisiana. States with Net Transfer Outflows: New York, Maryland, Michigan, Ohio, Indiana, Mississippi.

<sup>b</sup>Per cent of row.

<sup>c</sup>One bank had no note circulation.

Sources: Table 5.3; and United States Congress, Senate, 24th Congress, 2nd Session, Senate Document No. 21.

Treasury deposits due to transfer drafts thus affected bank lending. Since there is little difference in specie holdings, this might reflect the attempts of all deposit banks to increase their specie holdings. We have previously seen that the deposit banks taken as a whole increased their specie holdings to a greater extent than non-deposit banks. As might be expected banks in most of the outflow states curtailed their note circulation as notes then entailed a greater danger of redemption into specie than demand deposits, given the requirements of the Deposit Act.

When we look at the last two months of the year we find that the behavior of the deposit banks is more difficult to predict. There is no sharp distinction between the behavior of banks in states that were to gain funds and states that were to lose funds. None of the results in Table 5.5 are statistically significant. It should be noted, however, that deposit banks in general pursued a much less expansionary lending policy than in the June to November period. In the last two months of the year, slightly less than half, 48 per cent of the banks increased their lending whereas in the first period 73 per cent of the banks increased their loans. Even a majority of the banks that lost Treasury deposits due to transfer drafts expanded their lending in the June-November period.

We have seen that banks holding government deposits did behave differently than state banks in general. Their

TABLE 5.5.--The Relationship Between Net Interstate Transfer Flows Necessitated by the Distribution Act and Changes in the Major Assets and Note Circulation of Deposit Banks Between October 24-November 7, 1836 and December 1836.

A. Net Distribution, Transfer Flows <sup>a</sup> and Bank Lending				
	Loans and Discounts			Totals
Inflow	+	19 <sup>+</sup> (54)	16 <sup>-</sup> (46)	35
Outflow	-	18 (42)	25 (58)	43
Total		37	41	78
Not significant at p = .05				
B. Net Distribution Transfer Flows and Specie Holdings				
	Specie Holdings			Totals
Inflow	+	18 <sup>+</sup> (51)	17 <sup>-</sup> (49)	35
Outflow	-	27 (63)	16 (37)	43
Total		45	33	78
Not significant at p = .05				
C. Net Distribution Transfer Flows and Note Circulation				
	Note Circulation			Totals
Inflow	+	17 <sup>+</sup> (49)	18 <sup>-</sup> (51)	35
Outflow	-	22 (53)	20 (47)	42
Total		39	38	77
Not significant at p = .05				

<sup>a</sup>Net Distribution Inflow States: Maine, New Hampshire, Vermont, Rhode Island, Connecticut, New Jersey, Pennsylvania, Delaware, Virginia, North Carolina, South Carolina, Georgia, Tennessee, and Illinois. Net Distribution Outflow States: Massachusetts, New York, Maryland, Ohio, Indiana, Mississippi, Louisiana, Kentucky, and Missouri.

Sources: United States Congress, House, 25th Congress, 1st Session, House Document No. 30, pp. 71-81.

lending and specie holdings grew more rapidly than other banks. Movements in Treasury deposits, however, had a greater influence on lending than did movements in specie holdings. In the June to November period transfer drafts did appear to affect the lending and note creation policies of the banks. When we came to the last two months of the year when banks could prepare for the distribution, we saw that their lending policies became less expansionary. It is not possible to say with any degree of certainty that it was only the preparations for the distribution that altered bank policies in the last two months of 1836. Other factors were already at play by this time. Perhaps more importantly we do not have comparative information for non-deposit banks during this period. But it is again clear that the Deposit Act did influence the behavior of banks governed by it.

Whether the Deposit Act fed the fires of inflation is a question which cannot be definitively answered. The evidence, fragmentary as it is, is affirmative. We have just seen that movements in Treasury deposits did influence bank behavior. Between January 1835 and November 1836, the loans and discounts of deposit banks increased by 143 per cent and note circulation by 168 per cent. In comparison, the national figures for all banks was 48 per cent and 44 per cent.<sup>22</sup> As the relative size of the assets and liabilities of the deposit banks did not vary greatly during these

years, it means that the rate of growth for all banks is overstated.

If we accept the tentative conclusion that the Deposit Act did feed the inflationary pressures of the mid-1830's, can we then determine by how much it did? One can perform the operations of counterfactual history and attempt to determine what the growth rate of banking activity would have been if there had been no Deposit Act. But the data is too fragmentary and the assumptions too uncertain. There are many assumptions that might be needed but perhaps more important than facile economic assumptions is a political one. Can we assume away the political realities of the time that produced the Deposit Bank? This seems impossible.

Our conclusions on the effects of the Deposit Act during the last half of 1836 are somewhat at variance with those of Peter Temin's in his "The Jacksonian Economy." The main reason for this is that Temin, along with Temberlake, focus primary attention on the relationship between the distribution segment of the Deposit Act and the events of early 1837.<sup>23</sup> When Temin does briefly look at the possible effects of the Act during the last half of 1836, he approaches the problem in an unusual and eventually erroneous way.

The first and basic assumption made by Temin is that if the Distribution had any effect on banks, it was

through the shifting of specie brought about by the transfer of the Treasury deposits. We have already seen in this chapter that the available information does not support this assumption. Temin then implicitly assumes that the first part of the Deposit Act had no effect on bank behavior. Rather, he concentrates on the movement of specie during the last half of 1836. Finally when he does look at the effects of the Treasury transfers he assumes that as they did not cause a breakdown in the banking system in 1836, they did not cause the panic in 1837.

Temin notes that there exists in the literature an argument that,

The Secretary of the Treasury, Levi Woodbury, shifted the public deposits between regions in late 1836 to avoid a large demand for specie at the actual distribution and that this shift placed intolerable strains on the banking system.<sup>24</sup>

One might suppose that Temin then attempted to determine the magnitude and purpose of interstate transfers during the last half of the year and the effects which this may have had on the banks involved. He did not. He first looked at the total amount of transfers made in the last half of the year and then at the net changes in Treasury deposits during that time.

In concluding his analysis, Temin first notes that,

Only five states lost public deposits between June 20 and December 19, 1836. Of these losses, only two exceeded a quarter of a million dollars, and the losses from all states totaled just under \$1.5 million. It is clear that the net effect of the Treasury's actions was not to reallocate the government deposits among the different regions of the country.<sup>25</sup>



This conclusion is not surprising. We have already seen that Secretary Woodbury estimated that less than \$2 million was transferred for this purpose in 1836. This sum amounted to less than 13 per cent of the interstate transfer drafts drawn and paid during the period.<sup>26</sup> What is surprising is that the data cited by Temin cannot be used to support his conclusion. Changes in Treasury deposits reflect not only transfer drafts but also expenditures and receipts of Treasury revenue. Thus Temin should have at least measured net transfer flows, not net deposit changes.

Whereas only five states lost Treasury deposits in the last half of 1836, six states had net transfer outflows as we saw in Table 5.4. Of these six, New York State alone had a deficit of \$6.86 million, all of the outflow coming from New York City. Michigan had a net outflow of \$2.16 million, Ohio lost \$1.34 million and Indiana lost \$880,000 because of interstate transfer drafts.<sup>27</sup> Transfer drafts did not reallocate government deposits among regions as much as they did among different states and as we have already shown this did influence bank behavior.

Finally, Temin remarks that while the distribution did not cause the suspension of 1837 it was a hardship on individual banks. He then cites as examples the states of New York and Michigan which lost \$570,000 and \$430,000 in Treasury deposits respectively, between June and December.<sup>28</sup> Even looking just at changes in Treasury deposits

the figures cited by Temin do not tell the entire story. Though New York State deposit banks lost \$570,000 in Treasury deposits, those in New York City lost at least four times that amount during the June to December period.<sup>29</sup> In the next chapter we will see that the distribution contributed to the suspension of the New York City banks in 1837 though it did not cause it in any unicausal fashion.

With the enactment of the Deposit Act, the banks involved found themselves under increasing pressure. The administrative rules of the first part of the act, especially section one, caused large transfers of government deposits. After November, the banks had to prepare themselves for the distribution, but they had to do it almost alone. The government did not provide any large scale aid to prepare the banks for the distribution. But this was not to be the end of Federal policies which affected the banking system, not just the deposit banks, in the last half of 1836.

#### The Specie Circular and the Banking System

Within a month of the passage of the Deposit Act, the Jackson administration supposedly dealt another blow to the banking system, this time in the form of the "Specie Circular." The Specie Circular supposedly had two effects on the American economy. It dampened land sales and it caused specie to move from Eastern to mid-Western and South-Western banks. We will concentrate our attention on the

relationship between the Circular and land sales during the last half of the year. In so doing we will briefly examine the argument that the Circular caused specie to be shifted from the East to the banks in the land-sale states.

On July 11, 1836, a circular was sent to receivers of Public Funds and the deposit banks instructing them specifically not to accept in payment for public lands after August 15,

. . . nothing, except what is directed by the existing laws, namely, gold and silver, and, in the proper cases, Virginia land script; provided, that until the 15th of December next (1836), the same indulgences heretofore extended as to the kind of money received, may be continued for any quantity of land not exceeding three hundred and twenty acres to each purchaser who is an actual settler, or bona fide resident in the states where the sales are made.<sup>30</sup>

The stated purpose of the Circular was to curtail further speculation in public land sales as well as to safeguard the currency. This latter purpose being a continuation of the Jacksonian policy of substituting specie for paper currency.<sup>31</sup>

Though it was announced on July 11, the Specie Circular did not become partially effective until August 16 and fully effective until mid-December. Thus for approximately one-half of the third quarter it was not effective against large purchases, those supposedly made by land speculators. Yet as we see in Appendix Table A-6, public land sales fell sharply during the third quarter. It should

be noted that sales during the second quarter were the highest for any quarter during the ante-bellum period. Land sales in the last half of 1836 were 25 per cent below the levels of the first half. This might not seem that significant a decrease in sales given the record sales of the second quarter, but prior to 1836 second half sales were less than first half sales only in 1819, 1820, and 1825.<sup>32</sup> The first two years, 1819-1820, were during the post-Napoleonic depression and 1825 was a year of financial difficulty.<sup>33</sup>

Can we attribute the decrease in land sales to the Specie Circular or were there other factors at work which in combination with the Circular depressed land sales in the last half of 1836? It may be helpful for analytical purposes to divide the demand for land into two parts, a speculative and a factor demand for land.

Today when an individual buys common stock which yields little or no current dividend income, we assume it is because of the expectation of future capital appreciation. This depends on the future earnings of the company. The same principle applies to land, among other forms of speculation. Speculators purchased land with the belief that they could resell it at a price which would yield them a profit sufficient to warrant the risks undertaken.<sup>34</sup>

The speculative demand depends first on the amount and terms on which credit could be obtained, and secondly,

on the resale market, the latter in turn also depending on the credit market. Credit facilities were thus central to the speculative demand, and the Specie Circular allegedly dried up the credit streams which fed the land speculators.

Western banks stopped discounting and sold all Eastern funds for specie in the expectation that they would need it for land purchases and as a defense against the Treasury.<sup>35</sup>

In the short-run, when the supply of land is relatively fixed and the ability to shift land from one use to another is limited, the speculative demand for land is important in determining the level of demand. In the long-run, the usefulness or productivity of land, be it in cotton, grain or urban real estate, and the demand for the good or service produced with the land becomes the main determinants of the level of demand.<sup>36</sup>

The close proximity of the Specie Circular to the Deposit Act makes it difficult to separate out the effects of these two events on the banking system, assuming that they were the only factors influencing the banking system during the last half of 1836. However, we shall see that these were not the only factors at work during this time and therefore, our conclusions on the effects of the Specie Circular, just as those on the Deposit Act, cannot be acceptable as absolute.

Ideally, a comparison should be made between banks in land sale states and those in other states between July and the beginning of October. The latter date reflects the

fact that land sales fell sharply during the third quarter. The use of data for November and December might also entail the danger of including the effects of banks preparing for the distribution. Information of this type is available only for deposit banks. It would be simpler if we could assume that non-deposit banks behaved in the same manner as deposit banks, but we have already seen that they did not.

The information on deposit banks is given in Table 5.6. Since the results are not statistically significant, we cannot assume that the decline in bank lending was related solely to the location of banks in land sale areas. What if the results had been significant, could we then infer that the Specie Circular led to a decline in bank lending for land speculation purposes? It is unlikely that we could. All we know is that aggregate bank lending declined in deposit banks in land sale states. What percent of this was due to a curtailment in land loans is not known. Furthermore, we cannot assume that only banks in the West were involved in supplying funds for land speculation.<sup>37</sup>

Rising interest rates in the East might have contributed to the drying up of funds available for land speculation. First of all, the high interest rates may have made investment in commercial paper more attractive. Secondly, the high rates were due to a tightening credit

TABLE 5.6.--Comparison of the Changes in Major Assets and Liabilities of Deposit Banks in Land Sale and Non-land Sale States, July-October, 1836.<sup>a</sup>

A.	Loans and Discounts		Specie		Circulation <sup>c</sup>		United States Treasury Deposits <sup>d</sup>	
	6 <sup>+</sup>	10 <sup>-</sup>	9 <sup>+</sup>	7 <sup>-</sup>	2 <sup>+</sup>	13 <sup>-</sup>	6 <sup>+</sup>	8 <sup>-</sup>
Land Sale States <sup>b</sup>	6 <sup>+</sup>	10 <sup>-</sup>	9 <sup>+</sup>	7 <sup>-</sup>	2 <sup>+</sup>	13 <sup>-</sup>	6 <sup>+</sup>	8 <sup>-</sup>
Non-Land Sale States	24	11	21	14	19	15	24	10

  

B. Land Sales and Bank Lending		Loans and Discounts		Total Banks	
Land Sales	6 <sup>+</sup> (37)	10 <sup>-</sup> (63)		16	
Non-Land Sales	24 (69)	11 (31)		35	
Total Banks	30	21		51	Not significant at p = .05

  

C. Land Sales and Specie Holdings		Specie		Total Banks	
Land Sales	9 <sup>+</sup> (56)	7 <sup>-</sup> (44)		16	
Non-Land Sales	21 (60)	14 (40)		35	
Total Banks	30	21		51	Not significant at p = .05

  

D. Land Sales and Note Circulation		Note Circulation		Total Banks	
Land Sales	2 <sup>+</sup> (13)	13 <sup>-</sup> (87)		15	
Non-Land Sales	19 (56)	15 (44)		34	
Total Banks	21	28		49	Not significant at p = .05

<sup>a</sup>First reporting data in October not later than October 15. Only Banks submitting reports for both dates are included.

<sup>b</sup>Land Sales States: Ohio, Illinois, Indiana, Michigan, Missouri, Alabama, Mississippi, and Louisiana.

<sup>c</sup>Two banks had no treasury deposits during this period.

Source: Table 5.2.

situation further lessening the flow of funds to the West for land speculation. Thus in the Eastern money markets a smaller supply of loanable funds might have been shifted into the commercial paper market to a greater extent than previously, to the detriment of the land market.

The decline in land sales during the second half of 1836 does indicate that the Specie Circular had some effect on the market for public lands. As we have just seen the information available is insufficient to determine if the effects of the Circular worked mainly through the supply of credit available to speculators and their potential customers.

Our discussion so far has assumed that the Specie Circular brought about a decline in land sales through its effects on the supply of credit, but what about the demand for land? What other factors might have contributed to a decline in the demand for land, both its speculative and factor components? It is possible that the Specie Circular made speculators more wary about buying land. They may have believed that the boom was coming to an end and that it was better to try to sell land already held and not purchase additional land.<sup>38</sup>

The factor demand for land may have also contributed to a decline in land sales. Directly, farmers and planters might have decided it was not the time to buy land from the Federal government. Indirectly, speculators might have found it more difficult to sell land to farmers and planters.



The demand for agricultural land is a derived demand, depending on the profitability of the products grown on it. In the New South this meant cotton, in the North-Central states it meant grain.

Cotton prices in 1836 were below their 1835 highs and were falling throughout the latter part of 1836 although total receipts reached a decade peak in this year. Given the period of time needed between the preparation of new cotton lands and the harvesting of the first crop, a short-run decline in cotton prices might not be that significant.<sup>39</sup>

Falling prices or at least prices below their 1835 peak could have combined with rising costs of production to produce a squeeze on profits. According to the estimates of Conrad and Meyer, the average price per dollar invested in slaves declined.<sup>40</sup> A profit squeeze is not the best inducement for further commitment in cotton lands. The decline in land sales might have been due to these factors. It might have also been due in part to the Specie Circular and perhaps the political insecurity arising out of the Texas rebellion.

In the North-Central states wheat and corn prices rose during 1836, but this was mainly due to poor harvests. What effect this had on the demand for land is difficult to judge. Farmers might not have been willing to add on to their existing holdings. On the other hand, the high prices

might have induced farmers to expand their holdings or go further West. But as we do not know how quickly farmers did respond to the poor harvests of the period we cannot say what actually happened. Land sales in the North-Central states rose in 1836. Since we have only annual data we do not know when or even if land sales declined during the last half of the year.

In both the South and the North-Central region, the agricultural outlook was not propitious towards the end of the year. But what effect this had on the demand for land we do not know. We do know however that land sales fell in the third and fourth quarters of the year. The Specie Circular was announced in July and though it did not legally effect land sales to any extent until mid-August, it is difficult to say that it did not contribute to the decline in land sales.

It has sometimes been thought that land sales during 1834-1836 acted as a safety valve decreasing the inflationary pressures of the times by drawing money away from the market for goods and services which supposedly had less supply elasticity than public land. A corollary of this line of reasoning is that the Specie Circular fed the inflationary fires by reducing this leakage.<sup>41</sup>

What is left unanswered by this line of reasoning is the specification of the alternative sources of demand for bank funds. It is further assumed that the banks were

willing to supply these demands. Given that banks in the land-sale states during the last half of 1836 had loanable funds which they did not want to lend for land purchases, what were the alternative demands for these funds? Bankers discounted bills for local merchants and cotton factors. The credit needs of these individuals depended on the demand of farmers, cotton planters and other consumers for manufactured goods. The argument that the demand of merchants and factors for credit could have absorbed the loanable funds released by the decline in land sales supposes that the demand for manufactured goods increased. But this was a time when the economic climate in the agricultural regions differed greatly from that of 1835.

Bankers did not have to loan out the funds previously lent for land purchases. They could have done nothing, and by so doing decrease their demand liabilities and perhaps put themselves in better shape if they were deposit banks, for the forthcoming distribution. Non-deposit banks might have decided that this was not the time to extend their activities given the Specie Circular, the forthcoming distribution and the problems in the agricultural regions. Finally bankers could have purchased securities as an alternative investment outlet. Thus the funds released by the Specie Circular did not automatically have to go into loans that increased aggregate demand and further stimulated the inflationary pressures.

Temin believed that the Specie Circular most likely did rechannel purchasing power and thus increased inflationary pressures in the last half of the year. He points out that, "prices continued to rise in late 1836 while land sales fell."<sup>42</sup> But as we have already seen, the deposit banks in the land-sale states decreased their lending in the last half of 1836. Even if the non-deposit banks expanded their lending so that the total amount of loans increased, this still did not mean any large increase in aggregate demand. Only if we further assumed that all funds were lent for purposes which directly and immediately increased aggregate demand could there be some justification for Temin's argument.

Land sales in the last half of 1836 were less than \$4 million below the levels of the first half of the year. Given that Temin uses an estimate of \$1.5 million for United States gross national product in 1839, it is very hard to see how four million dollars could have been that crucial in maintaining inflationary pressures.<sup>43</sup>

While we cannot find any justification to support the hypothesis that the Specie Circular increased inflationary pressures, what about the more general hypothesis about the effect of land sales on the price level? According to Temin,

The sale of land acted as a 'sink' for the extra money supply of the mid-1830's because unlimited quantities could be bought without raising the price.

If these funds were directed elsewhere, they would cause prices to rise and the inflation to continue.<sup>44</sup>

We have already seen the assumptions about alternative sources of demand for bank credit that this argument entails. But let us look at this hypothesis from a slightly different point of view.

This hypothesis implicitly assumes that loans for land speculation decreased by an equal amount the supply of loanable funds available for activities that directly increased aggregate demand. Given the performance of banks during the boom period it is hard to imagine such an interest-inelastic supply of bank credit.

Suppose that the supply was inelastic, this still might have contributed to the inflationary pressures. Merchants who discounted bills at a bank might have been willing to pay higher interest rates if they could pass the costs on to the consumers. There is no reason to believe that this did not occur in the inflationary climate of the mid-1830's. Finally by drawing funds, especially Eastern funds, into land speculation, less funds were available for the purchase of capital equipment thus slowing down the rate of growth of aggregate supply. There is no evidence of either a quantitative or qualitative nature to support the hypothesis that land speculation was counter-inflationary.

The Specie Circular appears to have had some effect on land sales but did it also cause a shifting of specie

from Eastern banks to those in the West and South-West? There are three annual series available showing bank specie holdings by region. These are given in Table 5.7. Taking into account the differences in the estimates it appears that banks in the East did not lose any significant amount of specie to those in the land-sale states.<sup>45</sup>

But these are annual estimates and we do not know much about bank specie holdings during the last half of 1836. What information we do have indicates that banks, at least in New York City and Pennsylvania did not lose specie until the start of the fourth quarter of 1836. By this time banks in the land-sales states did not need that much specie as land sales had already fallen sharply. The specie holdings of the New York City Safety Fund banks were 22 per cent higher in September 1836 than the holdings of July. New York City deposit bank specie holdings rose every month from July through September while the specie holding of Pennsylvania banks, excluding the United States Bank, in November were 12 per cent above the June levels.<sup>46</sup> The Specie Circular apparently did not cause a noticeable shifting of specie from banks in the East to those in the South-West and the mid-West.

The Circular apparently contributed to a decline in the public's confidence in bank notes. Imagine the situation around July 1836. The Jackson administration had been attempting for more than a year to eliminate small

TABLE 5.7.--Distribution of Specie in State Banks, by Region, 1835-1836.  
(\$000,000)

	North East	Middle Atlantic	South Eastern	South Western	North Western	Total
<u>End of 1835</u>						
Treasury	2.4	12.1	7.0	6.0	4.6	32.1
Van Fenstermaker	3.6	12.2	5.1	5.5	4.5	31.0
Berry <sup>a</sup>	2.8	10.8	7.0	5.3	5.6	31.5
<u>End of 1836</u>						
Treasury	2.6	11.7	7.1	7.9	5.7	35.0
Van Fenstermaker	3.6	15.2	7.6	7.7	5.7	39.8
Berry	2.5	11.4	7.2	6.5	7.2	34.9
Change Between end of 1835 and end of 1836						
Treasury	+ .2	- .4	+ .1	+1.9	+1.1	+2.9
Van Fenstermaker	0	+ .3	+2.5	+2.2	+1.2	+8.8
Berry	- .3	+ .6	+ .2	+1.2	+1.2	+3.4

<sup>a</sup>Excludes United States Bank of Pennsylvania.

Sources: Peter Temin, The Jacksonian Economy (New York: W. W. Norton and Company, Inc., 1969), p. 122. Thomas S. Berry, Western Prices Before 1861 (Cambridge: Harvard University Press, 1943), p. 588.

bank notes from circulation. A bill passed in 1835 would become effective on July 4, prohibiting the government from accepting or using bank notes smaller than \$10. Section five of the Deposit Act all but eliminated the use of a bank note, if the section was enforced. Then, on July 11, the Specie Circular was announced. No wonder some people might become wary of bank notes. In a letter to the Baring's written in April, 1837, Biddle remarked that,

The crusade against banks and the discrimination at the Land Offices between specie and bank paper has not been without its effect on the less intelligent part of our population, whom it has inclined to hoard specie.<sup>47</sup>

As far as we can determine from the existing information, the Specie Circular contributed to the decline in land sales during the last half of 1836. Its effects on banks were minimal in terms of specie movements between banks. It might have, however, weakened public confidence in bank notes and thus banks. In this latter instance, the Specie Circular was one of several factors which destabilized the banking system in the latter part of 1836 and early 1837.

Up to now we have looked at the Deposit Act and the Specie Circular and the effects which they had on the banking system and the economy. We will now turn to the situation in the New York Money market to see if the events of the last half of the year weakened the city banks so that they could not withstand the pressures of 1837.



The New York Money Market in the  
Last Half of 1836

By the 1830's the financial and commercial center of the United States was New York City.<sup>48</sup> During the last half of 1836, the New York money market began to evidence signs of strain. Short-term interest rates began to rise in April and in July, the same month that the Bank of England raised its discount rate, the increase became more rapid. Domestic exchange rates on other East-coast centers and the South, which were stable throughout 1835 also began to move. What happened to the city banks during these months and what effects did the Deposit Act and the Specie Circular have on the banks of New York City?

Information is not available on a monthly basis for all banks in New York City. However, we do have data for the Safety Fund banks for the first month of each quarter in 1836.<sup>49</sup> We also have fairly complete information, as given in Table 5.8, on the deposit banks between July and September and it becomes complete for the months of October until December. This is due to the Treasury department's adding of new deposit banks until October. To improve our understanding of the actions of the deposit banks we will also look at the behavior of the three leading deposit banks during the same time period. This latter information is given in Appendix Table B-12.

Between July and September, the Safety Fund banks expanded their lending activities, although it was a small

TABLE 5.8.--Major Assets and Liabilities of Deposit Banks, New York City  
July 1836-July 1837.  
(\$000)

Month <sup>a</sup>	Loans and Discounts <sup>b</sup>	Specie <sup>b</sup>	Circu- lation <sup>b</sup>	United States Treasury Deposits <sup>c</sup>	Private Deposits
July	27003	4875	3985	13821	
August	35511	6021	4633	14157	
September	36882	6627	4828	13092	
October	35279	4474	5149	11513	
November	31618	3798	4191	11134	
December	34103	3562	4903	11515 <sup>d</sup>	
March	32060	2729	4842	9024	9013
May	29265	1434	3622	4830	9834
July	26796	1649	3666	3734	10297

<sup>a</sup>When more than one report is given for the month by a bank, the average is used. March contains reports from February 23rd to March 7th. May contains reports from April 24th to May 16th; July contains reports from June 23rd to July 1st.

<sup>b</sup>Eight banks covered for July, 12 for August, 13 for September to May, 12 for July, 1837.

<sup>c</sup>Five banks covered for July, 10 for August, 12 for September, 13 for October to May, 12 for July, 1837. As reports were given for some banks prior to their receiving Treasury deposits, the discrepancy arises between b and c.

<sup>d</sup>Bourne lists Treasury deposits as of January 1, 1837 as \$12,850,518.

Sources: United States Congress, Senate, 24th Congress, 2nd Session, Senate Document No. 21, pp. 8-13. United States Congress, House, 25th Congress, 1st Session, House Document No. 30, pp. 103-107, 115-119, 130-135. Bourne, Surplus Revenue, p. 139. New York State, Assembly, 60th Session, Assembly Document No. 328, p. 20.

increase, amounting to only approximately three per cent. Recalling our previous discussion on the lending activities of deposit banks in general it comes as no surprise that during the same period, city deposit banks expanded their loans by almost 37 per cent. By January, 1837 loans and discounts were less than \$1 million below their September, 1836 level. As we will soon see there is other information which indicates that there was some decrease in lending during part of the fourth quarter. Contrary to contemporary and later writers who believed that the Specie Circular drew specie away from the East, the Safety Fund Banks increased their specie holdings by approximately 20 per cent during the third quarter.<sup>50</sup>

The actions of the city deposit banks can perhaps give us more information as to what happened during the last half of the year. The deposit banks as we have just noted increased their lending during the third quarter. But the three leading deposit banks in the city, the Bank of America, Bank of the Manhattan Company, and the Mechanics Bank, decreased their loans and discounts by \$1.2 million during these months.<sup>51</sup> This occurred at a time when their specie holdings increased by 26 per cent. From what we have previously seen it appears that the actions of these three deposit banks differed from those of city banks in general.

One possible explanation for this lies in the movement of Treasury deposits. In August the three banks lost \$1.8 million in such deposits while the total losses for all city deposit banks was \$1.1 million. This indicates that perhaps only these banks lost deposits, and most of these went to banks outside the city. An examination of Treasury deposits in the city banks confirms this. No other city deposit bank lost Treasury deposits during this period.

In September, however, the other city deposit banks began to curtail their lending activities, as they too, were losing Treasury deposits.<sup>52</sup> The banks responded to these losses by contracting their lending, this taking place during September, October and the early part of November. Deposit bank lending fell by slightly over 14 per cent during the months of September to November. The shifting lending policies of the city banks were reflected in the movement of short-term interest rates in New York during the last half of the year. Interest rates rose from 12 per cent at the end of June to 36 per cent at the end of October. For the remainder of the year they fluctuated between 24 per cent and 30 per cent.

The loss of Treasury deposits was possibly more serious than the monthly data indicates. These figures are for net changes and thus do not reflect the total turnover of Treasury deposits during a month. The turnover of

deposits posed serious problems for the banks involved because of the regulations in the Deposit Act requiring specie payment on Treasury deposits when demanded. Suppose a bank lost a net of \$500,000 in Treasury deposits during the month, this might have entailed a concomitant loss of specie. During the same month, however, the turnover in the Treasury deposits could have been some multiple of the net change. Thus, the bank, while only losing a half million in Treasury deposits might lose more than that in specie.

Unlike the transfers which would be authorized for the Distribution banks did not have much forewarning about drafts which were drawn to meet the Section One requirements of the Deposit Act or normal expenditures of the government. We have previously seen in Table 5.3 that approximately \$8.8 million in interstate transfer drafts were drawn, and payable, on city banks between the end of June and the middle of December. Other deposit banks outside the city were also experiencing similar shifts in Treasury deposits. It would have been helpful to have information on bankers' balances in the city during this period to see if they underwent any significant changes, but unfortunately, this information was not available for 1836. We can obtain another indication of the changing situation in the New York money market by looking at the domestic exchange rates.

Just as Foreign exchange rates reflect the trading conditions between countries as well as the climate of the money and capital markets, so domestic exchange rates can also be used to give one an indication of the conditions of trade between different cities and regions of a country. In Appendix Table B-15, we have the discount or premium on domestic exchange--sight bills--in New York City, the bills being drawn on some of the important commercial centers of the country. An increase in the discount rate, which is the same as a fall in the price of the bill, results from either an increase in the supply of bills--assuming demand remains constant--; a decrease in the demand--assuming the supply as constant--; or some combination of demand and supply shifts causing the new market price to be below the old price. The opposite holds for a decrease in the discount rate or a rise in the premium.

Throughout 1835 and during the first half of 1836, the prices of domestic exchange remained stable. In June, changes started to occur, the price of bills on Boston fell, while the discount on Southern bills, signifying a falling price of bills, doubled, perhaps, due to the declining price of cotton. In July, exchange on Philadelphia and Baltimore rose slightly in price, rising grain prices and the loss of specie holdings in New York banks might have contributed to this increase, since the city banks could try to get exchange on these cities with the hope

of obtaining specie. Whatever the causes of these changes, the most significant fact was the changes themselves, especially in the South, coming after more than a year and a half of price stability.

By the end of 1836, the New York City banks had temporarily eased their contractionary policies. Some might have thought that the difficulties were over, but the reverse was true. The banks during the last two months continued to lose specie, and facing them in 1837 was the Distribution. Meanwhile, across the Atlantic, events were unfolding that were to have the most serious effects on New York City banks and the other banks of America during 1837.

The British Money and Commodity Markets  
During 1836

The English financial community showed increasing signs of distress towards the end of 1836. Nowhere was this more evident than in the Anglo-American trade and the condition of the Bank of England. Although earnings from cotton exports reached a peak in 1836, the declining price of cotton posed serious problems for the firms engaged in the cotton trade. To see why this was so, let us look for a moment at the cotton operations of the firm of Alexander Brown and Sons of Baltimore, one of the leading houses in the Anglo-American trade.

Utilizing the services of coastal factors resident in the cotton ports--and also to some extent those of

inland factors . . . the Browns offered in normal times to advance apparently the full value of cotton shipments consigned to the Liverpool branch. The advance was made in the form of bills drawn by the exporter on the Liverpool House and endorsed by the Brown agent.<sup>53</sup>

However, 1836 did not represent "normal times;" even in January, Brown Brothers limited advances to three-quarters or four-fifths of the present value of the cotton shipment.<sup>54</sup> Advances were made on the present value, and it was here that the danger existed. What would happen to the Liverpool house of the Browns or of other Anglo-American firms if bills were drawn on them with the expectation of cotton selling in the range of nine to eleven pence per pound, but the cotton could only be sold for eight or nine pence? Some losses would be incurred, or if the firms were lucky, only their profit margins would be cut. By the end of 1836, prices had fallen to a range of seven and one-half to eleven and one-quarter pence, while they had been as high as nine to twelve pence during the months of March to June.

If credit facilities were available, some houses might decide to hold the cotton off the market in the hope of selling at higher prices, but the London money market was having difficulties. These difficulties in London meant additional problems for the houses dealing in cotton. The export of finished cotton goods, just as much as the importation and production of cotton, depended on the availability of credit.



Rising interest rates in London, placed the Anglo-American houses in a two-way squeeze. The demand for raw cotton fell as producers found it more expensive to obtain credit. The cotton houses also saw their costs increasing as they had to discount bills in London or with Joint-Stock banks at a higher rate of discount. Any trade which was dependent on easy money and rising prices, as was the cotton trade, was vulnerable when the monetary conditions changed and prices began to fall. By mid-1836 the Bank of England had begun to pursue a more restrictive monetary policy.

At least until May the monetary situation in London showed none of the signs of tightness which was then being experienced in the United States.<sup>56</sup> The ready availability of credit in London was attributed to the rapid growth of joint-stock banks and the policies of the Bank of England. Between 1826, when they were first allowed to form and July, 1833 34 such banks were established; by the end of 1835, there were 60.<sup>57</sup> For a discussion of the inflationary policies of the Bank of England, Clapham is still a very good source.<sup>58</sup>

Throughout the last quarter of 1835, the short-term market rate of interest in London was 3.75 per cent per annum, it fell to three and one-half per cent by March of 1836, and it reached its low point of three and one-quarter per cent in April and May.<sup>59</sup> The Bank of England's discount rate was four per cent during this period. The

situation changed rapidly during late spring and early summer. By June, the market rate had risen three-quarters of one per cent, and by the end of the year, it was two and one-half points above the April-May low, a 77 per cent increase. An index of stock market share prices which stood at 113.6 in May, fell to 94.1 in November before recovering slightly in December.<sup>60</sup> The causes of this dramatic reversal are to be found in the attempts of the Bank of England to curtail its specie losses at a time when the poor grain harvests were increasing domestic grain prices and specie exports.

During the last quarter of 1835 and the first of 1836 the Bank of England increased its specie holdings. By the second quarter, the accumulation came to a halt. For the rest of the year, the Bank lost specie. It has sometimes been inferred that this loss was induced, at least partially, by the economic difficulties then occurring in the United States, and especially, the Specie Circular.

The crisis in the United States, under way even before the appearance of the Specie Circular, became more severe with its issue. Monetary pressure communicated itself to Britain through the commercial and financial connexions which had grown up in the previous few years. American traders liquidated much of their available holdings in London and cut down their imports. American securities were dumped in the British market and the cash (specie) remitted to America.<sup>61</sup>

Why just blame it on the Specie Circular, which we have previously seen was not that powerful an influence on the banks of America, why not also blame the specie losses

incurred by the Bank of England on the Deposit Act? The answer is simple, the facts do not support such statements. According to W. B. Smith, the United States imported approximately £506,000 or \$2.462 million, in specie from England between October 1, 1835 and September 30, 1836, but the Bank of England lost approximately £2.6 million between April and September, 1836.<sup>62</sup>

Palmer, the Governor of the Bank of England attributed 2.3 million pounds of this loss to exportation to America.<sup>63</sup> Part of this specie loss could have gone indirectly to the United States by way of France as a result of the French indemnity payment, but Palmer estimated that the Bank lost £100,000 in specie to France between April and December.<sup>64</sup> Palmer's estimates are grossly inaccurate. Even if we assume that the entire American specie inflow from England during fiscal 1836 took place between April and September, it still amounted to slightly less than 20 per cent of the specie lost by the Bank of England and only 23 per cent of the amount which Palmer claims was sent to the United States.

The Bank of England was losing specie during the last half of 1836. We have seen that contrary to the claims of the Governor of the Bank, Palmer, most of the specie did not go to the United States. Now we will see where the specie did go. It was these losses and the policies that the Bank of England pursued in an attempt

to stem them that brought about the monetary stringency in London which seriously weakened the financial underpinnings of the Anglo-American trade.

The directors of the Bank of England believed that the losses could be attributed to the lending policies of the joint-stock banks and those of the Anglo-American houses. In the latter instance they followed the lead of Palmer. The major Anglo-American houses were Baring Brothers and Company; W. and J. Brown and Company; F. de Lizardi and Company; Morrison, Cryden and Company; T. Wiggin and Company; T. Wilson and Company; and George Wildes and Company.<sup>65</sup> The joint-stock banks began to encounter difficulties in November and T. Wiggin and Company asked the other Anglo-American houses for aid in December.<sup>66</sup>

The first joint-stock bank to fail was the Agricultural and Commercial Bank of Ireland. A run on the other Irish banks was prevented when the Bank of England supplied £2,000,000 in bullion to these banks.<sup>67</sup> On November 28, the manager of the Northern and Central Bank of Manchester--this bank had 39 branches--for some unknown reason left £108,000 in a cab. This helped to start a run on the bank, which was halted when the Bank of England again came to the rescue. It eventually provided £1,370,000 in aid.<sup>68</sup>

The aid provided by the Bank of England as well as the attempts of other banks, mainly joint-stock banks, in

Ireland and England to build up their specie reserves most likely accounted for a great portion of the Bank of England's specie losses. Adding to this internal drain was an external drain. This was necessitated by the large grain imports from the continent because of poor harvest. The United States also had a poor harvest and this probably helped to further increase world grain prices. British imports of wheat, barley, oats and flour in 1836 were 110 per cent of their 1835 levels. Wheat prices averaged 23 per cent, barley 10 per cent, and oats prices five per cent above their 1835 levels.<sup>69</sup>

The Bank responded to the losses of specie by raising its discount rate and applying selective credit restraints. The discount rate was raised first to four and one-half per cent on July 21, 1836. This was the first change in the discount rate since July 1827. On September 1, the discount rate was again raised by one-half per cent. Thus in about two months the rate was raised by 25 per cent above its pre-July level.

The Bank of England also attempted to apply selective credit controls by limiting the types of bills it accepted for discounting. It refused to discount, or accept as security for loans, bills drawn on Anglo-American merchant houses. This action affected not only these houses but many joint-stock banks which discounted the bills of these houses and then sold them in the London discount market.<sup>70</sup>

In normal times the selective credit restraints of the Bank of England did not seriously hamper the major houses, who, because of their size, did not usually rediscount with bill brokers or the Bank of England.<sup>71</sup> But these were unusual times, the smaller houses had been using the facilities of the joint-stock banks. Three of the larger Anglo-American houses, Wiggins, Wilson, and Wilde--the "3 W's"--had approximately £885,000 in acceptances held by the Bank of England at the end of July.<sup>72</sup>

It appears that these actions on the part of the Bank were not sufficient to limit the activities of the Anglo-American houses. In October Palmer, the Governor of the Bank, applied what we now call "moral suasion," to the Anglo-American houses. He told representatives from most of these houses that,

. . . excessive facilities given to foreign bankers, 'either as open-credits or in anticipation of the sale of States' Securities in this country' were objectionable to him and the Company as note issuers.<sup>73</sup>

They were asked to limit such practices. We do not know the factors causing T. Wiggin and Company to ask the other houses for aid in December but the restrictive policies of the Bank could have contributed to that house's problems.

Some of the results of the Bank of England's policies can be seen in Appendix Table B-14. The short-term interest rate in the London money market rose by almost 52 per cent between the second and last quarters of the year. But the

value of bills discounted only started to fall in the last quarter. Meanwhile the Bank of England continued to lose specie.

The stringency in the short-term credit market did not seriously affect the long-term credit market, and this was fortunate for the United States, for by the middle of 1836, long-term American debt instruments were being more and more used to refinance short-term debts as they became payable. American firms faced with the task of covering bills coming due could, instead of remitting foreign exchange or notes drawn on other houses--open credit accounts--remit state and local securities instead.<sup>74</sup> The securities were then resold to individual investors. Some Anglo-American houses were also engaged in stock jobbing, that is, the purchasing of blocks of American securities for resale, in smaller units, to individual investors. Short-term credit was important to this operation as it enabled the jobbers to hold the securities until they could be sold, it was hoped, at remunerative prices. The problem in the short-term credit market probably added to the difficulties which these houses faced and were to face in early 1837.

The situation on both sides of the Atlantic was ominous as 1837 dawned. So far, the problems were basically monetary in nature, with some help provided by nature. On the American side, increasing monetary stringency primarily due to the fiscal and monetary policies of the Federal

government, but aggravated by the difficulties in Texas which cut the inflow of specie from Mexico, were being felt in the monetary centers of New York and Philadelphia.<sup>75</sup> Although cotton prices were declining at the end of the year, total revenue was increasing, but it was doubtful how long this could continue.

In the United Kingdom, the Bank of England was placing a lid, albeit a bit late in the day, on monetary expansion, and by so doing, tightened the screws on the Anglo-American houses which already faced falling cotton prices. The poor harvests were having their customary effects on the specie supply in England. The future remained uncertain for both countries. The American banking system still had to face the Distribution, while the British were beginning to have difficulties with the joint-stock banks.



## FOOTNOTES

### CHAPTER V

<sup>1</sup>Chaddock, p. 281.

<sup>2</sup>Niles' National Register, April 23, 1836, p. 126.

<sup>3</sup>Quoted in Niles' National Register, May 14, 1836, p. 185. Also see Scheiber, Business History Review, Spring, 1966, p. 55.

<sup>4</sup>The New York City Safety Fund banks were allowed by the state legislature to increase their capital stock through the sale of securities in foreign capital markets. See Henry W. Domett, A History of the Bank of New York, 1784-1884 (New York: 1884), p. 85.

<sup>5</sup>Niles' National Register, July 27, 1844, p. 342.

<sup>6</sup>Stephen A. Caldwell, A Banking History of Louisiana (Baton Rouge: Louisiana State University Press, 1935), p. 54.

<sup>7</sup>The Financial Register, August 2, 1837, pp. 33-36 reprints the Act in its entirety.

<sup>8</sup>Scheiber, Journal of Economic History, Vol. 23, p. 2. Gatell, American Historical Review, Vol. LXX, p. 36 lists the increase in the number of deposit banks as from 35 to 96. According to Kinley, p. 82, there were 44 deposit banks as of December 31, 1835 and 91 as of December 31, 1836.

<sup>9</sup>Even though the relationship between Treasury deposits and bank lending is statistically significant it does not mean that other factors which influence bank portfolio policies were also not important. In line with our conclusions of chapter three it should be noted that there was no statistically significant relationship between changes in bank specie holdings and bank lending.

<sup>10</sup>The Financial Register, August 2, 1837, p. 34. Apparently the government was having difficulty with bank notes of less than five dollars because the Treasury

notice of April 6, 1835 supposedly banned their use in government transactions by May, 1836.

<sup>11</sup>Ibid. Scheiber, Journal of Economic History, Vol. 23, No. 2, p. 206, notes that the deposit banks had to maintain a 25 per cent ratio of specie to note circulation.

<sup>12</sup>See Table 5.8. It should be noted that our Table 5.8 is based on Temin's "Table 4.2." A closer examination of this table and the Appendix Table on which it was based shows that the aggregate figures are inconsistent with each other. The major factor causing this is the exclusion of the specie holdings of the United States Bank of Pennsylvania prior to 1836. This does not, however, explain all the discrepancies. Note that Temin, in his Appendix Tables A-1 and A-2 lists the Treasury estimate of bank specie holdings as \$35 million at the end of 1837, whereas in his Table 4.2 he gives the figure as \$31.3 million. Finally, there is no agreement between the Van Fenstermaker estimates given in Table 4.2 and those given in Appendix Table A-1. See Temin, pp. 122, 184, 185, and our Appendix Table B-1.

<sup>13</sup>See Appendix Table B-3.

<sup>14</sup>The Financial Register, p. 35.

<sup>15</sup>Timberlake assumes that intrastate transfers involved no specie movements but offers no proof. Timberlake, The Journal of Political Economy, Vol. LXVIII, No. 2.

<sup>16</sup>United States Senate, Report of the Secretary of the Treasury, December 26, 24th Congress, 2nd Session, 1836, Senate Document No. 29.

<sup>17</sup>Senate, Report of the Secretary of the Treasury, 1836, pp. 1, 2.

<sup>18</sup>Ibid., p. 3.

<sup>19</sup>Ibid., p. 4.

<sup>20</sup>Ibid., p. 5. It was estimated that less than \$2 million had been transferred for this purpose. See p. 6.

<sup>21</sup>Ibid., p. 22.

<sup>22</sup>See Appendix Tables B-1, 3. Deposit banks increased their specie holdings by 122 per cent while all state banks increased their's by 67 per cent but we should not forget that changes in Treasury deposits were paralleled by changes

in specie flows for a majority of deposit banks in the last half of 1836. Moreover, as we saw in Table 5.2 specie flows were not related to bank lending activity in any significant way.

<sup>23</sup>Temin, pp. 128-136. Richard H. Timberlake Jr., "The Specie Circular and Distribution of the Surplus," The Journal of Political Economy, Vol. LXVIII (April, 1960).

<sup>24</sup>Temin, p. 133.

<sup>25</sup>Temin, p. 134.

<sup>26</sup>See Table 5.3. Out of the \$17.1 million in transfer drafts drawn for interstate payment in the last half of 1839, \$15.36 was actually paid.

<sup>27</sup>These figures are for payments actually made.

<sup>28</sup>Temin, p. 136.

<sup>29</sup>See Table 5.8.

<sup>30</sup>As reported in the Financial Register, Vol. 1, p. 14.

<sup>31</sup>Dewey, Financial History of the United States, p. 228, and Van Deusen, The Jacksonian Era, 1828-1848, pp. 104-105. According to Timberlake the Specie Circular was also intended to reduce the size of the Federal surplus and thus minimize the amount of the distribution. See Timberlake, The Journal of Economic History, Vol. LXXIII (April, 1960), p. 110.

<sup>32</sup>Arthur H. Cole, "Variations in the Sale of Public Lands, 1816-60," Review of Economics and Statistics, Vol. IX, 1927, p. 51.

<sup>33</sup>Smith, pp. 75-76.

<sup>34</sup>In using the term "speculator," we are excluding the settlers who purchased land, sometimes by first being squatters, improved it with the expectation of selling it for a higher price in a few years.

<sup>35</sup>Berry. p. 441.

<sup>36</sup>In the long-run, the migration from the East to the West also was an important factor.

<sup>37</sup>Benjamin H. Hibbard, A History of Public Land Policies (Madison: University of Wisconsin Press, 1965), p. 216.

<sup>38</sup>This is the view taken by Temin. See Temin, p. 125.

<sup>39</sup>Mississippi was the only cotton state where land sales fell during 1836. Cole, Review of Economics and Statistics, Vol. IX, p. 52.

<sup>40</sup>Alfred H. Conrad and John R. Meyer, "The Economics of Slavery in the Ante-Bellum South," The Journal of Political Economy, Vol. LXVI, No. 2 (April, 1958).

<sup>41</sup>Timberlake, The Journal of Political Economy, Vol. LXVIII, No. 2, p. 111, and Temin, pp. 125-126.

<sup>42</sup>Temin, p. 126.

<sup>43</sup>Ibid., p. 135.

<sup>44</sup>Ibid., p. 126.

<sup>45</sup>The United States Bank of Pennsylvania lost about \$5.8 million in specie during 1836 but we do not know how much of this went to banks in the land sale states. See Smith, p. 188.

<sup>46</sup>See Tables 5.8, Appendix Table B-11, and United States Congress, House, 26th Congress, 2nd Session, House Document No. 111.

<sup>47</sup>Hammond, p. 461.

<sup>48</sup>The United States Bank of Pennsylvania was still the lending dealer in foreign exchange followed by Alexander Brown and Sons of Baltimore and Prime, Ward and King of New York. See Smith, p. 46.

<sup>49</sup>In January, 1836, Safety Fund Banks accounted for 77 per cent of all bank lending in the city and 79 per cent of such lending as of January 1, 1837. See Table B-11, B-14 in our Appendix.

<sup>50</sup>See Table B-14. For contemporary and more recent statements supporting the view that specie was withdrawn from city banks, see: Publius (James DePeyster Ogden), Remarks on the Currency of the United States (New York: Wiley and Putnam, 1840), p. 22; Horace Greeley, Recollections of a Busy Life (New York: J. B. Ford and Co., 1868), p. 122; Matthews, A Study in Trade Cycle History, p. 16.

<sup>51</sup>See Appendix Table B-11.

<sup>52</sup>These losses cannot be attributed to specie exports. Exchange rates on London did not go to the specie export point until 1837.

<sup>53</sup>Stuart Bruchey, Cotton and the Growth of the American Economy: 1790-1860 (New York: Harcourt, Brace and World, Inc., 1967), p. 229.

<sup>54</sup>Ibid., p. 237.

<sup>55</sup>Smith, Second Bank of the United States, p. 190.

<sup>56</sup>For reports on monetary pressures in Philadelphia and New York during April and May see Niles' April 16, 1836, p. 114, and May 14, 1836, p. 185.

<sup>57</sup>Ellis T. Powell, The Evolution of the Money Market, 1385-1915 (New York: August M. Kelley, 1966), p. 310. See also William G. Sumner, A History of American Currency (New York: Henry Holt and Co., 1884), p. 120.

<sup>58</sup>Clapham, The Bank of England, Vol. 2, p. 150 and Report of the Chamber of Commerce, Manchester, England, December 12, 1839, pp. 304.

<sup>59</sup>See Appendix Table B-7. Note that interest rates in New York were rising in April and May.

<sup>60</sup>Arthur D. Gayer, W. W. Rostow, and Ann J. Schwartz, The Growth and Fluctuations of the British Economy, 1790-1850, Vol. 1 (Oxford: Clarendon Press, 1953), p. 369. It is interesting to note that in both countries, there was some easing of the monetary pressures during the last month or two in 1836. When movements in short-term interest rates in London were compared with those in New York City, the latter being the dependent variable, the largest  $R^2$  obtained was .218. This was when New York interest rates were lagged two months behind those of London.

<sup>61</sup>Ibid., p. 272; See also Ryner, University Studies, Vol. 5, No. 2, p. 26.

<sup>62</sup>Smith, Second Bank of the United States, p. 187.  
 $\bar{E} = \$4.871$ .

<sup>63</sup>Financial Register, Vol. 1, p. 105.

<sup>64</sup>Smith, Second Bank of the United States, p. 184, and Financial Register, Vol. 1, p. 103.

<sup>65</sup>Ralph Hidy, The House of Baring in American Trade and Finance (Cambridge: Harvard University Press, 1949), p. 205, and Smith, Second Bank of the United States, pp. 186-187.

<sup>66</sup>Hidy, p. 208.

<sup>67</sup>McGrane, Foreign Bondholders and American State Debt, p. 14.

<sup>68</sup>Powell, The Evolution of the Money Market, p. 338.

<sup>69</sup>Thomas Tooke, A History of Prices and the State of the Circulation in 1838 and 1839 (London: Longman, Orme, Brown, Green and Longmans, 1840), p. 292; B. R. Mitchell, and Phyllis Deane, Abstract of British Historical Statistics (Cambridge: The Cambridge University Press, 1962), p. 488; also see Table 8.1.

<sup>70</sup>Dealers in the London bill market had been using these bills as collateral for loans from the Bank of England. See Hidy, p. 205. For Palmer's discussion of the relationship between the Anglo-American houses and the joint-stock banks see W. T. C. King, History of the London Discount Market (London: George Routledge and Sons, Ltd., 1936), p. 945.

<sup>71</sup>Buck, p. 157.

<sup>72</sup>Clapham, Vol. 2, p. 152.

<sup>73</sup>Clapham, Vol. 2, p. 154. Also see Hidy, p. 208.

<sup>74</sup>Myers, p. 202.

<sup>75</sup>Between August, 1836 and January, 1837, New Orleans banks lost \$1.5 million in specie, a decrease of approximately 33 per cent. Hunt's (October, 1842), p. 361. The Two deposit banks in that city gained \$208,000 between August and the end of December. United States Congress, Senate, 24th Congress, 2nd Session, Senate Document No. 21, pp. 19, 20.

CHAPTER VI  
COTTON, SPECIE AND THE FINANCIAL  
CRISIS OF 1837

The bankers of New York City were at the end of their rope, not to say their specie, by the beginning of May, 1837. During the first nine days of that month, they had to come to the aid of two banks, the Mechanics and the Dry Dock, to prevent them from failing. Facing continued large withdrawals by individual depositors, they decided at a meeting held in the evening of May 9 to suspend the payment of specie on all their current demand liabilities.

This decision was announced on May 10, and by the end of that day, its effects were being felt in Philadelphia. The bankers of that city, reacting to the action of the New York banks, and fearful of losing specie to the latter if they continued specie payment, decided to suspend as of May 11. Boston banks followed suit on the twelfth and within a week of the New York suspension, most banks in the United States had suspended.<sup>1</sup>

When we look at the developments which directly led to the panic and suspension, the deterioration of the cotton market and the monetary policies of the Bank of England seem to have been the most important. Both of these were

interrelated and as we shall see, were in turn, related to such exogenous events as poor grain harvests and the fiscal policies of the American government.

### Grain, Cotton and the Anglo-American Money Markets

#### The Cotton Market

Developments in the cotton market occupied the center stage throughout most of the first five months of 1837. Between January and May of 1837, cotton prices in New Orleans fell by approximately 18 per cent while English prices fell by almost 30 per cent.<sup>2</sup> The effects of this were felt not only by those who were directly involved in the cotton trade, but also, by those who were dependent on the cotton growers and shippers, and those who depended on the British textile industry.

Suppose instead of the price of cotton fixing itself at a permanently high rate, after a long period of advance, it suddenly and unexpectedly began to decline, and finally sinks, perhaps to half or one-third its former value: we do not see, at once, a cause for widespread ruin, and an immense destruction of private and public credit? You have . . . thrown down the Atlas that upheld the superstructure.<sup>3</sup>

Through backward and forward linkages, a large segment of the Anglo-American commercial community were to feel the effects of the failing cotton market.

The cotton factor was the first to feel the effects of falling cotton prices and it was through him and his position in the cotton trade that shock waves were sent out through the entire commercial world. He purchased or



obtained on consignment, cotton which was sold or in turn, consigned to representatives of Northern or Anglo-American houses. Besides his role in the marketing of the main product of the South, the cotton factor also purchased imported and domestic goods from Northern, mainly New York City, merchants, which he then sold to the planters and storekeepers in his region. The factor normally received credit from the New York merchant on terms ranging from six to nine months; in turn, he extended credit, often for longer periods to the planters and storekeepers with whom he dealt.

The decline in cotton prices meant that the bills of exchange--cotton bills--which the factor drew when he shipped cotton might be dishonored if the proceeds of the cotton sales could not furnish sufficient funds to pay the bills.<sup>4</sup> Without these bills, the cotton factor had no means of meeting his commitments with the New York merchants nor could the planters receive enough to pay their bills with the factor or local storekeepers. Obviously, local banks would no longer discount notes drawn on the local planters for the factors.

In the North, the New York merchants could not obtain funds to meet their bills due Northern manufacturers or British exporters, who in many cases were the Anglo-American houses. The contraction in the flow of remittances from the South not only hurt the Northern merchants, but

also, their bankers. The latter found it difficult to get payment on loans and might be asked for extensions of existing loans or undertake new loans to enable the city merchants to meet their commitments.

The New York city banks might not, therefore, have been receiving their accustomed inflow of specie from the South, especially because of the events in Texas. Since Southern banks did not keep large working balances in New York City banks, the latter did not have to fear any significant loss of specie to these southern banks. As we shall soon see, the city banks were in a position to lose specie to the banks in the mid-Atlantic states and the mid-West when these banks drew down on their balances in New York.

More damaging to the New York city banks than the internal drain caused by the crisis in the cotton market was the external drain caused by the reduction in the supply of cotton bills which were the major source of foreign exchange. Normally, during the last month or two of the year and the first quarter of the next, cotton was being shipped in its greatest volume and the inflow of sterling drafts were concomitantly at their highest levels. This kept exchange rates at their seasonally low levels.<sup>5</sup> But the winter of 1836 and the spring of 1837 were not normal for the exchange market.

In the first three months of the year (exchange) rates stood at the specie export point and in April they were well above it. Between eight and ten millions

of dollars worth of (cotton) bills returned to the United States under protest.<sup>6</sup>

The foreign exchange needs were met by specie drawn from the banks. It seems that as far as the New York City banks were concerned, this foreign drain appears to have been more important than the internal drain resulting from the disintegrating cotton market.<sup>7</sup> So far we have been looking at the consequences of the decline in cotton prices on the banks of New York, but it is important to see what caused the decline in prices as these causes were also to influence the specie position of the city banks.

Poor grain harvests in England contributed to a decline in the British demand for raw cotton in two ways. First of all, it led to a decrease in the domestic demand for manufactured cotton goods as more of the income of the working classes had to go for breadstuffs which were higher in price. That is, the increase in the price of breadstuffs decreased the real income of the British working classes and thereby, decreased the demand for textiles. Secondly, the poor harvests necessitated specie exports to pay for grain imports, these specie outflows leading in part to the tight money policies pursued by the Bank of England.

Decline in British demand for raw cotton in combination with an increase in American production produced the sharp break in prices. We can see this in Appendix Table C-4 where American production increased by approximately

6.3 per cent during the 1837 crop year while total British exports of finished cotton goods fell by 13 per cent during the calendar year 1837. Temin has shown in a recent article that the main cause of the price decline, or the reason why it was so severe, lay in conditions on the demand side of the market.<sup>8</sup> The failure of some of the leading merchants in Canton China indicates perhaps, that the decline in the demand for textiles was due to more fundamental factors than our information discloses.<sup>9</sup> On the other hand, the tight money market in London might have influenced the situation in China, just as it did the Anglo-American trade.

#### The British Money Markets in the Winter and Spring of 1837

Throughout the last half of 1836 and the first half of 1837, the Bank of England was trying to halt the outflow of specie from its vaults.<sup>10</sup> As we saw in the last chapter these losses were mainly due to aid given the joint-stock banks and to pay for grain imports. Grain imports in 1837 were about £1.5 million, this being the largest import since 1831.<sup>11</sup>

When a central bank of a country which is on the gold standard or some variant thereof, experiences sustained specie losses, it was expected to pursue a deflationary policy characterized by a decrease in the money supply and an increase in the short-term interest rate structure. In the last chapter, we saw that the Bank adopted policies

along these lines, although the selective restrictions against the Anglo-American houses and the joint-stock banks were unusual in terms of the adjustment policies supposedly used under the gold standard.<sup>12</sup> The short-term market rate of interest stood at five and one-half per cent between November 1836 and April 1837, the bank rate at this time being five per cent.

It was only during the second quarter of 1837 that the pressure was strongly felt in the financial markets. Total bank note circulation fell slightly during the second quarter of 1837, but it was only approximately three per cent below its high of the second quarter of 1836.<sup>13</sup> More significant as a sign of stringency was the decline in the value of bills of exchange created in England and Wales. This decline amounted to 11.5 million pounds, or a fall of about 15 per cent during the second quarter.<sup>14</sup>

The British economy soon felt these pressures,

Outside the financial mart occurrences reflected and intensified the stress within. Manufacturing in Manchester and Glasgow almost ceased. Unemployment mounted. The volume of bankruptcies moved to its highest figure since the second quarter of 1826 . . . Particularly Liverpool firms, both importing and exporting, fell by the wayside.<sup>15</sup>

Bankruptcy fiats recorded in the Annual Register rose from 283 in the last quarter of 1836 to 453 in the first and 520 in the second quarter of 1837.<sup>16</sup>

Like a giant seesaw, pressure on one side of the Atlantic was to increase the strain on the other side.

Because of declining cotton prices and increasing monetary stringency in America, British manufacturers found their American markets drying up. The declining demand for British manufactured goods, especially textiles, both at home and overseas, led to a further decline in the demand for cotton. At the fulcrum of this seesaw were the Anglo-American houses, and they were gradually cracking under the strain. Over-committed in cotton, unable to make payment on cotton bills, they were also unable to pay the firms which sold them the goods for export to America.

The situation of the weakest of these firms, the firms known as the 3W's, became generally known to the commercial and banking world of England during the last week of February, 1837. As long as they received discountable bills from America, however, they could keep their heads above water.<sup>17</sup>

Packet arrival dates were days of extreme tension and anxiety; if the ships arrived, it was wondered if any bills were on board; if the remittances came, there still remained the question of acceptance and payment; at once the names on the paper were scanned to ascertain whether or not they were reputable enough for the bills to be acceptable to the Bank of England for discount. Naturally enough, as reports of the mounting tension in the United States came to hand, the directors of the Bank and other men in the money market became still more dubious of bill remittances.<sup>18</sup>

### The New York Money Market

The United States also experienced poor grain harvests and as in England, they adversely affected the banks as well as the commercial community of the mid-West and New

York City. The poor American grain harvests of 1836-1847, "lessened the purchasing power of the farmers and crippled the merchants."<sup>19</sup> Just as in the cotton growing regions, growers in the mid-West and Eastern grain regions faced declining incomes and as a result, could not pay off their debts to the local merchants. Most likely they could not buy anything more than the essentials needed to carry them through the next growing season, if they were fortunate enough to obtain credit.

The inability of the farmers to pay their debts meant that the country storekeeper could not pay his bills owed to the merchants of the larger interior cities such as Buffalo, Cincinnati, or Pittsburgh. Thus, merchants and their bankers all along the chain of commerce and credit, extending from New York into the interior of the Ohio River Valley found themselves with unpaid bills, defaulted loans, and unsold merchandise in warehouses.<sup>20</sup>

The banks in New York City were in an especially serious bind. Difficulties experienced by interior banks, especially those in the mid-West and New England were transmitted to the city banks because of the existence of large bankers' balances in the city banks.<sup>21</sup> Bankers' balances are deposits held in one bank by another for the purposes of financing transactions of the latter or its clients.

The growth of this type of deposit in the banks of New York rested upon the basic fact that the volume of goods flowing out of New York towards the interior

necessitated an almost constant flow of funds into New York from the interior.<sup>22</sup>

A bank in Springfield, Ohio might keep balances with a bank in Cincinnati as it knew that its clients dealt with firms in that city and it normally accepted bills or had checks drawn on it which were payable to Cincinnati firms. It might have also kept balances in Cincinnati so that its notes were not returned to it for specie redemption. The Cincinnati bank in turn might have deposits in New York banks for the same reasons. If the volume of trade warranted it, the Springfield bank might directly hold deposits in New York banks.

Suppose the Springfield bank needed specie, exchange on New York or city bank notes. It drew on its deposits with the Cincinnati bank which in turn drew on its deposits with New York banks. The drawing down of these bankers' balances in New York could force the city banks to curtail their lending. If this drawing down of bankers' balances was not an isolated event, but part of a general movement, interest rates rose as the supply of funds available to the New York money market decreased. Stock and bond prices could fall as banks asked for payment on call loans--loans payable on demand, normally secured by stocks and or bonds.

Since the original deposit might have been loaned by one bank to another and by it in turn to a broker to carry his customer, it is apparent that the demand set in motion by the country banker might have considerable effect upon the money market.<sup>23</sup>



It was through such a process that a disturbance, a first, affecting banks in the interior, could be transmitted to the New York banks. Conversely, the inability of the city banks to meet their demand liabilities, such as occurred when they suspended specie payment in May of 1837, could immediately affect all banks which held such balances in the city.

Normally, bankers' balances in the city were drawn down during the fall:

It was only during the crop-moving period in the autumn that the direction of the flow was reversed, for country bankers at that time drew against the balances which had been building up during the spring and summer.<sup>24</sup>

Deposits of the large import houses of the city increased at this time of the year, as goods were shipped to the interior, thus, to some extent, neutralizing the drain on city banks. In 1836, the New York banks faced more than the normal autumnal problems.<sup>25</sup>

The import merchants now found it difficult to obtain payment on outstanding debts owed by the interior merchants. The drain on the city banks were thus intensified with the decrease in the inflow of offsetting deposits. Adding to this was the abnormal withdrawals of bankers' balances as the interior banks attempted to build up their specie holdings as well as to meet the demand for exchange on New York required by their customers. Total balances due banks and other corporations, i.e., bankers' balances, fell from \$14.3 million in January 1837 to \$8.3 million by June.<sup>26</sup>

The New York City banks were losing specie. We previously saw that the reduced supply of cotton bills led to specie exports. The city banks also lost some specie to the interior banks as the latter drew down their balances in the former. Besides these specie losses the city banks, like those in the interior, found themselves with defaulted loans and requests for extensions. These problems were reflected in the movement of short-term interest rates. After easing in January, they rose again in February and continued to rise until the end of April. During this same period Smith and Cole's index of Bank and Insurance stock prices fell from 113 to 97. In Philadelphia the price of Pennsylvania five per cent bonds fell from 101.5 to 97.5.<sup>27</sup>

So far, all of the difficulties faced by the New York city banks, and to a lesser degree, other banks in the nation were due to the response of the economy to events in the market place. However, the fiscal and monetary policies of the Federal government aggravated the position of the banks, especially their specie holdings. This came when they could least afford to lose additional specie. It is fruitless to try to blame the suspension of the banks on the Distribution. It is problematical whether any one cause, by itself, could have caused the panic and suspension, but taken together, the economic and non-economic events of late 1836 and early 1837 did have these effects. What we will attempt to do next is estimate the magnitude

of the Treasury deposit shifting, necessitated by the Distribution, and if possible, their effect on the specie holdings of the New York Banks.

The Distribution and Its Effects on the  
New York City Banks

From Table 6.1 we see that assuming no net revenue inflows during 1837, seventeen out of the twenty-six states had to receive transfers from other states for the distribution. The destabilizing effects of these, as well as all interstate, transfers depended not only on their magnitudes, but also on their direction in relation to the normal pattern of interstate and interregional payments.

Suppose that drafts are drawn on New York City banks, with payment made to banks in Massachusetts. If, at the time that the drafts are payable, New York City banks were net creditors, of Massachusetts banks, the transfers could be made by the use of bankers' balances or bills of exchange, without necessarily causing specie flows. On the other hand, if New York City banks were debtors of the Massachusetts banks, the possibility of specie flows increased. It should be recalled that drafts drawn on New York City accounted for slightly more than half of all interstate transfers.

While there have been some works which attempted to deal with the effects of the distribution on the banks, most of these are characterized by conceptual and arithmetic

TABLE 6.1.--The Amount of Treasury Deposits in the Several States During June and December, 1836, and the Amounts Due and Received by the States Under Sections 12 and 13 of the Deposit Act of June 23, 1836.  
(\$000)

State	Amount Due to Each State	Amount Received	Amount on Deposit June 20, 1836	Amount on Deposit December 19, 1836	Change in Deposits June-December	Amount That Legally Had to be Transferred <sup>a</sup>	Amount on Deposit During December-Amount Received <sup>a</sup>
Maine	1274.4	955.8	231.8	507.6	+ 275.8	+ 766.8	+ 448.2
N.H.	892.1	669.1	180.2	632.3	+ 452.1	+ 259.8	+ 36.8
Vt.	892.1	669.1	53.0	162.3	+ 109.3	+ 729.8	+ 506.8
Mass.	1784.2	1338.2	2077.2	2386.5	+ 309.3	- 602.3	-1048.3
R.I.	509.8	382.3	112.1	349.8	+ 237.7	+ 160.0	+ 32.5
Conn.	1019.6	764.7	103.8	741.1	+ 637.3	+ 278.5	+ 23.6
N.Y.	5352.7	4014.5	12108.3	11536.3	- 572.0	-6183.6	-7521.7
N.J.	1019.6	764.7	0.0	534.0	+ 534.0	+ 485.6	+ 230.7
Pa.	3823.3	2867.5	2643.2	2684.9	+ 41.7	+1138.4	+ 182.6
Del.	382.3	286.7	0.0	170.0	+ 170.0	+ 212.3	+ 116.7
Md.	1274.4	955.8	1447.7	1225.2	+ 222.5	+ 49.2	- 269.4
Va.	2931.3	2198.4	489.9	1238.7	+ 748.8	+1692.6	+ 959.8
N.C.	1911.7	1433.8	129.6	660.7	+ 531.1	+1251.0	+ 773.1
S.C.	1401.9	1051.4	484.7	936.6	+ 451.9	+ 465.3	+ 114.8
Ga.	1401.9	1051.4	637.0	558.9	- 78.1	+ 843.0	+ 492.5
Ala.	892.1	669.1	1057.7	1407.5	+ 349.8	- 515.4	- 738.4
Miss.	509.8	382.3	1619.6	1791.6	+ 172.0	-1281.8	-1409.2
La.	637.2	477.9	2568.4	4382.3	+1813.9	-3745.1	-3904.4
Tenn.	1911.7	1433.8	631.3	492.4	- 138.9	+1419.3	+ 941.3
Ky.	1911.7	1433.8	400.0	1802.8	+1402.8	+ 108.9	- 369.1
Ohio	2676.3	2007.3	1521.0	3130.9	+1609.9	- 454.6	-1123.6
Ind.	1147.0	860.3	1021.2	2136.4	+1115.2	- 989.4	-1276.1
Ill.	637.2	477.9	0.0	45.6	+ 45.6	+ 591.6	+ 432.3
Mo.	509.8	382.3	1890.3	1890.6	+ 0.3	-1380.8	-1508.3
Ark.	382.3	286.8	0.0	0.0	0.0	+ 382.3	+ 286.8
Mich.	382.3	286.8	1895.2	1462.2	- 433.0	-1079.9	-1175.4
Total	37468.9	29171.0	33303.2	42861.7	12462.4	27057.3	25912.5

<sup>a</sup>This assumes that no other additions or subtractions from the deposits of December, 1836 were made by the Treasury.

Sources: Col. 1, United States Congress, House, 24th Congress, 2nd Session House Document 62, p. 2. Col. 2, United States Congress, House, 25th Congress, 1st Session House Document 30, pp. 72-81. Col. 3, 4, United States Congress, Senate, 24th Congress, 2nd Session, Senate Document 29, p. 21.

errors which make them less useful for our purposes. Bourne's analysis makes use of data which shown gross changes in Treasury deposits and not those due solely to the Distribution.<sup>28</sup> Timberlake's analysis contains significant numerical errors besides the implicit assumption that the loss of Treasury deposits involved a sufficient concomitant loss of specie to necessitate a contraction of bank lending activity. As we shall see below, there was no simple relationship between losses of Treasury deposits and specie deposits, at least, insofar as the New York City banks were concerned.

Returning to the first mentioned problem with Timberlake's analysis: A total of \$2.347 million was drawn on New York City banks for interstate transfer during the Distribution. Of this sum, \$300,000 in transfers were dishonored, leaving a net interstate transfer authorized under the Distribution of \$2.047 million.<sup>29</sup> Timberlake, on the other hand, estimates the interstate transfers as \$1.431 million, the difference, \$716,000, amounting to approximately 50 per cent of his original estimate.<sup>30</sup>

The important point is not the accuracy of our data on Treasury deposits and transfer drafts so much as the validity of the assumption that there is a significant positive relationship between changes in Treasury deposits due to the Distribution and changes in the specie holdings of deposit banks. Furthermore, as we do not have information

on the cause of each change in a bank's specie holdings, how do we determine what portion of the change in specie holdings resulting from changes in Treasury deposits was due to the Distribution? As far as this question is concerned, there is no solution. We cannot allocate different specie changes to different causes.

In Table 5.5 of the last chapter we saw that there was no statistically significant relationship between transfer flows necessitated by the first payment of the distribution and changes in bank specie holdings. Yet, on the other hand, we saw in Table 5.2 that a significant relationship did exist between all changes in Treasury deposits and changes in deposit bank specie holdings. What this implies is that changes in Treasury deposits resulting from the Distribution may not have had a major effect on bank specie holdings.

The data we have on the Distribution supports the contention of Temin that little specie was transferred as an immediate result of the Distribution.<sup>31</sup> Most of the transfers were made with bank deposit credit or bank notes. But we do not know what then happened with these bank deposits or notes.<sup>32</sup> As so much attention in the literature was focused on the effects of the Distribution on the New York city banks we shall spend some time on these banks.

The total amount of money transferred from New York city banks for the first installment of the Distribution was \$1.73 million, of which \$497,000 was for interstate purposes.<sup>33</sup>

For the second installment which was payable on April 1, transfer drafts were drawn on New York City banks amounting to \$1.95 million, of which \$770,000 were interstate drafts. Thus, the total transfer drafts drawn on the city banks because of the Distribution, prior to the suspension amounted to \$3.68 million, of which interstate drafts, which supposedly entailed the greatest danger of specie losses, amount to \$1.267 million.

When we look at the New York city banks we find little evidence of large interstate specie flows arising directly from the Distribution. Of the nine states which received payment on transfer drafts--those for South Carolina for the third installment of the Distribution were not paid--we have information on the means used to make payment to five of the states. Three of the states, Connecticut, Delaware and North Carolina received all their distribution payments in bank drafts. Vermont received all but \$5,000 in bank notes while Tennessee received \$80,000 in specie.<sup>34</sup> How much of the specie received by Tennessee came from New York city banks we do not know. It seems then that little of the \$2.1 million in specie which the city deposit banks lost between December and May was due directly to the Distribution.

We have been talking about specie losses directly attributable to the Distribution, for we do not know about the indirect losses. Distribution payments made with bank drafts increased the amount of deposits due to banks outside

New York city. Bank notes sent to banks outside the city could increase the debtor position of the city bank vis a vis other banks or decrease its creditor position just as bank drafts did. We have already seen that there was a decline in bankers' balances during this period. We do not know how much of this was due to the exchange of bank drafts arising out of the Distribution for specie. Nor do we know how many bank notes were similarly redeemed. Thus we can never completely know the amount of specie shifting resulting from the Distribution.

But should we be so concerned about specie losses arising from the Distribution? We saw in Table 5.2 that the shifting of Treasury deposits had a greater effect on bank lending than did changes in specie holdings. If we are concerned about the effects of Treasury policies on the banks and the money market as well, we must also look at the changes in Treasury deposits.

Between December and the beginning of May, the net change in Treasury deposits at city banks was \$6.685 million. The Distribution accounted for approximately 55 per cent of total deposit losses. We use net changes as we do not know the intra-monthly changes in Treasury deposits. To what can we attribute the approximately \$3 million loss in Treasury deposits which were not due to the Distribution? Part of the loss might have been due to the shifting of Treasury deposits necessitated by Section One of the Deposit Act; as



of March 1, 1837, the Manhattan Company and the Mechanics Bank had \$1.2 million in excess Treasury deposits.<sup>35</sup> The payment of the ordinary expenses of the government, especially given the rapid decline in revenue from land sales, probably accounted for some portion of the loss.

From what we have just seen it is incorrect to conclude that the Distribution caused the New York City banks to suspend. All we can say is that the massive shifting of Treasury deposits, of which the Distribution accounted for approximately one-half, weakened the New York City banks. In this position they were not able to meet the demands placed on them in the early weeks of May. Our attention will now turn to the events--which can be characterized as a liquidity crisis--that immediately led to the suspension of the city banks and then the other banks in America.

#### The Suspension of the New York City Banks

During the winter and spring of 1837 cotton prices continued to fall and with it went many firms on both sides of the Atlantic which dealt in cotton. The first significant cotton factor to fail was Herman, Briggs and Company of New Orleans on March 4, 1837; they failed because "they were unable to realize enough from the sale of their cotton to pay the obligations they had incurred in purchasing it."<sup>36</sup> The news of the failure reached New York City around March 16, and the New York correspondents of the Southern house, J.L. and S. Josephs and Company, failed as did some of the

TABLE 6.2.--Amount of Money Transferred from New York City Deposit Banks for the First Three Payments of the Distribution.  
(\$000)

Bank	Amounts Transferred			Total Each Bank		Treasury Deposits as of Dec. <sup>b</sup> May <sup>c</sup>	Net Change in Treasury Deposits
	Between January 4th and Feb. 1st	Payable April 1	Payable July 1	Installments First Two	Installments All Three <sup>a</sup>		
Manhattan Company	180	250	310	430	740	2418	710 - 1708
Bank of America	180	200	425	380	805	1860	1184 - 676
Mechanics' Bank	200	220	370	420	790	3058	1255 - 1803
Seventh Ward Bank	88	88	88	176	265	325	150 - 175
Lafayette Bank	28	43	75	71	146	345	134 - 211
Phoenix Bank	293	233	154	526	680	1089	162 - 927
Leather Manufacturers	113	113	108	226	334	450	200 - 250
Tradesman's Bank	53	53	43	106	149	200	95 - 105
Dry Dock Company	25	25	40	50	90	150	80 - 70
Merchants' Bank	247	227	170	474	644	560	396 - 164
Union Bank	133	233	103	366	469	710	244 - 466
National Bank	75	150	75	225	300	120	170 + 50
Merchants Ex. Bank	115	115	90	230	320	230	50 - 180
Total, Each Installment	1730	1950	2051	3680	5732	11515	4830 6685

<sup>a</sup>May not equal total because of rounding.

<sup>b</sup>Reports as of December 12-17 except Lafayette Bank, Dec. 8; Merchants' Exchange Bank, Dec. 1.

<sup>c</sup>Reports as of April 24-May 5 except Mechanics' Bank, May 16.

<sup>d</sup>Col. 8-4.

Sources: Columns 1-5, United States Congress, Senate, 26th Congress, 1st Session, Senate Document No. 14, p. 46. Column 6, United States Congress, Senate, 24th Congress, 2nd Session, Senate Document No. 21, pp. 8-13. Column 7, United States Congress, House, 25th Congress, 1st Session, House Document No. 30, pp. 118-119.

other houses having relations with New Orleans cotton factors. According to Sumner, ninety-eight failures, involving \$60.5 million in liabilities took place in New York City between March and the end of the first week of April; in New Orleans, only four or five major cotton factors had been, so far, able to survive.<sup>37</sup>

On March 23, nineteen days after the first failure of an important cotton house in New Orleans, and most likely before the news spread to Great Britain, the 3 W's applied for and received aid from the Bank of England. The Bank probably granted this aid in order to prevent the failure of many smaller firms in London, Liverpool, and Manchester; not to have granted the aid would have also increased the flow of protested bills to America.<sup>38</sup> The news from England as to the conditions of the Anglo-American houses and the attempts of Baring to limit remittances further added to the gloom in New York.<sup>39</sup>

The failure of the cotton market led to attempts to find some substitute for the discredited cotton bills in the foreign exchange market.

Baring Brothers and Company proposed to the Bank of England that it should open through the Barings a credit of £2,000,000.<sup>40</sup>

It was hoped that such aid would ease the pressure in America and facilitate the repayment of the American short-term foreign debt.

The United States Bank of Pennsylvania was still the dominant American firm in the foreign exchange market and it was through it that the Bank of England hoped to sustain the western pillar of the Anglo-American trade. On March 22, 1837 the Bank of England sent a letter to Biddle setting forth the terms under which aid would be extended to American merchants and bankers needing foreign exchange.

The Bank of England was willing to accept bills drawn on the United States Bank for up to £2,000,000; one half of the bills so drawn to be simultaneously covered by the shipment of bullion to the Bank of England, (it was still losing specie); the other half to be covered by acceptable securities including State securities and bills of exchange. The former were to be redeemed within six months from the maturity of the drafts, the latter would bear five per cent interest per annum payable within a year.

At about the same time this letter was being sent to Biddle, he was formulating his own plans which were very different than those envisaged by the Bank of England and Barings.<sup>41</sup> Biddle's proposals centered on the use of post-notes--interest bearing notes, payable to the bearer, maturing in normally twelve months--which were to be used to obtain exchange on England.<sup>42</sup>

Basically, Biddle's plan was for the United States Bank of Pennsylvania to issue \$5,000,000 in post notes,

payable in London or in Paris or Amsterdam. Other important banks in the mid-Atlantic states were also to issue post notes, these banks being the Bank of America, The Manhattan Company, The Morris Canal and Banking Company, and the Girard Bank. As with the United States Bank, the notes were payable in London. The total amount of notes so issued was not fully certain, but estimates ranged between \$10,500,000 and \$12,000,000.<sup>43</sup> Supposedly, these notes were to be supported in the British market by the shipment of £1,000,000 in specie to London, but we have no evidence of such shipments taking place.<sup>44</sup>

The plan worked, but not for long enough. The post notes, to the chagrin of the Bank of England, were readily accepted by British investors who purchased them from, "merchant bankers in London who had accepted them as cover for credit to their American correspondent."<sup>45</sup> Unfortunately, these notes were not enough to fill the void left by the cotton bills. On April 1, Prime, Ward, and King wrote to the Barings about the condition of the New York City banks:

Specie generally is so scarce in the several banks that it can hardly be procured, indeed individuals cannot well demand it, in our present excited state.<sup>46</sup>

French banks stopped supplying credit to American firms by the 10th of April and on the 16th, the United States Bank had issued the last of its post notes.<sup>47</sup>

The New York State government also tried to come to the aid of the city banks, but by the time aid arrived, it was too late. The State planned to supply the city banks with \$3.5 million in state bonds which the banks could issue. The proceeds of this issue would not be immediately demanded by the state.

The loan was on the expressed condition that the Stock of the State, which were then above par in England, should be used as remittances, and to that extent lessen the demand for specie.<sup>48</sup>

As fate would have it, the enabling legislation was passed on May 9. The commissioners of the Canals also seems to have tried to aid the banks as we know that they offered the Bank of New York on May 4, a loan of \$100,000 at five per cent interest to be paid by July, 1837.<sup>49</sup>

All this aid was not enough. The immediate cause of the suspension was the difficulties with the Mechanics and the Dry Dock banks. On May 4, the city banks went to the aid of the former bank; within a day or two, similar action was taken to support the latter bank. According to a letter written by Gallatin on May 31, 1837, the run by depositors was caused by disclosures of fraud committed on the Mechanics Bank and the Dry Dock Bank. The sudden death of the president of the Mechanics Bank did not help the confidence of depositors.<sup>50</sup> The rest we know, the city banks suspended and others quickly followed.

Unlike the bank suspensions of the twentieth century, suspension during this period meant that banks did not close,

rather they did not redeem their current demand liabilities for specie.<sup>51</sup> In most of the major cities, committees were set up to regulate the banks until they resumed specie payments.<sup>52</sup>

Domestically, suspension eased not only the plight of the banker but also of those who borrowed from banks. Bankers were now under less pressure to call in loans and might be more willing to renew loans. Internationally, suspension meant that the gold exchange standard was also suspended. Individuals and firms no longer could obtain gold from American banks to pay foreign debts.

Contemporary writers tended to attribute the panic and subsequent suspension to "excessive speculation" although what the term actually meant was never made clear enough. The biases, or shall we say philosophical beliefs of the individual commentator determined in large part, the sources of the excessive speculation. The supporters of the Jackson and Van Buren administrations, in general, blamed the speculation on the actions of bankers, land speculators, and merchants. The Whigs, on the other hand, held that the causes lay in the monetary and fiscal policies of the Jacksonians, starting with the "Bank War" and culminating with the Specie Circular and the Deposit Act.

In a period where there were strong feelings about tariffs, it is not surprising that some blamed the speculation and inflation of 1835-1836 on reductions in the tariff or on the tariff itself. Taussig notes that Calhoun,

. . . ascribed the crisis of 1837 to the fact that duties under the Act of 1833 remained too high. The high duties brought in large revenues and caused a surplus in the Treasury; the deposit and distribution of this brought inflation and eventually a crisis.<sup>53</sup>

When we look at contemporary opinion on the immediate events leading to the suspension, opinion was surprisingly uniform. The blame was apportioned between the failure of the cotton market, the monetary policies of the Bank of England and the pressure placed on the New York City banks due to the Distribution.

The opinion of the Bank Commissioners of New York State fairly well summed up what happened.

The immediate causes . . . are well known. The simultaneous withdrawing of the large public deposits, and of excessive foreign credits, combined with the great and unexpected fall in the price of the principal articles of our exports with an import of corn and breadstuffs such as had never before occurred, and with the consequent inability of the country, particularly of the southwestern states, to make the usual and expected remittances, did at one and the same time, fall principally and necessarily on the greatest commercial emporium of the union.<sup>54</sup>

Even though we can be fairly certain about what brought on the panic and suspension, are we that clear as to what started the boom in the American economy? It has already been shown that there was no simple causal sequence which brought about the boom. Rather, there was a chain of developments where the importance of each link cannot be judged independently of the other link.

The boom in the Anglo-American cotton market, as Temin shows, was primarily due to rising demand conditions



in England, fostered in part by good grain harvests during 1833-1836.<sup>55</sup> The absence of any need to pay specie for imports of grain, enabled the Bank of England to pursue an expansionary monetary policy until the middle of 1836. At about the same time, the monetary policies of the Jackson administration, the Coinage Act of 1834, the removal of the Second Bank of the United States as a "quasi-central bank," and the depositing of Federal funds in state banks, led to a monetary expansion on the western side of the Atlantic. The easy money conditions in London not only enabled the American expansion to continue, even with large balance of trade deficits, but permitted massive inflows of specie into the United States as State and Local governments were able to sell long-term securities in the London and Continental markets. The sale of these securities facilitated a boom in the construction of canals and railroads. A booming Southern economy an expanding mid-Western economy and increasing specialization in the latter and the East provided the demand for goods and services which the banking system was eager to finance.

With the collapse of the cotton market and worsening conditions in the London money market, the flow of specie and credit was reversed. Internal strains added to these external strains and the American banks led by those in New York City, were forced to suspend. The American economy was in the grip of a liquidity crisis. It was not until

late 1839 that a renewed liquidity crisis was also to affect the economy in a more fundamental manner.

In the next chapter we will attempt to measure the economic consequences of the Panic of 1837, the attempts made on both sides of the Atlantic to revive the Anglo-American trade, and the eventual failure of these efforts in 1839.

## FOOTNOTES

### CHAPTER VI

<sup>1</sup>Fritz Redlich, The Molding of American Banking, Part II (New York: Hafner Publishing Co., 1953), p. 259, and the Financial Register, Vol. 2, p. 201, quoting the "United States Gazette" of May 12, 1837.

<sup>2</sup>See Appendix Table C-5.

<sup>3</sup>Thomas R. Dew, The Great Question of the Day (Washington: 1840, Thomas Allen), pp. 7-8. See also John C. Brown, A Hundred Years of Merchant Banking (New York: 1909), p. 79.

<sup>4</sup>Smith, p. 190. If bills were redrawn for lesser amounts, this meant smaller profits or even losses to the cotton factor. Obviously this was preferable to dishonored bills.

<sup>5</sup>Myers, The New York Money Market, p. 75, and Smith and Cole, Fluctuations in America Business, 1790-1860, p. 78.

<sup>6</sup>Smith, Second Bank of the United States, p. 187.

<sup>7</sup>New York State, Assembly, 61st Session, Assembly Document No. 71, pp. 4-5.

<sup>8</sup>Peter Temin, "The Causes of the Cotton Price Fluctuation in the 1830's," Review of Economics and Statistics, Vol. XLIX (November, 1967), p. 469, and Van Deusen, The Jacksonian Era, pp. 116-117.

<sup>9</sup>Hidy, p. 221.

<sup>10</sup>Hidy, pp. 183-184. Also see "Causes of the Present Crisis: Seven Articles," Charleston South Carolina Patriot, 1837.

<sup>11</sup>B. R. Mitchell and P. Deane, Abstract of British Historical Statistics (Cambridge: University Press, 1962), p. 291. The average price of wheat in England rose from 36

shillings per quarter in January 1836 to 59 shillings 6 pence per quarter by January 1837. See Niles National Register, October 7, 1843, p. 84.

<sup>12</sup>Tilden, Speech of Samuel J. Tilden, p. 3.

<sup>13</sup>Appendix Table B-12.

<sup>14</sup>Ibid.

<sup>15</sup>Hidy, House of Barings, p. 221.

<sup>16</sup>Norman J. Silberling, "British Prices and Business Cycles, 1779-1850," The Review of Economic Statistics, Vol. V (October, 1923), Supp. 2, p. 252.

<sup>17</sup>The Barings did everything but publish the names of these houses in an attempt to halt the remittances of bills to these firms as well as to another A.A. house, Lizardi. See Hidy, House of Baring, p. 225.

<sup>18</sup>Hidy, pp. 220-221.

<sup>19</sup>Dewey, p. 230.

<sup>20</sup>Scheiber, Business History Review, Spring, 1966, p. 58.

<sup>21</sup>Myers, The New York Money Market, Vol. 1, p. 111.

<sup>22</sup>Ibid., p. 103.

<sup>23</sup>Myers, Vol. 1, p. 136.

<sup>24</sup>Ibid.

<sup>25</sup>For a discussion of the autumnal pressures on the British money market, see W. Stanley Jevons, "On the Frequent Autumnal Pressure in the Money Market, and the Action of the Bank of England," Journal of the Statistical Society of London, Vol. 29 (June, 1866), pp. 235-253.

<sup>26</sup>See Appendix Table B-13. These figures included balances due other city banks. In June we know that about 61 per cent of the total was due to banks and corporations outside the city.

<sup>27</sup>Walter B. Smith and A. H. Cole, Fluctuations in American Business, 1790-1860 (Cambridge: Harvard University Press, 1935), p. 174. Hazard's United States Commercial and Statistical Register, Vol. 4 (March, 1841), p. 192.

<sup>28</sup>Bourne, The History of the Surplus Revenue of 1837, pp. 80-81.

<sup>29</sup>United States Congress, House, 25th Congress, 1st Session, House Document No. 30, p. 71.

<sup>30</sup>Timberlake, The Journal of Political Economy, p. 116.

<sup>31</sup>Temin, p. 132.

<sup>32</sup>Information on the means by which the Distribution was actually shifted can be found in United States Senate, 26th Congress, 1st Session, Senate Document, 14.

<sup>33</sup>United States Congress, House, 25th Congress, 1st Session, House Document No. 30, p. 74.

<sup>34</sup>See source cited in footnote 32, and Appendix Table A-5.

<sup>35</sup>See Table 6.2 and source cited for column 7.

<sup>36</sup>Hammond, p. 459, and William G. Sumner, A History of Banking in All The Leading Nations, Vol. 1 (New York: The Journal of Commerce and Commercial Bulletin, 1896), p. 267.

<sup>37</sup>Sumner, A History of Banking, p. 267, and the "National Gazette," April 22, 1837 cited in the Financial Register, Vol. 1 (October 25, 1837), p. 129.

<sup>38</sup>Hidy, pp. 220-221 and Clapham, Vol. 2, p. 157.

<sup>39</sup>Hidy, p. 219. This news most likely reached New York City during the second or third week of April.

<sup>40</sup>Hidy, pp. 217-218.

<sup>41</sup>Hammond, pp. 459-460, and Hidy, pp. 217-218.

<sup>42</sup>Leland H. Jenks, The Migration of British Capital to 1875 (New York: 1927), p. 90, and Davis H. Dewey, State Banking Before the Civil War (Washington: 1910), p. 104.

<sup>43</sup>Fritz Redlich, "Bank Money in the United States During the First Half of the Nineteenth Century," Southern Economic Journal, Vol. 10, No. 3 (January, 1944), pp. 216-217, and Hammond, p. 463.

<sup>44</sup>Hammond, p. 463. No information can be found to show that any specie shipment took place and in fact, Smith

and Redlich make no mention of planned shipments. Temin, p. 133 mistakenly assumed that it was only New York City banks that planned to ship specie.

<sup>45</sup>Ibid.

<sup>46</sup>Hidy, p. 220.

<sup>47</sup>Hidy, p. 220.

<sup>48</sup>Albert Gallatin, Suggestions on the Banks and Currency of the Several United States (New York: Wiley and Putnam, 1841), p. 35.

<sup>49</sup>H. W. Domett, A History of the Bank of New York, 1784-1884 (New York: 1884), p. 86.

<sup>50</sup>United States Congress, Senate, 25th Congress, 2nd Session, Senate Document, No. 365, p. 20.

<sup>51</sup>Hammond, p. 478.

<sup>52</sup>Redlich, Part II, pp. 259-261, details the operations of committees in several cities.

<sup>53</sup>Frank W. Taussig, "The Tariff, 1830-1860," The Quarterly Journal of Economics, Vol. 2 (April, 1888), p. 320, and Patriot, Charleston, South Carolina, p. 2.

<sup>54</sup>Caldwell, A Banking History of Louisiana, p. 60. See also, "The Constitutional Currency, No. II," National Gazette, April 8, 1837, reprinted in the Financial Register, Vol. 1, September 13, 1837, pp. 84-85, and Publius, Remarks on the Currency of the United States, p. 19.

<sup>55</sup>Temin, Review of Economic and Statistics, pp. 463-470.

## CHAPTER VII

### THE AFTERMATH OF THE PANIC: DISLOCATION AND RECOVERY

Even as the news of the suspension of the East Coast banks spread into the interior and eastward across the Atlantic, moves were already afoot to revive the prostrated cotton market and financial community. Though there would be heated controversy over the methods used--the necessity and timing of resumption, the role of the United States Bank and others in cotton speculation--there was little doubt that something would be done. With a revitalized banking and mercantile credit system and a stabilized cotton market, many believed that the boom times of the mid-1830's would return. In this chapter we shall first attempt to determine the economic damage resulting from the deflation and financial panic of 1837 and then see how the economy was able to recover almost entirely by the end of 1838.

#### Dislocation and its Economic Costs

If we divided the economy into three sectors, agriculture, commerce, and construction, we find that of the latter two (excluding urban construction which was to drop sharply in 1837 and the following years) commercial activity showed the most signs of being adversely affected by the panic.

As we saw in the last chapter agriculture was generally depressed in the latter half of 1836 and throughout 1837. In the South this was due to conditions mainly on the demand side of the cotton market while in the grain growing areas, poor crops depressed farm incomes. Without any information on the number of farm foreclosures or the rate of farm tenancy we cannot determine the extent of dislocation in the agricultural sector.

A problem common to all three sectors of the economy was the lack of money and credit. In more modern terms this is called a lack of liquidity. This not only inhibited trade and production but also made it more difficult for farmers, merchants and manufacturers to pay maturing obligations.

Many manufacturing companies throughout New England and the Central States failed not entirely because their business was unprofitable, but because they could not, in default of currency, realize upon their assets to meet immediate obligations.<sup>1</sup>

Merchants might have had warehouses filled with domestic and imported goods. They would be wary of selling them to Western and Southern merchants who could offer only bank notes and bills of exchange which were often totally unaccepted or accepted only at large discounts. During the last half of 1837 bank notes on Southern and Western banks either were not accepted or discounted at rates ranging from five to fifteen per cent, while discounts on domestic bills of exchange were often twice their 1836 levels.<sup>2</sup>



The money supply was estimated to have fallen by \$44 million even though there was a net specie inflow of approximately \$4.5 million in fiscal 1837. Aggregate bank lending fell by about \$39.5 million while gross current demand liabilities fell by approximately \$75.8 million. It is fairly obvious that the public, prior to suspension, was withdrawing specie from banks and not shifting deposits from what they considered less safe to more safe banks. These annual figures tend to understate the losses of specie incurred by banks, for while it is estimated that all banks lost about \$2.7 million in 1837, we know, for example, that New York City banks lost approximately three million in specie between January and July of 1837.<sup>3</sup> We saw in the last chapter some of the estimates of the mercantile losses resulting from the panic.

Prices, as shown in Table 7.1, fell along a broad front prior to the suspension of the banks. With suspension, price declines moderated except for industrial and cotton prices. In a later section we will examine the factors which contributed to the revival of cotton prices. Industrial prices fell in response to declining markets and contracting credit supplies. Perhaps contributing to the continuing decline in industrial prices was the accumulation of inventories during the flush times of 1836 which now had to be worked off before new orders could be placed.

TABLE 7.1.--Percentage Changes in Selected Price Series, 1835-1838.

Series	May 1836- May 1837	December 1836 -May 1837	1835-1837 High 1837-1838 Low	May 1837- 1838 Low
Agricultural Prices <sup>a</sup>	-13	-24	-28	+ 1
Industrial Prices <sup>a</sup>	-11	-12	-27	-14
General Commodity Prices <sup>a</sup>	-16	-20	-25	- 2
Wholesale Prices New York City	- 4	-10	-17	- 3
Wholesale Prices Philadelphia	- 5	-12	-22	- 5
Wholesale Prices Charleston	-20	-25	-26	- 1
Wholesale Prices New Orleans	-28	-23	-34	- 2
Wholesale Prices Cincinnati	-16	-18	-26	- 7
Railroad Stock Price Index	-40	-18	-55	-12
Bank & Insurance Stock Price Index	-25	-25	-28	+14
Cotton Prices New Orleans <sup>b</sup>	-26	-20	-56	-29

<sup>a</sup>Wholesale prices.

<sup>b</sup>No New Orleans prices given for June and July of 1837. London prices reached low in June. See Appendix Table C-5.

Sources: Agricultural, Industrial, Commodity, Railroad, Bank and Insurance. Walter B. Smith and Arthur H. Cole, Fluctuations in American Business, 1790-1860 (Cambridge: Harvard University Press, 1935), pp. 158, 159, 174, 179. Wholesale Prices: New York City, Philadelphia, Charleston, New Orleans, Conn.: Arthur H. Cole, Wholesale Commodity Prices in the United States, 1700-1861 (Cambridge: Harvard University Press, 1938), pp. 135, 142, 157, 179, 185. Cotton: Source cited Appendix Table C-5, Price Series A.

Manufacturing Industries and the Extent  
of Economic Dislocation

In terms of value added, the major manufacturing industries in the United States at this time were the cotton textile and leather and shoe industries in that order.<sup>4</sup> There were some dislocation in both industries during 1837 and 1838. It is difficult to determine, however, the effects of this on the economies of the regions in which they were located. Greely, Rezneck, Ware, and Hazard dealt usually in general terms and did not distinguish with sufficient care the events of the last half of 1837 and those of the last months of 1839.<sup>5</sup>

What information we do have tends to indicate that the leather and shoe industry went through more dislocation than the textile industry. In the latter,

After the peak of the third quarter of 1836, output stagnated at a lower level for a year. In the last half of 1837, sales fell sharply, output less rapidly and inventories accumulated. The severity of the contraction was limited to the 3rd and 4th quarters of 1837. Recovery was immediate and continued sporadically through 1838 and 1839.<sup>6</sup>

Caroline Ware noted that only some small mills failed and that the cotton mills were the first to recover after the panic.<sup>7</sup>

We have no quantitative information for the shoe industry but the qualitative information indicates a more serious situation. According to Blanche Hazard's study, the industry could be characterized in present-day terms as being one of monopolistic competition. During the

liquidity crisis of 1837, most of these small manufacturers failed. Hazard gives a 90 per cent failure rate.<sup>8</sup> Unfortunately we do not know how many of these firms were reorganized or merged into larger units and how many workers were made unemployed. Both Hazard and V.S. Clark noted that the panic was an important dividing line for the structure of the shoe industry. Prior to 1837 the market structure was characterized by a merchant-employer type of organization which, due to the widespread failures of the panic, changed into a structure dominated by the factory system.<sup>9</sup>

Industry was generally stagnant during 1837 especially because of the drying up of lines of commerce due to a lack of credit facilities and perhaps also to excess inventories.

#### Urban and Infrastructure Investment During the Suspension Period

In contrast to the stagnation of industry and commerce, the construction of canals and railroads continued to increase and in the process probably reduced the unemployment effects of the panic. Railroad construction expenses increased in 1837 over its 1836 level by 25 per cent--approximately \$2.8 million--though the rate of growth fell from the 50 per cent increase recorded in 1836.<sup>10</sup> Investment in canal construction almost doubled from \$4.4 million in 1836 to \$8.2 million in 1837, the increase being more than the total amount invested in 1835.<sup>11</sup>

Urban construction was not that fortunate, Rigglemans index of building in the United States fell from 52 in 1836 to 25 in 1837 and continued to decline, except for a slight upturn in 1841, until a low was reached in 1843. The building cycle in Boston reached a peak in 1836 and then fell, excluding 1839, until 1844. The number of buildings erected in New York City fell from 1,826 in 1836 to 840 in 1837 this being 37 below the level of 1834. It must be remembered that the fire in New York City in late 1835 most likely accounted for many of the buildings put up in 1836.<sup>12</sup>

There seem to be two possible explanations for the decline in urban construction at a time when that of internal improvements increased. The first is that these two types of long-term investment tapped different capital markets. The second is that the demand for such facilities fell.

Railroads and canals, especially when they could directly, or indirectly use the credit of state and local governments were able, until the middle of 1839, to borrow funds in the London and continental capital markets. We will see in a later chapter that because of expected differences in interest rates, British investors in 1843 sent funds to New York City to invest in mortgages. Because no studies have been made of the financing of urban construction during this period, we have no means of determining the relative importance or magnitude of such inflows prior to 1843.<sup>13</sup>

Urban construction was financed mainly by domestic sources. Such construction was financed either by the

builders using their own funds, by construction loans, or funds obtained through the use of some kind of mortgage instrument. These mortgages were sold to individuals, including as we have just seen foreign lenders, banks or insurance companies. The state of the money and credit markets in the United States in 1837 leads one to guess that such funds were hard to obtain.

A second possible explanation for the decline in urban construction deals with the demand side of the market, and asks the question whether there was overbuilding during the mid-1830's? We have no quantitative information which enables us to answer this question. It seems likely that if the reports of business failures were even partially true, there must have been an increase in vacancies as well as a decrease in demand for new construction on the part of the mercantile and manufacturing sectors in the stagnant condition of 1837.

Immigration, a source of demand for housing in general, even though it may not have generated any significant demand for new housing, reached a peak in 1837 and fell to a low point in 1838.<sup>14</sup> It is possible that immigration might have started to decline in the second half of 1837, but only if there were no lags between the inflow of immigrants and new construction could this explain some of the fall in construction. The absence of such a lag seems unlikely. The decline in immigration may have contributed to the continuing fall in urban construction in 1838.

Internal improvement projects were able to continue during 1837 and 1838 because of their ability to tap foreign capital markets. Urban construction, on the other hand was greatly dependent on domestic funds. It thus felt the force of the monetary panic and financial disorganization of 1837 and 1838.

#### The General Economic Situation After the Panic

We have been concentrating our attention mainly on the effects of the panic on commerce and manufacturing. That there was economic dislocation seems fairly clear. Because of the nature of agriculture we would expect that dislocation in this sector was less severe than in the cities. On the first page of this chapter we noted that there were no hints in the works covering this period of any widespread economic damage in the farm regions. On the other hand we do have some quantitative as well as qualitative information indicating that there were problems in the cities.

The slowing of commerce and of manufacturing production would have led to some unemployment, even if wages and other prices had some flexibility since inventories accumulated. This was due, if for no other reason than to the lack of money and credit. At the end of 1837, there were about 51,000 people listed on relief in the state of New York. This was a 35 per cent increase in the number listed in 1836; by the end of 1838 the number rose to 105,000. Most of this increase was concentrated in New York City as

the city's share rose from 59 per cent in 1837 to 76 per cent in 1838. Rezneck painted a vivid picture of the distress in New York City during 1837 while Caroline Ware wrote that the wholesale manufacturing of clothing which had begun in New York in 1835 failed in the panic.<sup>15</sup>

Importers were one of the most hard pressed of those in commerce. Their markets were drying up while they had to scramble to find means of paying off their British creditors. It might have been possible to continue trade without any adjustment of outstanding debts. If this could not be arranged then the debts had to be refinanced, if not at full value, then at some value which could enable the resumption of trade.

The straits importers were reflected in the sharp rise in the value of duty bonds not paid. Between January 1 and May 10, 1837 about \$162,000 in duty bonds were defaulted, the importers thereby giving up claim to the goods. Between May 10 and June 30, slightly over \$2.3 million in additional duty bonds were defaulted. New York importers were not alone in defaulting duty bonds, in fact importers to the South of the city may have been in worse difficulty. New York City's share of defaulted duty bonds fell from 73 per cent of the total in the first period to 63 per cent in the second. The ports to the South of New York had the largest per cent increase in such defaults.<sup>16</sup>

But this does not mean that the situation in New York was not serious. The assessed value of real property



in the city fell 16 per cent in 1837 and personal property fell 11 per cent. The total decline in real and personal property amounted to approximately \$45.7 million, in both absolute and percentage terms this exceeded the declines recorded during the entire 1839-1843 period.<sup>17</sup>

The general effects then of the economic disorganization caused by the panic was mainly concentrated in the cities and appears to have been more in pecuniary terms than in real terms. However, this can only be a tentative conclusion as too little is still known about the output of various industries during this period as well as what actually took place in the agricultural regions of the North and South during 1837 and early 1838.

#### The Situation on the Eastern Side of the Atlantic

In Great Britain the Bank of England by the middle of the year, in part at the expense of the American banks, stemmed its bullion losses and slowly began to fill its coffers. The London money market gave the surface appearance of a gradual easing as the short-term interest rates fell from 5.5 per cent in the first quarter to 3.4 per cent by the end of the last quarter of 1837. The supply of money and credit, on the other hand, contracted, the former by only about one per cent between the first and fourth quarters of 1837 while the latter decreased by 22 per cent.<sup>18</sup>

The Anglo-American houses were in serious trouble as the directors of the Bank of England decided on June 1 not to extend any more aid to the 3 W's and they suspended the next day. Barings estimated that the suspension of those three houses as well as four smaller ones would result in the return to the United States of at least £845, 000 in unpaid bills of exchange.<sup>19</sup> One can imagine what happened to those American firms which has purchased these bills to pay their British creditors. With the situation in the American market and the decline in credit at home, British exports fell by 20 per cent. Prices and output fell in response to a declining market for British manufactured goods at home and abroad, the domestic price index falling by 10 per cent and Hoffman's index of industrial production, excluding building, fell by five per cent during the year.<sup>20</sup>

The economic problems experienced by the United States and Great Britain was also being felt on the Continent. In France, the papers carried reports of reductions in production and unemployment in the French manufacturing districts. In Sweden the economic difficulties in the United States and falling prices in Great Britain were being blamed as the source of the suspension in the Swedish iron trade. The clock industry in Switzerland was claimed to be suffering from a decline in trade that had not been experienced in 23 years. The Swiss cotton textile industry was also hard pressed, not only from the general economic

downturn which seemed to cover the Eastern as well as the Western side of the Atlantic, but also from new and expanding competition from Alsace and Southern Germany.<sup>21</sup> It appears then that the United States was not alone in its problems. When the leading industrial country of the world, Great Britain, ran into difficulty, its problems found their way not only to America but to the other industrializing countries of the world.

The Movement Towards Recovery in the  
United States

Would the merchants, farmers, workers, bankers and politicians wait while the classical remedy of deflation had run its course or would action be taken by the private or public sectors to bring an end to the deflation and to start a recovery? The action of the American banks in suspending was itself a positive step which reduced some of the deflationary impact of the period by not forcing a further contraction of an already contracting money and credit supply. There were those however, who wanted the inflation to run its course.

The advisers closest to Van Buren looked upon the financial crisis as a healthful deflation that would rid the country of speculators and gamblers and restore the economy to stable levels. This would take place naturally, without any intervention by the national administration.<sup>22</sup>

In the remainder of this chapter we will examine the major steps taken to revive the economy. Our attention will center on the cotton market, the attempts of the northern banks--led

and pushed by those of New York City--to resume specie payment, and finally the monetary and fiscal actions of the federal and state governments.

#### The Revival of the Cotton Market

The first order of business in the South and for all those directly or indirectly dependent on the trade of the South and its main staple, cotton, was to stop the decline in cotton prices. With this accomplished and the market stabilized attention could then be turned to the task of paying off the debts accumulated during 1836 and early 1837. The United States Bank of Pennsylvania, later followed by some other Southern banks and cotton firms attempted to halt the decline in cotton prices.

They planned to do this by buying cotton and holding it off the British markets expecting that the British spinners would eventually deplete their raw cotton inventories and begin to buy new cotton driving up its price. If this attempt at supply restriction was to work, demand conditions for British textiles had to improve and sufficient credit had to be available to the cotton speculators to enable them to keep cotton off the market until prices rose. The need for credit was especially vital if the new crops were large. Unfortunately, by the beginning of 1839 demand for British textiles had not revived and credit was again scarce.

The actions of the United States Bank were motivated in part by the desire of Biddle to help revive the economy

and partially by the need to obtain foreign exchange to pay off the bank's maturing obligations in Great Britain, and Europe. He also wanted to protect the bank from further losses in cotton bills and its other short-term and long-term investments in the South. Much has been written about Biddle's attempts to corner the cotton markets in the 1838-1839 period. Our attention will center on the means used to finance these operations, and what did happen to the cotton market.<sup>23</sup>

The United States Bank set up two organizations in England to facilitate its cotton operations and to handle its financial transactions on the Eastern side of the Atlantic. Humphreys and Biddle were set up in Liverpool to receive cotton shipments consigned to it by agents of the Bank in the Southern United States. In London, Samuel Jaudon, cashier of the Bank, established an agency which represented the Bank in its British and Continental dealings and furnished aid to Humphreys and Biddle when they needed funds to keep cotton off the market. These two tasks assigned to Jaudon could, and did conflict, causing serious problems for all concerned in late 1839 and 1840.<sup>24</sup>

Samuel Jaudon arrived in London during the first week of November, announced the creation of his agency of the bank, opened a drawing account at the Bank of England, almost immediately began to accept drafts issued on him by the Philadelphia bank, and raised funds to meet his obligations by discounting bill remittances, by issuing post notes, and by selling bonds of various States and corporations. At the same time the firm of Humphreys and Biddle was set up in Liverpool to receive cotton . . . . If and when

Humphreys and Biddle needed funds in order to hold cotton for higher prices, it was able to draw on Jaudon in London.<sup>25</sup>

Soon other Southern banks, as well as some Anglo-American houses including the Baring's followed the lead of the United States Bank.<sup>26</sup> In November 1838, the Union Bank of Mississippi--which was to lose its charter in July 1840--distributed a circular to the planters declaring the bank's willingness to advance \$60 a bale on good cotton weighing 400 pounds, payable in 12 months. This was 15 cents a pound, a price reached in the 1830's only in the peak of the cotton boom and a price not seen for almost two years.<sup>27</sup>

It was fortunate for the cotton speculators that monetary conditions in Great Britain eased in 1838. The 1838 cotton crop was abnormally large and the cotton spinners were trying to buy as little cotton as possible to force down prices. The estimated stock of raw cotton held at the mills and by speculators as of the end of December, 1838 was the highest for the entire 1830's.<sup>28</sup>

Cotton prices were stabilized in early 1838 but during the first three quarters of the year they did not reach nine and one-half cents a pound. This meant problems for some speculators and planters. The Financial Register carried the following excerpt from a letter supposedly describing conditions in Mississippi in the spring of 1838.

The times are truly alarming here. Many plantations are entirely stripped of negroes and horses by the marshall or sheriff, and to add to our other

difficulties, our bank paper is getting worse and worse every day.<sup>29</sup>

Not until late October and November did cotton prices rise significantly. The average price of cotton in New Orleans rose by 18 per cent in October, this being the first time in a year that the price had risen to over ten cents a pound. British prices began to increase in the following month.

How successful was the action of the speculators in maintaining cotton prices? The end to the decline in cotton prices in 1838, in the face of the largest crop of the 1830's indicates that they had some success. The rise in cotton prices in the last quarter of 1838 and the early months of 1839 probably was due in part to the actions of the speculators, but they were aided by a crop which was 23 per cent smaller than that of 1838. Speculators helped to stabilize the price in 1838.

Only as long as the speculators could obtain credit with which to refinance cotton bills could they hope to keep cotton off the market in sufficient volume to maintain prices. In 1839 the credits again dried up, and with it the hopes of the United States Bank and many Southern banks, cotton factors and planters. The collapse of the London credit market meant a sharp drop in prices as cotton was thrown on the market to obtain funds to pay the maturing cotton bills. Speculation, backed by ample credit could

be stabilizing, but without the credit, it could be and was destabilizing.

The Resumption of Specie Payments  
By the Banks

While the struggle over cotton was taken place in the South and in Liverpool and Manchester, another struggle, which was also important to the American economy was taking place in the North. The bankers of the major east coast cities were divided over the question of when to resume specie payments. The New York bankers were almost alone in their insistence on a speedy resumption. Most of the other bankers along the East coast and throughout the West and South, eventually led by the United States Bank pressed for resumption when American trade, especially cotton and its all important cotton bills, would be in a better shape to sustain a resumption. The most frequently discussed date for resumption being around January 1839, when the new cotton crop would start to go to market.<sup>30</sup>

The policies of individual bankers as well as those brought together in the banking groups formed in various cities to handle inter-bank relations during the suspension were most likely determined after weighing the often conflicting needs of solvency and those of the bank's major customers. The more loans a bank made to mercantile and agricultural sources--these being the major loan customers--the greater the danger of insolvency if prices were to



decline further. On the other hand, without these loans, there was the possibility of widespread failures which also threatened the bank's solvency.

Bankers also had to take into account various Federal and state regulations and actions which delimited the alternatives open to the banker. It was not until May 31, 1838 that the Specie Circular was repealed. Even though the banks suspended in May, the fourth installment of the Distribution was not postponed until October. State regulations dealing with resumption posed the most serious problems for the banks and nowhere was this more so than in New York and Pennsylvania.

Most of the banks in New York were incorporated under the Safety Fund Act of 1829 which contained a clause requiring the forfeiture of a bank's charter if it suspended. Enforcement of this clause was postponed for a year so that the banks had until May 10, 1838 to resume specie payment or lose their charters. In Pennsylvania, the governor declared August 13, 1838 as the date by which banks had to resume specie payments.<sup>31</sup> The story of the struggle for resumption is found in Hammond and W.B. Smith as well as in the various issues of the Financial Register. Our task is to see how the New York City banks prepared themselves for resumption, the aid given to them by the Bank of England and finally, the short-run effects of resumption on the economy.

To prepare for resumption the New York City bankers knew that they had to reduce all potential and actual claims on their specie holdings while at the same time building up these holdings. The banks reduced their lending activities which resulted in some reduction in their current demand liabilities. The reduction in loans was greater than the latter as loans were paid off not only with notes and checks of New York city banks but also those of other cities and perhaps in specie. Some of the reduction in the loans of New York City banks as well as the others listed in Table 7.2 may have resulted from the writing off of bad debts but we do not know whether or not this was actually done.

The New York City banks were not alone in contracting their lending activities nor in having the majority of this contraction taking place before the end of 1837, when there was still uncertainty as to when they would resume. In Table 7.2 we have eleven observations covering the period between the suspension of the New York Banks and their resumption. Eight out of eleven observations shows a contraction of lending activities and of these eight, six had their greatest contraction prior to the end of 1837.<sup>33</sup> Only in New Orleans, Mississippi, and Illinois was there an expansion of bank lending activities during this period and the former two most likely was due to speculation in cotton. There is no readily apparent explanation for the

TABLE 7.2.--Percentage Changes in Bank Lending, Specie Holdings and Current Demand Liabilities, Selected Banks, April 1837-June 1838.

Banks and Dates <sup>a</sup>	Loans and Discounts	Specie	Current Demand Liabilities <sup>d</sup>
<u>New York City</u>			
June-Dec. 1837	-19	+ 39	+ 2
Dec. 1837-May 1838	- 9	+177	- 6
June 1837-May 1838	-27	+284	- 5
<u>Boston<sup>b</sup></u>			
May-Dec. 1837	n.g.	+ 17	+45
Dec. 1837-May 1838	n.g.	+ 29	- 9
May 1837-May 1838	n.g.	+ 52	+32
<u>Philadelphia<sup>c</sup></u>			
Jan.-May 1838	- 2	+ 2	+18
<u>United States Bank of Pennsylvania</u>			
May-Dec. 1837	-34	+125	-15
Dec. 1837-April 1838	+11	+ 17	+20
May 1837-April 1838	-26	+162	+ 2
<u>New Orleans</u>			
May-Dec. 1837	+ 9	+ 17	-10
Dec. 1837-Mar. 1838	- 6	+ 9	-15
May 1837-Mar. 1838	+ 2	+ 28	-24
<u>Rhode Island</u>			
May-Dec. 1837	+ 4	+ 47	+ 5
Dec. 1837-May 1838	- 3	+ 23	n.g.
May 1837-May 1838	- 1	+ 80	n.g.
<u>New Hampshire</u>			
May 1837-Feb. 1838	-13	n.g.	-44
Feb.-May 1838	- 2	+ 3	- 8
May 1837-May 1838	-15	n.g.	-48
<u>Maine</u>			
June 1837-Jan. 1838	- 5	- 19	- 6
Jan.-June 1838	-13	+ 10	-31
June 1837-June 1838	-17	- 11	-35
<u>Virginia</u>			
April 1837-Jan. 1838	-13	- 13	-25
<u>Kentucky</u>			
May-Dec. 1837	- 4	+ 1	- 9
Dec. 1837-May 1838	- 1	+ 11	+ 2
May 1837-May 1838	- 5	+ 13	- 7

TABLE 7.2.--Continued.

Banks and Dates <sup>a</sup>	Loans and Discounts	Specie	Current Demand Liabilities <sup>d</sup>
<u>Georgia</u>			
April-Oct. 1837	- 5	- 13	- 35
Oct. 1837-April 1838	- 1	+ 7	+ 44
April 1837-April 1838	- 6	- 7	- 7
<u>Mississippi</u>			
May 1837-Jan 1838	+ 2	0	+ 40
Jan.-June 1838	+44	- 2	+ 46
May 1837-June 1838	+47	- 2	+104
<u>Illinois</u>			
June 1837-Jan. 1838	+ 9	- 4	- 6
Jan.-May 1838	+ 4	+ 12	+ 20
June 1837-May 1838	+14	+ 8	+ 12
<u>Ohio</u>			
May-Dec. 1837	-12	+ 16	- 28
Dec. 1837-June 1838	- 8	+ 12	+ 3
May 1837-June 1838	-19	+ 30	- 25

<sup>a</sup>Dates for May 1837 are after May 10, 1837.

<sup>b</sup>Associated Banks of Boston, excluding Massachusetts, Franklin, and Lafayette Banks. No information is available as to the importance of the excluded banks though the Franklin was a deposit bank and its loans and discounts as of Feb. 1837 were less than \$300,000 making it the smallest deposit bank in Massachusetts. See Table 3.3, source cited for Col. 2.

<sup>c</sup>Excluding the United States Bank of Pennsylvania.

<sup>d</sup>Gross figures, including interbank holdings.

n.g. = not given.

Sources: New York City; Appendix Table B-10. Associated Banks of Boston: Financial Register, Vols. 1 and 2. Philadelphia Banks: United States Congress, House 26th Congress 2nd Session, House Document 111. United States Congress, House, 29th Congress, 1st Session, House ex. Document 226. New Orleans: Merchant's Magazine, Vol. 7 (Oct. 1842), p. 361. United States Bank of Pennsylvania: Financial Register, Vol. 1, pp. 378, 380, 381. State Banks: United States Congress, House, 26th Congress, 2nd Session, House Document 111.

actions of the State Bank of Illinois which was almost a monopoly in the state, except if it was forced to extend its loans to support state activities. We will see that this bank would fail in the aftermath of the panic of 1839.

There appears to have been no simple relationship between the actions of the banks and the movement of prices although contemporary and later writers believed that preparing for resumption entailed further deflation and economic dislocation.<sup>34</sup> During the same time period in which New York City banks contracted their current demand liabilities by five per cent and lending by 27 per cent, prices fell by .09 per cent. In Philadelphia on the other hand, bank lending fell by two per cent and gross current demand liabilities rose by 18 per cent but prices fell by four per cent. Finally, in Cincinnati, prices rose by six per cent even though the banks of Ohio contracted the lending and gross current demand liabilities by 19 and 25 per cent respectively.<sup>35</sup>

While the banks curtailed their lending activities, their specie holdings increased to such an extent that by the end of 1838, banks held more specie than at any time during the 1830's and early 1840's. How were the American banks, especially those of New York City, able to increase their specie holdings? In general, banks could obtain specie from either domestic or foreign sources.

Dishoarding by the private sector as well as by governments, when specie from these sources were not kept in banks, and mining constituted the sources of the net increases in specie held by banks that did take place from domestic sources. Domestic production did not become significant as a source of specie until the discoveries in California, the estimated value of gold and silver production in 1838 being slightly less than \$500,000.<sup>36</sup> According to Berry, specie flowed from the interior to the Eastern seaboard in 1838 as domestic rates of exchange rose above interregional specie export points.<sup>37</sup> We do not know the original source of this specie flow, that is whether it came from dishoarding as banks called in loans--this increased the size of bank specie holdings--or whether it represented merely a transfer of specie from Western and Southern banks to those on the East coast. Unless dishoarding was large, which seems unlikely, domestic sources of specie appear to have played a relatively small role in the growth of aggregate bank specie holdings during 1838.

In fiscal 1838, that is from October 1, 1837 to September 30, 1838 the United States imported an estimated \$17.75 million in specie of which approximately 50 per cent came from England and about 13 per cent from France. Exports of specie totaled about \$3.5 million, leaving a net specie inflow of approximately \$14.24 million which was the third largest in the period from 1830 to 1845.<sup>38</sup>

What caused this massive inflow of specie? The price deflation in the United States combined with the temporary drying up of British credits and the decline in the money supply led to a sharp drop in American imports. Exports fell only slightly, the net result was a balance of trade surplus of a little more than \$6 million.<sup>39</sup> State and local governments continued to borrow in the London and Continental capital markets throughout this period. The combination of a surplus on the balance of trade account and long-term capital inflows in combination with two unusual transactions, resulted in the exchange rate falling below the specie import point between May and August of 1838.<sup>40</sup>

The two non-recurring transactions were: (1) the continuing payment of the French indemnity resulting from the Napoleonic wars, the so-called French Spoliation Claims; (2) the loan granted by the Bank of England to aid the American banks, especially those in New York City to resume specie payments.

The French Spoliation Claims pose a problem in that we have conflicting information as to the total amount paid to the United States and to the amount received by the United States--that is its citizens--in 1838. According to Redlich, these payments totaled 25 million francs while Smith placed the figure as 18.5 million francs. As a franc was equal to approximately 19 cents, these were \$4.75 and

\$3.5 million respectively, but the historical statistics of the United States has these payments equalling \$5 million.<sup>41</sup>

We are interested not so much in the total amount of these payments, as the amount paid in 1838. There is fairly close agreement on this point between Smith and the H.S.U.S., the former estimating \$900,000 while the latter \$1 million. These indemnity payments, if they were made entirely in specie, and this is what Smith implies, accounted for 40 or 50 per cent of the specie imports from France in 1838.<sup>42</sup>

More important than these French payments was the loan from the Bank of England. This loan not only accounted for slightly more than 50 per cent of United States specie imports from Great Britain, but it also had positive psychological effects on the New York banking community. According to Redlich,

The gold loan had little if any influence on actual business conditions, but it contributed to the atmosphere of confidence which prevailed that summer. What it did was to stiffen the neck of the New York banking fraternity and make it insist on a policy of early resumption.<sup>43</sup>

On March 15, 1838, the Bank of England using the services of Baring's and its agents in New York City, Prime, Ward and King, shipped the first installment of a £1 million (\$4.875 million) loan in gold to the United States. According to Clapham, £680,000 was shipped by the end of March while Hidy estimates that £700,000 was shipped by June 15.



There seems to be confusion as to the amount shipped and its final distribution. Clapham writes that,

. . . the sovereigns were to be 'disposed of' by Prime Ward and King, the purchasers bills to be remitted to the Bank. This completed a transaction about which little more is known.<sup>44</sup>

Hidy, writing about five years later, gives a partial breakdown of the distribution of the loan but this does not solve the problem. He lists the New York City banks as purchasing approximately £103,000, with a Boston Bank buying about £20,000 and the United States Bank about £300,000, or a total of £423,000. But Hidy then remarked that, "only about £330,000 remained in the hands of Prime, Ward and King on May 25."<sup>45</sup> If we add this £330,000 to the £423,000 purchased by the American banks we have a total of £753,000, which exceeded by £53,000 the amount of specie which Hidy said was shipped by June 15.

The actual distribution of the loan still seems open to question, but the New York City banks seemed to have received, directly or indirectly, a substantial portion of the loan for by the first week of May, 1838 they had almost \$6.6 million in specie. This was an increase of about \$3.2 million, or slightly less than £670,000 increase during the month of April.<sup>46</sup> Whatever the source, a balance of trade surplus or long-and short-term capital inflows, by the spring of 1838 most American banks increased their specie holdings to decade highs.

Resumption and Recovery

The New York banks resumed specie payments on May 10, 1838, but it was not until August 13 that the banks of Philadelphia, Boston and other cities along the East coast resumed; by January most other banks in the United States appear to have followed suit.<sup>47</sup> With resumption most banks in the country, or at least all those shown in Table 7.2, excluding Massachusetts, expanded their lending activities. The American economy reached the low point of the 1837-1838 deflation during the spring of 1838 and the recovery picked up steam in the early fall of the year, the resumption of the banks may have been a contributing factor to the recovery and in the next few pages we will attempt to see if it was so.

In the South, wholesale prices at New Orleans and Charleston started to rise during the spring, at about the same time that cotton prices reached their 1837-1838 lows and the banks of New York were to resume specie payment.

Cotton prices remained relatively stable until September, and though New Orleans prices reached their low in March, English prices of Georgia upland cotton did not reach bottom until August. The discrepancy in low points may be due to different classifications of cotton or perhaps to the actions of cotton speculators on the western side of the Atlantic. New Orleans cotton prices rose by 7/10 of a cent in April (nine per cent), and an additional

one-half cent in May to 9.3 cents a pound but it then fell between July and September as is shown in Appendix Table C-5.

When we look at the pattern of general price movements we find that wholesale prices at New Orleans reached bottom in March and April and the largest absolute and percentage increases of 1838 came in May, the month the New York banks resumed. The second largest percentage increase came in September with the second largest absolute increase coming the next month, when cotton prices also rose sharply.

At Charleston, prices reached their low point in April, the largest absolute and percentage price increases taking place in October. The second largest percentage increase came in May. This was basically the reverse of the pattern of price movements in New Orleans.<sup>48</sup>

Resumption, by leading to an expansion of the supply of money and credit could facilitate or induce an expansion of economic activity. We can look at the movement in the discount rate on bills drawn on these two Southern ports and sold in New York City as an indicator of the monetary ease transmitted to them because of the resumption in New York. The largest absolute decline in the discount on New Orleans bills took place between May 12 and June 2, with the largest percentage decline occurring in October. In Charleston the pattern was similar except that the largest

percentage decline took place a month later.<sup>49</sup> Though this information tends to indicate that resumption in New York eased credit conditions with these two main Southern ports, we should expect that it took some time for this to be felt throughout the Southern economy as a whole.

We should not overestimate the effects on the Southern economy of the easing of credit in New York. We saw in a previous chapter that Southern banks did not maintain any substantial working balances in New York Banks at this time. More importantly, according to Smith, the easy credit policies pursued by Philadelphia merchants and bankers during the suspension period as contrasted to the tight money policy in New York caused a large part of the New York City mercantile trade to shift to Philadelphia.<sup>50</sup>

Contemporary sources indicate that it was the resumption of the late summer which had, along with the large rise in cotton prices in October, the greatest effect on the Southern economy. The New York Gazette on August 1 wrote that as a result of the decision of the Philadelphia banks and others to resume on August 13,

. . . a large number of merchants from Virginia and other Southern states have made their appearance in our market, who had not been this way on business before since the suspension in 1837.<sup>51</sup>

The Mobile Examiner on October 9, two months after the late summer resumptions, reported that,

. . . already has the restoration of confidence in our banks and merchants been displayed by the rapid

decline of exchange on northern cities and the course now pursued by northern creditors.<sup>52</sup>

It appears that the recovery of economic activity in the South paralleled the movement of cotton prices. The resumptions especially those of late summer, facilitated this recovery and could have in part induced some of it if it enabled cotton prices to rise by supplying the funds needed by speculators. As the Mobile paper indicates, perhaps the most important outgrowth of the resumption of Southern banks as contrasted to those in the North, was the renewed confidence in the money and credit instruments of the South.

When we turn our attention to the West, we find a similar pattern of price movements, that is, two significant rises, the first in the spring, and the second in early fall. As with our discussion of the South, it is difficult to distinguish between the effects of resumption and those of the revival in the grain trade. According to Berry, the West was less affected by the suspension and deflation than the East and South. He noted, for example, that Western prices stayed above seaboard prices throughout 1838, whereas this was not true in the 1839-1843 deflation.<sup>53</sup> Cincinnati prices reached their 1838 low in April and then started to increase with the largest absolute and percentage increases coming in September during the fall harvest and a month after the resumption of many banks outside New York; the second largest price increase coming in

June. Looking at bills of exchange drawn on Cincinnati and sold in New York City, we find the greatest absolute decrease in their discount occurring during May with the largest percentage decrease in September.<sup>54</sup>

Resumption of the New York banks had some effect on economic activity in Cincinnati, and perhaps other points in the West. Contemporary sources tend to support this hypothesis. The Genessee Farmer reported that,

. . . the resumption of the New York banks early in the season and the promising appearance of the wheat crop soon changed the face of things, and as the season advanced, the gloom and shadows which had hung over the farmer and the financial matters of the country gradually cleared away.<sup>55</sup>

Scheiber writes that further west, the large grain crops and general signs of economic recovery (he did not elaborate on this), and the availability of credit from the New York banks enabled Cleveland banks, specifically the Commercial Bank of Lake Erie, to expand its lending activities.<sup>56</sup>

As in the South, it was the combination of an increased supply of money and credit coming after the resumptions of spring and late summer and a good agricultural market, in this case, wheat, that together led to the recovery of mid and late 1838 and early 1839.

So far we have looked at the possible causes of recovery in the South and mid-West. We will now examine what happened in the East. Our attention will first concentrate on the general pattern of recovery in the East. The possible relationship between the actions of the

Federal and state governments and the recovery process will then be looked at. Finally we will turn to developments in Great Britain. What happened in that country obviously influenced not only the resumption of the American banks but also the temporary recovery in the cotton trade and the Anglo-American trade in general.

We saw in the preceding section a quote from the New York Gazette indicating the importance of the late summer resumption to the commerce of New York. When we look at the wholesale price indexes for New York and Philadelphia we find that the largest price increases came after the summer resumption and the beginning of the fall harvest season in the West and the South.<sup>57</sup> At New York City, the largest absolute and relative price increases came in October with the second largest occurring in the preceding month; in Philadelphia the largest increases came in September with the second largest in the following month.

New York prices fell in June and remained stable until September indicating that there was no immediate affect on prices arising from the resumption of the New York banks. If there was some degree of unemployed resources there could have been an increase in output without any concomitant price increase. We should also take into account the time lag between an expansion of the money and credit supply and movements in prices, though the time lag in the fall appears to have been very short.

There does seem to be another reason for the stability of prices in New York during June-August. The banks may have been willing to lend and did lend but most of this might have been for financial transactions as contrasted to spending for consumption or investment. According to Keynesian analysis, if the supply of money is increased when people hold the amount of money they desire to hold, the excess money will be used to purchase bonds, driving their prices up and lowering the rate of interest until all the excess money has been used. Lower interest rates were assumed to cause an increase in investment thereby increasing aggregate demand.

According to the simple classical transaction demand explanation, the increase in the supply of money at full employment income leads to rising prices. The assumption is that these new money balances are spent, thus the increase in prices.

One can also imagine a combination of these two approaches. The increased supply of money is first used for financial transactions, but eventually the newly created money comes into the hands of those who use it to buy goods and services. This can explain part of the lag between increases in the supply of money and credit and increases in economic activity, especially as measured by changes in aggregate price indexes. It should also be remembered that the greater the extent of unemployed resources, the longer



the possible lag between changes in economic activity and changes in prices.

When we look at the indexes of security prices, we find the largest increases of 1838 between the months of May and July. This tends to support our hypothesis that the financial markets and then only later the real markets were affected by the increase in the supply of money and credit. The index of railroad share prices rose fourteen points in May and June, this accounted for 78 per cent of the total rise which took place during the 1838-1839 recovery. Bank and insurance company share prices rose only nine points in 1838, but six of these nine points came during the months of May through July, this was 67 per cent of the total increase. While this was taking place in the security markets, the interest-rate on short-term paper in New York and Boston money markets fell from 10 per cent at the beginning of May to seven per cent by the end of the month.<sup>58</sup> The expansion of bank lending and the increases in the money supply resulting from this and the specie inflows appears then to have gone mainly into the financial markets until the resumption of late summer and the marketing of the cotton and grain crops in the fall stimulated aggregate demand in general.

#### The Role of Federal and State Governments in the Recovery

The Federal government, more by necessity than by choice, did not remain inactive during the suspension period.

Its importance lay not in the magnitudes of its expenditures and receipts, for these were but a small part of total demand, but rather in its policies which influenced the decisions taken by bankers, merchants and consumers.

Robert Gallman has estimated that the total output of the American economy in 1839 was between \$1.019 and \$1.037 billion in current prices. Using the estimate of government expenditures found in Appendix Table A-2, we see that these expenditures were between 2.8 per cent and 2.9 per cent of total output.<sup>59</sup>

Recognizing that these are the most tenuous of estimates it seems clear that the government expenditure multiplier, taking into account changes in the money supply, would have had to be exceptionally large for even a 10 per cent change in government expenditures to have brought about a change of more than one or two per cent in total output.<sup>60</sup> On the other hand, we will see that one estimate of the ratio between state government expenditures and total output is 16 per cent, though when we look at the derivation of this estimate we will see that it appears to be a bit excessive.

Congress met in special session in September, 1837. President Van Buren in his message to that body said that they were called primarily to solve the problems of the government and that the difficulties of various groups was not the concern of the government. Van Buren justified this on the basis of his belief that,

. . . such measures are not within the constitutional province of the general government and that their adoption would not promote the real and permanent welfare of those they might be designed to aid.<sup>61</sup>

Because he was a politician he did not permit this belief to stand in the way of actions taken to aid the politically powerful import merchants of New York and other East coast ports. Even prior to the suspension of the New York banks in May, 1837, he authorized the postponement of the payment of duty bonds, and among other measures sent to Congress, he proposed an extension of this aid.<sup>62</sup> Van Buren was not successful in getting legislation for an Independent Treasury nor for a Federal bankruptcy act for the suspended banks. Congress, however, did pass several acts which were to aid the banks, import merchants, and ease the financial plight of the government.

These acts were embodied in Public Laws 1, 2, 6, 8, 9, signed into law by Van Buren during the first two weeks of October, 1837.<sup>63</sup> Public Law One authorized the postponement of the payment of the fourth installment of the Distribution until January 1, 1839, by then it became clear that this payment would never be made.

Public Law Two provided for the issuance of Treasury Notes in an amount not to exceed \$10,000,000 and in denominations of not less than fifty dollars, and to bear interest charges not exceeding six per cent per annum. These notes were used to pay creditors of the United States, and were transferrable and also receivable by the Treasury for

payments due the United States Government. Their issuance generally increased the supply of money. The administration had some apprehension that these notes might not be accepted by the government's creditors and therefore authorized the Treasury department to sell these notes for the, "legal currency of the United States," and use the proceeds to pay these creditors.<sup>64</sup>

Section three of Public Law Six, a general appropriations bill, authorized the Secretary of the Treasury to accept in payment of debts due the government, transfer drafts drawn for the Distribution but not honored by the banks on which they were drawn.

Public Law Nine provided that the Secretary of the Treasury continue to withdraw funds from the deposit banks, in a manner as gradual and convenient to the institution as should be consistent with the pecuniary wants of the government and the safety of the funds thus to be drawn.<sup>65</sup>

If a bank refused or could not honor one of these drafts it could avoid a Treasury suit by providing the Secretary with approved--no definition of this was given in the act--securities covering the amount of the drafts with the stipulation that the amount would be paid to the Treasury in three semi-annual installments beginning on July 1, 1838.

Public Laws Six and Nine, eased pressure on deposit banks. They did not have to call in loans or in other ways endanger their solvency to meet the demands of the Treasury. From the point of view of the Treasury, a suspended bank was

still preferable to a bankrupt one. A further postponement of duty bonds, helping the import merchants and those banks which supplied them with credit, was provided for by Public Law Eight.

All of these legislative actions, directly or indirectly, eased the pressure on the banks which were government depositories and perhaps moderated the dislocation in the money and credit markets during the suspension period. With the repeal of the Specie Circular on May 13, 1838, the two major government acts which contributed in some measure to the financial panic of 1837, the Distribution and Specie Circular, were removed from the books.

If we looked at Federal monetary policy, such as the acts we have just seen, the overall effect was to ease the problems of the banks. The fiscal policies of the government was generally expansionary in that deficits were incurred during fiscal 1837 and 1838, and they were financed with Treasury notes. But because of the relatively small size of government expenditures in relation to total output, these deficits had little effect on the economy in general.

#### Fiscal Policies of State Governments During the Suspension Period

Since the beginning of World War II, Federal expenditures have consistently exceeded those of state and local governments. We have become so accustomed to this disparity that the importance of State and local government expenditures

to aggregate demand levels and movements in the nineteenth century have been overlooked usually.

Lance Davis and John Legler in an 1966 article calculated per capita estimates, on a regional basis, of the receipts and expenditures of the state government. These estimates on a national basis are given in per capita and aggregate figures in Table 7.3. As we previously noted--using Gallman's upper estimate of gross domestic product in 1839--state expenditures were equal to about 16 per cent of G.D.P. This seems a bit high, however, as Martin's estimate of total, not just state, governmental expenditures as a per cent of National Income in the 1869-1879 period was only about 4.4 per cent.<sup>66</sup>

From the information given in Table 7.3 we can conclude that state expenditures and receipts may have been procyclical, that is they may have intensified the deflation in 1837 when there was an aggregate budgetary surplus and counter-cyclical in 1838 when there was a deficit.

The data for 1837 seems a bit surprising. Even though 1837 was a year of financial panic and deflation, aggregate receipts increased by 89 per cent while expenditures rose by 85 per cent. Where did this increase in revenue come from? In both absolute and percentage terms, the largest increases in receipts during 1837 were in the states of the "Old" and "New" south, 69 per cent of the total increase. But it was in these states, which were so

TABLE 7.3.--Estimates of State Expenditures and Receipts, Per Capita and Aggregate for all States, 1830-1845.

Year	Per Capita (\$)			Aggregate <sup>a</sup> (\$)		
	Receipts	Expendi- tures	Deficit (-) or Surplus (+)	(\$000)		Deficit or Surplus
1830	5.36	6.40	-1.04	69,150	82,566	-13,416
1831	5.38	5.71	- .33	71,667	76,063	- 4,396
1832	5.72	6.44	- .72	78,604	88,498	- 9,894
1833	5.89	6.17	- .28	83,414	87,380	- 3,966
1834	5.87	6.28	- .41	85,596	91,575	- 5,979
1835	5.85	8.32	-2.47	87,768	124,825	-37,057
1836	6.99	6.26	+ .73	107,807	96,548	+11,259
1837	13.23	11.62	+1.61	209,603	184,096	+25,507
1838	9.19	10.57	-1.38	149,466	171,910	-22,444
1839	8.24	10.28	-2.04	137,476	171,512	-34,036
1840	6.96	10.50	-3.54	119,155	179,760	-60,605
1841	7.11	8.43	-1.32	126,082	149,489	-23,407
1842	7.02	7.31	- .29	128,782	134,102	- 5,320
1843	7.02	6.71	+ .31	133,078	127,201	+ 5,877
1844	7.16	6.15	+1.01	140,114	120,349	+19,765
1845	7.14	6.50	+ .54	144,099	131,183	+12,916

<sup>a</sup>Per capita estimates multiplied by population estimates, the latter being based on linear interpolation between decennial census years, this being the method used by Davis & Legler.

Sources: Per Capita Estimates: Lance E. Davis and John Legler, "The Government in the American Economy, 1815-1902: A Quantitative Survey," The Journal of Economic History, Vol. 26, No. 4 (December 1966), pp. 532-533. Population Estimates: The Statistical History of the United States from Colonial Times to the Present (Conn.: Fairfield Publishers, Inc., 1965), p. 7, Series A-2.

dependent on the cotton crop, that the collapse of the cotton market and the financial markets would have been most seriously felt.

To attribute the rise in receipts to increasing revenues implied that tax rates increased more rapidly than the apparent decrease in the tax base.<sup>67</sup> It was not until 1839-1840 that we find widespread contemporary comments about state governments arising tax rates.

A possible explanation is that the total receipts included not only tax revenues but also funds received through the Distribution and from bond sales. Estimated aggregate state receipts rose by \$101.8 million in 1837 and if we assume that the states spent in that year all of the Distribution funds which they received, \$28.1 million, this would have accounted for only about 27 per cent of the total increase. According to Bourne, however, the time distribution of such expenditures exceeded one year, thus we must look for other possible sources.<sup>68</sup>

Another source of revenue was the proceeds of the sale of state securities. We saw in the first part of this chapter that the increase in internal improvement construction during 1837 and 1838 was in large measure due to these bond sales. According to Ralph Hidy, the London bond market, buoyed by the loosening of the Bank of England's monetary restraints, readily absorbed the inflow of American securities until at least the middle of 1838.<sup>69</sup>



We do not know the magnitude of these bond sales in 1837 and can only estimate them in a very loose fashion. The 10th Census estimated that during the 1835-1838 period, states increased their debts by approximately \$107.8 million and that by the end of 1838, total state debts outstanding amounted to \$174.3 million. On the other hand, Hidy estimated that between the end of 1837 and the end of 1839, total state debts rose from \$123.8 to \$175.5 million.<sup>70</sup>

If in the four year period 1835-1838 state bond sales rose by \$107.8 this gives us an annual average of \$26.7 million. Using the estimates for the 1838-1839 period given by Hidy, we obtain an average of \$25.8 million a year. W. B. Smith noted that as of November 1838, about \$22.7 million of state securities were "in current negotiations," in England. It seems fairly safe to assume that a bond sale of \$25 million in 1837 and perhaps slightly more in 1838 were upper estimates to the sales that actually took place.<sup>71</sup> Obviously bond sales in 1836 were at a higher level than those of 1837 and any simple averaging procedure understates the sales of 1836 and perhaps 1838 while overstating those of 1837.

To use a more complex estimating procedure entails the adding on of assumptions to a structure already top-heavy with unconfirmable assumptions. We so not know, for example, the rate of discount, if any, at which these securities were sold nor the procedure by which the states

received the proceeds of the bond sales. Mississippi and Florida based their repudiations of part or all of their state debts on the fact that the bonds were not sold at par value. We saw in the last chapter that when New York state attempted to aid the city banks prior to resumption it gave them state bonds to sell in order to obtain specie in London and elsewhere, and the state agreed not to demand immediate payment of the proceeds of the bond sales. This may have also occurred in 1837 and 1838 but we have no information either way on this.

Our estimate that bond revenues did not exceed \$25 million in 1837 seems reasonable as an upper limit estimate. If this was so, receipts from the sale of state securities accounted for approximately 25 per cent of the total increase in state receipts that year. At the most then, proceeds from the Distribution and bond sales accounted for 52 per cent of the estimated 1837 increase in state receipts, still leaving us in doubt as to the sources of the remaining increase.

Taking into account these questions as to the accuracy of estimated state expenditures and receipts it still seems clear that state governments were relatively more important as a component of aggregate demand than the Federal government and that the deficits of 1838 and 1839 helped in their small way to sustain the levels of aggregate demand. This assumes that the deficits were financed

in ways which did not lead to a parallel decline in the aggregate demand of the private sector. If the aggregate state surplusses of 1837 were the result primarily of transfers from the Federal government to the state governments and from capital imports, and if these funds were not obtained at the expense of private sector demand, then they might not have been as deflationary as it first appeared, especially as expenditures did rise so much in 1837.

The Bank of England and the British Economy: 1837-1838

Recovery in the American economy, like deflation, did not take place in a vacuum. The British economy, especially the cotton and capital markets was an important, if not crucial factor, in determining the health of the American economy. The London money market was a key source of funds which enabled the United States Bank and others to build a floor under cotton prices. It also supplied the foreign exchange which enabled the banks of New York and later those in other sections of the country to succeed in their resumption efforts for as long as they did. It is highly doubtful that the New York City banks could have resumed when they did without the aid given by the Bank of England.

By the time the New York City banks had suspended, the Bank of England had stemmed its specie losses and slowly began to refill its depleted bullion vaults. Only when the

Bank felt itself with sufficient specie did it ease up its pressure on the London money market and especially the Anglo-American trade. From a low of £4 million in the quarter ending in March 1837, the Bank built up its specie holdings to a level of £10.1 million by the same time in 1838. It felt sufficiently confident of its position by early 1838 that it lowered its discount rate from five per cent to four per cent in February.

The money market and the economy in general reflected the effects of the easing conditions. Short-term interest rates fell to their 1834-1841 lows during the second quarter of 1838. The amount of bills of exchange issued continued to expand throughout most of the year, easing the task of those involved in the cotton speculations. Another sign of the improving business health in Great Britain was the fact that bankruptcy fiats during the second half of 1838 were at the lowest level for any half year for the entire 1830-1850 period.<sup>72</sup>

1838 was clearly a year of general revival. Both the American and Continental markets revived, and, due to the arrangements made by Nicholas Biddle, there was a further import in Britain of American securities.<sup>73</sup>

By the middle of 1838 the American economy had substantially recovered from the monetary panic and subsequent deflation of 1837-1838. The term deflation and not depression is used because as we saw in the first part of this chapter there is little evidence of widespread unemployment

or decline in the level of output resulting from other than real causes such as crop failures. The evidence indicates rather that the period was characterized by rapidly falling prices until May 1837 and then a levelling off which lasted until the first half of 1838. The fall up to May was much larger than that during the remainder of the deflation period. The movement of prices during this period was what one would have expected to occur in an economy where the classical assumptions about output and prices were operative.

The recovery, as we saw in the second part of this chapter, was due not just to the movement of the cotton trade or the resumption of the banks, but also to the return of confidence which these developments engendered. The actions of the cotton speculators helped to sustain cotton prices until the small crop of 1838-1839 brought about higher prices.

The rise in cotton prices stimulated the Southern economy and all those who were dependent on the cotton trade. The flow of cotton bills especially those emanating from the actions of the United States Bank and the other speculators enabled Southern merchants and planters to pay off at least part of their accumulating debts. This facilitated the expansion of trade once cotton prices did turn up. Cotton bills were also important in keeping the foreign exchange rates below the gold export points after the banks had

resumed and the fall revival in trade increased imports. Finally, the resumption of the banks, the New York in the spring and most others in late summer and fall, led to an increased supply of credit which was readily demanded once trade revived.

Sustaining the level of aggregate demand during the latter half of 1837 and early 1838 was the continuing expenditures on internal improvements financed in large part by the sale of state securities and funds obtained from the Distribution. But all of this, the cotton market, continuing resumption, bond sales to support canals and railroads, depended on the health of the British economy. Fortunately the Bank of England was able to loosen the credit reins in early 1838, at a time when the American economy was at its low point. This entire process of deflation and recovery demonstrated that the United States was unable to isolate itself from economic conditions in Great Britain and on the Continent. Suspension might loosen the economic ties binding both sides of the Atlantic, but it could not prevent the international transmission of economic fluctuations from Great Britain to the United States as the record of 1839-1843 amply demonstrated.

## FOOTNOTES

### CHAPTER VII

<sup>1</sup>Victor S. Clark, History of Manufactures in the United States, 1607-1860 (Washington D.C.: Carnegie Institution of Washington, 1916), p. 380.

<sup>2</sup>See Appendix Table B-5, W. B. Smith, Second Bank of the United States, p. 193. United States Congress, Senate, 25th Congress, 2nd Session, Senate Document No. 457, pp. 108-109.

<sup>3</sup>See Appendix Tables A-1, B-6, and B-10. Obviously suspension did not mean that banks stopped completely the paying out of specie. This was most likely done to settle interbank balances both intra and inter-city and perhaps to aid the banks main customers.

<sup>4</sup>Robert E. Gallman, "Commodity Output, 1839-1899," Trends in the American Economy in the Nineteenth Century, ed. William N. Parker (New York: National Bureau of Economic Research Studies in Income and Wealth Vol. 24, National Bureau of Economic Research, 1960), p. 59.

<sup>5</sup>Horace Greeley, Recollections of a Busy Life (New York: J. B. Ford and Co., 1868); S. Rezneck, "The Social History of an American Depression, 1837-1843," American Historical Review, LX (1935).

<sup>6</sup>Lance E. Davis and Louis H. Stettler III, "The New England Textile Industry, 1825-1860; Trends and Fluctuations," Output, Employment and Productivity in the United States After 1800 (New York: National Bureau of Economic Research Studies in Income and Wealth Vol. 30, National Bureau of Economic Research, 1966), p. 224. According to Paul F. McGouldrick output rose in 1837 but fell slightly in 1838 while sales and profits fell in both years. During 1837 and 1838 investments fell by approximately \$140,000 which was 51 per cent of the 1836 investment level. Paul F. McGouldrick, New England Textiles in the Nineteenth Century (Cambridge: Harvard University Press: 1968), pp. 142, 159, 245. Fiscal years ended in May of the year cited. Fiscal 1839 ended in May, 1839, p. 5.

<sup>7</sup>Caroline F. Ware, The Early New England Cotton Manufacture (New York: Russell and Russell, 1966), pp. 88, 143.

<sup>8</sup>Blanche E. Hazard, "The Organization of the Boot and Shoe in Massachusetts Before 1875," The Quarterly Journal of Economics, Vol. 27 (February, 1913), p. 252.

<sup>9</sup>V. S. Clark, p. 381; Hazard, p. 252.

<sup>10</sup>Albert Fishlow, American Railroads and the Transformation of the Ante-Bellum Economy (Cambridge: Harvard University Press, 1965), p. 385.

<sup>11</sup>H. Jerome Cranmer, "Canal Investment, 1815-1860," Trends in the American Economy in the Nineteenth Century, p. 555, and comments by Harvey H. Segal, p. 565.

<sup>12</sup>Jeffrey G. Williamson, American Growth and the Balance of Payments, 1820-1913 (Chapel Hill: The University of North Carolina Press, 1964), p. 271; Charles P. Huse, The Financial History of Boston (Cambridge: Harvard University Press, 1916), p. 13; Niles National Register, May 1840, p. 164.

<sup>13</sup>Niles National Register, July 8, 1843, p. 309.

<sup>14</sup>Thomas S. Berry, Western Prices Before 1861 (Cambridge: Harvard University Press, 1943), p. 471.

<sup>15</sup>David M. Schneider, The History of Public Welfare in the State of New York, 1609-1866 (Chicago: University of Chicago Press, 1938), pp. 263-264; S. Rezneck, American Historical Review, LX, pp. 664-665; Caroline F. Ware, p. 48.

<sup>16</sup>United States Congress, House, 25th Congress, 1st Session, House Document No. 28, p. 2.

<sup>17</sup>Niles National Register, August 19, 1843, p. 388, and October 7, 1843, p. 86.

<sup>18</sup>See Appendix Tables B-7 and B-12.

<sup>19</sup>Ralph Hidy, The House of Baring in American Trade and Finance (Cambridge: Harvard University Press, 1949), p. 222. Other Anglo-American houses such as Brown's were given aid and survived. The Bank of England also decided that it would thereafter only accept bills drawn on merchandise shipments, real bills, but we do not know how long this policy lasted, if indeed it was enforceable. See Sir John Clapham, The Bank of England (New York: The Macmillan



Company), II, p. 159, and John C. Brown, A Hundred Years of Merchant Banking (New York: 1909), p. 90.

<sup>20</sup>Jeffrey G. Williamson, p. 285; Arthur D. Gayer, W. W. Rostow, and Ann J. Schwartz, The Growth and Fluctuations of the British Economy, 1790-1850 (Oxford: Clarendon Press, 1953), I, p. 469; B. R. Mitchell and P. Deane, Abstract of British Historical Statistics (Cambridge: University Press, 1962), p. 271.

<sup>21</sup>Reports published in the Financial Register, I, August 30, 1837. V. S. Clark, p. 381 notes that it was during this period that the use of brass clocks began in the United States.

<sup>22</sup>Glydon G. Van Deusen, The Jacksonian Era, 1829-1848 (New York: Harper and Brothers, 1959), p. 119.

<sup>23</sup>Hammond and Jenks stressed Biddle's desire to aid the economy while Smith and McGrane pointed out the Bank's liquidity and solvency needs. Bray Hammond, Banks and Politics in America (Princeton: Princeton University Press, 1957), pp. 467-468; Leland H. Jenks, The Migration of British Capital to 1875 (New York: Alfred A. Knopf, 1927), p. 89; Reginald C. McGrane, Foreign Bondholders and American State Debts (New York: The Macmillan Co., 1935), p. 16; Smith, p. 196.

<sup>24</sup>On this point see Smith, pp. 224-225.

<sup>25</sup>Hidy, pp. 240-241. During 1838 and 1839 Humphreys and Biddle were often the largest recipients of American cotton in Liverpool. See Smith, p. 197 and Vincent Nolte, Fifty Years in Both Hemispheres (New York: Redfield, 1854), p. 427.

<sup>26</sup>Hidy, pp. 255, 157.

<sup>27</sup>Niles National Register, December 8, 1838, p. 289.

<sup>28</sup>A correspondent of the New York Herald reported from Liverpool in July 1838 that the spinners were persuing such a policy. Financial Register, I, p. 139. Estimates of raw cotton held by speculators and mills in Great Britain are to be found in Thomas Ellison, The Cotton Trade of Great Britain (New York: A. M. Kelley, 1968), Table I.

<sup>29</sup>Financial Register, II, July 18, 1838. Mississippi bank notes were at a 15-35 per cent discount at Philadelphia and a 12-40 per cent discount at New York during 1838. In April, Natchez banknotes at Natchez were at a 45 per cent

discount and those of other Mississippi banks at a 50-60 per cent discount. Senate Document No. 457, pp. 124, 125, 130, 131.

<sup>30</sup>For differing explanations as to why the United States Bank first came out for rapid resumption and then tried to delay it for as long as possible see Fritz Redlich, The Molding of American Banking (New York: Hafner Publishing Co., 1953), II, p. 267; Hammond, pp. 479-483; and Smith, p. 207.

<sup>31</sup>Hammond, p. 479; Smith, p. 207.

<sup>32</sup>See sources cited in footnotes 29 and 30.

<sup>33</sup>An analysis of variance procedure along the lines of those done in chapter five showed no statistically significant relationship between changes in bank lending and specie holdings; bank lending and current demand liabilities and between current demand liabilities and specie holdings.

<sup>34</sup>Hammond, pp. 478-479.

<sup>35</sup>Table 7.1 and Arthur H. Cole, Wholesale Commodity Prices in the United States, 1700-1861 (Cambridge: Harvard University Press, 1938), p. 185.

<sup>36</sup>The Statistical History of the United States From Colonial Times to the Present (Stamford: Fairfield Publishers, Inc., 1965), pp. 346-371.

<sup>37</sup>Berry, pp. 448-450. The United States Gazette of May 12, 1838 reported that the United States Bank of Pennsylvania received about \$1 million in specie from the West. Financial Register, I, p. 382.

<sup>38</sup>Smith, p. 187, and Appendix Table A-1.

<sup>39</sup>Appendix Table A-1. Warren and Pearson's index of wholesale prices fell four per cent while the price of imports fell 13 per cent according to North's index, thus indicating that imports would have been relatively cheaper than existing import substitutes. George F. Warren and Frank A. Pearson, Prices (New York: John Wiley and Sons, Inc., 1933), p. 12. Douglass C. North, The Economic Growth of the United States, 1790-1860 (New York: W. W. Norton and Company, Inc., 1966), p. 280.

<sup>40</sup>Smith, p. 203. According to Berry, western bond sales reached a peak in 1838. Berry, p. 450. As we shall see later we do not know how much of these sales were at

par value and how much funds the states would receive in 1838 from these sales.

<sup>41</sup>Redlich, II, p. 167; Smith, p. 184, Statistical History of the United States, p. 559. A five franc piece contained 347.27 grains of pure silver, while a dollar contained 371.25 grains, therefore five francs equalled approximately 94 cents and one franc equalled about 19 cents. See source cited in Appendix Table B-9.

<sup>42</sup>Smith, p. 87.

<sup>43</sup>Redlich, II, p. 67, see Also Hammond, p. 480.

<sup>44</sup>Clapham, II, pp. 164-165.

<sup>45</sup>Hidy, pp. 244-245.

<sup>46</sup>See Appendix Table B-10.

<sup>47</sup>The available information does not permit a complete listing of which banks had not resumed by January 1, 1839. For a listing of banks which resumed or announced plans to resume by this date see Niles National Register, July 28, 1838, p. 337. Financial Register, II, pp. 28, 127, 143; Redlich, II, p. 269.

<sup>48</sup>Appendix Table C-5, and Cole, p. 157.

<sup>49</sup>United States Congress, House, 25th Congress, 3rd Session, House Document No. 227, p. 650. Hazard's United States Commercial and Statistical Register, IV, March 1841, pp. 154-155.

<sup>50</sup>Smith, p. 214.

<sup>51</sup>Quoted in Niles National Register, August 4, 1838, p. 353. Similar statements were also reported from Baltimore and Philadelphia.

<sup>52</sup>Financial Register, II, p. 288. The largest decline in the discount on Alabama bank notes came during the period between May 12 and June 2, the second largest during September. House Document No. 227, p. 654.

<sup>53</sup>Berry, pp. 454, 455, 459.

<sup>54</sup>Cole, p. 185, and sources cited in footnote 52.

<sup>55</sup>No date or place of location was given, but we assume that it was an upper New York State paper, quoted

in The Journal of the American Institute, IV, No. 1, April, 1839, p. 362.

<sup>56</sup>We saw in chapter three that mid-western banks tended to keep working balances in New York City banks. Harry N. Scheiber, "The Commercial Bank of Lake Erie, 1831-1843," Business History Review (Spring, 1966), p. 60.

<sup>57</sup>See sources cited in Table 7.1.

<sup>58</sup>Appendix Table B-7, and sources cited in Table 7.1.

<sup>59</sup>Robert Gallman, pp. 24-26, 43.

<sup>60</sup>The structure of the American economy in the antebellum period, the relative importance of agriculture and the more pronounced regionalization would appear to indicate that a government expenditure multiplier would be of small magnitude in relation to that of the present day economy. Various estimates of government expenditure multipliers in post World War II America range from a low of 1.1 to a high of 4. Even if we assumed a government expenditure multiplier of 5, a \$3 million increase in government expenditures financed by an increase in the supply of money so that interest rates did not change would lead to a \$15 million increase in aggregate demand which still amounted to only about 1.5 per cent of estimated 1839 output; the \$3 million increase in government expenditures being about a 10 per cent increase in expenditures. For estimates of these multipliers see Michael K. Evans, Macroeconomic Activity: Theory, Forecasting, and Control (New York: Harper and Row, 1969), p. 583.

<sup>61</sup>Message of President Van Buren to the first session of the 25th Congress, September 4, 1837 reprinted in the Financial Register, I, p. 341.

<sup>62</sup>Financial Register, I, p. 321; Glyndon G. Van Deusen, p. 121.

<sup>63</sup>The following discussion is based on Financial Register, I, pp. 167-170.

<sup>64</sup>About \$12.72 million of such notes were issued in fiscal 1838, this representing about 37 per cent of total government expenditures in that year. See Appendix Table A-2, Col. 2; Jonathan Elliott, The Funding System of the United States and of Great Britain (New York: A. M. Kelley, 1968), p. 1017; Niles National Register, January 9, 1839, p. 322.

<sup>65</sup>Financial Register, I, p. 170.

<sup>66</sup>Lance E. Davis and John Legler, "The Government in the American Economy, 1815-1902; a Quantitative Survey," The Journal of Economic History, XXVI, No. 4 (December, 1966), pp. 532-533; History of the United States, p. 140. For a critique of Martin's estimates see William N. Parker and Franklee Whartenby, "The Growth of Output Before 1840," Trends in the American Economy in the Nineteenth Century.

<sup>67</sup>We do not know the types of taxes and other sources of revenue for state governments. Property taxes and excise taxes were probably the major sources of revenue; other sources included income from state owned internal improvements and corporations such as banks, and perhaps fees revolving around the chartering of banks and other corporations. Ohio canal revenue rose in 1837 while that of the New York State system fell. North, p. 253; Robert G. Albion, The Rise of the New York Port (New York: Charles Schribner's and Sons, 1939), p. 411.

<sup>68</sup>Appendix Table A-5, and Edward G. Bourne, pp. 122-123.

<sup>69</sup>Hidy, p. 237; Jenks, pp. 93-94.

<sup>70</sup>Hidy, p. 237; Table 4.1. On the other hand Guy S. Callender estimated that state debts amounted to \$232 million in 1839 and a Congressional investigation of public debts in 1843 listed total state debts, including those of Mississippi and Florida, as \$231 million in 1843. Using these estimates would increase the estimated state revenue from bond sales in 1837, but by how much, we do not know. North, pp. 624-625.

<sup>71</sup>Smith, p. 208. Also see comments in preceding footnote.

<sup>72</sup>Appendix Tables B-8, B-14 and Norman J. Silberling, "British Prices and Business Cycles, 1779-1850," The Review of Economic Statistics, V, Supp. 2 (October, 1923), p. 252.

<sup>73</sup>Gayer, Rostow, and Schwartz, I, p. 244.

CHAPTER VIII  
THE BRITISH MARKETS AND THE  
PANIC OF 1839

A correspondent of the New York Herald writing from Liverpool on July 10, 1838 emphasized the dependence of the American export trade on the internal trade of Great Britain, which in turn was, he believed, entirely dependent on the grain crops. As far as he could determine from his trips through England and Scotland, the 1838-1839 crops would be average or above average and therefore he expected that the market for American cotton would turn up sharply.<sup>1</sup> He could not have been more mistaken. By the same time in August, the first clouds had appeared over the British economy. They would build in intensity and eventually, in a little more than a years time, the final remnants of the Anglo-American boom of the mid-1830's would blow away.

In this chapter we will first examine the events taking place in Great Britain and on the Continent which, through the British money and commodity markets, was to transmit economic difficulties from the Eastern to the Western side of the Atlantic. The second part of the chapter will show how the American economy reacted to the events on the Eastern side of the Atlantic.

The British and Continental Markets:  
Grains and Specie

The grain crops of Great Britain had been poor since 1836, but during July and August of 1838 heavy rains seriously damaged those of 1838-1839. As early as August 11, 1838, London papers were already reporting about the damaged crops. Only when the harvests were completed was the magnitude of the disaster fully known; it would be the poorest crop since 1816. As we see in Table 8.1, all grain prices in the United Kingdom reached their 1830-1845 peaks in 1839.<sup>2</sup>

The specie exports resulting from the record grain imports led the Bank of England, as it had done in the latter half of 1836, to tighten the monetary reins. We have already seen that such policies not only affected the British import trade, especially cotton, but also the domestic and foreign sales of British manufactured goods which were already beginning to face falling demand as the rise in food prices decreased the real income of the British working class. On the Continent and elsewhere the economic picture was also bleak.

Problems on the Continent

During the last months of 1838, monetary difficulties on the Continent came to a head, for just as in America and Great Britain there had been an economic boom paralleled by a rapid expansion of banking facilities along with a general

TABLE 8.1.--Average Annual Prices and Volume of Grain Imports, United Kingdom, 1830-1845.

Year	Annual Average Prices Per Imperial Quart:			Imports of Wheat and Wheat Flour (000 Quarters)		Corn Imports <sup>a</sup>
	Wheat s d	Barley s d	Oats s d	Net	From Ireland	(£000)
1830	6403	3207	2405	16760	530	3280
1831	6604	3800	2504	23104	557	4726
1832	5808	3301	2005	4641	790	899
1833	5211	2706	1805	3222	844	654
1834	4602	2900	2011	2020	780	619
1835	3904	2911	2200	890	662	334
1836	4806	3210	2301	2624	599	746
1837	5510	3004	2301	5750	534	1501
1838	6470	3105	2205	13818	543	2388
1839	7008	3960	2511	28524	258	6060
1840	6604	3605	2508	23522	178	5156
1841	6404	3201	2205	26814	219	5238
1842	5703	2706	1903	29406	202	5511
1843	5001	2906	1804	10301		2049
1844	5103	3308	2007	13396		3631
1845	5010	3108	2206	11107		2799

<sup>a</sup>Corn term used to cover all grain imports.

Sources: Columns 1-3, 5, 6, B. R. Mitchell and P. Deane, Abstract of British Historical Statistics (Cambridge: Cambridge University Press, 1962), pp. 95, 488, 291. Column 4, A. D. Gayer, W. W. Rostow and A. J. Schwartz, The Growth and Fluctuations of The British Economy, 1790-1850, Vol. I (Oxford: Clarendon Press, 1953), p. 314.



growth in the formation of companies. Just as in the United States there was and would continue to be a struggle between the new and old banking interests and methods. In the American case it was between the United States Bank of Pennsylvania, formerly the Second Bank of the United States, and the banks of New York City; though it was often hard to say who represented the old and who the new bankers.

In Belgium a struggle took place between a new type of banking concern, an industrial bank, the Belgium Societe Generale and the Bank of Belgium--Banque de Belgique--the latter was forced to suspend in December 1838. The monetary problems engendered by the struggle spread to Paris where there was a run on the Lafitte banking house. Specie left the Bank of England and was shipped to Brussels and Paris. The damage appeared to have already been done for the resulting financial stringency in Belgium, France and Switzerland brought with it a wave of bankruptcies throughout the Continent.<sup>3</sup> During 1835-1836 there had been a boom in the construction of textile mills on the Continent, but the financial problems of Belgium and Paris helped to bring the new textile industries of Belgium, Prussia and Saxony to what Jenks described as "a crisis in their development which curtailed their demand for English yarn."<sup>4</sup> Further adding to the problems of Great Britain was the Russian plan to convert to a silver ruble in July 1839, this meant additional specie exports.<sup>5</sup>

The Bank of England was losing specie to the Continent not only to pay for grain imports but also because British exports to the Continent were falling. The balance of trade was being pressed on both sides. Added to this was the monetary difficulties of Western Europe, which in part engendered the fall in European demand, and the currency conversion in Eastern Europe further intensifying the specie drains from Great Britain.

The Bank of England: Inaction  
and Reaction

The Bank of England's response to these mounting problems at first was a decision to pursue business as usual and this meant a relatively easy money policy. The directors of the Bank announced on November 29, 1838 that they were prepared to lend funds at a rate of three and one-half per cent interest until January 22, 1839 on bills of exchange as well as other approved securities. Most writers then and now, agree that this was the wrong policy to pursue.<sup>6</sup> Throughout the first quarter of 1839 the Bank lost bullion, this loss amounted to an estimated £1,200,000 whereas in the last half of 1838 it had lost only £300,00. By the end of May 1839 the Bank of England appears to have lost an additional £3 million in specie while it continued to increase its security holdings.<sup>7</sup>

The policy of inaction is all the more surprising as the news at home and abroad pointed to a worsening situation.

During April news reached London telling of the stopping of trade at Canton as well as of the continuing failures in France. At home the London banking house of Coutts and Company began to call in all loans secured with American securities, and they were not alone in curtailing their activities,

The Barings had decided that the time to furl sails had come once more. They gave orders to curtail all types of operations--commercial and financial.<sup>8</sup>

Finally in mid-May the Bank of England took action. On the 16th it raised its discount rate a full point to five per cent, yet it continued to increase its security holdings until the early fall. Within a few days of the Bank's action, the London Morning Chronicle was reporting about an increased demand for money and rising discount rates on short-term commercial paper. This, however, was attributed to the continuing problems on the Continent and the flood of bills coming on the market from cotton and grain speculators.<sup>9</sup>

A little more than a month later, on June 20, the Bank again raised the discount rate, this time to five and one-half per cent, what was to then the highest rate in the Bank's history. In addition to this, the Bank, as it had done in the crisis of late 1836 and early 1837, applied qualitative restrictions by limiting the types of credit instruments that it would accept for discounting. It now limited discounts only to bills of exchange and according

to King these would only be allowed to have a maturity of thirty days. Smith believes that these restrictions amounted to the Bank's not discounting bills coming from joint-stock banks or those arising from speculations in cotton or grains.<sup>10</sup> It should be noted for future reference that cotton prices in both England and New Orleans started to fall in May with a fairly substantial drop--12 per cent in the New Orleans average and 26 per cent in the English high and a 19 per cent drop in the English low cotton prices--taking place in July.<sup>11</sup>

The Bank of England attempted to stem its continuing specie losses by borrowing £2 million in Paris and £900,000 in Hamburg in July and by further raising its discount rate to six per cent during August, but it continued to lose specie. The 1839-1840 grain crops were also poor and this was especially true in Ireland.<sup>12</sup> Finally in the last quarter of 1839 the Bank of England was able to halt its specie losses. These losses amounted to approximately £6.4 million during the year while net British specie exports were £4.4 million. The cost of halting these losses was to be great, not only for Great Britain but also for America.

#### The British Economy in 1839

Poor grain crops, declining domestic and foreign markets, tightening monetary conditions, all these interacted to bring about a deflation in Great Britain which

lasted from 1839 until 1843. In this section we will briefly examine the state of the British economy in 1839, paying particular attention to the cotton textile industry.

The economic picture was bleak in the money and financial markets, Overend, Gurney's index of the annual average rate for first class three month bills rose from three per cent in 1838 to 5.19 per cent in 1839, this being the highest recorded from the inception of the series in 1824 until 1847. Bankruptcy fiats doubled between the first and fourth quarters of 1839, while according to Hidy, the English railroad boom was brought short in 1839.<sup>13</sup> Clapham described the British economy during the 1839-1843 period in the following terms.

Prices fell continuously and far from 1839 to 1843, although until the good harvest of 1842 that of bread kept high. The whole country was distressful and discontented, never more so. The new Poor Law of 1834 was desperately unpopular. Employment was irregular. Rioting was endemic. Chartism was in its militant phase. From 1840 bankruptcies were steadily and abnormally high. Discounting was slack; private lending was not very active.<sup>14</sup>

The British industry most severely affected by these developments was the cotton textile industry. It was being squeezed from all sides. Raw cotton prices rose until April, while demand fell at home and abroad increasing the problem of excess capacity, brought about by the drop in demand and by the after-effects of the expansion of production facilities which took place during 1836-1838.<sup>15</sup> In the last month or two of 1838 the cotton textile market was already feeling the pressure of declining demand and excess

capacity. Cotton speculators were the major buyers of raw cotton as the spinners began to feel the pinch of declining continental demand. To sell their steadily building inventories, the cotton manufacturers were extending extensive book credits to American buyers.

By February 1839, the Liverpool Price Current was reporting, "that the production of yarn has overtaken the wants of consumption," and that the mills of Manchester had gone on short time.<sup>16</sup> Note that this action was undertaken prior to the Bank of England's raising the discount rate in May. Part of the reason for going on short times involved an attempt to reduce inventories of finished cotton goods, but it was also done in order to force down the price of raw cotton.<sup>17</sup> It is difficult to judge the results of this policy on cotton prices as the Bank of England in the late spring started to tighten the monetary screws. At least one contemporary source did not even discuss the Bank of England's actions. In an article dealing with the state of the cotton trade, the Liverpool Albion on May 21, five days after the Bank of England raised its discount rate by one per cent, did not refer to this but rather dealt with what it described as a general depression in the trade. This depression was not confined only to Great Britain but was,

. . . felt with at least equal severity in every market to which the shock of 1837 extended. The manufactures at Ghent and the neighborhood are all

in the same situation as our own establishments in Lancashire, only two or three are working full time, all the others are working only half time.<sup>18</sup>

It does seem likely, however, that the second increase in the discount in late June in combination with the restrictions placed on bills to be discounted increased the pressure on the manufactures to continue on short time. At the same time it made it harder for the cotton speculators to keep the cotton off the market. The manufacturers and their customers found it more difficult and expensive to obtain credit to finance sales. The speculators, finding themselves being excluded from the London money market had to sell cotton to meet maturing cotton bills.<sup>19</sup> Given that the British cotton manufactures were having difficulties in late 1838 and were on short time as early as February 1839 the relative stability of cotton prices indicates that the speculators, aided by the relatively short crop, were able to maintain prices until their supply of credit ran out in the early summer of 1839.

Poor harvests, monetary difficulties on the Continent as well as at home, economic and political disturbances in Asia, the Mid-East and South America as well as the border difficulties between the United States and Canada and the Chartist disturbances at home, all of these combined to bring about a downturn in the British economy starting in late 1838. As Redford remarked in his history of the Manchester merchants, "the depressed thirties merged into the hungry

forties."<sup>20</sup> As far as the United States was concerned the question was not whether it could avoid the fate that had befallen Great Britain but when would it start to feel the first effects of the British deflation.

The End of the Recovery: America in 1839

If we focused our attention solely on the available price series such as those given in Table 8.2, we find that most peaked during the first four months of 1839 and that significant declines in prices occurred in two waves. The first downturn in prices took place during June and July when the tightening money conditions in Great Britain began to be felt in the New York and other East coast money markets and when cotton prices broke sharply in July. The second wave of price declines occurred during the last quarter of 1839 paralleling the monetary panic and suspension of most American banks outside New York and New England.

A search of contemporary and more recent works reveals that there was little mention of monetary or commercial stringency in the East until July whereas it was believed that the South and Southwest were having problems as early as the winter of 1838 and the early spring of 1839. As with our examination of the situation in Great Britain we shall proceed chronologically, paying particular attention to the two periods of rapid price declines as well as to movements in the cotton and money markets. It



TABLE 8.2.--Percentage Changes in Selected United States Price Series, Monthly 1839.

	Agricul- tural Commodity Prices <sup>a</sup>	Indus- trial Commodity Prices <sup>a</sup>	General Commodity Prices <sup>a</sup>	Whole- sale Prices N.Y.C.	Whole- sale Prices Phila.	Whole- sale Prices Charles- ton	Whole- sale New Orleans	Whole sale Cinn.	Cotton Prices New Orleans	Rail- road Stock Price Index	Bank & Insur- ance Stock Index
Jan.-Feb.	+ 3.8	+ 5.5	+ 5.9	+ 1.7	0	0	+ 2.5	- 3.5	+ 4.8	+ 6.4	- 1.8
Feb.-Mar.	- 3.0	+ .9	- .8	- .8	- .9	- 3.4	- 1.6	0	+ 7.0	- 6.0	- 1.9
Mar.-Apr.	- 2.0	- 3.4	- .8	+ .8	+ .9	0	+ 2.5	+ 1.4	+ 5.8	0	0
Apr.-May	- .8	- 2.7	- 2.6	- 2.5	- .9	- 1.8	+ 1.6	+ 2.1	- 1.4	+ 3.2	+ 1.0
May-June	0	- 1.8	- 1.7	- 1.7	- 1.8	- .9	- 7.8	- 1.3	- .7	- 6.2	+ 1.0
June-July	- 5.5	0	- 3.4	- 2.6	- 1.8	- 1.8	0	- 2.1	- 11.0	- 6.6	- 3.8
July-Aug.	- 5.0	- .9	- 1.8	- 1.8	- .9	- 1.8	- 5.1	+ .7	- 18.0	- 3.5	- 2.0
Aug.-Sept.	+ .9	- 1.9	0	- .9	- .9	- 3.8	0	0	- 10.0	- 3.6	- 3.0
Sept.-Oct.	- 7.0	- 1.0	- 3.6	- 2.7	- .9	- 2.9	0	- 10.0	+ 11.0	- 7.6	- 6.2
Oct.-Nov.	- 1.9	- 6.8	- 3.7	- 2.8	+ 1.0	- 3.3	- 6.2	0	- 10.0	- 8.2	0
Nov.-Dec.	- 3.8	- 3.1	- 2.9	+ 7.6	- 3.8	- 4.2	- 8.6	- 4.0	- 19.0	+ 4.5	+ 3.3
Dec.-Jan.	- 11.0	- 2.2	- 8.9	- 11.5	- 1.0	- 6.5	- 2.1	- 9.0	+ 5.3	+ 4.3	+ 2.1
1839 High-Sep.	- 16.0	- 10.0	- 10.0	- 9.0	- 6.0	- 13.0	- 12.5	- 2.8	- 36.0	- 21.0	- 10.0
1839 High-Dec.	- 28.0	- 20.0	- 19.0	- 7.0	- 10.0	- 21.0	- 25.0	- 16.0	- 49.0	- 30.0	- 13.0

<sup>a</sup>Wholesale Prices.

Sources: Col. 1-3, 10-11: Walter B. Smith and Arthur H. Cole, *Fluctuations in American Business, 1790-1860* (Cambridge: Harvard University Press, 1935), pp. 158, 159, 174, 179. Col. 4-8, Arthur H. Cole, *Wholesale Commodity Prices in the United States 1700-1861* (Cambridge: Harvard University Press, 1938), pp. 135, 142, 157, 179, 185. Col. 9, Source cited in Appendix Table C-5, Series A.

would be in these two markets that the economic problems of Great Britain and the Continent were first felt in the United States.

The American economy does not appear to have been experiencing any significant economic difficulty during the last quarter of 1838, though the price indices in Philadelphia and Cincinnati peaked in October and December respectively. Up until March, 1837 the economy appears to have been marking time, waiting for something to either send it upward or to start it downward.

The events of the spring were not propitious. Almost all commodity price series, excluding New Orleans and cotton prices, reached their peaks in February and March. Border difficulties between Maine and Canada contributed to a decline in the sale of American securities in London during the spring of the year.<sup>21</sup>

Monetary conditions in the mid-West were confusing. Scheiber wrote that the directors of the Commercial Bank of Lake Erie in Cleveland were still extending loans and buying state securities in the spring. Berry noted, on the other hand, that a monetary contraction started in Cincinnati at the end of April as specie started to leave the city for the East, and to other banks in the interior.<sup>22</sup>

In May cotton prices started to ease slightly and in the middle of the month the Bank of England raised its discount rate. It is unlikely that the effects of these

developments were felt in the American money market until early June. The average time by steamship between England and New York in 1839 was seventeen days while a packet took at least thirty-five days on the average.

The Price Declines of Late Spring  
and Early Summer

Prices in most markets had been declining prior to June but in this month the financial markets of the East appear to have began to react to this downturn and to developments on the Eastern side of the Atlantic. The short-term interest rate rose in New York while railroad stock prices fell by six points, making it the second month in a row that the index fell by this amount. The index of Bank and Insurance company stocks fell by four points, this was the second largest absolute and percentage decline in the year.<sup>23</sup>

In Philadelphia, the banks had been curtailing lending activities as loans and discounts fell by six per cent between April and June. At the same time, they lost 20 per cent of their specie while their current demand liabilities fell by 17 per cent.<sup>24</sup> At least part of the specie loss was due to the public's converting bank money, current demand liabilities, into specie as the decline in bank money exceeded the decline in bank lending. As we shall see this was not an isolated event in the East.<sup>25</sup>

In the West, as well, banks were losing specie. Ohio banks cut back their lending slightly, three per cent, between April and June but their specie fell by 10 per cent while current demand liabilities fell by nine per cent. During the months of May and June, the Commercial Bank of Cincinnati, cut back its lending by seven per cent but its current demand liabilities and specie holdings fell by 26 and 29 per cent respectively, again indicating that the public was beginning to lose confidence in the banks.<sup>26</sup> Berry notes that in June there was increasing difficulty in obtaining funds to pay bills coming due in the Cincinnati banks. Capital was no longer flowing to the mid-West from the East and Europe. Just as the United States had a balance of payments problem with Great Britain, so did the mid-West have a similar problem vis a vis the East. A liquidity crisis was the result of the former problem in the East later in the year while it was already starting in the mid-West.<sup>27</sup>

Between April and June it appears that the American economy had started on a downward trend, yet we find in the first issue of Hunt's Merchant's Magazine the following comments by Charles F. Adams,

Here we are in the year of our lord 1839, to all external appearances recovered from the effect of every injury . . . the wages of labor are as high as ever--the returns from industry are as quickly realized--the profits of business do not fall short.<sup>28</sup>

TABLE 8.3.--Major Assets and Liabilities of Selected Banks, 1838-1840.

Banks and Dates	Percentage Changes		
	Loans and Discounts	Specie	Current Demand Liabilities <sup>a</sup>
<u>Ohio</u>			
June 1838-June 1839	+ 9	-21	- 7
June 1839-Jan. 1840	-16	-26	-32.5
June 1838-Jan. 1840	-15.5	-42	-37
<u>Georgia</u>			
Oct. 1838-Apr. 1839	+14	-22	0
Apr. 1839-Oct. 1839	-20	-44	-45.5
Oct. 1838-Oct. 1839	- 8	-56	-46
<u>Pennsylvania<sup>b</sup></u>			
Jan. 1839-Apr. 1839	+10	+ 8	+23
Apr. 1839-Oct. 1839	-16	-21	-33
Jan. 1839-Oct. 1839	- 7	-12	-14
<u>Philadelphia<sup>b</sup></u>			
Jan. 1839-Apr. 1839	+ 6	+ 6	+24
Apr. 1838-Oct. 1839	-16	-27	-32
Jan. 1839-Oct. 1839	-11	-23	-10
<u>New York City</u>			
May 1838-Jan. 1839	+28	-24	+18.5
Jan. 1839-Jan. 1840	-25	-10	-11

<sup>a</sup>These are gross figures which include inter-bank holdings.

<sup>b</sup>Excludes the United States Bank of Pennsylvania.

Sources: Ohio, Georgia, Pennsylvania: United States Congress, House, 26th Congress, 1st Session, House Document 111. Philadelphia: United States Congress, House 29th Congress, 1st Session House Ex. Document 226. New York City: Appendix Table B-11.

In July there was a further worsening of the health of the economy and by the end of the month we begin to find the press commenting on the turn of events. The two main developments in this month were the sharp drop in the cotton market and reports of massive specie exports from the United States. We have already seen that cotton prices in New Orleans and England fell sharply in July. This had immediate consequences not only for those directly involved in the trade but also for the foreign exchange market and money markets of the North.

The foreign exchange market was, prior to the fall in cotton prices having difficulties due to the increased level of imports. Imports stimulated by the revival of late 1838 were 63 per cent above the level of 1838 and the second highest in the 1830-1845 period. The monetary situation in Great Britain as well as the uncertainty caused by the border disturbances between the state of Maine and Canada brought about a decrease in the demand for American securities in London. This decreased the available supply of foreign exchange.

The United States Bank of Pennsylvania, at least temporarily filled the void by selling foreign exchange. In mid-July the New York Express reported that the bank was supplying exchange at a 10 per cent premium over nominal par. Though there was some apprehension about gold exports, the paper believed that cotton sales would provide a source

of exchange to keep the rate below the specie export point.<sup>29</sup> Unfortunately, like so many other expectations in 1839, this one was not to be fulfilled. Both McMaster and McGrane wrote about massive specie exports during the summer of 1839. The former noted that,

By July, every packet, every steamship that left New York carried out specie.<sup>30</sup>

At the end of the month, the following was found on the front page of Niles' National Register,

The foreign news published in the present sheet is of great interest, indicating as it does a great and disastrous revolution in the commercial relations of this country with England in which our merchants and planters will be the principal sufferers.<sup>31</sup>

By mid-summer the economic signs pointed to a crisis. Cotton prices were falling and with them the mercantile and banking structure of the South. In the mid-West, it became increasingly difficult for merchants to obtain funds as the banks contracted in response to specie losses to the East. Finally, in the East, the money markets began to react to the losses of specie to Great Britain and the decline in trade with the South and the interior. As in 1837, a liquidity crisis was approaching.

#### The United States Bank Enters the Picture

In August the United States Bank of Pennsylvania entered the money and foreign exchange markets in a massive way as it attempted to extricate itself from problems partially of its own making--the cotton transactions and its

generally poor portfolio management--and partially from those problems facing all banks at that time. The bank's immediate problem was that it needed specie to meet domestic demand and to ship to Great Britain to pay the large amount of its debts which would be maturing there during the last half of the year. According to Smith, between August 26 and the end of October, the bank's agent in London, Jaudon, had to somehow pay or refinance approximately £720,000 (approximately \$3.5 million) in maturing short-term and long-term obligations. With a collapsing cotton market and the drying up of the London capital market, the bank was hard put to meet its obligations. In fact, to meet the needs of Jaudon, Humphreys and Biddle were forced to sell cotton, this in August when cotton prices were down from their spring highs and selling meant losing money.<sup>32</sup>

To meet its needs for specie, the bank expanded its issue of post notes while at the same time selling large amounts of foreign exchange bills in New York. Most of these bills were drawn on the Paris firm of Hottinguer and Company with others drawn on its agency in London.

Can we be certain that these sales of post notes and exchange bills were for the purpose of obtaining specie? Or was there another reason for the sales? Bray Hammond believed that the main purpose of these sales was to force the New York banks to suspend, thus allowing the United



States Bank to escape the onus of suspending first. This view is supported by a letter written by Joseph Cowperthwaite, cashier at the bank's home office, in March of 1841 to Nicholas Biddle, explaining the bank's actions in the last half of 1839.

Another crisis was anticipated, and it was feared that the banks generally would be obliged again to suspend. This was unhappily too soon to be realized for the storm was then ready to burst, but, instead of meeting its full force at once, it was deemed best to make it fall first upon the banks of New York . . . . The proceeds of these immense sales of exchange created very heavy balances against the New York banks, which after all, signally failed in producing the contemplated effect.

Whatever the motives the obvious result of the bank's action was to increase the pressure already on the money centers of the East. According to Hammond, specie and other loanable funds were being withdrawn not only from New York but also from Boston and Baltimore.<sup>34</sup> This meant less credit to the merchants and manufactures, and where it was obtainable, more expensive credit. The short-term interest rate on commercial paper rose from 12 per cent at the beginning to 15 per cent by the end of August. Some would be forced to sell goods in order to meet maturing debts while others might have had to contract production because they could not obtain funds to purchase raw materials or pay their workers.

As the supply of money contracted, due to specie exports and bank actions, economic activity and prices could be maintained only if velocity were to increase. But bills

of exchange which decreased the need for money became more unsuitable. The discounts on domestic bills began to increase in August and for the remainder of the year. Bills on Cincinnati rose from a two and one-half to three per cent discount in the summer to four to five per cent by October. On Southern cities the discount started to rise in August and September.<sup>35</sup> The increase in the short-term interest rates might have attracted more funds into the Eastern money markets, but as we saw above, most of these funds were being absorbed by the post-notes sold, in the main, by the United States Bank and the Girard Bank of Philadelphia.

The lack of credit and money was severely felt in the interior. Berry wrote that,

In September the banks (of Cincinnati) were refusing to discount altogether, forcing traders to rely upon their own resources and employers to refuse contracts because they could not collect cash to pay their hands.<sup>36</sup>

September closed with a continuing deterioration in the money and commodity markets. Interest rates and discounts on bills of exchange continued to increase and with a rising exchange rate specie continued to leave the banks and the country.<sup>37</sup> Confidence left the financial community as it realized that the revival was ending and that they had overextended themselves once again. At the end of the year, the New York State Bank Commissioners reported that,

Dismay and distrust prevailed the whole commercial community. . . . Every moneyed institution, and every capitalist, held with a closer grasp, the means of self-preservation.<sup>38</sup>

Nowhere was the problem as severe as in Philadelphia where the largest bank in the country, the United States Bank, found itself at the end of its rope. It was over-committed in the cotton trade and in the South in general. It held large amounts of bonds as a result of its investment banking transactions. The bank had to sell future commitments to obtain specie to meet its present commitments having lost a little over 50 per cent of its specie holdings between January and September. It was apparently surviving on a day to day basis and this was not to last for long.<sup>39</sup>

#### The End of an Era: The Panic of 1839

In May 1837, the New York City banks were forced to suspend because of a run by their depositors who feared that the banks would become, or already were, insolvent and thus unable to exchange their current demand liabilities for specie. In 1839 the scene was again repeated, but this time it was the turn of the United States Bank of Pennsylvania to lead the way. Unknown to it, and for that matter to anyone on the Western side of the Atlantic, the fate of the United States Bank had been sealed in late September when it became known on the Continent and in Great Britain that Hottinguer and Company of Paris had refused to pay the foreign exchange bills which the United States Bank had drawn on it and sold in New York during August. As it happened this news, and the later news that the Paris

branch of the Rothschilds did agree to accept the drafts, reached the United States after the United States Bank had already suspended.<sup>40</sup>

The United States Bank of Pennsylvania  
Suspends

On October 9, 1839 the United States Bank quickly followed by the other Philadelphia banks, suspended. The suspension was immediately caused by a run on the bank resulting from the disclosure of a meeting held the previous evening by the directors of the bank. This meeting was held to consider its response to the presentation that day of large drafts drawn on it by the New York City banks. As the news of the Philadelphia suspension spread, many banks to the South and West of the city also suspended. The suspension was not uniform in these regions, and excluding Rhode Island, the banks of New York and New England appeared not to have suspended.<sup>41</sup>

In 1837 and 1839 bank suspensions were initiated by bank runs. The underlying causes were the same in both cases; an increasing illiquidity in the American economy brought about by an overextended banking and financial structure having to face the reality of its overexpansion as commodity prices fell and as the money and commodity markets of Britain moved into recessionary periods. The difference is that there was to be no rapid recovery in 1840, but rather a deepening deflation which lasted until 1843-1844.

The Nonuniformity of Suspension:  
Possible Causes

When the New York City banks suspended in May, 1837, they were quickly followed by what appears to have been all the other banks in the nation, yet in 1839, when the largest bank in the nation suspended first, there was to be no uniformity in the suspension that followed. Why was this so? Whether a bank suspended or not appears to have depended on two factors, the confidence which depositors had in it and the banking philosophy of the bankers in the particular locality. Depositors--according to Hammond these were more important in starting a bank run than note holders--started a run on a bank when they believed that the bank could not or through suspension, would not redeem demand deposits in specie.<sup>42</sup> Obviously in a fractional reserve system, no bank could normally meet all the demands placed on it for the redemption of current demand liabilities into specie, even if only the depositors tried to do this. We can assume that the large depositors knew this.

What conditions then, initially induced these depositors to withdraw their funds from a particular bank or group of banks? Thomas D. Willett, has recently written that the expansion ratio--the ratio of a bank's current demand liabilities to its specie--would increase prior to suspension and thus acted as an indicator to the public of the difficulties that a bank was experiencing.<sup>43</sup> Willett implicitly assumes that the public knew about this ratio. This may have

been true for deposit banks which had to submit monthly reports to the Treasury, but we do not know the time lag between the time the report was submitted and the time its contents were made public. But how did the public find out about the non-deposit banks?

Did movements in the expansion ratio predict which banks actually suspended? Banks in Philadelphia, New Orleans, and Rhode Island suspended, while those of New York, Massachusetts, and Maine did not. Table 8.4 contains estimates for these banks for the period around the suspension. It should be remembered that the higher the expansion ratio, the smaller the amount of specie behind each dollar of bank current demand liability. To say the least, the results obtained from the table do not substantiate Willet's analysis, at least in so far as the suspension of 1839 was concerned. All three of the regions where banks suspended, and for which we have information, had lower expansion ratios than the banks of Maine and Massachusetts. Furthermore, the expansion ratio of the New Orleans banks rose only after news of the suspension in Philadelphia reached that city.

If we follow Hammond's lead and concentrate not on total current demand liabilities but only on the relationship between specie and demand deposits, we obtain similar results. The information available does not support Hammond's hypothesis. Obviously then, bank balance sheets do not tell the entire story.

TABLE 8.4.--Ratios of Current Demand Liabilities and Demand Deposits to Bank Specie Holdings in Selected Banks 1839.

Banks	Date	Current Demand Liabilities to Specie	Demand Deposits to Specie
Philadelphia	Jan. 1839	5.3	2.9
	June 1839	6.6	3.9
	Nov. 1839	5.9	3.6
New Orleans	Dec. 1838	3.5	1.9
	Oct. 1839	3.2	1.7
	Nov. 1839	4.6	2.3
Rhode Island	Jan. 1839	6.2	2.1
	Dec. 1839	4.7	1.5
New York City	Jan. 1839	3.7	2.6
	Jan. 1840	3.7	2.8
Massachusetts	Oct. 1838	6.7	3
	Nov. 1839	7.1	2.7
Maine	June 1839	10.9	3
	Jan. 1840	13.8	2.5

Sources: See sources cited in Table 7.2.

So far we have looked at the situation from the point of view of the depositor, which assumes that bankers mainly reacted to the actions of their depositors. But bankers may have done more than just anticipate runs: they may have attempted to convince their large depositors that individually or together and in local or regional groupings, bankers would not simply suspend but would try to meet all normal specie needs of their customers. For this to work, bankers and depositors needed to have had some degree of confidence in each other and the same general philosophy about the negative aspects of suspension.

In the preceding chapter we saw that during the struggle over the timing of resumption in 1838 the bankers of New York and New England generally held to the belief that banks should convert current demand liabilities into specie at all times. If for some unavoidable reason they were forced to suspend, they should attempt to resume as quickly as possible.

Many bankers outside New York and New England did not judge convertibility to be of that vital a nature in the management of banks and thus perhaps were more willing to suspend if and when the opportunity arose. The statements of the Philadelphia bankers after they suspended supports this latter view. The Philadelphia bankers in a report issued on October 23, 1839 claimed that because of



the specie losses to Great Britain--they did not discuss the question of what role poor banking practices had in this--they had two choices, either contract and call in loans or suspend. They preferred to do the latter rather than hurt business and the general community more than it already was.<sup>44</sup> One may ask however, whether they could have done the former, contract, without in fact causing the latter?

There are three ways in which the banking system as a whole can increase its specie holdings:

1. From transactions, such as calling in loans or not renewing maturing loans, which cause dishoarding on the part of the private non-banking sector or government;
2. From importation;
3. From domestic production.

In 1839, the banks of America, taken as a whole, had a net specie loss of approximately \$12 million. Most of this appears to have gone in to the private sector and government holdings outside of banks as net specie exports were only about \$3.2 million in fiscal 1839.<sup>45</sup>

If one or several of the Philadelphia banks attempted to increase their specie holdings by calling in loans, they could do this only at the expense of other banks, inside or outside the city. But Philadelphia banks taken as a whole lost specie during this period. According to Berry, they were losing specie at a more rapid rate than they were

receiving it from the interior.<sup>46</sup> It appears then that any widespread attempt by the Philadelphia banks to contract rather than suspend eventually would have led to suspension. It is surprising and perhaps revealing that in their report they did not take this into account as a justification for suspension.

We are still left with the question of why the New York Banks and those of New England, excluding Rhode Island, did not suspend. We have seen that balance sheets do not tell the story. Mutual confidence and understanding between merchants and bankers in a locality might have been important. But were there other factors, perhaps exogenous to the banking system which may explain the actions of the non-suspending banks.

Obviously, by suspending, the United States Bank and the other Philadelphia banks eased the pressure on New York and Boston banks. They now did not have to fear losing specie to Philadelphia banks because of the sale of post-notes and foreign exchange bills in the Northern money markets. The New York City banks were also able to obtain a loan in mid-October which helped to alleviate pressures in the foreign exchange markets and thus two sources of specie losses were eliminated or reduced.

On October 18, a loan of \$1.5 million was negotiated between Prime, Ward and King of New York and the commissioners of the New York State Canal Fund which issued

securities which were, "used to obtain foreign exchange by the use of drafts drawn on Barings and Company."<sup>47</sup> This loan enabled the New York City banks to remit bills instead of specie to Great Britain causing the exchange rate on London to ease during the rest of the year. The funds which the Canal Fund received were deposited in the New York City banks without interest, thus in a sense a loan to the banks, and withdrawn from those banks at fixed intervals to pay for work on the canals of the state; these expenses were estimated to have averaged about \$450,000 a month.<sup>48</sup> The New York City banks thus were given two types of aid which helped them to sustain specie payments, foreign exchange bills to substitute for specie and short-term interest free loans.

The New York and New England banks did not suspend because both banker and depositor had confidence in each other. This was reinforced by the removal of the post-notes from these two Northern money markets, as well as by the fall in the exchange rates below the specie export points due in part to loans granted to New York City banks. That banks in other sections of the country did not suspend perhaps attests to the confidence in the banks which existed in the particular locality. As we have seen, no simple comparison of bank expansion ratios or other components of a bank's balance sheet gives an a priori estimate of whether a bank would or would not suspend. We may hazard

the guess that the economic position of bank's major depositors--that is the degree to which they were hurt by the price movements of the summer and fall of 1839--as well as the liquidity of the bank's income earning assets and their specie holdings were the major factors structuring the degree of mutual confidence between the bankers and their depositors. In the last few pages we have attempted to see why the suspension was not uniform. What about the economic consequences of the suspension? Could they be localized in the regions where suspension took place or would they spread to all parts of the country?

The American Economy During the Last  
Quarter of 1839

The prospects did not seem good for localizing the damage done by the suspensions; the two great agricultural sectors of the country were in serious difficulty while the monetary system was in disarray. Not only did farmers and merchants have to face declining prices, but they also found themselves being paid with bank notes usable only at large discounts, and this was also true for domestic bills of exchange. In mid-November, the bank-notes of Pennsylvania, Maryland and District of Columbia banks were at a 15 per cent discount in New York City. Domestic exchange at New York City during the week prior to suspension ranged from maximum discount rates of one-quarter per cent at Philadelphia three and three-quarters per cent

at New Orleans and to five per cent at Cincinnati. During the first week of November the rates at these same cities were 15 per cent, 10 per cent and there were no quotes on Cincinnati exchange until December when the discounts ranged between 14 to 16 per cent.<sup>49</sup>

The suspension meant not only a declining money supply in nominal terms but also in real terms as bank notes fell in value, compounding the problem was the rise in the discount on domestic exchange which by decreasing the usefulness of these bills, further decreased the velocity of the money supply.

Until the suspension, the price decline was centered in agriculture, between January and September the index of agricultural prices fell 12 per cent and for the remainder of the year they fell an additional 12 per cent, indicating the severity of the problem facing the agricultural sectors. Industrial prices on the other hand fell only five per cent between January and September, but it then fell 11 per cent during the remainder of the year.<sup>50</sup> In its December issue, the Merchant's Magazine announced that as soon as it had obtained the necessary information, it would start a series of articles on the laws concerning debtor-creditor relations in the United States and Great Britain. The announcement ended with the statement that, "the utility of a series of articles of this kind is obvious."<sup>51</sup>

We have looked at the unfolding, month by month, of a deflation which was highlighted, but not culminated, by the suspensions of late 1839. Unlike the suspension of May, 1837 where prices did not fall substantially after the suspension, in 1839 they would continue their decline until a slight respite in mid-1841. The purpose of this chronological approach has been to show that the suspensions were part of a process which had started not in the fall of 1839, but rather in the fall of 1838, and not in the United States but in the grain fields and money markets of Great Britain and the markets of the Continent.

The economic difficulties of the Eastern side of the Atlantic was transmitted by means of the cotton and credit markets--the latter with the aid of the specie flow mechanism--to the United States, to an economy which appeared outwardly healthy but because of its dependence on an unstable money and credit system and the health of the British economy was overly receptive to any strong economic stimuli, be it inflationary as in the mid-1830's or deflationary as in 1837 and now in 1839. The year, which had opened with hopes of continuing recovery ended in gloom. The Bank Commissioners of New York State described the events of late 1839 in the following terms, even though the New York banks had not suspended,

The pecuniary distress of the last autumn was decidedly more intense, more general, and more embarrassing than any that has occurred since our acquaintance with the subject.<sup>52</sup>

## FOOTNOTES

### CHAPTER VIII

<sup>1</sup>Financial Register, II, p. 139.

<sup>2</sup>Financial Register, II, p. 229; Thomas Tooke, A History of Prices and the State of the Circulation in 1838-1839 (London: Longman, Orme, Brown, Green and Longman, 1840), p. 11.

<sup>3</sup>Clapham, II, p. 166; Hidy, p. 267; and Tooke, p. 75.

<sup>4</sup>Jenks, pp. 95-96.

<sup>5</sup>Hidy, p. 224; Clapham, II, p. 169.

<sup>6</sup>Tooke, pp. 114-115; Nolte, p. 429; Clapham, II, p. 167.

<sup>7</sup>Hunt's Merchants Magazine, September 1840, p. 262.

<sup>8</sup>Hidy, pp. 267-268. In its April 27, 1839 issue, Niles reported that money was very tight in Holland and that the Bank of Amsterdam had increased its discount rate from two and one-half per cent to three and one-half per cent but no information was given as to the date of this action though it was indicated that this had taken place during the first quarter of 1839, Niles National Register, April 27, 1839, p. 130.

<sup>9</sup>London Morning Chronicle, May 19, 1838 reported in Niles National Register, June 29, 1839, p. 280.

<sup>10</sup>W. T. C. King, History of the London Discount Market (London: George Routledge and Sons, Ltd., 1936), p. 82; Niles National Register, July 27, 1839, p. 341.

<sup>11</sup>See Appendix Table C-5. Interest rates in New York started their upward rise in June.

<sup>12</sup>Niles National Register, November 9, 1839, p. 162; Clapham, II, pp. 169-170.

<sup>13</sup>B. R. Mitchell and Phyllis Deane, Abstract of British Historical Statistics (Cambridge: University Press, 1962), pp. 333, 460; Silberling, The Review of Economic Statistics, V, Supp. 2, p. 252; Hidy, p. 272.

<sup>14</sup>Clapham, II, p. 176.

<sup>15</sup>Tooke, p. 63.

<sup>16</sup>Journal of the American Institute, March, 1839, p. 324; The Manchester Guardian, April 23, 1839 quoted in Niles National Register, June 1, 1839, p. 213.

<sup>17</sup>R.C.O. Matthews, A Study in Trade Cycle History (Cambridge: University Press, 1954), p. 138; Hammond, p. 503.

<sup>18</sup>Liverpool Albion, May 21, 1839 quoted in Niles National Register, June 19, 1839, p. 282.

<sup>19</sup>John B. McMaster, A History of the People of the United States (New York: D. Appleton and Company, 1906), VI, p. 524.

<sup>20</sup>Arthur Redford, Manchester Merchants and Foreign Trade, 1794-1858 ("University of Manchester Economic History Series," No. XI; Manchester: Manchester University Press, 1934), p. 83.

<sup>21</sup>Hidy, pp. 237, 264, 267, 268.

<sup>22</sup>Scheiber, Business History Review, Spring, 1966, pp. 60-61; Berry, pp. 457-459.

<sup>23</sup>Sources cited in Table 8.2 and Appendix Table B-7.

<sup>24</sup>See Table 8.3.

<sup>25</sup>For a contemporary discussion of this contraction see Niles National Register, June 29, 1839, p. 273.

<sup>26</sup>United States Congress, House, 26th Congress, 1st Session House Document No. 172; and Table 8.3.

<sup>27</sup>Berry, pp. 453, 466-467.

<sup>28</sup>Merchant's Magazine, I, No. 1, July 1839, p. 47.

<sup>29</sup>Niles National Register, July 20, 1839, p. 326.



<sup>30</sup>John B. McMaster, VI, p. 524; Reginald C. McGrane, The Panic of 1837 (Chicago: The University of Chicago Press, 1924), pp. 205-206.

<sup>31</sup>Niles National Register, July 27, 1839, p. 337.  
For the situation in the Cincinnati market see Berry, p. 453.

<sup>32</sup>Smith, pp. 200, 217, 257, 259, 260; Merchant's Magazine, I, No. 6, December 1839, p. 508.

<sup>33</sup>Niles National Register, April 24, 1841, p. 123;  
Hammond, p. 505.

<sup>34</sup>Hammond, pp. 505-506; Nathan Appleton, Remarks on Banking and Currency (2nd edition: Boston: Little and Brown, 1841), p. 17.

<sup>35</sup>United States Commercial and Statistical Register, IV, March, 1841, pp. 151-155.

<sup>36</sup>Berry, p. 453. According to Berry, grain prices did not break in the interior until the October suspensions, although a liquidity crisis had been building since spring. See Berry, pp. 453-467.

<sup>37</sup>According to an article in the New York Courier and Enquirer of October 2, 1839, the United States would continue to lose specie until the rate of exchange on London was at least two points below actual par. On October 2, the rate was between 9 5/8 and 10 1/4 per cent above nominal par while actual par was about 9.35 per cent. Niles National Register, October 5, 1839, p. 81 and source given in footnote 35.

<sup>38</sup>New York State, Assembly, 63rd Session, Annual Report of the Bank Commissioners of the State of New York, 1839, Assembly Document No. 44, p. 37.

<sup>39</sup>Smith, p. 301.

<sup>40</sup>According to Hidy, the Barings knew as early as September 11 that Hottinguer would dishonor the bills drawn on it by the United States Bank. Hidy, p. 278; Smith, p. 215.

<sup>41</sup>Smith, p. 219; Redlich, II, p. 267.

<sup>42</sup>Hammond, p. 689.

<sup>43</sup>Thomas D. Willett, "International Specie Flows and American Monetary Stability, 1834-1860," The Journal of Economic History, XXVIII, No. 1 (March, 1968), p. 44.

<sup>44</sup>United States Commercial and Statistical Register, I, October, 1839, p. 299; John B. McMaster, VI, p. 527.

<sup>45</sup>Appendix Tables A-1 and B-1, domestic production was less than \$1 million.

<sup>46</sup>Berry, pp. 458-459; Niles' National Register, October 19, 1839, p. 121.

<sup>47</sup>Hidy, p. 282.

<sup>48</sup>Niles National Register, October 19, 1839, p. 121.

<sup>49</sup>Jonathan Elliott, The Funding System of the United States and of Great Britain (New York: Augustus M. Kelley, 1968), p. 1170; United States Commercial and Statistical Register, IV, March 1841, p. 155.

<sup>50</sup>Sources cited in Table 8.2.

<sup>51</sup>Merchants Magazine, I, No. 6, December 1839, p. 518.

<sup>52</sup>Robert E. Chaddock, The Safety Fund Banking System in New York, 1839-1866, National Monetary Commission, United States Congress, Senate, 61st Congress, 2nd Session, Senate Document No. 581, p. 305.

## CHAPTER IX

### THE BECALMED YEARS: 1840-1843

The 1830's ended on a bleak note for the United States. Many banks were suspended, the second suspension in a little more than two years. The entire financial community felt uncertain. The major market for American cotton and its main source of short- and long-term foreign capital, Great Britain, was in the midst of a recession which would last as long as British grain crops were poor.

The problems facing the American economy were not only those of overexpansion of production and transportation facilities during the mid-1830's boom and of the financial system which supported the boom. There was also a shift from a boom psychology to one of uncertainty structured by recent suspension, bankruptcies, and declining prices.

We shall see in this chapter that prices in the United States declined until the spring and summer of 1840. After a revival which lasted until the late summer of 1841, they fell until the bottom was reached in early 1843. Unfortunately, we will not be able to explain fully the movement of prices during this period, especially for the revival of 1841. Yet we will see that as in the 1830's,

the health of the British economy was important in bringing an end to the period of falling prices.

In the first section of this chapter we shall examine the years 1840-1841, a period in which prices reached a temporary bottom. The second section will cover the period when the economy was at its low point and the beginning and end of the recovery. The final section will compare the 1839-1843 recession with others of the ante-bellum period.

#### Reaching a Temporary Bottom, 1840

The first year of the 1840's did not start propitiously for the United States and Great Britain. The 1839-1840 cotton crop was the largest on record up to that year while the British grain crops were again poor. Yet prices in the United States in general stabilized during the last half of the year and actually rose until the late summer of 1841.

#### Trade and Credit

Commercial activity in the United States declined in 1840, though as far as the textile industry was concerned, the decline was in sales, not in production. Sales in dollars fell by 41 per cent in fiscal 1840 from their 1839 level, while output in yards rose slightly, by less than one-half of one per cent. The reason for the divergent movement of sales and output appears to derive from the indivisibilities in textile production, that is large fixed

costs. "It was therefore advantageous, unless prices were very low, to produce either at levels near capacity or not at all."<sup>1</sup> Auction sales in New York City, the only other indicator of sales we have for this period, also fell, with American dry goods falling by 21 per cent and European by 17 per cent.<sup>2</sup> Indirectly, we have other indications of a decline or perhaps at the most a levelling off of sales.

For the second year in a row the money supply declined and by an estimated three and one-half per cent more than the decline in 1839, and bank lending fell even more.<sup>3</sup> In relative terms bank lending fell by 16 per cent as compared to a 13 1/2 per cent decline in the money supply, but in absolute terms, bank lending fell by an estimated \$76 million whereas the money supply fell by \$29 million.<sup>4</sup>

The contraction in bank lending and the money supply seems to have been the result of bankers attempting to increase their liquidity and perhaps of the declining demand on the part of the business community for credit. Bankers appear to have been successful as their specie holdings rose in 1840. While the supply of money and credit was declining, short-term interest rates in New York City fell throughout the year. This can be taken as an indication that the demand for credit was also declining.

The public lost specie to the banks and perhaps to the sub-Treasuries during 1840. The net specie holdings of the banks increased by approximately \$2 million while the

United States during 1840 had a net specie inflow of slightly less than \$500,000. The banks gained specie as they contracted their lending activities. The sub-Treasuries gained specie as the business community paid its bills due the government. As the Federal government was running a deficit in 1840, the drain was only temporary.<sup>5</sup>

We might expect that the contraction in the money and credit supply, and especially that of credit, not only in the United States but also in Great Britain, led to a decline in American imports. This did happen, and at least part of it was due to declining prices in the United States relative to the price of imported goods, though of course falling incomes in the South and West were also important. It is impossible to say which was more important as we do not know the composition of imports, especially the components which fell the most in 1840, and the degree to which domestic goods were substitutes for imported goods. The United States import price index fell by 3.9 per cent while the Warren and Pearson index of wholesale commodity prices fell by 15 per cent.<sup>6</sup> Imports fell by \$59.4 million, 37 per cent,<sup>7</sup> but this was a mixed blessing as it meant less trade and therefore less income for the merchants, shippers and others involved in the import trade.

While imports were falling, exports were expanding but because of price movements this did not mean a concomitant increase in export earnings. The index of the prices of United States Exports fell 36 per cent in 1840, the

simple barter terms of trade thus turned sharply against the United States.

The significance of this fall in prices was that though the aggregate value of exports increased, the per unit value fell and if costs did not fall by as much, the producers of these exports faced declining profits and perhaps even losses.<sup>8</sup> Expanding cotton and grain exports accounted for more than half of the increase in exports and the prices of both commodities fell in 1840. The average price of the various grains and flours exported fell from 13 to 37 per cent; flour prices fell by 29 per cent and wheat prices fell by 37 per cent. These two commodities accounted for approximately 95 per cent of the increase in grain exports.<sup>9</sup> Commenting on the economic consequences of increased grain exports in the face of lower prices, the National Intelligence wrote the following in late June,

While the exports are large, (they) amount to but little when sold in Europe. Flour continued to go out notwithstanding the promise of a loss on every barrel sent, but it is here (New York City) on hand with no demand for it at home, and what else can be done.<sup>10</sup>

Cotton prices--export value--in the face of the largest crop on record at the time and declining demand at home and abroad, fell by 42 per cent in 1840. In late June, Niles reported on the depressed state of the cotton market due to the large crop and existing inventories. It held out hope, as others had done in 1839, of a good British

grain crop reviving the cotton market, and as in 1839, this was not to be.<sup>11</sup>

Matthew Hammond in his work on the American cotton industry noted that if raw cotton sold at eight cents a pound in local markets--Hammond was referring to the early 1840's--the planters could afford to produce it. If this was true than for most of the first half of the 1840's planters would have been in serious trouble unless they were able to lower their costs of production significantly. Cotton prices in New Orleans, excluding the last quarter of 1840 and the first half of 1841, were below eight cents a pound and this was true until the 1845-1846 crop.<sup>12</sup>

For the majority of American exports, expanded value in 1840 did not mean increased income for the growers and for those dependent on the trade in cotton and grains. An examination of the movements of goods on the New York State canals, mainly the Erie, indicates that demand in the interior fell in 1840, and most likely to a greater extent than in 1837. Westbound tonnage from tidewater in general fell by nine per cent but shipments destined to the states and territories West of New York fell by 26 per cent, the comparable figures for 1837 being eight per cent and 11 per cent respectively.<sup>13</sup> Falling farm incomes contributed to an economy already burdened by a contracting supply of money and credit. The United States was not alone in its problems in 1840, for Europe was also in the grip of a recession as well as political disturbances.



European Problems in 1840

Throughout the first half of 1840 Niles National Register contained stories of economic difficulties in France and Great Britain. In February there were reports of widespread distress in all parts of France and a depressed state of trade in all industries and especially in the textile industry. The monetary situation was similar to that in Great Britain and the United States, "there was no promising means for the employment of capital in trade."<sup>14</sup> By late April there were reports of corn riots in the provinces, Great Britain was apparently not alone in having poor harvests, and continuing distress in the industrial centers. The problems of French manufactures and merchants was in part allegedly due to conditions in the United States, and this was most likely true to some extent.

The American merchants, debtors to our towns of Paris, Lyons . . . make no returns, send no cargoes, forward no bills.<sup>15</sup>

A similar picture could be painted for Great Britain.<sup>16</sup>

In both European countries the economic problems centered around poor harvests producing declining domestic demand after a period of expanding production facilities. Added to the drop in domestic demand was that of foreign demand, and to both this meant the American market as well as each others.



The Revival of Late 1840 and 1841

By mid-1840 the economic picture began to change in the United States and to a lesser degree in Great Britain, but as we shall see in this section the reasons for the changes are not readily apparent and still remain somewhat of an unknown. In terms of general price movements, the decline in the United States came to a halt first in the South and then, within a few months, in the North. For the remainder of the year and for about the first three quarters of 1841, excluding the drop in prices after the failure of the United States Bank and the renewed suspension of some other banks, prices were relatively stable or rose slightly. Besides the price series which are given in Table 8.2, other indicators of economic activity also paint a picture of stability during this period. Whereas the money supply fell by approximately 13 1/2 per cent in 1840, it fell by only six and one half per cent during 1841.

Price Movements and Economic Activity  
in Late 1840 and 1841

Because we have only one source of monthly data, price series, this information is used to designate the turning points in the American economy. The low point in the 1839-1840 price decline was reached by late summer in all parts of the country excluding the West, that is Cincinnati.

The last half of 1840 was primarily one of consolidation where prices reached bottom and gradually began to rise. The first comments we find of an upturn in economic activity was in the November issue of the Merchant's Magazine.<sup>17</sup> That is all the information we have as far as the state of the upturn was concerned in 1840.

In 1841, price movements influenced by the attempts of some of the suspended banks to resume and their subsequent resuspension, and in some cases, most notably that of the United States Bank, failure, painted a confusing picture of upward and downward movements. In fact if we only used price series such as those found in Table 8.2 it is difficult to speak about a revival at all. Information on output and sales, however, point to the conclusion that a recovery, albeit short, did in fact take place.

In order of occurrence, security prices were the first to halt their decline and stabilize. This took place in the spring of 1840.<sup>18</sup> It seems likely that the increase in security prices was due to the fact that the securities were a relatively safer form of investment than the alternatives available to individual and corporate investors such as banks.

Movements in cotton prices were more important to the American economy than were changes in security prices. Cotton prices reached their low of 6.5 cents a pound at New Orleans in March and then slowly rose to 8.3 cents a

pound by August. Prices remained around this latter level for the remainder of the year and, with the marketing of the 1840-1841 crop, rose to a high of 10.1 cents a pound in May of 1841 after which prices fell to a low of 4.9 cents a pound in March, 1843.

The factors underlying the movement of cotton prices in 1840 are difficult to uncover. Whereas prices in New Orleans reached bottom in March, they continued to fall in England until what appears to have been late May or early June.<sup>19</sup> This may indicate that the movement of prices at New Orleans was the result of speculative activity. As far as we can determine there was no recovery in the British textile industry at this time, but we cannot find any information supporting the speculation hypothesis. The New Orleans banks continued their contraction in lending until July and there was no significant increase in lending until the last two months of 1840.<sup>20</sup> Another possibility might have been that the last of the 1839-1840 crop had gone to market and prices could not be further depressed especially as the 1840-1841 crop was to be much smaller than that of the preceding year.

When we look for indications of an economic turnaround, the most dramatic perhaps was the rise in imports. Using the data for the port of New York, it appears that the increase in imports was concentrated in the first three quarters of 1841.<sup>21</sup> During 1841, imports rose by 25 per

cent over their 1840 level, and in conjunction with declining export earnings, shifted the American balance of trade from a surplus of \$23 million in 1840 to a deficit of \$13.6 million in 1841. Unlike the mid-1830's, this deficit had to be paid off without the massive capital inflows of the boom period. In a real sense, the revival, at least as it was characterized by this balance of trade deficit, carried with it its own seeds of destruction.

Just as in 1840 when the decline in commercial activity was reflected in the drop of imports, auction sales in New York City and other indicators of commercial trade, so we find an upturn in these activities in 1841. Auction sales in New York City rose by 21 per cent, but most of this, almost 69 per cent, was in European goods.<sup>22</sup> Shipments to the region west of New York State, via the canals of that state increased by 29 per cent over their 1840 levels.<sup>23</sup> The recovery was also felt in the New England textile industry as its sales and output rose in fiscal 1841 over the 1840 levels by 20 per cent and 23 per cent respectively. As capital expenditures fell in the textile industry, it appears that underutilized or unused facilities were again being placed into production.<sup>24</sup>

Although the Riggleman index of building construction turned up slightly in 1841, the level of internal improvements investments reached a peak in 1840-1841. As it turned down so did the incomes of those dependent on

these projects. We shall spend a few moments examining this area of economic activity because it was another element assuring that the revival could not continue and because it again demonstrates the relationship between the American and British economies.

#### The End of the Canal and Railroad Boom

During the railroad and canal building boom of the mid and late 1830's, most projects whether public, semi-public or privately owned, obtained financing through the sale of bonds, and many of these were sold directly or indirectly in the London capital market and other European capital markets.<sup>25</sup> With the problems in the European capital markets and in London and with the disorganization of the banking and financial communities of the United States, the inflow of funds gradually dried up. At the same time state and local governments were facing declining revenues as trade and commerce stayed relatively stationary during the first three years of the 1840's.

The flow of American securities to England and the Continent slowed to a trickle in 1840 with the low point in the market for these securities being reached in late 1842 and early 1843.<sup>26</sup> Both economic and political factors contributed to this decline. Monetary conditions in England did not significantly ease until late 1842. In America, state governments began to take a second look at the methods used to sell their bonds as the interest payments came due

at a time when incomes were declining and many projects were still incomplete. In March 1840 the governor of Mississippi, a state where bonds were issued solely to finance banks, made some statements casting doubt on the legality of state bonds sold below par. When the Union Bank of Mississippi, in whose behalf the bonds were issued, then lost its charter in July, 1840 because it did not pay specie, the bond market suffered a serious loss of confidence.<sup>27</sup>

According to Fishlow gross capital formation in railroads peaked in 1839 and fell by 20 per cent in 1840 and continued to fall until 1843.<sup>28</sup> Cranmer estimated that canal construction peaked in 1840 though Segel believes that owing to the financial and monetary problems of the 1839-1843 period, payments lagged behind actual construction and that as a result of this, construction did not actually peak until 1841.<sup>29</sup> Whatever the actual pattern of expenditures, the drop in construction was another factor ensuring that the economy would not witness continuing recovery in 1842.

In 1840 state governments witnessed a continuing expansion of their expenditures while their incomes declined from the distribution peak in 1836. From Table 7.3 we see that the estimated aggregate state deficits in 1840 were the highest in the 1830-1845 period. By 1841 the states were able to cut back expenditures and increase revenues



as the economy stabilized and temporarily turned up. Some states raised their tax rates and others used the principal still remaining from their share of the Distribution to support current consumption or to meet interest payments on their bonds. A few would try to float new bond issues.<sup>30</sup>

Mounting deficits and difficulties in meeting interest payments on existing debts together with the meager returns from some of the existing projects discouraged the states from undertaking new or sometimes completing existing internal improvement projects. Problems at home and abroad, all at a time when many banks were suspended or had failed led to the end of the internal construction boom.

Though the American economy recovered slightly in 1841, the probable factors producing it were not strong enough to sustain it in the face of the decline in construction, the increasing deficit in the balance of trade and other problems which arose during 1841. The recovery was basically a temporary expansion of output and sales utilizing existing production facilities. The increase in cotton, wheat, and sugar prices during at least part of 1841 helped to stimulate demand and resulted perhaps, in merchants restocking inventories which had been allowed to deplete during the latter half of 1839 and through 1840.<sup>31</sup> But even as imports were increasing and sales picked up it became clear that all was not right. During

the first quarter of 1841 there was an unsuccessful attempt by many of the suspended banks to resume specie payment and by the end of the second quarter cotton prices were again falling.

#### The End of the Revival

In April 1840, the legislature of Pennsylvania passed a law which would have taken away a bank's charter if it did not resume specie payment by January 15, 1841. Many banks South and West of Philadelphia also decided or were similarly forced to resume in the first months of 1841. Thus when the Philadelphia and other Pennsylvania banks resumed on January 15, they were quickly followed by the banks of Maryland, Virginia, Georgia and other banks throughout the country, most of the banks in the deep South however, did not follow suit.<sup>32</sup>

Unable to meet the specie demands which were placed on it, the United States Bank failed--it did not just suspend--on February 4, 1841.<sup>33</sup> This led to the resuspension and failure of banks not only in Philadelphia but also in Maryland and in two neighboring states which did not generally suspend in 1839 or resumed prior to the beginning of 1841. These being Delaware and New Jersey.

Prices in the North fell in the months immediately following these banking developments and the effects were felt in the interior as well.

In the first quarter of 1841 the Cincinnati par medium (bank notes) suddenly depreciated to an extent not realized since 1820. . . . From the currency angle, the darkest days were those between January 1841 and March 1842.<sup>34</sup>

Michigan appears to have been seriously hurt by the failure of the United States bank. Niles' National Register reported in mid-March that,

The Detroit Daily Advertiser states that the failure of the United States Bank will be a severe blow to Michigan, that institution holding nearly two millions of the Michigan state bonds. It says all the hopes of Michigan to prosecute her internal improvements, have been based on the ability of the bank to pay the state the amount of these bonds.<sup>35</sup>

One might have assumed that prices should have reflected the problems in the banking community yet, except for a slight drop in prices during the first quarter, prices rose slightly in the North, and at Cincinnati and in Charleston, while they remained stable in New Orleans until the fourth quarter of the year. This was all the more surprising as cotton prices in New Orleans peaked and started to fall during the second quarter of the year.

The end came to the recovering cotton market in the spring. Prices reached their peak in England during April and a month later in New Orleans, the reverse of the pattern when the market started to rise in the spring of 1840. In mid-June reports reached the United States of a spreading stagnation throughout the industrial regions of Great Britain. The money markets were again in difficulty. Short-term interest rates in London which had been below

five per cent during the second and third quarters went above five per cent while there was a sharp drop in bills of exchange issued during the third and fourth quarters of the year.<sup>36</sup> Again, as in 1837 and 1839 cotton prices fell as the major market for American cotton ran into difficulty. Just as in these two previous years, the East coast banks were losing specie at least in part due to the decreased flow of cotton bills.

By the last quarter of 1841 the situation and outlook was obviously bleak as far as the American economy was concerned. We have seen that expenditures on internal improvements were already declining in 1841. At least in the case of Michigan and most likely in other states and localities as well, the failure of the United States Bank-- it had been the investment banker for many such projects-- contributed to and perhaps accelerated this decline.

The economic outlook was not improved by the developments in the cotton markets and the massive specie outflows which took place in the latter half of the year. A large balance of trade deficit, a decline of about 15 per cent in the value of cotton exports, and the lack of short- and long-term capital inflows contributed to the largest net specie losses experienced by the United States in the 1830-1845 period and the second largest in the 1815-1845 period.<sup>38</sup>

The unsuccessful attempt of many banks to resume in the first months of 1841 increased the uncertainty in the

mind of the public as to the usefulness of bank notes. Even though the money supply contracted at a slower rate than in 1840, banks lost specie in 1841 and as these specie losses were estimated to have been \$2 million greater than the net export of specie it appears that they went into the hands of the non-banking sectors of the economy.<sup>39</sup>

It seems surprising that there was any recovery at all, but just as certain it was not surprising that the recovery could not be sustained into 1842. The recovery came to an end, not with the tumult of 1837 and 1839 but quietly under the weight of a sagging economy.

The American Economy Reaches Botton:  
1842-1843

For the United States 1842 and 1843 were darwinian years as weak firms and banks fell by the wayside and as the poorer states, poorer not just in resources but perhaps more importantly poorer in leadership, found themselves unable to meet interest payments and a few would disown some of their debts.

In the United Kingdom the picture was just as bad. During the first three quarters of 1842 there were a record number of bankruptcies. Exports in the year were the lowest since 1837, this being mainly due to a fall of slightly over 50 per cent in the exports to the United States. Industrial production as measured by the Hoffman index fell five per

cent. In the money markets the market rate of discount on short-term bills--three months--declined by a third to the lowest level in eight years while the amount of bills of exchange fell by 13 per cent.<sup>40</sup>

By the end of the year the outlook was to brighten for Great Britain as well as for the United States. The 1842-1843 British grain crops were the best since that of 1838-1839 and grain prices fell accordingly, stimulating domestic demand. Foreign demand increased with the end of the Opium War in China and the settlement of the Canadian-American boundry dispute by the Webster-Ashburton Treaty. In the United States the banking community was stabilized by the end of the year with many banks being able to resume specie payments as specie was again flowing into the United States, gradually rebuilding the depleted holdings of the banks.

The Economic Problems of the Private and Public  
Sectors of the American Economy: 1842

Both business and government faced serious problems during 1842. During the first half of the year the mercantile interests along the East coast were under increasing pressure as they had bills to pay while the banks, in their attempts to resume or remain solvent, curtailed their lending and discounting activities.

On March 12, 1842 the Philadelphia banks again attempted to resume, and all but the Girard Bank were able

to do so. The banks of Baltimore soon followed suit and one immediate result of these resumptions was a sharp drop in domestic exchange rates between these cities and New York.<sup>41</sup> In mid-May the New Orleans banks also attempted to resume but most were again forced to suspend by early June.

Further North, the banks in Kentucky, Missouri, Indiana and Illinois resumed during June. But here again the attempts were not completely successful for the State Bank of Illinois failed. This left that state virtually without any incorporated banking facilities until 1857.

By the end of the year resumption appears to have been achieved in most parts of the country and 1842 was to be the last year in the 1840's in which there was a decline in the number of banks in the United States.<sup>42</sup>

As we noted above, the banks curtailed their activities during the period of resumption. There was a net decline in both bank lending and current demand liabilities during 1842, the former falling by \$69 million (21 per cent), the latter by \$32 million (22 per cent). The money supply on the other hand fell by only nine per cent, this being \$16 million. As there was no significant change in specie flows during 1842, there being a net export of about \$730,000, this meant that about 50 per cent of the decline in current demand liabilities was due to inter-bank transactions. This is not out of line with the estimates of inter-bank

transactions given by Van Fenstermaker and others for the mid-1830's.<sup>43</sup>

The money market reflected the decline in bank lending and the money supply. The short-term interest rate in New York did not fall to five per cent until the last quarter. On the other hand, there appears to have been funds available, especially towards the end of the year. During fiscal 1842 the United States government was able to sell about \$14.8 million in treasury notes and bonds, although in the first half of the year, at rates around six per cent.<sup>44</sup> The purchase of these securities and more significantly the increase in their prices and those of New York State and City bonds during the last half of 1842 and the first quarter of 1843 indicate that it was not primarily the lack of resources which kept bankers from lending to merchants. Rather, it was the unwillingness of money lenders to undertake what they thought of as excessively risky loans.<sup>45</sup>

As we previously noted, in the early spring of 1842 the large merchants in the East coast cities found themselves in dire straits as they had spring payments to make to their suppliers. Many of these payments were due prior to the resumption of the Philadelphia and Baltimore banks, thus at a time when domestic exchange rates were still disorganized and the banks were still in the process of curtailing their activities.



The banks were fearful of extending themselves in the smallest degree . . . remittances from the country could not be obtained . . . goods could scarcely be sold for money at any prices . . . enormous fluctuations in bills and extravagant rates destroyed all means of remittance to the cities . . . caused a great number of failures among mercantile houses extending along the line of the Atlantic, from Boston to New Orleans.<sup>46</sup>

The textile industry was hard hit by the declining demand. In July, the textile companies in Lowell and elsewhere in New England attempted, because of rising inventories and falling profits, to restrict output as well as force down wages. But prices continued to fall and capital expenditures for expansion and replacement in fiscal 1842 were the lowest on record.<sup>47</sup>

In general, economic activity reached a low point during this year and the first quarter of 1843. According to Abramovitz, 1842 was the low point in such activities as business incorporations, ship building and urban construction though the Riggleman Building Index showed 1843 as the low point.<sup>48</sup>

In the farming regions the situation was not good. In the South cotton prices continued to fall and sugar prices reached their ante-bellum low. In the North, wheat prices were rising while corn prices were relatively stable even as production increased.<sup>49</sup> The disorganization of trade and the lack of money, however, helped to keep Western demand down even as prices rose. The tonnage on the canals of the State of New York destined to points West of the

state again declined as did the receipts of the Ohio canal system.<sup>50</sup> Conversely, this pent-up demand would, as the money supply and bank lending increased during 1843, help to turn the economy around.

The private sector was not alone in having serious problems. Many states found themselves pressed to meet interest payments on their debt obligations. In order to meet these payments as well as current expenditures, they were forced to raise taxes, issue state treasury notes, force loans from banks and sell stock, as well as other assets, which they held.

At mid-year the states of Pennsylvania and Maryland were unable to meet the interest payments on their bonds. This brought to eight the number of states which had fallen into arrears in interest payments. By that time Arkansas, Mississippi, Michigan and the territory of Florida had repudiated part or all of their outstanding debts.<sup>51</sup> With these developments in state securities and the failure of the Merchant's Exchange in New York City after it could not meet a debt of \$30,000, the bottom fell out of the market for American securities in London and on the Continent.<sup>52</sup>

The depressed state of the American economy was reflected in the balance of trade. Smaller cotton exports meant less income in the South as well as less cotton bills for Northern importers already facing a London money market all but closed to American debt instruments. Declining

money and perhaps real income in the United States, a contracting American money and credit base and the decline in British credit, not only to American importers but also to British exporters contributed to the fall in American imports. Because of the fall in American exports, they were the lowest since fiscal 1833, the surplus in the balance of trade was relatively small, less than \$2 million.<sup>53</sup>

Allegedly contributing to the decline in imports was a change in the tariff laws during 1842 which also was supposed to have helped in the recovery which took place in 1843. Under the Tariff Act of 1833 substantial cuts in the tariff rates were scheduled for January 1 and July 1, 1842 so that after the latter date there would be a uniform tariff of 20 per cent on all imported goods. But on September 1, 1842 a new tariff law was passed which significantly raised tariff rates. The immediate effect of this on imports does not appear to have been substantial if one takes the following statement found in the Merchant's Magazine at face value--the Merchant's Magazine was considered to be a "protectionist journal"--remembering that the full impact of the new legislation would not be felt until fiscal 1843.

The operation of the tariff, passed at the late session, appears hitherto to have produced but little effect . . . owing to the very restricted state of the currency in the interior, and the extreme low prices of produce.<sup>54</sup>

We shall see in the next section that even taking into account the fact that in 1843 the fiscal year contained only nine months, there was still a large drop in imports.

The important question is how much of this decline in imports was due to import substitution and the extent to which domestic production expanded to meet this new demand. Furthermore how much of the decline was due to the relatively low levels of income and hence demand for import and import type goods in 1843 as well as to the possible existence of sufficient if not excessive inventories which had to be worked down first? According to Taussug the Tariff Act of 1842 did stimulate domestic production in the textile, woolen and iron industries among others,<sup>55</sup> but this was in 1843 and the next few years until the Tariff Act of 1846. The Act of 1842 had little effect on economic activity in 1842 as the statement in the Merchant's Magazine indicated.

1842 ended with only a faint glimmer of hope. Incomes and prices were falling as was the money and credit base. State governments were in difficulty and American securities were no longer popular in London and on the Continental markets, yet the picture was not all bleak. In Great Britain the new grain crops were to be the best since 1838-1839, this together with the end of the Opium War helped to revive British industry. The upturn in the British economy along with an eased monetary situation in London enabled American banks, through a flow of funds into America in search of higher returns to increase their specie holdings. Thus--as we shall see below--they had the facilities

to expand the money and credit base when demand did start to rise in late 1843 and 1844.<sup>56</sup>

#### The Path to Recovery: 1843-1844

By the end of 1842, as we have just seen, the worst was over for both the British and American economies.<sup>57</sup> In America all but industrial prices bottomed by March, and this series reached bottom in July. Prices were relatively stable throughout the remainder of the 1840's and it was only in the mid-1850's that they again reached the levels obtained during the boom period of the mid-1830's.<sup>58</sup>

Just as we had difficulty in determining the sequence of events and factors which led to the temporary recovery in 1841, so will we have the same type of problem, but to a lesser extent, with the developments of 1843 and 1844. The basic problem is that although the banks were to build up their specie holdings throughout the year and the money market was easing at the same time, economic activity did not start to show signs of picking up until the last half of 1843 and especially not until the last quarter. Furthermore, we have very little quantitative data to show that, excluding the increase in the money supply, there was any significant upturn, or cause for such an upturn, until 1844.

#### The Money Markets and Economic Activity

Throughout the first half of 1843 the Merchant's Magazine as well as Niles' National Register were commenting

on the fact that even though there were massive specie inflows--the latter publication estimated that during the first six months of 1843 about \$12.83 million in specie had been imported--little if any were being used to support the extension of credit to merchants, planters and farmers. The money lenders were still too uncertain about the future course of the economy to again enter into the commercial credit markets. One factor inhibiting the flow of funds into these fields was the debtor laws enacted in the Western states. "A merchant cannot trust a western dealer because state law gives him no protection."<sup>59</sup>

Most of these funds flowed into the financial markets driving up the prices of good grade state securities as well as United States bonds as we see in Table 9.1. The stock market also felt the inflow, Smith and Cole's index of Bank and Insurance Company stocks rose from 77 in January to 90 by May. The short-term interest rate in the New York money market also began to reflect the increasing supply of loanable funds as interest rates fell from six per cent in January to a range of three and one-half to four per cent during the last half of the year.<sup>60</sup> Eventually the flow of funds into the financial markets spilled over into the market for goods and services, but this took longer than if there was a direct expansion of credit for trade and manufacturing.

TABLE 9.1.--Prices of United States, State of New York, and New York City Bonds  
at New York City February 1842-March 1843.

Bond	1842			1843	
	Feb.15	Aug. 1	Dec.15	March 15	
United States					
5 1/2% 1844	96-97	96 - 97	97 - 99	101	-101 1/4
6% 1844	97-99	98 -100	99 -100	101	-101 3/4
6% 1862		100 -100 1/2	100 -101	106	-106 1/8
State of New York					
5% 1845	80-87	90 1/2- 91	92 - 93 3/4	96	- 97
6% 1861-7		91 - 92	96 3/4- 98	103	-103 1/2
7% 1848-9		100 -101	103 3/4-104	105	1/8-105 1/4
New York City					
5% 1858-1870	77-78	79 1/2- 80	84 1/2- 85	91	- 91 1/2
7% 1852		100 3/4-101 1/2	105 -106	106	1/2-107 1/2

Source: Jonathan Elliott, The Funding System of the United States and of Great Britain (New York: Augustus M. Kelley, 1968), p. 1181.

More was needed than the availability of loanable funds to bring about an increase in economic activity. The inertia of money lenders had to be overcome and perhaps also, that of merchants. On the one hand, they had to extend credit to farmers and planters and on the other, order new goods, thus again undertaking new debt obligations.

It was in August, as the new cotton and grain crops were being harvested, that we began to find reports in Niles' National Register of a slow upturn in trade.

The papers of Boston, New York, New Orleans, and Philadelphia as well as those upon all the interior thoroughfares of trade, indicate the gradual revival of trade . . . restoration of confidence.<sup>61</sup>

For the remainder of the year there were increasing reports of the revival of manufacturing and commerce resulting from the renewed trade in agricultural products.<sup>62</sup>

Even though prices, excluding industrial, stopped falling by the spring and banks were increasing their holdings of specie throughout the year, it was not until the last three or four months in the year, as we have just seen, when the new crops were coming into the markets that we find contemporary comments about an upturn in trade. This is to be expected, for even if we take the viewpoint that it was changes in the money supply, resulting from the specie inflows, that led to an increase in economic activity, we saw in the preceding section statements about the lack of money inhibiting trade--there was still a lag between the



time the money supply increase and the time economic activity responded to this.

The fact that funds first flowed into the financial markets and only later into the commodity markets insured that there was some lag. The institutional structure of the American banking and financial system, especially the time it took to actually transmit specie from the Eastern sea ports to the interior also produced a lagged response on the part of economic activity.<sup>63</sup> The inflow of specie enabled banks to expand their lending when demand picked up, but what brought about the large specie inflow during 1843?

#### Specie Inflows During 1843

During the nine months of fiscal 1843, the last quarter of 1842 and the first two of 1843, the United States had the largest net specie inflow up to that time, an estimated \$20.8 million. Only in 1847 was there a larger inflow during any fiscal year in the ante-bellum period.<sup>64</sup>

These massive specie inflows could be the result of either a large surplus in the balance of trade which was paid in specie, or as in the mid-1830's, because of capital inflows arising from the exportation of debt instruments. The net balance of trade surplus in fiscal 1843 was approximately \$39.5 million, the largest surplus in the ante-bellum period.<sup>65</sup> Because of the change in the fiscal year, can we be certain that the trade surplus was due to

real factors and not just a change in accounting periods? In Table 9.2 we have taken estimates of imports via the port of New York, which were originally given in quarterly and calander year terms, and have converted these into constant fiscal years--fiscal years as determined prior to 1843--so that we can obtain an estimate of imports not influenced by the changes in the accounting periods. As we can see there was a sharp drop in imports.

The next question is what caused this drop in imports? From what we have already seen of the American economy in 1843 the answer is not difficult to find. Incomes, certainly money and perhaps real, was depressed and this meant less imports. Parallel with this was the contracting money supply and credit base which contributed to the declining demand for domestic as well as imported goods. Finally, domestic prices as measured by the Warren and Pearson index fell by nine per cent while the index of prices of imported goods fell by four per cent thus making imports relatively more expensive.

The economic situation in England was another factor tending to depress American imports more than it did exports to Great Britain. Domestic bills of exchange, fell to their lowest level since 1835, and this drop in bills of exchange was very important as there was a significant change in the financing of British exports to the United States in the years just after 1842 which placed more of the burden of

TABLE 9.2.--Imports into the Port of New York, 1833-1844.  
(\$000,000)

Year	Constant Fiscal Year <sup>a</sup>	Ratio of New York Imports to Total United States Imports, Unadjusted Fiscal Years
1833	55.5	54
1834	71.7	66
1835	87.7	63
1836	117.7	65
1837	84.5	63
1838	68.2	70
1839	99.5	62
1840	60.7	61
1841	75.4	60
1842	60.5	62
1843	46.6	72
1844	75.3	61

<sup>a</sup>In 1843, the fiscal year was changed from the period Oct. 1-Sept. 20 to July 1-June 30, because of this, the 1843 fiscal year was from October 1, 1843-June 30, 1843 while fiscal 1844 was from July 1, 1843-June 30, 1844. Constant fiscal years adjusts 1843 and 1844 to the twelve month fiscal year used prior to 1843. Unadjusted imports in fiscal 1843 was \$31.1 million, while those in 1844 were \$64.2 million.

Sources: Merchant's Magazine, Vol. II (November 1844), p. 452. Niles' National Register, January 27, 1844, p. 344.

financing this trade on the London and Continental money markets.

As a consequence of the crippling effects in the United States of the long depression, a larger proportion of the flow of merchandise to America after 1842 was on British or European account.<sup>66</sup>

It is impossible, given the available information, to determine how much of the decline in imports was attributable to the new tariff legislation. As we noted in our discussion dealing with the decline in imports in 1840, we do not know the composition of imports. Further adding to our data problems is the change in fiscal years during 1843.

What information we do have indicates that there may have been some import substitution in the iron industry but little if any in the cotton textile industry. Iron imports during 1843 were about 25 per cent of their 1842 level. Taking into account the difference in fiscal years, this still represents a considerable decline. Domestic production, on the other hand, rose substantially indicating that import substitution did take place.<sup>67</sup> American cotton textile production concentrated mainly on areas which were not in direct price competition with British textile imports.<sup>68</sup> Since domestic production was estimated to have fallen by about two per cent during 1843 the decline in demand, both for domestic and textiles appears to have come from falling incomes and a contracting supply of money and credit.<sup>69</sup>

So far we have looked at the balance of trade surplus from the import side, but what about exports? Exports in 1843 were \$17 million less than in 1842. How much of this decline was due to the shorter fiscal year? Lacking a complete breakdown of exports by calendar year we cannot answer this question with any accuracy. We do know that cotton exports rose by \$1.5 million while exports from New York City fell by only \$70,000 during the year.<sup>70</sup> Improved harvests in Great Britain led to decreased American grain exports, wheat and flour exports fell by about \$4.25 million.<sup>71</sup> It appears then that some of the decline in exports was due to the change in fiscal years.

In addition to the specie inflows resulting from the trade surplus, there appears to have been some capital inflows resulting from the continuing drop in interest rates in Great Britain. The Merchant's Magazine reported at mid-year that British investors were sending funds to New York City in an attempt to invest in mortgages at a hoped for six per cent return.<sup>72</sup> Specie inflows thus were the result of a large balance of payments surplus arising from a sharp drop in imports due to the poor state of the American economy and a lack of short-term credits from abroad which inhibited imports. There also appears to have been some inflow of long-term capital, especially during the last half of the year.

What was the relationship between these massive specie imports and the recovery in the American economy? Most of the specie imports appears to have flowed into the banking system. What induced the bankers to again lend money to merchants, manufactures, planters and farmers? We have already seen that by the middle of 1843 funds were going into the financial markets raising security prices and lowering rates of return. Eventually as the return on government securities--Federal as well as state and local--fell, bankers started to look to commercial loans as a source of higher earnings. But why should merchants, manufactures and others again begin to borrow from the banks? An answer to this question appears if we look at the "neo-Keynesian" explanation of the factors causing an upturn in the business cycle.<sup>73</sup>

As the economy moves toward the low point in a business cycle merchants and manufactures, facing declining sales and the unavailability of credit drew on their inventories rather than reorder or expand production in order to meet the low levels of demand facing them. Eventually inventories would be so depleted that in order to meet the existing demand, reordering and then production would increase. This upturn in demand can coincide with an upturn in gross investments as replacement investments might no longer be postponable. According to McGouldrick's estimates gross investment in plant and equipment by New England

textile mills increased from \$20,000 in fiscal 1843 to \$409,000 in fiscal 1844.<sup>74</sup> The increasing liquidity in the economy, due not only to the effects of the specie inflows but also perhaps to the liquidation of debts during 1842 and 1843, coming at a time when demand for consumer goods and investment good was picking up, helped to turn the economy upward.

This upturn in demand generated by inventory and capital replacement needs took place at a time when the stabilization of agricultural prices and the late summer harvests gave added reason for merchants and manufactures to expand their ordering and production schedules. Bankers and merchants throughout the chain of commerce and credit from the manufacturer and importer to the final consumer felt renewed confidence and ability in extending new credit. The combined effects of renewed demand and increased liquidity and stability in the financial system meant the end of the 1839-1843 recession and the gradual recovery of the American economy.

By the end of 1843 agricultural incomes began to expand, although the full effect of this was not felt until 1844. The rising prices and the prospect which this gave of increasing farm incomes and demand, revived trade. With this in mind the merchants began to come to the Eastern mercantile centers to rebuild their stocks of goods. They were aided in this as bankers, having watched their specie

holdings increase, began to extend credit, first to those buying financial instruments and then, in the last months of the year to the merchants all along the channels of trade. The prospect of renewed agricultural demand, both in the North and in the South fueled the fires of recovery while an expanding money and credit based resulting from near record specie inflows, stoked the fires of recovery.

#### The 1839-1843 Recession in Historical Perspective

Having examined the 1839-1843 recession we shall conclude this chapter by comparing this recession first with that of the 1930's and then with other ante-bellum economic disturbances.

Peter Temin has made a thorough comparison of 1839-1843 with the 1930's. He concluded that while the monetary effects of the former disturbance were greater than that of the later one, because of the assumed flexibility of prices, real output did not decrease but actually increased during 1839-1843.<sup>75</sup>

This perhaps surprising conclusion depends on the confidence which one places on the available aggregate output estimates and the base years used. Temin comments on one of the problems in using the aggregate estimates which were derived from the work of Gallman.

The author of these estimates of G.N.P. . . . in the 1840's emphasized that the annual data were derived only 'to reduce our dependence on benchmark



year estimates.' They were not intended to be used for analyses of yearly changes. . . . If they are to reduce our dependence on benchmark year estimates . . . they must also reflect the conditions of the economy in the intervening years.<sup>76</sup>

Moreover, two components of output were excluded from these estimates, value added by home manufactures and changes in inventories.<sup>77</sup> Could their exclusion significantly overstate or understate changes in G.N.P. during 1839-1843?

This would depend on:

1. the ability of households to shift from the consumption of manufactured goods to goods produced either at home or locally and obtained through barter;
2. the relationship of inventories to total sales;
3. the relative size of these two components to G.N.P. in 1839 and 1843.

As incomes fell and with the contraction of money and credit, households shifted from the purchase of manufactured goods to those produced at home or locally and obtained by barter. If this led to an increase in the ratio of home manufactured goods to market manufactured goods, then output in 1843 would be understated. The only information available which might throw some light on the magnitude of home manufactures are the estimates of Westward shipments on the New York Canals. These shipments fell in 1840 and 1842 and the tonnage in 1843 was only about one per cent above the level of 1839. Shipments to states and territories west of New York also fell in 1840

and 1842 and the 1843 tonnage was 15 per cent below that of 1839.<sup>78</sup> If we accept this information as representative of what actually happened throughout the economy we could then conclude that the ratio of household manufactures to manufactured goods was higher in 1843 than in 1839. The estimate of G.N.P. in 1843 thus are understated by excluding this component of total output.

A decrease in inventories reduces gross private domestic investment and thus the magnitude of G.N.P. Was the ratio of inventories to total production and sales at a lower level in 1843 than in 1839? We have no quantitative means of determining this. But it seems likely that with declining demand and contracting credit, merchants and manufactures might have drawn down their inventories rather than make commitments for new goods or raw materials. To the extent that this happened the G.N.P. estimates are overstated in 1843. Given the methods used to derive the G.N.P. estimates for these years the errors introduced by the omission of these two components do not appear to substantially alter Gallman's estimates. A more serious problem, however, arises from the years chosen.

We have seen in this chapter that there was a temporary revival in economic activity during 1841. The question obviously arised is how much of the estimated increase in G.N.P. in the 1839-1843 period actually took place in 1841. The G.N.P. data does not throw light on

this, but by looking at the textile industry we can readily see the problem involved. According to Temin,

Two estimates of the cotton-textile industry's have been made recently. They differ on many counts, including the method of derivation, but they both fail to show a sustained decline in production in the early 1840's. In fact the production in 1843 was shown to be about 15 per cent above the 1839 level in both estimates.<sup>79</sup>

The estimates Temin refers to are those of Davis and Stettler which have been published in a National Bureau study and that of Zevin which is not yet available.<sup>80</sup>

A closer look at the Davis and Stettler data shows that while textile output did increase by 15 per cent, almost all of this was concentrated in 1841.<sup>81</sup> If this is also true for other sectors of the economy, and the data on internal trade tend to support this, then much of the growth in output during the 1839-1843 period took place in 1841. Growth rates may still have been positive in 1842 and 1843, but at much smaller levels than Temin indicates.

The paucity of data is not the only stumbling block in any attempt to compare the 1839-1843 period with that of the 1930's, for what we are attempting to do in this case is to compare two different economies. The American economy was not the same in these two periods and the differences were not just simply that of size but also of structure. Using Gallman's estimates, not for yearly changes but for interdecade changes, we see that the share of output attributed to agriculture fell from 72 per cent in 1839 to 56 per

cent in 1859 and 33 per cent by 1899. In 1929-1933, agriculture accounted for slightly less than 10 per cent of output. The 1840 Census estimated that about 11 per cent of the population lived in urban centers with population of 2,500 or more, while in the 1930 Census the figure was 56 per cent.<sup>82</sup> Thus, if we want to gauge the relative magnitude of the 1839-1843 recession it is more appropriate to compare it to other ante-bellum economic disturbances.

#### A Comparison of Ante-Bellum Economic Disturbances

The data available for a comparison of the three major ante-bellum economic disturbances; 1818-1822, 1837-1843, and 1857-1860, will be found in Table 9.3. There are many similarities between these three periods.<sup>83</sup>

All were characterized by domestic banking problems leading to suspension as well as by international monetary disturbances. In the first period the international monetary picture was disturbed by the attempts of the European powers to return to specie payment following the Napoleonic Wars. In the second period there were the specie losses of the Bank of England arising from poor harvests and monetary problems on the Continent, especially in France and Belgium. Finally, in the last period the attempt of the French government to rebuild its specie holdings caused a contraction in the British capital markets which in turn affected the railroad speculation then going on in the United States.

TABLE 9.3.--Comparison of Three Ante-Bellum Economic Disturbances, 1818-1822, 1837-1843, 1857-1860.

Series	Percentage Changes			
	1818- 1822	1837- 1843	1839- 1843	1857- 1860
Warren & Pearson Wholesale Price Index (1830 = 100)	-31	-35	-33	-20
Export Price Index (1830 = 100)	-48	-47	-51	-16
Import Price Index (1830 = 100)	-30	-24	-19	-06
Western States Terms of Trade (1824-26 = 100)	-31	-27	-29	-04
Money Supply	-05	-43	-27	-18
Number of Banks	n.g.	-17	-23	+04
Bank Lending (Total loans)	n.g.	-45	-43	-15
Current Demand Liabilities <sup>a</sup>	n.g.	-48	-40	-22
Imports	-57	-67	-73	-24
Exports	-41	-26	-26	-07
Land Sales Acreage	-81	-91	-78	-87
Cotton Prices (New Orleans)	-62	-63	-54	-13

<sup>a</sup>Gross figures, includes inter-bank holdings.

n.g. - not given.

Sources: Rows 1-4, 9-10 Douglas C. North, The Economic Growth of the United States, 1790-1860 (New York: W. W. Norton and Company, Inc., 1966), pp. 240, 242, 255, 233, 234. Row 5, Source cited in Appendix Table B-7, Col. E. Rows 6-8, 11, The Statistical History of the United States From Colonial Times to the Present (Conn.: Fairfield Publishers, Inc., 1965), pp. 624-625, 239. Row 12, Source cited Appendix Table C-5, Series A.

Agricultural overproduction in the United States also characterized all three periods, cotton in the first two and grains in the last one and to some extent in the middle period. The first two periods were also characterized by international price deflations.

The recessions of 1818-1822 and 1837-1843 were fairly similar, at least in terms of the fluctuations in the series given in Table 9.3, though according to Berry the West, the area up to the Ohio Valley, appears to have been worse off in 1821 than in 1842.<sup>84</sup>

In general it appears that the latter recession was more severe than the former. An economy with most of its labor force in agriculture and with few urban centers--according to the 1820 Census only about 7.2 per cent of the total population lived in urban centers--would be less affected by economic disturbances, as contrasted to natural disturbances such as poor crops, than a relatively more industrialized economy.<sup>85</sup> It would be easier for a small labor force not fully committed to the work place to move back to the farm during hard times and for farmers to increase the amount of home manufacturing they undertake as the market for their cash crops declines. This does not mean that there would not be serious problems, especially for those regions which were mainly involved in plantation agriculture such as cotton, sugar and rice, or in manufacturing and commerce, but rather that there would be

relatively less real hardship involved. In this light it may be assumed that for the country as a whole, the recession period of 1837-1843 involved more economic hardship than the earlier recession period.

From the information we have on internal as well as external trade in the 1830's it seems safe to assume that there was unemployment. We have, however, no information on its relative seriousness in the manufacturing and trade centers of the East coast and South and perhaps those of the interior, such as Cincinnati and Pittsburgh, as well. The lack of any significant body of contemporary comment about unemployment in the 1840-1843 period indicates that the problem, at least to the commentators, was not serious. Price flexibility, the ability of some of the unemployed workers to switch to agricultural occupations, though not necessarily through a westward migration, minimized the declines in output and unemployment that did take place during the 1837-1843 recession.<sup>86</sup>

The End of the 1839-1843 Recession,  
an Overview

Through the early 1840's the American economy attempted to recover from the after effects of the panic's of 1837 and 1839. This was almost accomplished in late 1840 and early 1841 but the recovery could not be sustained in the face of falling prices and renewed monetary problems

highlighted by the failure of the United States Bank in February 1841.

The situation was worsened by the end of the internal construction boom. States became discouraged over the failure of many of these projects to provide the financial benefits claimed for them. It became clear that ordinary tax revenues would have to be used to pay the interest payments on the bonds issued for these projects, this helped to dampen the fervor for continuing them.

The London and Continental capital markets reacting in part to the financial difficulties of the various state governments, some of whom missed interest payments and repudiate their obligations in part or total, closed their doors for the time being to American securities.

Contracting trade and concomitantly a contracting money and credit base brought the economy to its low point in 1842 and early 1843. But the fall in demand, prices, and money, led to a large balance of trade surplus which, with better crops in Great Britain and increased Continental supplies of specie enabled near record amounts of specie to flow into the United States. Sustained recovery came in late 1843 and 1844 as the crops of the South and the West went to market and the banks and the entire financial community again felt confident enough to extend credit to the agricultural, mercantile and manufacturing interests of the country.



## FOOTNOTES

### CHAPTER IX

<sup>1</sup>McGouldrick, pp. 29, 142. Davis and Stettler estimated that output rose by less than one-half per cent during calander 1840. Davis and Stettler, Output, Employment and Productivity in the United States After 1800, p. 221.

<sup>2</sup>Fred M. Jones, Middlemen in the Domestic Trade of the United States 1800-1860 (Illinois Studies in the Social Science, Vol. 21, No. 3, Urbana: University of Illinois Press, 1937), p. 70.

<sup>3</sup>See Appendix Table B-6.

<sup>4</sup>In 1840 an estimated \$7 million in United States Treasury notes were issued. These notes were interest paying post-notes and can be considered to have been part of the money supply and thus the decline in the money supply would be overstated as these estimates excluded Treasury notes. Peter Temin, The Jacksonian Economy (New York: W. W. Norton and Company, Inc., 1969), p. 192; Niles' National Register, April 24, 1841, p. 28.

<sup>5</sup>The Independent Treasury Act was passed on July 4, 1840. As there was little contemporary comment on the sub-treasuries withdrawing money, especially specie, from circulation, it is likely that the main recipient of the public's specie was the banks. See Myers I, pp. 180-181.

<sup>6</sup>North, Economic Growth, p. 243; Warren and Pearson, p. 12.

<sup>7</sup>In 1837, imports fell by \$47 million or 26 per cent. See Appendix Table A-1.

<sup>8</sup>North, Economic Growth, p. 243.

<sup>9</sup>Louis B. Schmidt, "The Internal Grain Trade of the United States," Iowa Journal of History and Politics, Vol. 8, No. 1 (January, 1920), pp. 42, 44, 45; North, Economic Growth, p. 243.

<sup>10</sup>Niles National Register, July 4, 1840.

<sup>11</sup>Niles National Register, June 27, 1840, p. 257;  
Appendix Table C-3.

<sup>12</sup>Matthew B. Hammond, The Cotton Industry (American Economic Association Publications, New Series, No. 1; New York: Macmillan 1897), p. 118; Appendix Tables C-3 and C-5.

<sup>13</sup>Albion, p. 411.

<sup>14</sup>Niles National Register, April 18, 1840, p. 98;  
For a similar statement about the London money market in late June see Niles' National Register, July 25, 1840, p. 321.

<sup>15</sup>Niles National Register, July 25, 1840, p. 322;  
May 23, 1840, p. 178.

<sup>16</sup>Niles National Register, July 25, 1840, p. 321;  
December 26, 1840, p. 257.

<sup>17</sup>Merchant's Magazine, Vol. 7, November 1840, p. 456. According to Caroline Ware the election of Harrison buoyed the spirits of manufactures as they believed he would be for a higher tariff and the restoration of a national bank. C. Ware, p. 105.

<sup>18</sup>Bank and Insurance Index included only New York City firms, the Railroad index included those of Massachusetts, New York, New Jersey, Pennsylvania, and Maryland. See Smith and Cole, pp. 175-176.

<sup>19</sup>See Appendix Table C-5.

<sup>20</sup>Merchant's Magazine, Vol. 7, October, 1840, p. 361. Also see comments of Smith on the financial situation in New Orleans and Mobile in the Spring of 1840. Smith, p. 221.

<sup>21</sup>Merchant's Magazine, Vol. 11, November 1844, p. 452.

<sup>22</sup>Jones, p. 70. \$21 of the \$25 million increase in imports came from Europe, \$13 from Great Britain and \$8 million from France. Statistical History of the United States, p. 553. Victor Clark implies that at least part of these imports resulted from British and Continental manufactures dumping goods on the American market. Clark, p. 249.

<sup>23</sup>Albion, p. 411.

<sup>24</sup>McGouldrick, pp. 142, 159.

<sup>25</sup>Domestic financing was most important in the railroads of New England. See Alfred D. Chandler Jr., "Patterns of Railroad Finance, 1830-1850," Business History Review, Vol. 28 (Sept. 1954), and Taylor, pp. 98-99.

<sup>26</sup>Hidy, pp. 289-290; Smith, p. 221-222.

<sup>27</sup>Smith, p. 222. For a discussion of the Canadian-American border difficulties which also helped to depress the London bond market see Samuel Eliot Morison, The Oxford History of the American People (New York: Oxford University Press, 1964), p. 66.

<sup>28</sup>Fishlow, pp. 385, 399; Fogel has the peak in the consumption of rails in 1841, Robert W. Fogel, Railroads and American Economic Growth (Baltimore: John Hopkins Press, 1964), p. 174.

<sup>29</sup>H. Jerome Cranmer, "Canal Investment, 1815-1860," Trends in the American Economy in the Nineteenth Century, ed. William N. Parker (New York: National Bureau of Economic Research Studies in Income and Wealth, Vol. 24, National Bureau of Economic Research, 1960), pp. 555-556; Comment of Harvey H. Segal, pp. 565-566.

<sup>30</sup>Reznek, American Historical Review, LX, p. 680. For those states which used Distribution funds in this manner see Bourne, pp. 122-123. States which had difficulty in meeting interest payments as well as those which defaulted are discussed in B.U. Ratchford, American State Debts (Durham: Duke University Press, 1941), pp. 97-107 and Benjamin R. Curtis, "Debts of the States," North American Review, Vol. 58 (1844), pp. 132-134.

<sup>31</sup>Statistical History of the United States, p. 115.

<sup>32</sup>For a discussion of the aid given by New York and Boston banks and other financial firms to the United States Bank and the other banks of Philadelphia see Smith, pp. 225-226; Niles National Register, January 30, 1841, p. 352; and Redlich, II, p. 272.

<sup>33</sup>For some of the reasons behind the failure of the United States Bank see Smith, pp. 60, 226; and Niles National Register, February 13, 1841, p. 372.

<sup>34</sup>Berry, p. 463.

<sup>35</sup>Niles National Register, March 13, 1841, p. 32. On April 17, the National Register carried news that the Michigan State Legislature had passed a law limiting foreclosures. Niles National Register, April, 17, 1841, p. 105.

<sup>36</sup>Niles National Register, June 19, 1841, p. 252; September 25, 1841, pp. 52, 64; October 30, 1841, p. 129. Gayer, Rostow and Schwartz reported that at the end of the year, both Britain's home and foreign markets were depressed. Gayer, Rostow, Schwartz, I, p. 283.

<sup>37</sup>The National Register reported that there was a shipment of \$1.1 million in specie from New York City to Great Britain and the Continent during one week in late September. Niles National Register, October 9, 1841, p. 96.

<sup>38</sup>North, p. 236.

<sup>39</sup>There are some problems in the use of the bank specie data for 1841. According to Smith the United States Bank during the month of January lost \$6 million in specie of which \$4 million was due to the redemption of bank notes. Furthermore the reports of aggregate bank specie holdings as of the end of 1841 and the beginning of 1842 appear not to have included Ohio banks, which, at the end of 1840 held a reported \$1.2 million in specie. On both accounts then, the losses of specie by banks appears to have been overstated. See Smith, p. 226; Berry pp. 588-589.

<sup>40</sup>Silberling, The Review of Economic Statistics, V, Supp. 2, p. 252. Mitchell and Deane, p. 271; Williamson, p. 285; Appendix Table B-5.

<sup>41</sup>Redlich, II, p. 272; Niles National Register, April 2, 1842, p. 80.

<sup>42</sup>Niles National Register, June 18, 1842, p. 256; James, p. 143; Hammond, Banks and Politics, p. 612; Statistical History of the United States, p. 624.

<sup>43</sup>J. Van Fenstermaker, The Development of American Commercial Banking: 1782-1837 (Kent, Ohio: Kent University, Bureau of Economic and Business Research, 1965), pp. 66-67; Elliot, p. 983.

<sup>44</sup>Elliot, pp. 988-999, 1017. Treasury notes accounted for \$11.4 million of this borrowing. Merchant's Magazine, Vol. 6, May, 1842, p. 478.

<sup>45</sup>See Table 7.1. The National Register carried comments on this in July. Niles National Register, July 2, 1842, p. 288.

<sup>46</sup>Merchant's Magazine, Vol. 6, May, 1842, p. 482.

<sup>47</sup>McGouldrick, pp. 33, 159-160.

<sup>48</sup>Moses Abramovitz, "Long Swings in American Economic Growth," in New Views on American Economic Development, ed. Ralph Andreano (Cambridge, Mass: Schenkman Publishing Co., 1965).

<sup>49</sup>There is a confusing picture in grain prices. Wheat prices at Baltimore fell from \$1.25 in May-June to 88 cents by the end of the year. Niles National Register, August 17, 1844, p. 399. Schmidt shows a rise in average prices of wheat from 95 cents in 1841 to \$1.12 in 1842. Schmidt, Iowa Journal of History and Politics, Vol. 8, p. 45. Finally, the price of wheat at Albany, New York fell between January 1842 and January 1843. New York States, Assembly, 69th Session, Senate Document 92, pp. 25-27. Prior to the 1840's most of the mid-western grains were shipped via New Orleans. See Morton Rothstein, "Antebellum Wheat and Cotton Exports: A Contrast in Marketing Organization and Economic Development," Agricultural History, Vol. XL, No. 2 (1966), p. 95.

<sup>50</sup>North, p. 253; Albrion, p. 411.

<sup>51</sup>Paul B. Trescott, "Federal-State Financial Relations," Journal of Economic History, Vol. 15, No. 3 (September 1955), p. 242; Ratchford, pp. 107, 110-112.

<sup>52</sup>Hidy, pp. 294, 302-303.

<sup>53</sup>See Appendix Tables A-1 and B-5.

<sup>54</sup>Merchant's Magazine, Vol. 7, December 1842, p. 553; Joseph Dorfman, The Economic Mind in American Civilization, 1606-1865, II (London: George G. Harrap and Co. Ltd., 1957), p. 750. Note the comment about the lack of money in the interior.

<sup>55</sup>Frank W. Taussig, The Tariff History of the United States, 8th Rev. ed. (New York: Capricorn Books, 1964), Chapter 3; V. Clark Stressed the psychological boost of the new tariff legislation, especially in its role of removing uncertainty as to what the new schedule would be. V. Clark, p. 205.

<sup>56</sup>According to Clark Warburton as long as the Bank of England's discount rate was five per cent or more, it would be able to attract specie from other countries or at least reduce its losses. In April, 1842 the Bank lowered

its discount rate to four per cent from the previous five per cent, this together with increased Russian gold production enabled both American and British banks to simultaneously increase their gold holdings. Clark Warburton, "Monetary Disturbances and Business Fluctuations in Two Centuries of American History," In Search of a Monetary Constitution, ed. Leland B. Yeager (Cambridge: Harvard University Press, 1962), pp. 73-74.

<sup>57</sup>The Barings began to expand their activities during the summer of 1842, Hidy, p. 311.

<sup>58</sup>Smith and Cole, pp. 158-159, 167-168.

<sup>59</sup>Merchant's Magazine, Vol. 8, March, 1843, p. 273; Estimates of specie imports found in Niles National Register, July 15, 1843, p. 307.

<sup>60</sup>Niles National Register, April 8, 1843, p. 83; Merchant's Magazine, Vol. 8, June 1843, p. 558; Appendix Table B-7, and Smith and Cole, p. 174.

<sup>61</sup>Niles National Register, August 26, 1843, p. 416.

<sup>62</sup>See Comments in Niles National Register, September 14, 1843; Merchant's Magazine, Vol. 9, October 1843, p. 272; and December 1843, p. 561.

<sup>63</sup>Most monetary interpretations of this period, such as Temin's appear to assume an instantaneous response of economic activity to changes in the monetary base--mainly specie in the banks--and in the money supply. In part this is due to the necessity of working with annual data, but as we have seen, this oversimplifies the relationship between money and economic activity. For the present day state of knowledge on the size and time path of the lag between money and economic activity see the article by Cagan and Gandolfi and the comments by Davis and Tucker in the April, 1969 American Economic Review. Phillip Cagan and Arthur Candolfi, "The Lag in Monetary Policy as Implied by the Time Pattern of Monetary Effects on Interest Rates," American Economic Review, LIX, No. 2 (May, 1969).

<sup>64</sup>North, p. 236.

<sup>65</sup>Ibid., pp. 219, 220.

<sup>66</sup>Hidy, p. 356.

<sup>67</sup>Frank W. Taussig, "Statistics of Iron and Cotton, 1830-1860," Quarterly Journal of Economics, II (April,

1888), p. 379; and Taussig, The Tariff History of the United States, p. 126; Domestic production estimates are found in Taussig, Quarterly Journal of Economics, II, p. 380; and Rober W. Fogel, Railroads and American Economic Growth (Baltimore: The John Hopkins Press, 1964), p. 132.

<sup>68</sup>McGouldrick, p. 31.

<sup>69</sup>Davis and Stettler, Output, Employment and Productivity in the United States After 1800, p. 221.

<sup>70</sup>Appendix Table C-2 and Niles National Register, January 27, 1844, p. 344.

<sup>71</sup>Schmidt, Iowa Journal of History and Politics, Vol. 18, p. 43.

<sup>72</sup>Niles National Register, July 8, 1843, p. 304. British capital exports rose from a £600,000 in 1842 to + £9.3 million in 1843, though a large part of this outflow was destined for the Continent and not the United States. On this latter point see A. G. Kinwood, "Railway Investment in Britain, 1825-1875," Economics, New Series, Vol. XXXII, No. 127 (August, 1965), p. 320; for British capital exports see Williamson, p. 280.

<sup>73</sup>The following is based on Robert Gordon's analysis of the factors causing economic recovery from the low point in a business cycle; Robert A. Gordon, Business Fluctuations, 2nd ed. (New York: Harper and Brothers, 1961), pp. 302-312.

<sup>74</sup>McGouldrick, p. 164.

<sup>75</sup>Temin, pp. 155-165, especially pp. 156-157.

<sup>76</sup>Ibid., p. 157.

<sup>77</sup>Gallman, Output, Employment, and Production in the United States After 1800, pp. 26, 61, 62.

<sup>78</sup>Albion, p. 411.

<sup>79</sup>Temin, p. 161.

<sup>80</sup>David and Stettler, Output, Employment and Productivity in the United States After 1800; Robert B. Zevin, The Growth of Cotton Textile Production After 1815, forthcoming.

<sup>81</sup>Davis and Stettler, p. 221.

<sup>82</sup>Robert E. Gallman, Trends in the American Economy in the Nineteenth Century, p. 26; Statistical History of the United States, p. 14.

<sup>83</sup>The following discussion is based on North, pp. 182-188, 212-214; Smith, pp. 108-110.

<sup>84</sup>Berry, p. 468.

<sup>85</sup>Statistical History of the United States, p. 14.

<sup>86</sup>The "Safety Valve Tyeory," supposedly does not apply to the United States after the late 1830's, yet what did happen to the workers made unemployed by the ending of the canal and railroad projects. We can find no contemporary comment on the disposition of these workers during the early 1840's, only for 1837 and 1839 do we find comments about them and then only in cities such as New York. For a discussion of the Safety Valve Theory see F. A. Shannon, "A Post Mortem on the Labor Safety-Valve Theory," Agricultural History, Vol. 29 (January, 1945).



## CHAPTER X

### CONCLUSIONS

During the mid-1830's and early 1840's the United States economy went through a period of economic prosperity and recession. This movement in economic activity and growth was brought about by economic and non-economic forces operating on both sides of the Atlantic. In this work I have attempted to show how important components in the structure of the American economy; the economic relationship between America and Great Britain and the mechanics of international monetary relations enabled economic disturbances on one side of the Atlantic to be transmitted to the other side, and in the process multiplying the magnitude of the disturbances. The structural elements were the cotton industry and the banking and financial system. Both the American and British economies being connected through the cotton and credit markets and the specie flow mechanism.

#### Excess Demand and Economic Growth

America during this period had both an excess demand for goods and services and an excess demand for money--specie coins, bank notes, demand deposits--with both being financed by an excess supply of securities.<sup>1</sup> The demand was

excess in terms of domestic production at the full employment level of output. It was generated by the incomes produced by the rapid growth of cotton and grain production and by the expansion in gross domestic investment mainly due to the boom in internal improvement projects such as canals and railroads. This excess demand meant not only rising prices but also balance of trade deficits between fiscal 1831-1837 inclusively.

Concomitant with the excess demand for goods and services was an excess demand for money generated by the growth in output and demand as well as by the continuing specialization of production taking place in the economy. This excess demand for money was reflected in different ways, economic and political. Between fiscal 1832 and 1837 inclusively, while the United States had trade deficits it also had net specie imports. The excess demand allowed the rapid expansion of banks and current demand liabilities and it was here that the political problems arose.

There were conflicting political pressures as the growing demand for money came face to face with the "hard money" beliefs of important figures in the Jackson administration led by Jackson himself. Thus we had the so-called Bank War. The formation of the Deposit banks was a response, however unconscious, to meet the demand for banks and banking facilities. At the state level the Free Banking Laws enacted in the last years of the 1830's facilitated the growth



of banks and bank money creation as the case of Michigan shows. But at the same time the Federal government as well as some state governments attempted to limit the use of bank notes.

Finally, prices of goods and services could rise with the excess demand, and the United States could import specie because American securities found a ready market in Great Britain and the Continent.<sup>2</sup> Throughout this period, short-term credit instruments were important not only in America's domestic trade but also in its foreign trade. According to North's balance of payments estimates, United States aggregate indebtedness to foreigners rose from \$89 million in fiscal 1831 to \$297.2 million by the end of fiscal 1839.

The volume of capital imports between 1830 and 1839 was sizable. Relative to the size of the economy it was probably the most significant inflow of capital during the nineteenth century.<sup>3</sup>

The excess demand for goods and services, the excess demand for money, and the sale of securities strongly suggest that economic growth in the United States depended on the growth and health of the British economy.

#### A Summer of the 1833-1843 Period

##### The 1834-1836 Boom

A boom in the market for raw cotton developed during the mid-1830's. British demand for raw cotton expanded rapidly to meet the needs of a growing textile industry

serving home and foreign markets. Good grain harvests in the British Isles stimulated demand for British textiles and other goods. They meant lower food prices and an increasing real income for the British working population, therefore an increased demand for textiles and other manufactured goods. Finally, good harvests meant that large grain imports were not needed so that specie outflows would be minimized. The Bank of England was able to maintain its bullion holdings at levels that allowed expansionary monetary policies.

Expanding credit aided by the discounting practices of the newly important joint-stock banks, especially those dealing in the Anglo-American trade, and the lenient policies of the Bank of England facilitated the expansion of British domestic and foreign trade. Easy credit in the short-term capital markets spilled over into the London capital market which absorbed large amounts of American securities.

British credit was vital for the expanding world trade in general. As American money and credit is used to supplement gold in international trade today, so in the nineteenth century Great Britain's money and credit was used to supplement the inadequate supply of gold and silver to finance international trade.

On the Western side of the Atlantic the boom in the cotton market came at a time when the American supply

was expanding. The United States became the major source of supply of raw cotton to the British and Continental textile industries. At the same time the American banking and credit system also grew rapidly, fed by the growing volume of specie inflows and the bills of exchange arising out of the cotton trade.

The Bank War facilitated this expansion. The removal of the Second Bank of the United States as a possible controller over the note issues of the state banks was not as important as the shifting of Federal deposits to the newly created deposit banks; banks which as we have seen, did pursue a generally more expansionary lending policy than non-deposit banks.

Concomitant with the expansion of the cotton trade and the banking and financial system was a desire at the state and local level to emulate the success obtained by the State of New York and New York City from the Erie Canal. This emulation led to a great expansion in internal improvements as East coast centers such as Baltimore, Boston, and Philadelphia attempted to build canals and railroads to compete with the Erie Canal which was funneling the trade of the west in increasing amounts to New York City.

In the interior Ohio and Michigan and other states were building canals to connect their states via the Great Lakes to the Erie Canal and other East-West transportation

lines then being built. The South had some interest in internal improvements but most of the efforts were on the founding of banks which would finance the development of new cotton lands.

From the West, South, Mid-Atlantic and to a much lesser degree the New England States, securities flowed across the Atlantic to the capital markets of Great Britain and the Continent. The Second Bank of the United States--which would become the United States Bank of Pennsylvania in 1836--became the main intermediary between the issuing state and local authorities and the foreign capital markets.

As domestic goods and labor were the largest component of cost for internal improvements, the main purpose of the foreign capital inflow was the supplying of foreign exchange or specie to maintain or expand domestic currency. Much of the specie was used to satisfy the public's demand for gold and silver thus minimizing the drain on bank specie holdings.<sup>4</sup>

By the end of 1835 the United States was in the midst of a boom from the timber of Maine to building in New York City and the Pennsylvania, New Jersey and Maryland canals. Further South the boom encompassed the cotton lands of the lower Mississippi Valley. In the West it encompassed the growth of new cities, the construction of canals and the expanding cultivation of new grain lands.

The boom was financed by an unusual assortment of domestic and foreign bankers, capitalists and merchants. There was an amalgam of the new money of New York, the South and the joint-stock banks of Great Britain with the old money of Boston, Philadelphia and London. The conservative banking practices of Boston and London contrasted with those of the cotton banks in the South and the joint-stock banks of the industrial areas of Great Britain. Governmental bodies in the United States and Great Britain generally had little control over bankers besides the latter's own conceptions of proper and prudent banking. How banks were regulated was still being worked out by a trial and error process.

The mercantile credit systems on both sides of the Atlantic were in similar straits. There were old line mercantile houses such as Brown Brothers and the Barings and newer firms in the Anglo-American trade such as Humphreys and Biddle. The scramble for the expanding American trade caused many British firms to loosen their credit policies. The same loosening occurred in the domestic American trade as the lines of credit stretched further and further from the importer or manufacturer to the final consumer. Thus the potential was being stored up for a larger and larger reaction once the credit chain was broken.



The Panic of 1837

The bubble was pricked, and not just once. In the United States in late 1836 and early 1837 a series of natural and political events destabilized the American economy and made it highly vulnerable to shocks from Great Britain. The American grain crops were poor in 1836, necessitating grain imports in the East while farm incomes were falling because of ruined crops, in the interior. Eastern merchants and their bankers now found bills of exchange returning from the interior unpaid. At the same time the Eastern bankers were under pressure from the South and Great Britain as well as from the monetary and fiscal policies of the Federal Government.

Cotton prices fell as British demand slackened. As in America, the grain crops in the British Isles were poor, but the consequences were much more serious. British home demand for textiles fell as rising food prices decreased the purchasing power of the working population and as the money and credit supply began to undergo severe strain. These strains in the money markets would culminate in failures among the joint-stock banks and the Anglo-American mercantile houses. The Bank of England found its bullion holdings declining as more and more grain had to be imported and as it extended aid to the hard-pressed joint-stock banks of England and Ireland. Eventually, the Bank of England implemented a contractionary monetary policy

with special attention on the Anglo-American houses and the joint-stock banks.

With the clamps being placed on the money and credit supply, the situation became more bleak for British merchants and manufacturers, for credit was vital to domestic and foreign trade. One place where this contraction was most felt was the market for raw cotton. It could not be sustained in the face of declining demand and contracting credit facilities. With the continuing fall in cotton prices more unpaid bills of exchange flowed across the Atlantic.

A declining supply of cotton bills in the American foreign exchange market, together with rising short-term interest rates in London, combined to raise the exchange rate on London to the specie export point. The Eastern banks, especially those in New York City, found themselves losing specie as merchants drew down their deposits to obtain specie to ship to creditors in Great Britain and the Continent.

Even before this was taking place, the Federal government's fiscal and monetary policies increased the pressure on the New York and other East coast banks and shook public confidence in banks in general. The various Federal laws designed to remove bank notes from circulation, culminating in the Specie Circular, increased the pressure on banks, especially those in the West. The

Specie Circular was not as crucial to the Eastern banks as was the handling of the Federal surplusses. The sections of the Deposit Act dealing with the distribution of the Federal surplus caused large movements in Federal deposits at deposit banks in New York City and elsewhere. Nowhere was this more untimely than in New York City. The city banks lost a great proportion of their Federal deposits during the last half of 1836 and the first few months of 1837. Large depositors watched these losses with increasing anxiety. They felt confident in the banks only so long as they believed that the banks could redeem their deposit liabilities and their bank notes in specie. Continued specie losses due to the shifting of Federal deposits and specie exports added to an already worsening financial situation.

The supply of money and credit contracted as banks in New York City and other commercial centers curtailed their lending activities as bills came from the interior, and the South unpaid. The inflow of British short-term credit temporarily dried up as the Bank of England tightened the pressure on the Anglo-American houses and as bills of exchange drawn on British firms returned to American unpaid.

In Early May, 1837, the crisis turned into a panic in New York City when depositors started runs, first on a few banks which were in difficulty and then on all city banks. On May 10, 1837, the New York City banks suspended

specie payments, and as news of this spread throughout the country the other banks in America followed suit. The boom bubble had been pricked. As in 1929, many speculators found that paper profits had turned into real losses. Farmers and planters found themselves with debts that could not be repaid until grain harvests improved and cotton prices rose. Merchants and manufacturers found themselves over-supplied with goods but under-supplied with money, credit or customers.

There was unemployment in New York and other cities, but the preponderant role of agriculture and the apparent flexibility of prices dissipated much of the unemployment and dislocation by the middle of 1838. People in the cities had difficulties in making it through the fall and winter of 1837. It is difficult to judge the actual extent of the dislocation for with the exception of New York City, for which information on the size of the relief rolls is available, other quantitative information is lacking. The worst of the economic hardships, however, appears to have passed by the spring of 1838.

#### The Recovery and the Panic of 1839

By the end of 1838 the American economy was in the midst of a recovery. The resumption of specie payments during 1838, the upturn in the cotton market, improvement in the grain trade, and the continuing inflow of British long-term capital helped to bring about the recovery.



However, the recovery could not be sustained. There had been no significant changes in the structural factors which made the American economy highly vulnerable to economic disturbances from the cotton and money markets of Great Britain and the United States. There was nothing on the horizon to justify expectations of continuing recovery. Rather, there were signs that the recovery would end. Adverse conditions in Great Britain and the Continent would soon make themselves felt in the cotton and money markets of America and Britain.

It became apparent by the late summer of 1838 that the grain crops in the British Isles would be exceptionally poor. At the same time, a monetary crisis and recession developed in France and Belgium. Taken together these developments dampened the home and Continental demand for British manufactured goods while at the same time increasing the outflow of specie from Great Britain.

By the late spring of 1839 the recovery in America, dependent as it was on the health of the British economy, appears to have run out of momentum. Cotton prices were falling again and banks in most sections of the United States, perhaps mindful of their problems in 1837, began to curtail their lending activities. During the summer prices fell across the country, and as in 1837, this meant unpaid bills of exchange to merchants and bankers. Falling prices, unpaid bills of exchange, a contracting supply of

credit and money and increasing exports of specie to Great Britain brought on another financial crisis.

Caught in the middle was the United States Bank of Pennsylvania, overcommitted in cotton and state securities at a time when the British markets were contracting. It was losing specie to other domestic banks as well as to its foreign creditors. The United States Bank suspended in October and soon afterwards many other banks in the nation, excluding those of New York and most of New England, also suspended or failed. These suspensions marked the end of the boom of the 1830's and the beginning of a depression which, except for a slight recovery during 1841, lasted until early 1844.

#### The 1840-1843 Depression

Unlike the suspension of 1837, that of 1839 did not bring with it any relief to the economy. Prices, especially industrial, fell sharply during the remainder of the year and into the middle of 1840. The boom in the construction of canals and railroads came to an end in 1840. The inflow of foreign long-term capital slowed to a trickle when the British grain crops once again were poor, further contracting the inflow of foreign capital, while the disorganized American banking system made it difficult to obtain funds to continue construction.

There was a temporary halt to the decline in economic activity in the last months of 1840 and through most of 1841.

This was due mainly to an upturn in agricultural prices, especially cotton, causing demand, which had been relatively dormant during 1840 to increase. Merchants rebuilt their inventories and this led to increased domestic production and expanded imports.

But with the continuing decline in the construction of canals and railroads, intensified in February 1841 by the failure of the United States Bank, and the worsening economic situation in Britain, the outlook again became poor. Cotton prices fell and the expanding imports of 1841 had to be paid in specie. The American economy again sank into a depression which continued until a low point was reached in early 1843.

Recovery finally came to the United States in 1844 in an almost textbook fashion. A record trade surplus resulting from low levels of domestic demand and the revival of the British economy due to better grain harvests led to massive specie imports. The increased liquidity of the banks and the financial community in general and the stabilization of cotton and other agricultural prices led to a renewed demand for manufactured goods. This stimulated the rebuilding of depleted inventories. Added to these increases in demand was an upturn in gross investment as accumulated replacement needs began to be met. The sum total of all this was an upturn in aggregate demand which was widespread enough to turn the economy around and start it on the road to recovery.



Concluding Comments

The boom in the American economy during the 1830's could continue only as long as aggregate demand continued to increase. It was fed by the growing cotton trade, expanding investments in internal improvements, and increasing economic specialization as reflected in the growth of the textile industry and the breaking of new grain lands in the west. But this growth in aggregate demand which outstripped domestic production could be maintained only as long as overall equilibrium in the commodity, money and security markets was maintained. Thus, because there was excess demand for goods large balance of trade deficits developed. These deficits might have led to specie outflows, a contracting supply of money and credit therefore at least slowing down the rate of growth of demand and output.

America was fortunate for easy money conditions in Great Britain during the 1830's facilitated specie inflows. Directly specie inflows were facilitated by American export of short- and long-term debt instruments to British and Continental firms which supplied credit to American importers and foreign capitalists who purchased American securities. Indirectly it was when British short-term credit instruments--later supplemented by those issued by the United States Bank, which in turn obtained credit in Britain and France--were substituted for Mexican silver and other specie in the China trade. These capital flows enabled the

United States to retain a greater portion of the specie inflows.

The sale of long-term securities in Britain and the Continent enabled the builders of canals and railroads in America to obtain imported machinery, but more importantly foreign exchange. The foreign exchange could be sold for--or specie could be directly obtained and used for--domestic currency needed to pay the day to day construction costs of these projects. The securities were also used to refinance a portion of the country's short-term debts as they matured.

The excess supply of American securities--excess in terms of the American market--flowed into the foreign capital markets, of which the British was the largest, and enabled the United States to finance much of its infra-structure construction as well as its trade deficits.

British capital and cotton markets were crucial to the American economic boom of the 1830's. The financial crises of 1837 and 1839 and the economic downturns which followed resulted fundamentally from the adverse conditions of these markets arising from poor grain harvests and financial disturbances. In 1837 the financial disturbances centered in the joint-stock banks of Great Britain and Ireland while in 1839 they centered in banking disturbances in France and Belgium. In both years domestic problems made the American economy more receptive to the shocks emanating from the eastern side of the Atlantic.

The pattern of boom and bust, growth and stagnation in American during the 1830's and early 1840's did not result from any single source. It cannot be explained solely in terms of the actions of the Jackson and Van Buren administrations as many of the earlier writers have done. Neither can it be explained as Temin did mainly in terms of changes in the supply of money and credit as the banking and financial sector of the economy adjusted to the changing inflows and outflows of specie. Finally this pattern of economic activity cannot be explained as the result of the growth in the cotton market and the concomitant increase in economic specialization which took place. Rather movements in the American economy were due to circumstances on both sides of the Atlantic. If America did not have an almost monopolistic position in the world cotton market, and if the British grain crops had been uniformly poor through the 1830's; the British cotton and capital markets would not have been able to purchase American cotton and securities to the extent that they did. American economic growth in the 1830's depended on a healthy British economy, just as Europe's in the late 1940's and early 1950's did on that of the American economy.

## FOOTNOTES

### CHAPTER X

<sup>1</sup>Copper coins in the denominations of cents and half-cents were minted but in terms of value were minor in comparison to the total money supply.

<sup>2</sup>Estimated total state debts rose from \$25.6 million in 1830 to approximately \$174 million by the end of 1838. See Table 4.1 for sources.

<sup>3</sup>Douglass C. North, "The United States Balance of Payments, 1790-1860," Trends in the American Economy in the Nineteenth Century, p. 585, and Table on p. 581.

<sup>4</sup>We can think of individuals as holding a portfolio of money assets consisting of bank notes, demand deposits and specie. Between these components there will be some desired ratio determined by such factors as income, availability of banking services, confidence in banks, and the types of payments which have to be made. During the 1830-1834 period Temin has estimated that the proportion of money held as specie was about one-half the average level of holdings during the 1820's. The massive specie inflows of 1834-1836 made it easier for the public to increase their specie holdings. We should also remember that in times of uncertainty over the safety of paper money, people have tended to increase their holdings of gold and other precious metals. The best current example of this was the French public's movement into gold coins during the currency problems of the late 1960's.

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## APPENDICES

APPENDIX A



TABLE A-1.--United States Balance of Payments, 1830-1845  
(\$000)

Fiscal Year	Merchandise Exports	Trade Imports	Net Balance	Specie Flow Exports	Imports	Net Balance	Current Account <sup>b</sup> Surplus or Deficit
1830	71671	62721	+ 8950	2179	8156	- 5977	+13900
1831	72296	95885	-23589	9015	7306	+ 1709	-15800
1832	81521	97024	-15503	5656	5908	- 252	- 6500
1833	87529	103069	-15540	2612	7071	- 4459	- 9000
1834	102260	110782	- 8522	2077	17911	-15834	- 2900
1835	115216	139499	-24283	6477	13131	- 6654	-23300
1836	124339	180111	-55772	4324	13401	- 9077	-53200
1837	111443	133082	-21639	5977	10517	- 4540	-18000
1838	104979	97889	+ 6090	3508	17747	-14239	+ 9000
1839	112252	159627	+47375	8777	5596	+ 3181	-52200
1840	123669	100224	+23445	8417	8883	- 466	+31200
1841	111817	125417	-13600	10034	4988	+ 5046	-12600
1842	99878	97997	+ 1881	4814	4087	+ 727	+ 5500
1843 <sup>a</sup>	82826	43282	+39544	1521	22320	-20799	+43100
1844	105746	104657	+ 1089	5454	5830	- 376	+ 4400
1845	106040	115448	- 9408	8604	4070	+ 4534	- 700

<sup>a</sup>Nine months.<sup>b</sup>Merchandise Trade Balance, services and current items, and interest and dividends.

Source: Douglass C. North, "The United States Balance of Payments, 1790-1860," Trends in the American Economy in the Nineteenth Century, Studies in Income and Wealth, Vol. 24 (Princeton: Princeton University Press for the National Bureau of Economic Research, 1960), pp. 581, 605.

TABLE A-2.--Federal Receipts, Expenditures, Annual and Gross Deficits and Surplusses 1830-1845.  
(\$000)

Year <sup>a</sup>	Receipts		Other Receipts		Total Receipts <sup>b</sup>	Expenditures <sup>c</sup>	Surplus or Deficit <sup>d</sup>	Total Gross Debt
	Customs	Internal Revenue	Sales of Public Lands	Total				
1830	21922	12	2329	2910	24844	15143	+ 9701	39123
1831	24224	7	3211	4295	28527	15248	+13279	24322
1832	28465	12	2623	3389	31866	17289	+14577	7012
1833	29033	3	3968	4913	33948	23018	+10931	4760
1834	16215	4	4858	5573	21792	18628	+ 3164	38
1835	19391	10	14758	16028	35430	17573	+17857	38
1836	23410	*	24877	27416	50827	30868	+19959	377
1837	11169	5	6776	13779	24954	37243	-12289	3308
1838	16159	2	3082	10141	26303	33865	- 7562	10434
1839	23138	3	3076	8342	31483	26899	+ 4584	3573
1840	13500	2	3293	5979	19480	24318	- 4837	5251
1841	14487	3	1366	2370	16860	26566	- 9706	13594
1842	18188	*	1336	1788	19976	25206	- 5230	20201
1843	7047	*	898	1256	8303	11858	- 3555	32743
1844	26184	2	2060	3136	29321	22338	+ 6984	23462
1845	27528	4	2077	2438	29980	22937	+ 7033	15925

\* Less than \$500.

<sup>a</sup>1830-1842 year ending December 31. 1844-1845, year ending June 30. 1843, January 1-June 30.

<sup>b</sup>Sum of Columns 1, 2, 3. Excludes receipts from borrowing.

<sup>c</sup>Excludes Debt Repayment.

<sup>d</sup>Receipts-Expenditures.

<sup>e</sup>As of end of period.

Source: The Statistical History of the United States From Colonial Times to the Present (Conn: Fairfield Publishers, Inc., 1965), Series Y 254-263, pp. 711, 712.

TABLE A-3.--Receipts From Public Land Sales by the United States Quarterly, 1830-1845.  
(\$000)

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
1830	479	351	520	1059
1831	406	1029	1029	902
1832	597	524	630	1052
1833	608	799	768	1998
1834	1054	982	955	3073
1835	1990	3144	4083	6949
1836	5847	8423	5859	4805
1837	3479	1834	1699	928
1838	548	524	700	2239
1839	1823	1672	1283	1710
1840	950	794	468	536
1841	416	313	367	416
1842	253	591	263	345
1843	551	388	473	638
1844	497	489	525	729
1845	447	531	690	794

Source: Arthur H. Cole, "Variations in Sale of Public Lands," Review of Economics and Statistics, IX (1927), p. 51.

TABLE A-4.--United States Exports of Flour, Corn, and Meal, 1830-1845.

Year	Volume (000)				Market Value (\$000)				Prices (\$)			
	Flour Bar- rels	Corn Bush- les	Meal Bar- rels	Wheat Bush- els <sup>a</sup>	Corn Bush- els	Corn Meal Barrels	Wheat Bush- els	Flour Bar- rels	N.Y.C. June 30 Wheat	Corn	Wheat	Baltimore Corn
1830	1807	444	145								.65	.40
1831	865	471	208	409							1.10	.65
1832	956	451	147	88							1.25	.70
1833	835	437	147	32							1.14	.60
1834	956	303	150	37					1.07	.66	1.05	.65
1835	779	756	167	48					1.40	.95	1.25	.86
1836	505	125	141	3	831	441	100	706	1.40	.90	1.50	.80
1837	319	151	159	17	978	479	157	937	1.00	1.10	1.35	.93
1838	448	172	172	6	823	420	129	804	1.45	.90	1.60	.69
1839	923	162	166	96	869	397	150	750	1.25	.82	1.08	.85
1840	1898	574	206	1721	589	342	95	535	1.07	.53	.90	.44
1841	1516	536	232	869	584	294	95	512	1.125	.62	1.10	.55
1842	1284	600	209	818	575	295	112	575	1.25	.54	1.25	.52
1843	841	673	174	312	419	261	85	447	1.15	.55	.90	.54
1844	1439	825	248	559	490	259	90	470	.88	.47	.90	.42
1845	1195	840	269	390	490	238	86	452				

<sup>a</sup>Wheat imports, bushels: 1835-239,000; 1836-534,000; 1837-3,921,000; 1838-845,000.

Sources: Columns 1-3: 1830-1835 Niles' National Register, Vol. 64, April 1, 1843, p. 67; August 19, 1843, p. 388. 1836-1845 Herbert J. Wunderlich, "Foreign Grain Trade of the United States, 1835-1860," Iowa Journal of History and Politics, Vol. 33, No. 1 (January, 1935), pp. 42-44. Column 4: 1830-1835 Hunt's Merchants Magazine, November 1, 1839, p. 464. 1836-1845, same as columns 1-3. Columns 5-8: Wunderlich, Iowa Journal of History and Politics, Vol. 33, No. 1, p. 45. Columns 9-10: Niles National Register, Vol. 65, August 10, 1844, p. 383. Columns 11-12: Niles National Register, Vol. 65, August 17, 1844, p. 399. Average price as of June.

TABLE A-5. --Interstate Transfer Drafts Issued for Distribution of the Surplus Reserve.  
(\$000)

From:	Mass.	N. Y.	Penn.	Ohio	Ind.	Miss.	La.	Ky.	Mo.	Total*	State Received Amount*
to:											
Me.	297									297.0	955.8
N.H.	194									194.0	669.1
Vt.		519.1								519.1	669.1
Mass.											1338.2
R.I.		50.0								50.0	382.3
Conn.		154.9								154.9	764.7
N.Y.											4014.5
N.J.		329.7								329.7	764.7
Penn.				150.0						150.0	2867.5
Del.		129.0								129.0	286.8
Md.											955.8
Va.		375.0 <sup>c</sup>	57.0 <sup>b</sup>					275.8		707.8	2198.4
N.C.		489.0	254.8 <sup>d</sup>							743.8	1433.8
S.C.		100.0 <sup>e</sup>	50.5 <sup>e</sup>							150.5	1051.4
Ga.		150.5								150.5	1051.4
Ala.											669.1
Miss.											382.3
La.											477.9
Tenn.		50.0		37.5		125.0 <sup>g</sup>		37.5		250.0	1433.8
Ky.											1433.8
Ohio											2007.6
Ind.					192.9				195 <sup>a</sup>	387.9	860.3
Ill.					150.0					150.0	382.3
Mo.											286.8
Ark.				33.0		186.8	34	33.0		286.8	286.8
Mich.											286.8
Total*	491	2347.2 <sup>h</sup>	362.3	220.5	342.9	311.8	34	346.3	195	4651.0	28102.1

\*May not equal total because of rounding.

<sup>a</sup>Drawn on Commercial Bank of Cincinnati, Ohio and payable at its Agency in Saint Louis.

<sup>b</sup>Draft on Girard Bank of \$57,000 protested for non-payment.

<sup>c</sup>\$200,000 in drafts on New York City banks protested for non-payment.

<sup>d</sup>\$19,913.13 draft on Girard Bank protested for non-payment.

<sup>e</sup>\$50,474.00 draft on Girard Bank protested for non-payment.

<sup>f</sup>\$100,000.00 draft on New York City banks protested for non-payment.

<sup>g</sup>\$125,000.00 draft on the Agricultural Bank of Natchez protested for non-payment. All protested drafts drawn for third installment of the Distribution.

<sup>h</sup>All but \$30,000 was drawn on New York City banks.

Source: United States, Congress, House, 25th Congress, 1st Session, House Document No. 30, pp. 71-81.

APPENDIX B

TABLE B-1.--Estimates of Major Assets, all United States  
Banks, 1829, 1833-1845.  
(\$000,000)

End of Year	Loans and Discounts			Specie				
	I	II	III	Ia	IIa	IIIa	IVa	Va
1829		200.5			22.1			20
1833		324.1	324				26.6	27
1834	350.8	365.2	365	42.9	43.9	43.9	47.0	44
1835	458.8	457.6	458	39.9	40.0	40.0	44.8	40
1836	519.5	525.1	525	37.5	37.9	37.9	43.3	38
1837	476.3	485.6	486	34.9	35.2	35.2	36.1	35
1838	497.6	492.3	492	44.5	45.1	45.1	48.7	45
1839	460.6	462.9	463	33.1	33.1	33.1	36.7	33
1840	385.8	385.8	387	32.7		34.8	38.0	35
1841	349.8	324.0	324	29.6		28.4	31.6	28
1842	255.5	254.6	255	33.9		33.5	40.1	34
1843	265.5	264.9	265	49.7		49.9	56.6	50
1844	285.5		289	43.8		44.2	51.0	44
1845	311.5		312	41.8		42.0		42

Sources: I and Ia, Thomas S. Berry, Western Prices Before 1861 (Cambridge: Harvard University Press, 1943), p. 588.

II and IIa, Hunt's Merchants Magazine, August, 1841, p. 186; Niles' National Register, January 14, 1843, p. 308; and David R. Dewey, Financial History of the United States, 12th ed., New York: Longmans, Green and Co., 1939), p. 225.

III. The Statistical History of the United States From the Colonial Times to the Present (Conn: Fairfield Publishers, Inc., 1965), Series X22, p. 624.

IIIa, Jeffrey G. Williamson, American Growth and the Balance of Payments, 1820-1913 (Chapel Hill: University of North Carolina Press, 1964), p. 277.

IVa, George Macesich, "Sources of Monetary Disturbances in the United States, 1834-1845," Journal of Economic History, Vol. 20 (September, 1960), pp. 430-431.

Va, Peter Temin, The Jacksonian Economy (New York: W. W. Norton and Co., Inc., 1969), pp. 186-187.

TABLE B-2.--Estimates of Major Liabilities, all United States  
Banks, 1829, 1833-1845.  
(\$000,000)

End of Year	Note Circulation		Deposits		
	I	II	Ia	IIa	IIIa
1829		61.3		55.6	
1833		94.8		75.7	102
1834	101.9	103.7	85.1	83.1	122
1835	148.1	140.3	120.7	115.1	166
1836	146.5	149.2	131.9	127.4	190
1837	115.5	116.1	82.9	84.7	146
1838	135.6	135.2	90.4	90.2	143
1839	111.6	107.0	73.9	75.7	120
1840	106.4	107.3	66.5		108
1841	86.7	83.7	62.6		88
1842	60.2	58.6	55.5		78
1843	76.3	75.2	83.2		117
1844	91.1	90.0	86.2		114
1845	104.9	106.0	96.5		125

Sources: I and Ia, Thomas S. Berry, Western Prices Before 1861 (Cambridge: Harvard University Press, 1943), p. 588.

II, Statistical History of the United States from Colonial Times to Present (Conn: Fairfield Publishers, Inc., 1965), Series X39, p. 625; Hunt's Merchants Magazine, August 1841, p. 186; Niles' National Register, January 14, 1842, p. 308.

IIa, Hunt's Merchants Magazine, August 1841, p. 186; Niles National Register, January 14, 1842, p. 308.

IIIa, Statistical History of the United States From Colonial Times to the Present, Series X34, p. 625. Listed as total deposits.



TABLE B-3.--Selected Assets and Liabilities of Federal Deposit Banks, 1834-1837.  
(\$000,000)

Year & Month	Loans and Discounts	Specie	Circulation	Private Deposits	Deposits of U.S.Treasury
1834					
Jan.	n.a.	2.92	7.80	n.a.	9.36
Oct.	n.a.	4.57	8.07	n.a.	12.00
1835					
Jan.	47.36	6.86	15.52	n.a.	9.34
Dec.	62.58	9.59	21.79	n.a.	22.35
1836					
Feb.	65.44	10.20	26.24	15.04	28.24
March	64.03	11.07	27.30	15.91	30.81
May	70.16	10.20	29.18	16.72	35.52
June	71.28	10.45	27.97	16.04	37.28
Nov.	115.08	15.52	41.48	26.57	45.06
1837					
March	n.a.	15.31	44.83	29.96	38.96
May	n.a.	13.33	37.62	30.78	26.86
July	n.a.	11.43	31.78	30.11	21.04
Aug.	112.9	10.58	32.63	29.49	12.94
Per cent Change					
Jan. 1835	143%	125%	168%	77% <sup>a</sup>	382%
Nov. 1836					

<sup>a</sup>February 1836-November 1836.

Sources: Harry N. Scheiber, "The Pet Banks in Jacksonian Politics and Finance, 1833-1841," Journal of Economic History, Vol. 23, No. 2 (June, 1963), p. 203; Niles National Register, April 9, June 4, and July 9, 1836; Financial Register, Vol. 1, 1836, p. 205.

TABLE B-4.--Comparison of Percentage Changes in Major Assets and Liabilities of Selected Deposit Banks and Banks of the States or Cities in Which They are Located, 1834-1837.

Bank and Location	Loans and Discounts	Specie	Circulation	Deposits	Circulation & Deposits	Bank Expansion ratio <sup>a</sup>
<u>Planters Bank</u>						
<u>Of Atlanta, Ga.</u>						
10/1834-4/1836	+105	+100	+114	+700	+296	+86%
10/1834-5/1837	+ 37	+113	+ 67	+175	+ 96	+ 9%
4/1836-5/1837	- 33	+ 07	- 22	- 66	- 48	-41%
<u>Georgia Bank</u>						
10/1834-4/1836	+ 96	+ 44	+116	+230	+140	+65%
10/1834-4/1837	+117	+ 61	+117	+190	+132	+42%
4/1836-4/1837	+ 10	+ 11	0	- 12	- 04	-14%
<u>Bank of America</u>						
<u>New York City</u>						
1/1835-7/1837	+ 46	+ 37	+ 60			
1/1835-1/1837	+ 20	- 31	+ 92	- 23	0	+41%
7/1836-1/1837	- 17	- 50	+ 14			
<u>New York City</u>						
<u>Safety Fund</u>						
1/1835-7/1836	+ 19	+ 16	+ 22			
1/1835-1/1837	+ 19	- 12	+ 62	+ 18	+ 33	+50%
7/1836-1/1837	0	- 24	+ 33			
<u>Union Bank of</u>						
<u>New Orleans</u>						
9/1835-8/1836	+ 68	-005	+ 21			
9/1835-4/1837	+ 58	- 16	+ 21	+122	+ 46	+74%
8/1836-4/1837	-003	- 11	0			

TABLE B-4.--Continued.

Bank and Location	Loans and Discounts	Specie	Circulation	Deposits	Circulation & Deposits	Bank Expansion Ratio <sup>a</sup>
<u>New Orleans Banks</u>						
6/1835-8/1836	+ 37	+ 64	+ 39	+ 65	+ 54	-05%
6/1835-5/1837	+ 36	- 08	+ 29	+ 42	+ 37	+67%
8/1836-5/1837	-001	- 50	-001	- 14	- 11	+76%
<u>Girard Bank</u>						
11/1834-8/1836	+169	+ 67	+143			
11/1834-5/1837	+162	- 43	+ 14	- 15	- 03	+69%
8/1836-5/1837	- 02	- 66	- 53			
<u>Penn. Banks<sup>b</sup></u>						
11/1834-8/1836	+ 56	- 08	+ 27	+ 04	+ 15	+40%
11/1834-5/1837	+ 64	- 30	+ 36	+ 02	+ 17	+53%
8/1836-5/1837	+ 05	- 06	+ 06	- 02	+ 02	+09%

Sources: United States, Congress, House; 24th Congress, 2nd Session, House Documents 21, 65. 25th Congress, 1st Session, House Document 30. 26th Congress, 2nd Session, House Document 111. 29th Congress, 1st Session, House Executive Document 226. United States, Congress, Senate; 25th Congress, 2nd Session, Senate Document 471. New Orleans, Hunt's Merchants' Magazine, October, 1842, p. 361. New York City Safety Fund-New York State, Report of Bank Commissioners, New York State Assembly, 60th Session, Assembly Document 78.

<sup>a</sup>Circulation and Deposits ÷ Specie.

<sup>b</sup>Excluding the Second Bank of the United States.

TABLE B-5.--Monetary Conditions in the United Kingdom 1830-1845.  
(£000,000)

Year	Bullion in Bank of England	Bills and Notes Dis- counted by Bank of England	Bank of England Notes in Circulation	Total Bills of Exchange Created	Market Rate of Discounta	Yield on 3 Per cent Consols
1830	9.5	1.6	20.5	198.2	2.81	3.35
1831	7.0	2.3	18.6	207.3	3.69	3.69
1832	6.8	2.2	18.1	194.1	3.15	3.56
1833	10.4	1.3	19.1	204.9	2.73	3.40
1834	8.1	2.2	18.8	211.6	3.38	3.31
1835	6.4	2.8	18.1	229.6	2.71	3.29
1836	6.3	4.5	17.8	280.3	4.25 <sup>1</sup>	3.32
1837	6.0	7.6	18.3	258.7	4.44 <sup>2</sup>	3.28
1838	9.7	3.3		266.4	3.00 <sup>3</sup>	3.20
1839	4.4	5.9		303.6	5.12 <sup>4</sup>	3.26
1840	4.2	4.6		300.4	4.98 <sup>5</sup>	3.32
1841	4.7	4.7		286.4	4.90 <sup>6</sup>	3.36
1842	8.3	4.2		249.4	3.37 <sup>7</sup>	3.26
1843	11.8	2.5		230.6	2.17 <sup>8</sup>	3.14
1844	15.4	2.3		246.0	2.12 <sup>9</sup>	3.02
1845	15.2	4.7		283.3	2.96 <sup>10</sup>	3.04

<sup>a</sup> This is the rate on first-class bills of exchange discounted by Overend Gurney, Bank rate was 4 per cent until July 1836.

<sup>1</sup> Bank rate of discount 4.39% average. 25%. 34.13%. 44.10%.  
55%. 65%. 74.27%. 84%. 93.6%. 103.4%.

Source: A. D. Gayer; W. W. Roston; and A. J. Schwartz, The Growth and Fluctuations of the British Economy, 1790-1850, Vol. 1 (Oxford, Clarendon Press, 1953), pp. 221, 235, 259, 290, 320, 329.

TABLE B-6.--Estimates of the United States Money Supply,  
1833-1845.  
(\$000,000)

End of Year	A	B	C	D
1833	113.0		226	168
1834	123.8	187.0	268	172
1835	160.9	268.8	366	246
1836	160.0	277.4	407	276
1837	153.3	198.4	345	232
1838	175.6	226.0	363	240
1839	159.3	185.5	306	215
1840	139.4	172.9	294	286
1841	144.0	149.3	252	174
1842	127.5	115.7	225	258
1843	137.2	159.5	284	194
1844	165.1	177.3	292	214
1845	195.3	201.0	318	241

- Sources:
- A. Report of the Comptroller of the Currency 1896 found in Jeffrey Williamson, American Growth and the Balance of Payments (Chapel Hill: The University of North Carolina Press, 1964), p. 277.
  - B. Thomas S. Berry, Western Prices Before 1861 (Cambridge: Harvard University Press, 1943), p. 588, includes only bank money.
  - C. The Statistical History of the United States From Colonial Times to the Present (Conn: Fairfield Publishers, Inc., 1965), Series X, 281, p. 647, includes only bank money.
  - D. Peter Temin, The Jacksonian Economy (New York: W. W. Norton and Co., Inc., 1969), pp. 61, 159.

TABLE B-7.--Interest Rates in London and New York Money Markets and the Bank of England's Discount Rate, Monthly, January 1834-December 1844.

Month and Year	London	Bank of England	New York <sup>a</sup>
January 1834	3 1/4	4	15,18,24
February	3	4	Business unsettled
March	2 3/4	4	Rates High and
April	3	4	Variable
May	3 1/4	4	"
June	3 1/4	4	"
July	3 1/4	4	"
August	3 1/4	4	"
September	4	4	"
October	3 3/4	4	"
November	3 3/4	4	"
December	3 3/4	4	12,10,8
January 1835	3 3/4	4	5
February	3 1/4	4	5
March	3 1/2	4	5
April	3 3/4	4	5
May	3 3/4	4	5
June	4	4	5
July	4	4	5
August	3 1/2	4	5
September	3 3/4	4	5
October	3 3/4	4	5
November	3 3/4	4	5
December	3 3/4	4	8, 10
January 1836	3 3/4	4	10
February	3 3/4	4	10
March	3 1/2	4	12
April	3 1/4	4	12,15
May	3 1/4	4	15,18
June	4	4	15,12
July	4	4, 4 1/2	15,18
August	4 1/2	4 1/2	18,24
September	5	5	24
October	5	5	24,36
November	5 1/2	5	24,30
December	5 1/2	5	24,30
January 1837	5 1/2	5	16,20,13
February	5 1/2	5	15,21,18
March	5 1/2	5	18,20,27
April	5 1/2	5	27,26,30
May	4 1/2	5	27,32
June	4 1/2	5	18,9,6
July	4 1/2	5	7 1/2
August	4	5	7 1/2

TABLE B-7.---Continued.

Month and Year	London	Bank of England	New York <sup>a</sup>
September	3 1/2	5	7 1/2, 6 1/2
October	3 1/4	5	6 1/2
November	3 1/4	5	6, 9
December	3 1/2	5	10
January 1838	3 1/2	5	11
February	3	5	12
March	3	5	12, 18
April	2 3/4	5	18, 12
May	2 1/2	5	10, 9, 7
June	2 3/4	5	7, 6
July	3	5, 4	6
August	2 3/4	4	6, 7
September	3	4	6, 7
October	3	4	6, 7
November	3 1/4	4	6, 8
December	3 1/2	4	7, 9, 7
January 1839	3 3/4	4	6, 9
February	3 3/4	4	6, 9
March	3 3/4	4	6, 9
April	3 3/4	4	6, 9
May	4	4, 5	6, 9
June	5	5, 5 1/2	9
July	5 1/2	5 1/2	11, 12
August	6	6	12, 15
September	6 1/2	6	15, 18, 21
October	6 1/2	6	21, 30
November	6 1/2	6	20, 33, 36
December	6 1/2	6	18, 15, 9
January 1840	6	6, 5	9
February	4 3/4	5	9, 12
March	4 3/4	5	9, 12
April	4 3/4	5	12, 7
May	4 1/4	5	7
June	4 3/4	5	6, 8
July	4 1/2	5	8, 5
August	4 1/2	5	5, 7 1/2
September	4 3/4	5	6, 7
October	5	5	6, 7
November	6	5	6, 7
December	5 3/4	5	6, 7
January 1841	5 1/2	5	6, 7
February	5	5	6, 7
March	5	5	6, 7
April	4 1/2	5	6, 7
May	4 1/2	5	6
June	5	5	6
July	4 1/2	5	6

TABLE B-7.--Continued.

Month and Year	London	Bank of England	New York <sup>a</sup>
August	4 1/2	5	6
September	4 3/4	5	6, 7
October	5	5	6, 7 1/2
November	5 1/2	5	6, 9
December	5	5	9, 12
January 1842	4 3/4	5	9, 12
February	4 1/2	5	9, 12
March	3 3/4	5	9, 12
April	3 3/4	5, 4	8
May	3 1/4	4	8
June	3 1/2	4	8
July	3 1/4	4	8
August	3	4	7 1/4
September	2 1/2	4	7
October	2 3/4	4	6 1/2, 6
November	2 1/2	4	6, 6 1/2
December	2 1/2	4	6, 9
January 1843	2 1/2	4	6
February	2 1/4	4	6, 5
March	2	4	5, 6
April	2	4	5
May	2	4	5, 4 1/2
June	2 1/4	4	5, 4 1/2, 3 1/2
July	2 1/4	4	4
August	2	4	3 1/4, 4
September	2 1/4	4	3 1/2, 4
October	2 1/4	4	3 1/2, 4
November	2 1/4	4	3 1/2, 4
December	2 1/2	4	3 1/2, 4
January 1844	2 1/4	4	4
February	2	4	4
March	2	4	4, 5
April	2	4	5
May	1 3/4	4	5
June	2	4	5
July	2	4	5
August	1 3/4	4	5
September	2	4, 2 1/2, 3	5, 5 1/2
October	2 1/4	3, 2 1/2	5
November	2 3/4	3, 2 1/2	5, 5 1/2
December	2 3/4	2 1/2	5

<sup>a</sup>Rates quoted are for the beginning, middle, and end of each month.

Source: Erastus B. Bigelow, The Tariff Question (Boston: Little Brown and Co., 1862), p. 206.



TABLE B-8.--Foreign Exchange Rates, Dollar and Pounds  
January, 1834-December, 1843.

Year and Month	Sixty Day Bills Per cent Premium on Nominal Par <sup>a</sup>				Sovereigns			
January 1834	2	-	2	1/2 p	2	-	2	1/2p
February	1	-	2	d	2	-	2	1/2p
March	1	-	2	d	3	-	3	1/2p
April	par	-	1	p	4	-	5	p
May	3 1/4	-	4	p	3 1/2	-	4	p
June	1 1/2	-	2	p	2 1/2	-	3	p
July	2 1/2	-	3	p	7	-	8	p
August	4 3/4	-	5	p	8 7/8	-	9	1/8p
September	6 1/2	-	7	p	8 7/8	-	9	1/8p
October	7 1/4	-	7 1/2	p	8 7/8	-	9	1/8p
November	7	-	7 1/4	p	8 7/8	-	9	1/8p
December	6	-	6 1/2	p	8 7/8	-	9	1/8p
January 1835	7	-	7 1/2	p	8 7/8	-	9	1/8p
February	6 1/2	-	7	p	8 7/8	-	9	1/8p
March	7 1/4	-	7 3/4	p	8 7/8	-	9	1/8p
April	8 1/2	-	8 3/4	p	8 7/8	-	9	1/4p
May	8 3/4	-	9	p	8 7/8	-	9	1/4p
June	9 1/2	-		p	8 7/8	-	9	1/4p
July	9	-	9 1/4	p	8 7/8	-	9	1/8p
August	9 1/4	-	9 1/2	p	8 7/8	-	9	1/8p
September	8 3/4	-	9	p	8 7/8	-	9	1/8p
October	9	-	9 1/4	p	8 7/8	-	9	1/8p
November	9 1/2	-	10	p	8 7/8	-	9	1/8p
December	9 1/4	-	9 1/2	p	8 7/8	-	9	1/8p
January 1836	8 1/4	-	8 1/2	p	8 7/8	-	9	1/8p
February	9 1/2	-	10	p	8 7/8	-	9	1/8p
March	9	-	9 1/4	p	8 7/8	-	9	1/8p
April	7 3/4	-	8	p	8 7/8	-	9	1/8p
May	7 3/4	-	8	p	8 7/8	-	9	3/8p
June	6 3/4	-	7	p	8 7/8	-	9	3/8p
July	7 1/2	-	7 3/4	p	8 7/8	-	9	3/8p
August	7 1/4	-	7 1/2	p	8 7/8	-	9	3/8p
September	7 1/2			p	8 7/8	-	9	3/8p
October	8	-	8 1/2	p	8 7/8	-	9	3/8p
November	7 3/4	-	8 1/4	p	8 7/8	-	9	3/8p
December	9 1/4	-	9 3/4	p	8 7/8	-	9	3/8p
January 1837	7 1/2	-	8	p	8 7/8	-	9	3/8p
February	9 3/4	-	10 1/4	p	8 7/8	-	9	3/8p
March	8 1/2	-	9	p	8 7/8	-	9	3/8p
April	10 1/2	-	11 1/2	p	8 3/8	-	9	3/8p
May	10	-	12 1/2	p	11 3/8	-	13 5/8p <sup>b</sup>	
June	12	-	16	p	18	-	21	p
July 1837	20	-	22	p	22 3/4	-	23 1/8p	
August	19	-	20	p	19 3/4	-	20 1/2p	
September	20	-	21	p	20 1/2	-	21 1/8p	

TABLE B-8.--Continued.

Year and Month	Sixty Day Bills Per cent Premium on Nominal Par <sup>a</sup>				Sovereigns
October	14	-15		p	13 1/2-14 3/4p
November	15	1/2 -16		p	14 3/4-15 1/4p
December	14	-14	1/2	p	14 3/4-15 1/4p
January 1838	9	1/8 -10	1/4	p	11 3/8-12 1/2p
February	9	- 9	1/2	p	12 1/2-13 3/4p
March	7	1/4 - 7	1/2	p	11 3/8-11 7/8p
April	4	1/5 - 5		p	10 1/4-11 3/8p
May	6	1/4 - 6	3/4	p	9 1/8-10 1/4p
June	8	- 8	1/2	p	9 1/8-10 1/4p
July	7	1/2 - 8	1/2	p	9 1/8-10 1/4p
August	7	1/2 - 8	1/2		9 1/8
September	9	- 9	1/4		9 1/8
October	10	1/4 -10	1/4		9 1/8
November	9	1/4 - 9	1/2		9 1/8
December	10	-10	1/4		9 1/8
January 1839	9	1/8 - 9	5/8		9 1/8
February	8	7/8 - 9	1/8		9 1/8
March	8	5/8 - 8	7/8		9 1/8
April	8	1/2 - 9	3/8		9 1/8
May	8	1/2 - 8	7/8		9 1/8
June	9	3/8 - 9	5/8		9 1/8
July	8	7/8 - 9	3/8		9 1/8
August	9	1/8 - 9	7/8		9 1/8
September	8	1/2 - 8	7/8		9 1/8
October	9	5/8 -10	1/4		9 1/8
November	6	7/8 - 7	3/8		9 1/8-10 1/4
December	8	5/8 - 9	1/8		9 1/8-10 1/4
January 1840	7	3/8 - 8	1/2		9 1/8-10 1/4
February	8	- 8	1/2		9 1/8-10 1/4
March	8	- 8	1/4		9 1/8-10 1/4
April	7	3/8 - 8	1/4		9 1/8-10 1/4
May	7	5/8 - 8	1/4		9 1/8-10 1/4
June	7	3/8 - 8			9 1/8-10 1/4
July	6	5/8 - 7	1/8		8 7/8
August	6	3/8 - 6	7/8		8 7/8
September	6	3/8 - 6	7/8		8 7/8
October	8	- 8	1/4		8 7/8
November	8	5/8 - 8	7/8		8 7/8
December	8	1/2 - 8	7/8		8 7/8
January 1841	8	1/2			
February	8				
March	8				
April	7				
May	7	1/2			
June	8	1/4			
July	8	1/2			
August	8	1/2			

TABLE B-8.--Continued.

Year and Month	Sixty Day Bills Per cent Premium on Nominal Par <sup>a</sup>	Sovereigns
September	9	
October	9 3/4	
November	10	
December	9 1/4	
January 1842	8 3/4	
February	8 1/4	
March	8 1/4	
April	6 1/2	
May	7 1/2	
June	8	
July	7 1/2	
August	6 1/4	
September	7 3/8	
October	8 1/8	
November	6 1/4	
December	6 1/2	
January 1843	5 1/2	
February	5 3/8	
March	6	
April	5 3/4	
May	7 1/4	
June	8 1/2	
July	8 3/4	
August	9 1/4	
September	9 1/4	
October	9 1/4	
November	8 1/2	
December	8 1/2	

<sup>a</sup>Nominal par was \$4.4444 = 1 £. p = premium;  
d = discount; high and low for each month.

<sup>b</sup>May, 1837-December, 1837 \$ = £

May 1837	\$4.95-\$5.05	September 1837	\$5.35-\$5.38
June 1837	\$5.25-\$5.35	October 1837	\$5.05-\$5.10
July 1837	\$5.45-\$5.475	November 1837	\$5.10-\$5.13
August 1837	\$5.30-\$5.35	December 1837	\$5.10-\$5.13

Sources: United States, Congress, Senate, 25th Congress, 2nd Session, Senate Document No. 457, pp. 92-97; Appendix Table B-10. Walter B. Smith and Arthur H. Cole, Fluctuations in American Business, 1790-1860 (Cambridge: Harvard University Press, 1935), pp. 187, 190-191. Hazard's United States Commercial and Statistical Register, Vol. 4, March 1841, pp. 154-155; June 1841, pp. 408-409. United States Congress, House, 25th Congress, 3rd Session, House Document 227, pp. 646-647.

TABLE B-9.--Value of the Pound Sterling in Dollars.

	Per cent of Par (Nominal) <sup>a</sup>	Dollars and Cents Per Pound Sterling
Par		\$4.4444
Premium	1/4%	.4555
	1/2%	.4666
	3/4%	.4777
	1	4.4888
	2	.5333
	3	.5777
	4	.6222
	5	.6666
	6	.7111
	7	.7555
	8	.8000
	9	.8444
	10	.8888
	11	.9333
	12	.9777
	13	5.0222
	14	5.0666
	15	5.1110
	20	5.3332

<sup>a</sup>Prior to the Act of June 28, 1834, the ratio of gold to silver at the mint was 15.1. The American eagle (\$10) of the old coinage--previous to July 31, 1834--contained 247.5 grains of pure gold. As the British sovereign (£1) contained when minted 113 1/623 grains of pure gold, the gold par was \$4.65 to the pound, while the legal par was \$4.44 to the pound.

After the Act of June 28, 1834, mint ratio was changed to 16 1/464 to 1. New eagle contained 232 grains of pure gold and the gold par was equal to the exchange rate at \$4.87075 to the pound.

After the Act of January 18, 1837, the mint ratio was changed to 15.988+ to 1. Exchange rate was then, assuming that British sovereigns were of full weight and standard fineness, \$4.86656 to the pound.

It was estimated by the Assay Office at the Philadelphia Mint in 1837 that the average weight of British sovereigns was 112.8577 grains.

Source: United States, Congress, House, 25th Congress, 3rd Session, House Document No. 227, pp. 648-649.

TABLE B-10.--The Condition of the New York City Banks  
July 1834-May 1844.

Month and Year*	Loans and Discounts	Specie	Circu- lation	Deposits	U.S. Deposits
July 1834	24364	2494	3687		
January 1 1835	30480	4359	4994	11594	
January 1 1836	43240	4731	7569	14849	9292
June 1 1836	44572	6389	8578	18141	
January 1837	46246	4731	9693	14855	10135
June <sup>a</sup> 1837	38434	1711	5284	11300	3908
July 1837	37725	1710	5575	10929	3152
August 1837	36988	1758	6061	11481	708
September 1837	35308	1782	5492	11890	587
October 1837	33724	1966	5541	13384	431
November 1837	32078	2100	4827	12969	237
December 1837	31070	2374	4004	12843	131
January 1838	34057	2875	3608	12497 <sup>d</sup>	
February 1838	31038	2623	3008	11725	134
March 1838	30489	2740	2657	11180	110
April 1838	29729	3329	2322	11458	35
May 1838	28220	6571	3180	12600	130
January 1839	35947	5008	5494	13201	
January 1840	26900	4495	4029	12456	
January <sup>b</sup> 1841	22763	3776	4153	10639	
January <sup>c</sup> 1842	21583	3341	4151	9396	
January 1843	29579	7280	4631	15453	
August 1843	36514	12966	5309	23476	
May 1844	42130	8486	5894	25001	

\* Unless otherwise indicated the first week of the month.

<sup>a</sup> Report of the Bank Commissions given the following for May 25, 1837: \$43,649,000, \$3,092,000, \$6,836,000, \$12,680,000.

<sup>b</sup> 18 Safety Fund Banks.

<sup>c</sup> 20 Safety Fund Banks.

<sup>d</sup> Financial Register gives \$12,491,000.

Sources: New York State Report of Bank Commissioners, New York State Assembly, 56th Session, Assembly Document 69; 57th Session, Assembly Document 102; 58th Session, Assembly Document 74; 59th Session, Assembly Document 80; 60th Session, Assembly Document 78; 60th Session, Assembly Document 328; 61st Session, Assembly Document 71; 62nd Session, Assembly Document 101; 63rd Session, Assembly Document 44; 64th Session, Assembly Document 64; 65th Session, Assembly Document 29; 66th Session, Assembly Document 34; Financial Register, Vol. I.

TABLE B-11.--Major Assets and Liabilities of the Leading Deposit Banks in New York City, February-July, 1837.  
(\$000)

Month and Year	Loans and Discounts <sup>d</sup>	Specie <sup>d</sup>	Circulation <sup>d</sup>	United States Treasury Deposits <sup>d</sup>
February 1836	14522	2992	1380	9290
June 1836	16400	3440	1537	12694
July 1836	18084 (67)	4119 (84)	2270 (57)	13261 (96)
August 1836	18368 (52)	4345 (72)	1768 (38)	13382 (94)
September 1836	16875 (46)	5179 (78)	1651 (37)	11581 (88)
October 1836	16025 (45)	3356 (75)	1853 (36)	10623 (92)
November 1836	14220 (45)	2311 (61)	1547 (37)	7537 (67)
December 1836	14237 (42)	1977 (55)	1776 (36)	7336 (63)
Feb.-March 1837 <sup>a</sup>	13921	1657	1721	5956
April-May 1837 <sup>b</sup>	14250	437	1218	3149
June-July 1837 <sup>c</sup>	12286	1012	1317	2442

The banks were the Bank of America, Bank of the Manhattan Co., and the Mechanics Bank.

<sup>a</sup>February 27, 1837-March 1, 1837.

<sup>b</sup>April 29, 1837-May 16, 1837.

<sup>c</sup>June 30, 1837-July 1, 1837.

<sup>d</sup>Per cent of Total City Deposit Banks.

Source: United States Congress, Senate, 24th Congress, 1st Session, Senate Document No. 226; United States Congress, Senate 24th Congress, 1st Session Senate Document No. 423; United States Congress, Senate, 24th Congress, 2nd Session, Senate Document No. 21; United States Congress House, 25th Congress, 1st Session, House Document No. 30.

TABLE B-12.--Quarterly Indications of Monetary Conditions in the United Kingdom  
1833-1842.  
(£000,000)

Year and Quarter	Average Market Rate of Discount Per Cent	Yield on Consols Per Cent	Net Note Circula- tion in England and Wales	Bank of England Note Cir- culation	Total Note Circulation in England and Wales	Value of Bills of Exchange Created in England and Wales
1833	1	2.5	3.43	19.3		50.8
	2	2.9	3.38	19.3		48.3
	3	2.7	3.39	19.8		51.6
	4	3.3	3.41	18.2	28.4	51.8
1834	1	3.1	3.35	19.1	29.3	53.3
	2	3.1	3.27	18.9	29.4	50.9
	3	3.5	3.31	19.1	29.3	55.6
	4	3.8	3.30	18.0	28.7	51.8
1835	1	3.5	3.28	18.6	29.0	56.7
	2	3.8	3.27	18.3	29.2	57.2
	3	3.8	3.32	18.2	28.6	58.3
	4	3.8	3.29	17.3	28.4	57.4
1836	1	3.6	3.29	18.1	29.5	64.0
	2	3.5	3.27	17.9	30.1	64.8
	3	4.5	3.31	18.1	29.8	78.1
	4	5.3	3.34	17.4	29.4	73.4
1837	1	5.5	3.33	18.4	29.4	74.5
	2	4.8	3.30	18.2	29.1	63.0
	3	3.8	3.28	18.9	29.0	63.1
	4	3.4	3.22	17.9	28.8	58.1
1838	1	3.2	3.26	19.0	29.9	63.5
	2	2.7	3.18	19.0	30.7	62.9
	3	2.9	3.19	19.7	31.1	71.8
	4	3.2	3.19	18.2	30.4	68.2
1839	1	3.8	3.23	18.4	30.7	72.9
	2	4.3	3.21	18.1	30.4	74.0
	3	6.0	3.28	18.0	29.1	82.0
	4	6.5	3.31	16.3	27.7	74.7
1840	1	5.2	3.30	16.8	27.6	76.8
	2	4.4	3.26	16.9	28.0	73.6
	3	4.6	3.33	17.2	27.2	79.3
	4	5.6	3.37	16.1	26.5	70.7
1841	1	5.2	3.37	16.5	26.5	75.5
	2	4.8	3.33	16.6	26.9	70.4
	3	4.6	3.35	17.6	26.7	76.4
	4	5.2	3.38	16.7	26.2	64.1
1842	1	4.3	3.36	16.9	25.2	67.9
	2	3.5	3.25	17.8	26.1	63.8
	3	3.1	3.26	19.9	27.8	62.5
	4	2.6	3.19	18.8	27.2	55.2

<sup>a</sup>Note circulation of private and joint stock banks. No information given as to intra-bank holdings.

Source: R. C. O. Matthews, A Study in Trade Cycle History (Cambridge: Cambridge University Press, 1954), pp. 199, 201.

TABLE B-13.--Major Liabilities, New York City Banks, January 1837-May 1838.  
(\$000)

Date	No. of Banks	Note Circulation	Deposits		Amount Due Outside the City		Net Bankers Balances
			U.S. Treasury	Private	To Other Banks and Corporations	From Other Banks and Corporations	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Jan. 1837	21	8822	7176 <sup>a</sup>	12510	14245 <sup>b</sup>		
June 1837	21	5284	3908	11300	5093	5447	+ 354
July 1837	21	5575	3152	10929	6218	5761	- 457
Aug. 1837	21	6061	708	11481	7190	6216	- 974
Sept. 1837	21	5492	587	11890	6745	6720	- 25
Oct. 1837	21	5541	431	13384	5277	6686	+1409
Nov. 1837	21	4827	237	12969	5711	6829	+1118
Dec. 1837	21	4004	131	12843	5884	6770	+ 886
Jan. 1838	22 <sup>d</sup>	3608	n.g.	12497 <sup>c</sup>	11284 <sup>e</sup>	11835 <sup>f</sup>	+ 551
Feb. 1838	21	3008	134	11725	6329	5833	- 496
Mar. 1838	21	2657	110	11180	6321	5108	-1213
Apr. 1838	21	2322	35	11458	6273	4887	-1386
May 1838	21	3180	130	12600	6049	4175	-1874

<sup>a</sup>This figure is for the Safety Fund Banks.

<sup>b</sup>This is the total amount due all banks and corporations which performed banking functions inside and outside the city. The comparable figure for June 1837 was \$8,270,000.

<sup>c</sup>Listed as deposits, no mention made of Treasury deposits.

<sup>d</sup>Manhattan Company included.

<sup>e</sup>Total due all banks and corporations both inside and outside the city.

<sup>f</sup>Total due from all banks and corporations both inside and outside the city.

Sources: Financial Register, Vol. 1, pp. 92, 93, 143, 152, 157, 170, 224, 287, 319, 320, 349, 408. New York State, Assembly, 61st Session, Assembly Document No. 71. United States, Congress, House, 25th Congress, 2nd Session, House Document, No. 79, pp. 342-345. United States, Congress, Senate, 25th Congress, 2nd Session, Senate Document No. 471, pp. 816-817.



TABLE B-14.--The Condition of New York City Safety Fund Banks, 1831-1837.  
(\$000)

Date	Loans and Discounts	Specie	Circu- lation	Individual Deposits	United States Govt. Deposits
October 1831	18339	802	3112	4198	
January 1832	17655	1206	4396	4023	
April 1832	19202	1156	3311	5057	
January 1833	20742	1288	4195	n.g.	
April 1833	21180	1213	3997	7049	
November 1833	23588	1000	4192	7008	
January 1834	24396	1595	4890	n.g.	2409
March 1834	25388	1400	3880	6594	3592
October 1834	27057	3948	n.g.	n.g.	n.g.
January 1835	30479	4358	4993	9494	2100
May 1835	33351	4558	5233	10642	2299
July 1835	34691	n.g.	4728	n.g.	n.g.
January 1836	33204	3623	6349	10649	6049
April 1836	35068	3379	6700	13080	8175
July 1836	36385	5044	6132	n.g.	n.g.
September 1836	37332	6137	6052	13096	9909
January 1837	36442	3854	8155	11180	7176

n.g. = not given

Source: New York State, Assembly, 60th Assembly, Assembly Document No. 78.

TABLE B-15.--Prices of Domestic Exchange at New York City, January 1835-March 1843.

Year and Month	Boston	Philadelphia	Baltimore	Charleston	Savannah	New Orleans
January 1835	Par	1/4d	3/8d	1/2-1	1	1/2-1
February 1835	Par	1/4d	3/8d	1/2-1	1	1/2-1
March 1835	Par	1/4d	3/8d	1/2-1	1	1/2-1
April 1835	Par	1/4d	3/8d	1/2-1	1	1/2-1
May 1835	Par	1/4d	3/8d	1/2-1	1	1
June 1835	Par	1/4d	3/8d	1/2-1	1	1/2-1
July 1835	Par	1/2d	3/8d	1/2-1	1	1/2-1
August 1835	Par	1/2d	3/8d	1/2-1	1	1/2-1
September 1835	Par	1/2d	3/8d	1/2-1	1	1/2-1
October 1835	Par	1/2d	3/8d	1/2-1	1	1/2-1
November 1835	Par	1/2d	3/8d	1/2-1	1	1/2-1
December 1835	Par	1/2d	3/8d	1/2-1	1	1/2-1
January 1836	Par	1/2d	3/8d	1/2-1	1	1/2-1
February 1836	Par	1/2d	3/8d	1/2-1	1	1/2-1
March 1836	Par	1/2d	3/8d	1/2-1	1	1/2-1
April 1836	Par	1/2d	3/8d	1/2-1	1	1/2-1
May 1836	Par	1/2d	3/8d	1/2-1	1	1/2-1
June 1836	Par - 1/2d	1/2d	3/8d	1	2 1/2-3	3
July 1836	Par - 1/2d	1/4d	1/4d	1	2 1/2-3	3
August 1836	Par - 1/4d	Par	Par	-	2 1/2-3	3
September 1836	Par - 1/4d	Par	Par	-	2 1/2-3	3
October 1836	Par - 1/4d	Par	Par	1	2 1/2-3	3
November 1836	Par - 1/4d	Par	Par	1	2 1/2-3	3
December 1836	Par - 3/4d	Par	Par	1	2 1/2-3	3
January 1837	Par	Par	Par	2	2 1/2-3	3
February 1837	Par	Par	Par	2	2 1/2-3	3
March 1837	Par	Par	Par	2	2 1/2-3	3
April 1837	Par - 1/2d	Par	Par	2	2 1/2-3	3
May 1837	Par - 1/2d	Par	Par	4	-5	5
June 1837	Par - 1/2d	1/2-1	1/2-1	4	-5	5
July 1837	Par - 3/4d	1/2-1	1/2-1	4	-5	7
August 1837	Par - 1	d	1/2-1	4	-5	10
September 1837	3/4-1	d	3/4-1	4	-5	10

TABLE B-15.--Continued.

Year and Month	Boston	Philadelphia	Baltimore	Charleston	Savannah	New Orleans
October 1837	1	-1 1/2d	1	3 1/2-4 1/2d	4	5
November 1837	1 1/4-1 3/4d	1	-2	2 1/2-3 d	2 1/2-3 d	3 1/2-4 d
December 1837	1 1/2-2 d	1 1/4-1 3/4d	1	2 1/2-3 d	2 1/2-3 d	-3 1/2d
January 1838	1 3/4-2 1/4d	1 1/2-2 d	1 3/4-2 d	2 -2 1/2d	2 1/4-2 3/4d	2 -3 d
February 1838	1 3/4-2 1/4d	1 1/2-1 7/8d	1 3/4-2 1/4d	3 -3 1/2d	3 -3 1/2d	3 1/2-4 d
March 1838	1 1/2-2 d	2 -2 1/4d	2 -2 1/2d	3 -3 1/2d	3 -3 1/2d	4 -5 d
April 1838	Par - 1/2d	3 1/4-3 1/2d	4 -4 1/2d	4 -4 1/2d	5 -9 d	5 -6 d
May 1838	1/2-1 d	3 -3 1/2d	3 1/2-4 1/4d	6 -7 d	8 10 d	8 -10 d
June 1838	Par - 1/2d	3/4-1 d	1 1/2-2 d	3 1/2-4 d	6 8 d	6 1/2-7 1/2d
July 1838	1/4- 3/4d	1 1/4-1 3/8d	1 3/4-2 d	3 1/2-4 d	6 8 d	6 1/2-7 1/2d
August 1838	Par - 1/4d	3/8- 5/8d	5/8- 7/8d	2 1/2-3 1/2d	5 1/2-6 d	4 3/4-5 1/4d
September 1838	Par - 1/4d	1/8- 3/8d	1/4- 1/2d	2 -2 1/2d	3 4 d	4 -4 1/2d
October 1838	Par - 1/4d	1/8- 1/4d	1/4- 3/8d	1 3/4-2 1/4d	1 1/2-2 d	2 3/4-3 1/4d
November 1838	Par - 1/4d	1/8- 1/4d	1/4- 1/2d	2 3/4-2 1/4d	2 -2 1/2d	1 1/4-1 3/4d
December 1838	Par - 1/4d	Par - 1/4d	1/4- 1/2d	1 1/2-1 d	2 -2 1/2d	1 1/4-1 3/4d
January 1839	Par - 1/4d	Par - 1/4d	1/4- 1/2d	1 2 d	2 -2 1/2d	1 1/4-1 3/4d
February 1839	Par - 1/4d	Par - 1/4d	1/4- 1/2d	1 2 d	2 1/2-3 d	Par - 1 3/4d
March 1839	Par - 1/4d	Par - 1/4d	1/4- 1/2d	1 2 d	2 1/2-3 d	Par - 1 d
April 1839	Par - 1/4d	Par - 1/4d	1/4- 1/2d	2 2 1/2d	3 -3 1/2d	Par - 1/2d
May 1839	Par - 1/4d	Par - 1/4d	1/4- 1/2d	2 2 1/2d	3 -3 1/2d	1 -1 1/2d
June 1839	Par - 1/4d	Par - 1/4d	1/4- 1/2d	1 3/4-2 1/2d	2 1/2-3 d	1 -1 1/2d
July 1839	Par - 1/4d	Par - 1/4d	1/4- 1/2d	1 3/4-2 1/4d	2 1/2-3 d	2 1/2-3 d
August 1839	Par - 1/4d	Par - 1/4d	1/4- 1/2d	2 -2 1/2d	2 1/2-3 d	2 3/4-3 1/4d
September 1839	Par - 1/4d	Par - 3/8d	1/4- 1/2d	4 5 d	3 4 d	4 1/2-5 d
October 1839	Par - 1/4d	Par - 3/8d	1/4-1 d	4 5 d	4 5 d	4 1/2-5 d
November 1839	Par -1 d	14 -15 d	13 -14 1/2d	6 8 d	n.g.	9 10 d
December 1839	Par - 1/2d	8 1/4-8 1/2d	8 1/4-8 1/2d	5 -6 d	14 -16 d	7 -7 1/2d
January 1840	Par - 1/2d	8 1/4-8 1/2d	7 3/4-8 d	3 -4 d	12 -15 d	6 -6 1/2d
February 1840	Par - 1/4d	6 -6 1/2d	6 -6 1/4d	3 -4 d	10 -12 d	3 1/2-4 d
March 1840	Par - 1/2d	6 1/2-6 3/4d	5 3/4-6 d	3 -3 3/4d	8 1/2-9 d	4 -4 1/2d
April 1840	Par - 1/2d	5 1/4-5 3/4d	4 3/4-5 d	3 -3 3/4d	8 1/2-9 d	6 -6 1/2d
May 1840	Par - 1/4d	4 1/4-4 3/4d	5 1/4-5 1/2d	3 1/4-3 3/4d	8 1/2-9 d	7 1/2-9 d
June 1840	Par - 1/4d	5 -5 1/8d	5 5 d	4 1/2-5 d	7 1/2-8 d	6 1/4-6 3/4d

TABLE B-15.--Continued.

Year and Month	Boston	Philadelphia	Baltimore	Charleston	Savannah	New Orleans
July 1840	Par - 1/4d	3 7/8-4 1/8d	3 1/4-4 d	3 1/2-3 3/4d	7 1/2-7 1/2d	7 - 7 1/2d
August 1840	Par - 1/4d	3 -3 1/4d	2 1/4-2 1/2d	2 1/4-2 1/2d	6 3/4-7 d	5 1/4- 5 1/2d
September 1840	Par - 1/2d	4 -4 1/4d	2 1/4-2 1/2d	1 3/4-2 d	6 -6 1/2d	4 1/2- 5 d
October 1840	Par - 1/8d	3 -3 1/4d	1 3/4-2 d	1 1/4-1 1/2d	5 1/4-5 1/2d	2 1/2- 2 3/4d
November 1840	Par - 1/8d	2 7/8-3 1/2d	1 1/2-2 d	1 1/2-2 d	5 -5 1/4d	2 - 2 1/4d
December 1840	Par - 1/8d	2 3/4-3 3/4d	1 1/2-1 3/4d	1 -1 1/4d	5 -5 1/4d	1 3/4- 2 d
April 1841	1/8- 1/4d	3 1/2-4 d	3 1/2-4 d	1 3/4-2 d	9 1/2-10 d	5 1/2- 6 d
May 1841	1/4- 3/8d	Par - 1/8d	n.g.	n.g.	n.g.	n.g.
June 1841	Par - 1/4d	1/8- 1/4d	n.g.	n.g.	n.g.	n.g.
September 1841	1/8- 1/4d	3 1/2-4 3/4d	2 d	1 1/4-1 1/2d	8 1/2-9 d	4 - 6 d
December 1841	1/4- 3/8d	5 1/2-6 d	4 -4 1/2d	1 1/4-1 1/2d	13 1/2-14 d	9 1/2- 9 5/8d
January 1842	1/4- 1/2d	5 1/2-6 d	n.g.	1 1/4-1 1/2d	-14 d	9 1/2- 9 5/8d
February 1842	1/4- 3/8d	7 -8 3/4d	2 -3 d	1 1/4-1 3/4d	15 -16 d	6 1/2- 7 d
March 1842	1/4- 3/8d	n.g.	n.g.	1 1/2-1 5/8d	11 -12 d	6 - 6 1/2d
April 1842	1/4- 3/8d	Par - 1/8d	1/8- 1/4d	1 1/2-1 3/4d	6 -7 d	6 3/4- 7 d
May 1842	1/4- 3/8d	Par - 1/8d	1/8- 1/4d	1 1/2-1 3/4d	6 -10 d	6 3/4- 7 d
June 1842	Par - 1/4d	Par - 1/4d	Par - 1/4d	1 1/4-1 1/2d	3 1/2-4 d	1 1/4- 1 1/2d
September 1842	Par - 1/8d	Par - 1/8d	Par	1 1/2-1 3/4d	3 -4 d	Par - 1/4d
November 1842	Par - 1/8d	Par - 1/8d	1/8- 1/4d	1 1/4-1 1/2d	2 -2 1/2d	1 3/4- 2 p
March 1843	Par - 1/8d	Par - 1/8d	Par - 1/8d	1/4- 3/8d	1 -1 1/2d	1 - 1 1/2p

d or p, per cent discount or premium on par for sight bills.

n.g. = not given.

Sources: United States, Congress, Senate, 25th Congress, 2nd Session, Senate Document No. 457, pp. 95-97;  
 Hazard's United States Commercial and Statistical Register, March, 1841, pp. 154-155; June, 1841,  
 pp. 408-409. Jonathan Elliott, The Funding System of the United States and Great Britain  
 (Washington: Blair and Rives, 1845), p. 1182.

## APPENDIX C

TABLE C-1.--Estimates of United States Cotton Prices, 1830-1845.  
(Price Per Pound)

Year	Liverpool Uplands Cents	American Midlings and Uplands Pence	New Orleans Uplands Cents <sup>a</sup>	Export Price Per Pound Gross Weight Cents <sup>b</sup>
1830	13.6	6 7/8	8.4	9.9
1831	11.8	6	9.0	9.1
1832	13.7	6 5/8	10.0	9.8
1833	17.5	8 1/2	11.2	11.1
1834	17.6	8 5/8	15.5	12.9
1835	20.6	10 1/4	15.2	16.8
1836	20.3	9 7/8	13.3	16.8
1837	14.2	7	9.0	14.2
1838	14.2	7	12.4	10.3
1839	15.7	7 7/8	7.9	14.8
1840	12.1	6	9.1	8.6
1841	13.5	6 1/4	7.8	10.2
1842	10.5	5 3/8	5.7	8.1
1843	9.1	4 5/8	7.5	6.2
1844	10.1	4 7/8	5.5	8.1
1845	8.3	4 1/8	6.8	5.9

<sup>a</sup>Data is for crop year, 1830 is thus from September 1830 to August 1831.

<sup>b</sup>Data is for fiscal year, 1830 is thus from October 1, 1829 to September 30, 1830.

Sources: Liverpool upland: Victor S. Clark, History of Manufactures in the United States, 1607-1860 (Washington: Carnegie Institute, 1916), p. 611. American midlings: United States Congress, Senate, Report of the Committee on Agriculture and Forestation, 53rd Congress, 3rd Session, Senate Report 986, Vol. 2, p. 157. New Orleans Upland: Lewis C. Gray, History of Agriculture in the Southern United States, Vol. 2 (Washington: Carnegie Institute, 1933), p. 1027. Export Price: United States Department of Agriculture, Statistical Bureau, Circular Number 32, Cotton Crops of the United States, 1790-1911, August 15, 1912, pp. 6-7.

TABLE C-2.--United States Cotton Production and Consumption, 1830-1845.

Year <sup>a</sup>	Production			Exports			Retained & Rec'd for Consumption in 500 lb. Bales, G.W. & of Prod.
	Running Bales 000	Equiv- alent 500 lbs. Bales B.W. 000	Total Net Wt. Million Pounds	Gross Weight Million Pounds	Equiv- alent 500 lbs. Bales G.W. 000	Export Value \$Millions	
1830	1077	764	365	298	597	29.7	21.9
1831	1026	732	350	277	554	25.3	24.3
1832	1069	805	385	322	644	31.7	20.0
1833	1114	816	390	325	649	36.2	20.4
1834	1226	931	445	385	769	49.4	17.4
1835	1253	962	460	387	775	65.0	19.7
1836	1361	1062	508	424	847	71.3	20.2
1837	1424	1129	540	444	888	63.2	21.3
1838	1801	1428	683	596	1192	61.6	16.6
1839	1361	1093	522	414	827	61.2	24.3
1840	2064	1654	790	744	1488	63.9	10.0
1841	1635	1348	644	530	1060	54.3	21.4
1842	1684	1398	668	585	1169	47.6	16.4
1843	2379	2035	973	792	1585	49.1	22.2
1844	2030	1750	837	664	1327	54.1	24.2
1845	2395	2079	994	873	1746	51.7	16.0

<sup>a</sup>Year is the production year which is the same as the fiscal year. Thus 1830 is October 1, 1829 to September 30, 1830.

Source: United States, Department of Agriculture, Statistical Bureau, Circular #32, Cotton Crops of the United States, 1790-1911, August 15, 1912, pp. 6, 7.

TABLE C-3.--Anglo-American Cotton Trade, 1830-1845.  
(Millions of Pounds Except Cotton Goods which are Millions of Yards)

Year <sup>a</sup>	U.K. Im- ports of Raw Cotton	U.K. Raw Cotton Consump- tion	Imports Consump- tion Carry- over	Per cent Carry- over Di- vided by Consump- tion	U.S. Cot- ton Ex- ports	U.S. Cot- ton Ex- ports to U.K.	U.S. Cot- ton Ex- ports to U.K. As Per cent of U.S. Total	U.S. Cot- ton Ex- ports as per cent of U.K. Imports	U.K. Ex- ports of Cotton Yarn	U.K. Ex- ports of Cotton Goods
1830	264	248	16	6.4	298	211	71	80	64	441
1831	289	263	26	9.5	277	219	79	76	61	421
1832	287	277	10	3.6	322	220	68	77	76	461
1833	304	289	15	5.2	325	238	73	78	71	469
1834	327	303	24	7.9	385	269	70	82	76	656
1835	364	318	48	15.1	387	284	73	78	83	557
1836	407	347	60	17.6	424	290	68	71	88	638
1837	407	366	41	11.2	444	321	72	79	103	531
1838	508	417	91	21.8	596	431	72	85	114	690
1839	389	382	7	1.8	414	312	75	80	106	731
1840	592	459	133	29.0	744	488	66	82	118	791
1841	488	438	50	11.4	530	358	67	73	123	751
1842	532	435	97	22.4	585	414	71	78	137	734
1843	673	518	155	30.0	792	575	73	85	140	919
1844	646	544	102	18.7	664	517	78	80	139	1047
1845	722	607	115	19.0	873	627	72	87	135	1092

<sup>a</sup>For United Kingdom, Calendar Year--For United States, Fiscal Year.

Sources: Columns 1 and 2; B. R. Mitchell and Phyllis Deane, Abstract of British Historical Statistics (Cambridge: Cambridge University Press, 1962), pp. 302-303. Column 5; Statistical History of the United States, p. 547. Column 6; Mitchell and Deane, p. 291. Column 9, 10; United States, Congress, Senate, Report of the Committee on Agriculture and Forestry, 53rd Congress, 3rd Session, Senate Report 986, Vol. 2, p. 157.



TABLE C-4.--Cotton Consumption and Production, United States and United Kingdom Per Cent Changes, 1830-1845.

Time	U.K. Cotton Imports	U.K. Raw Cotton Consumption	U.S. Cotton Production	U.S. Cotton Exports	U.S. Cotton Exports To U.K.	U.K. Ex-ports of Cotton Yarn	U.K. Ex-ports of Cotton Goods
1830-1831	+ 9.5	+ 6.0	- 4.1	+ 7.0	+ 3.8	- 4.7	- 4.5
1831-1832	- .7	+ 5.3	+10.0	+16.2	+ .4	+24.6	+ 9.5
1832-1833	+ 5.9	+ 4.3	+ 3.9	+ .9	+ 8.2	- 6.6	+ 7.6
1833-1834	+ 7.6	+ 4.8	+14.1	+18.5	+13.0	+ 7.0	+32.0
1834-1835	+11.3	+ 4.9	- 3.4	+ .5	+ 5.6	+ 9.2	-15.0
1835-1836	+11.8	+ 8.3	+10.4	+ 9.6	+ 2.1	+ .6	+14.5
1836-1837	.0	+ 5.5	+ 6.3	+ 4.7	+10.7	+ 1.7	-16.8
1837-1838	+24.8	+13.9	+26.4	+34.2	+34.3	+10.7	+30.0
1838-1839	-23.4	- 8.4	-23.4	-30.5	-27.6	- 5.7	+ 5.9
1839-1840	+52.2	+20.1	+51.3	+79.7	+56.4	+11.3	+ 8.2
1840-1841	-17.6	- 4.6	-18.5	-28.8	-26.6	+ 4.2	- 5.1
1841-1842	+ 9.0	.7	+ 3.7	+10.4	+15.6	+ 8.5	- 1.4
1842-1843	+26.5	+19.1	+45.7	+35.4	+38.9	+ 7.2	+25.1
1843-1844	- 4.0	+ 5.0	-14.0	-16.2	-10.1	- .7	+13.9
1844-1845	+11.8	+11.6	+18.7	+31.5	+21.3	- 2.9	+ 4.3

Sources: Appendix Tables C-2, and C-3.

TABLE C-5.---Monthly Prices of Short-Staple American Cotton, New Orleans  
and England, January 1834-January 1845.  
(Price Per Pound)

Year and Month		New Orleans		(Pence) England	(Pence) Liverpool
		Series A	(Cents) Series B		
January	1834	10.3	10 1/2- 9 3/4		
February	1834	9.8	10 1/2- 9		
March	1834	10.0	10 1/2- 9 1/2		
April	1834	10.8	11 -10		
May	1834	11.3	11 1/2-11		
June	1834	11.3	12 -11		
July	1834	11.8	12 -11 1/2		
August	1834	11.8	12 -11 1/2		
September	1834	11.8	12 -11 1/2		
October	1834	14.3	14 1/2-12 1/2		
November	1834	13.3	15 -12 1/2		
December	1834	15.8	16 -14		
January	1835	15.3	15 1/2-14		
February	1835	14.8	16 -14 1/2		
March	1835	15.8	16 -15 1/2		
April	1835	16.0	16 1/2-15 1/2		
May	1835	17.0	17 1/4-16 1/2		
June	1835	17.0	17 1/2-16 1/2		
July	1835	18.5	19 -16 1/2		
August	1835	18.5	19 -18		
September	1835	n.g.	n.g.		
October	1835	15.3	15 1/2-15		
November	1835	15.3	14 1/2-14		
December	1835	14.6	14 1/2-13		
January	1836	14.5	15 -13 1/2	10 1/2- 7 1/2	
February	1836	14.5	15 1/2-14	10 1/2- 8 3/4	
March	1836	15.5	16 -15	11 1/4- 9	
April	1836	16.8	17 -15	12 -10 1/2	
May	1836	15.5	16 1/2-15	11 3/4-10	13 - 9 1/2
June	1836	15.5	16 -14 1/2	11 - 9	13 - 8 3/4
July	1836	14.8	15 -14 1/2	10 3/4- 8 1/2	12 1/2- 8 1/4
August	1836	14.8	15 -14 1/2	10 1/2- 8 1/2	11 1/2- 7 3/4
September	1836	n.g.	n.g.	11 3/4- 8 3/4	11 3/4- 7 1/2
October	1836	15.0	16 -14	11 3/4- 8 3/4	9 1/2- 6 1/4
November	1836	15.3	16 -14	11 1/4- 7 1/2	9 - 5
December	1836	14.3	14 1/2-13 1/2	11 1/4- 7 1/2	n.g.
January	1837	14.1	14 1/2-13	11 1/4- 7 1/2	11 1/2- 7 3/4
February	1837	12.8	13 1/2-12 1/2	10 - 7	11 3/4- 7 1/2
March	1837	13.8	14 -11	8 - 6	9 1/2- 6 1/4
April	1837	11.5	10 1/2- 8 1/2	8 - 5 1/2	9 - 5
May	1837	11.5	n.g.	7 3/4- 5 1/4	8 1/2- 4 3/4
June	1837	n.g.	n.g.	7 1/2- 4 3/4	7 3/4- 4 1/4
July	1837	n.g.	n.g.	8 - 5	8 - 4
August	1837	11.3	11 1/4-11 1/4	8 - 5	8 1/4- 4 1/2
September	1837	9.4	n.g.	8 - 5 1/2	
October	1837	9.8	10 - 9 1/2	8 - 5 1/2	
November	1837	9.3	9 1/2- 8 1/2	8 - 6 1/2	
December	1837	9.1	9 1/2- 8 1/2	8 1/2- 6 3/4	

TABLE C-5.--Continued.

Year and Month	New Orleans				(Pence) England	(Pence) Liverpool
	Series A	(Cents) Series B				
January 1838	9.1	9 1/2-	9		8 3/4-	7 1/2
February 1838	9.1	9 1/2-	8		8 -	6 1/2
March 1838	8.1	8 1/2-	8		8 1/4-	6 1/2
April 1838	8.8	8 3/4-	8 1/4		8 -	5 3/4
May 1838	9.3	9 1/4-	8 1/2		8 1/4-	5 1/4
June 1838	9.3	9 -	8 1/4		8 1/4-	5 1/4
July 1838	8.4	9 -	8 1/4		8 1/4-	5 1/2
August 1838	9.3	9 -	8 1/2		8 -	5 1/4
September 1838	8.8	9 -	8		8 1/4-	5 3/8
October 1838	10.4	11 1/2-	8		8 1/4-	5 1/8
November 1838	10.5	11 1/2-	10 1/4		8 1/2-	5 3/4
December 1838	11.5	12 1/2-	11		8 3/4-	6 1/2
January 1839	12.3	12 3/4-	11 1/2		9 -	7 3/8
February 1839	12.9	14 -	12		8 3/4-	7 1/8
March 1839	13.8	14 1/2-	13 1/2		9 3/4-	8
April 1839	14.6	15 -	13 1/2	10	-	8 1/2
May 1839	14.4	14 3/4-	13 1/2		9 5/8-	7 3/4
June 1839	14.3	14 1/2-	11 1/2		9 1/2-	7 3/8
July 1839	12.5	13 -	12		7 -	6
August 1839	10.3	13 1/2-	10		8 1/2-	6 1/2
September 1839	9.3	10 1/2-	10		7 1/2-	6 1/4
October 1839	10.3	10 3/4-	10		8 1/2-	6
November 1839	9.3	10 1/2-	8 1/4		7 3/4-	5 3/4
December 1839	7.5	8 1/2-	7 1/4		7 3/4-	6
January 1840	7.9	8 1/2-	7 1/4		6 3/4-	5 1/2
February 1840	7.3	7 3/4-	6 3/4		5 3/4-	5
March 1840	6.5	7 -	6		5 3/4-	5
April 1840	6.8	7 1/4-	6 1/4		5 3/4-	5
May 1840	6.9	7 3/4-	6 1/2		5 1/2-	4 3/4
June 1840	7.5	8 -	7 1/4		6 3/4-	4 1/2
July 1840	7.8	8 -	7 1/2		6 3/4-	5
August 1840	8.3	8 1/2-	7 1/2		6 3/4-	5
September 1840	8.3	9 -	8		6 3/4-	5
October 1840	8.4	9 -	7 3/4		6 3/4-	5 1/4
November 1840	8.3	8 1/2-	8		6 1/2-	5
December 1840	8.4	8 1/2-	8 1/4		6 1/2-	5
January 1841	8.5	9 1/4-	8 1/4		7 1/4-	6
February 1841	9.6	9 3/4-	9 1/4		7 1/4-	6
March 1841	9.6	9 3/4-	9		7 1/4-	6
April 1841	10.0	10 1/4-	9 1/2		7 1/2-	6 1/8
May 1841	10.1	10 1/2-	10		7 1/2-	5 5/8
June 1841	9.8	10 -	9 1/4		7 1/4-	5 3/8
July 1841	9.3	9 1/2-	9		7 -	5 1/4
August 1841	9.0	9 1/4-	9		7 -	5
September 1841	8.5	8 1/2-	8 1/4		7 -	5
October 1841	8.6	8 3/4-	8 1/4		7 -	5
November 1841	8.6	8 3/4-	8 1/4		6 3/4-	4 3/4
December 1841	8.3	8 3/4-	8		6 3/4-	4 3/4
January 1842	7.9	8 -	7 1/2			
February 1842	7.3	7 3/4-	7 1/4			
March 1842	7.4	7 1/2-	6 3/4			

TABLE C-5.--Continued.

Year and Month		New Orleans		(Pence) England	(Pence) Liverpool
		Series A	(Cents) Series B		
April	1842	7.5	7 1/2- 6 3/4		
May	1842	6.6	7 - 6 1/4		
June	1842	6.6	7 - 6 1/2		
July	1842	7.6	7 1/2- 6 1/4		
August	1842	6.3	7 - 6		
September	1842	7.4	7 1/2- 6		
October	1842	6.1	7 - 5 3/4		
November	1842	6.0	6 - 5 1/2		
December	1842	5.6	6 - 5 1/4		
January	1843	5.8	6 - 5 1/4		
February	1843	5.2	5 1/2- 5		
March	1843	4.9	5 1/4- 4 1/2		
April	1843	5.4	5 5/8- 4 7/8		
May	1843	6.0	6 1/4- 5 1/2		
June	1843	6.0	6 1/4- 5 3/4		
July	1843	6.0	6 1/4- 5 3/4		
August	1843	6.0	6 1/4- 5 3/4		
September	1843	6.6	7 1/2- 5 3/4		
October	1843	7.1	7 1/2- 6 3/4		
November	1843	7.1	7 3/8- 6 3/4		
December	1843	9.0	9 - 7 1/8		
January	1844	7.7	9 - 8 1/4		
February	1844	7.7	9 1/8- 8 1/4		
March	1844	7.8	8 5/8- 7 1/2		
April	1844	7.1	8 - 6 3/4		
May	1844	7.2	7 3/8- 6 1/2		
June	1844	7.1	7 3/8- 6 3/4		
July	1844	7.0	7 1/8- 6 1/2		
August	1844	7.0	7 - 6 1/4		
September	1844	5.8	6 1/4- 6		
October	1844	5.8	6 - 5 3/8		
November	1844	5.3	5 1/2- 4 7/8		
December	1844	5.3	5 1/4- 4 1/2		
January	1845	4.7	5 - 4 3/8		

n.g. = not given.

Sources: Price Series A: Lewis C. Gray, History of Agriculture in the Southern United States to 1860 (Washington: Carnegie Institution, 1933), Vol. II, p. 1027. Price Series B: James E. Boyle, Cotton and the New Orleans Cotton Exchange (Garden City: 1934), pp. 176-178. England: Walter B. Smith, Economic Aspects of the Second Bank of the United States (Cambridge: Harvard University Press, 1953), p. 190. Liverpool: Journal of the American Institute (March, 1839), p. 131.

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