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**United States foreign investment during the Bretton Woods
period: Portfolio investment in western Europe**

Werner, Laurie Moroz, Ph.D.

City University of New York, 1994

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UNITED STATES FOREIGN INVESTMENT
DURING THE BRETTON WOODS PERIOD:
PORTFOLIO INVESTMENT IN WESTERN EUROPE

by

LURIE MOROZ WERNER

A dissertation submitted to the Graduate Faculty in Economics
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy, The City University of New York

1994

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This manuscript has been read and accepted for the Graduate Faculty in Economics in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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ACKNOWLEDGMENTS

I wish to thank my adviser, Michael Edelstein, for introducing me to economic history, for guiding and challenging me through the process of researching and writing my dissertation, and for the moral support, advice, and patience that were no less important in bringing my work to a successful conclusion. The other members of my supervisory committee, Robert Lipsey and Thom Thurston, provided critical comments and direction that improved the final product significantly. I also received valuable information and generous assistance from Hugo Kaufmann, Mira Wilkins, and Richard Sylla. I am grateful for Michael Grossman's help and advice throughout my graduate studies.

Finally, I want to thank my husband, Jan, for always being there.

CONTENTS

	<u>Page</u>
ACKNOWLEDGMENTS	iv
LIST OF TABLES	vii
LIST OF GRAPHS	x
I. INTRODUCTION	1
A. U.S. Foreign Investment: A Survey	4
B. Research Objective	12
C. Comparison to Previous Research	13
D. Scope of the Study	15
E. Summary of Findings	19
II. HISTORICAL BACKGROUND: INTERNATIONAL CAPITAL FLOWS, 1879-1939	21
III. U.S. FOREIGN INVESTMENT DURING THE BRETTON WOODS PERIOD	38
A. Overview	38
B. 1946 - 1955: Post-World War II Foreign Investment	52
C. 1956 - 1962: Increased Portfolio Investment in Europe	62
D. 1963 - 1971: Capital Controls and the Euro-markets	85
IV. CAPITAL MOVEMENTS AND CONTROLS UNDER THE BRETTON WOODS SYSTEM	106
A. The Provisions and Operation of the Bretton Woods Monetary System	106
B. Attitudes Toward Capital Controls in the U.S. and Europe	118
V. HYPOTHESES CONCERNING U.S. PORTFOLIO INVESTMENT IN WESTERN EUROPE	124

	<u>Page</u>
VI. RESEARCH ON INTERNATIONAL CAPITAL INVESTMENT	156
A. Theories of International Portfolio Capital Movements	156
B. Considerations for the Bretton Woods Period	162
C. Review of Previous Research	167
D. Empirical Problems	180
VII. TESTS OF HYPOTHESES	185
A. Construction of Model	185
B. Results of Empirical Tests	204
C. Conclusions	217
VIII. SUMMARY AND CONCLUSIONS	225
APPENDIX	232
A. Country Groups	233
B. Data Sources	235
C. Tables	237
BIBLIOGRAPHY	261

LIST OF TABLES

<u>Table</u>		<u>Page</u>
II.1	U.S. Private Long-term Capital Flows: 1896-1919	36
II.2	U.S. Private Long-term Capital Flows: 1920-1939	37
III.1A	U.S. Private Long-term Capital Flows: 1946-1971, All Areas	43
III.1B	U.S. Private Long-term Capital Flows: 1946-1971, Western Europe and Canada	44
III.1C	Share of U.S. Private Long-term Capital Flows, Western Europe and Canada	45
III.2A	International Investment Position of the U.S.: Private Long-term Investment	46
III.2B	International Investment Position of the U.S.: Annual Change in Investment Position	47
III.2C	International Investment Position of the U.S.: Private Long-term Investment: Western Europe and Canada	48
III.2D	International Investment Position of the U.S.: Share of All Areas: Western Europe and Canada	49
III.2E	International Investment Position of the U.S.: Western Europe: Investment Position/Annual Change	50
III.3	U.S. Government Capital Transfers: Western Europe	61
III.4A	U.S. Direct Investment by Industry: All Areas	74
III.4B	U.S. Direct Investment by Industry: Western Europe	75
III.5A	U.S. Private Long-term Portfolio Investment: All Areas	76
III.5B	U.S. Private Long-term Portfolio Investment: Western Europe	77
III.6A	Gross Domestic Product	78
III.6B	Gross Fixed Capital Formation: Share of GDP	80

<u>Table</u>		<u>Page</u>
III.7	Long-term Interest Rates	82
III.8	Foreign Dollar Bonds Issued in the U.S.: 1954-1960	84
III.9	U.S. Balance of International Payments: 1960-1971	99
III.10	U.S. Private Long-term Portfolio Investment: Western Europe	100
III.11	Foreign Bond Issues Placed on U.S. Domestic Market	101
III.12	International Investment Position of the U.S. in Western Europe	102
III.13A	Long-term Claims on Foreigners Reported by Banks: 1956-1962	103
III.13B	Long-term Claims on Foreigners Reported by Banks: 1963-1970	104
III.14	Foreign and International Bond Issues	105
V.1	Determinants of Foreign Borrowing, 1945-1955	135
VII.1	Summary of Model Results	209
VII.2A	Models Tested with Alternate Specifications of Risk (1)	212
VII.2B	Models Tested with Alternate Specifications of Risk (2)	216
VII.3	U.S. Portfolio Investment Position in Western Europe: Actual vs. Estimated	221
A.1	Private Long-Term Capital Flows: Historical Summary	238
A.2	U.S. Private Long-Term Capital Flows: Western Europe (excluding U.K.)/United Kingdom	241
A.3	International Investment Position of the U.S.: All Areas/Western Europe Share of Total	242
A.4	U.S. Government Capital Transfers: Non-Military	243
A.5	Long-Term Claims on Foreigners Reported by Banks (by Region)	244

<u>Table</u>		<u>Page</u>
A.6	United States: Key Economic Data	248
A.7	United States Private Sector Net Worth International Investment Position: Share of Net Worth	249
A.8	Western Europe: Key Economic Data	250
A.9	Comparison of Growth Trends: United States and Major European Countries	251
A.10	Consumer Prices: Percent Change vs. Previous Year	252
A.11	Exchange Rates vs. U.S. Dollar	253
A.12	U.S. Stock Market Prices and Yields	254
A.13	Stock Yields: United States and Germany	256
A.14	Data Input for Models	258

LIST OF GRAPHS

<u>Graph</u>		<u>Page</u>
I.1	Long-term Private Foreign Investment Share of U.S. GNP	10
I.2	Long-term Private Foreign Investment: Western Europe	11
III.1	Long-term Private Foreign Investment: Western Europe	51
III.2	Growth of GDP: Index vs. Previous Year	79
III.3	Gross Fixed Capital Formation: Share of GDP	81
III.4	Central Government Long-Term Bond Yields	83
V.1	U.S. Stock Market Yields	154
V.2	Stock Market Dividend Yields: United States and Germany	155
VII.1	Portfolio Investment in Western Europe: Change in Stock of Assets	222

I. INTRODUCTION

The twenty-five years after World War II formed a distinctive period in international economic relations. It is usually characterized as a time of successful international economic cooperation, inaugurated by the signing of the Bretton Woods agreements in 1944. The agreement, signed by forty-four countries at the United Nations International Monetary and Financial Conference held at Bretton Woods, New Hampshire, laid down the principles of the Bretton Woods monetary system. An adjustable peg exchange rate system was to ensure stability in international transactions; and two financial institutions, the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (World Bank), were created to coordinate and regulate international economic and monetary affairs. The countries of the industrialized world experienced high rates of output growth and productivity, and world trade expanded greatly. The Bretton Woods era came to an end when the United States suspended dollar-gold convertibility in 1971.

During the Bretton Woods period, the United States had a dominant role in world economic and political affairs. The U.S. emerged from World War II not only almost undamaged physically, but Allied war requirements had helped to build up its industrial capacity, so that it

now accounted for one-third of world industrial output. The United States had a major influence over the negotiations that established the international monetary system and financial institutions of Bretton Woods. The U.S. dollar became the numeraire of the exchange rate system and the major international reserve currency. The rest of the world now looked to the U.S. as a major source of capital for rebuilding, industrialization and development assistance.

Despite the climate of international cooperation, the Bretton Woods era is considered to be one of relatively low international capital mobility, in comparison to periods before and after it, especially for private portfolio capital. The period experienced the frequent use of capital controls by the United States and by a number of countries in Western Europe.

This is a study of private long-term portfolio capital investment by the United States in Western Europe during the Bretton Woods period, 1946 to 1971.

Financial capital flows would not necessarily be expected to occur between developed countries; however, the major recipients of U.S. foreign investment during the decades following World War II were wealthier, industrialized countries, especially Canada and Western Europe. The United States historically had enjoyed a close relationship with the countries of Western Europe, and after World War II Western Europe had special economic, political and military importance to the U.S.. Its developed, industrial economies were important markets for

U.S. manufacturers. Western Europe was also a political and geographical barrier against the Communist world. The U.S. government wished to contain the spread of Communism to the Soviet Union's existing sphere of influence in Eastern Europe, and poor economic conditions and political and social unrest in Western Europe risked leaving that region vulnerable to Communist influence.

During the Bretton Woods period, Western Europe was experiencing rates of growth and capital formation more typical of a developing region because of the need to rebuild following the destruction of World War II. Expected rates of return were lower in the United States at this time because its productive capacity had already been greatly expanded due to war requirements. Funds from the U.S. were especially desirable to the Europeans who needed a universally accepted currency, such as the U.S. dollar, for trade and to hold as foreign reserve assets. In addition, European capital markets were restrictive and underdeveloped, and the Europeans turned to New York where it was easier and less costly to raise funds.

Private portfolio capital flows from the United States to Western Europe were relatively small as a percentage of both U.S. net worth and European capital formation levels. Nevertheless, they were an important element in United States international economic relations during the Bretton Woods period, serving as the catalyst for government policy actions and consequent reactions from private investors that changed the role of the United States and the U.S. dollar in international finance.

In order to place U.S. portfolio investment in Europe in historical and economic context, following is a brief review of U.S. private long-term foreign investment from the beginning of the twentieth century until the 1970s, emphasizing investment in Western Europe during the Bretton Woods period. More complete discussion and supporting data are contained in Chapters II and III.

A. U.S. FOREIGN INVESTMENT: A SURVEY

Historical Overview. The history of United States private long-term foreign investment during the twentieth century reveals a number of distinct periods. (See Graph I.1.)¹ From the beginning of the century until World War I, the U.S. was primarily a recipient of foreign portfolio investment. Most long-term capital outflows from the U.S. were in the form of direct investment, with intermittent periods of net outflows of portfolio capital from the U.S.. During World War I, levels of outflow of capital from the United States increased sharply, eventually reaching the sustained heavy volumes of the 1920s. This was the first significant period of U.S. foreign portfolio investment, when New York replaced London as the major international financial center. This came to an end with the beginning of the Depression in 1929 and widespread defaults on international loans and bonds during the 1930s. There was a net capital inflow during most of the 1930s, as the United

¹ Graphs are found at the end of the section.

States became a destination for refugee capital. During World War II, there was little activity on the international capital markets. The end of the war and the establishment of the Bretton Woods system made little impact on private U.S. foreign investment at first. Most capital outflows from the U.S., particularly to Western Europe, were associated with inter-government aid for war reconstruction, including the Marshall Plan. Beginning in 1950, however, private portfolio capital flows resumed at significant levels, reaching a level comparable to the 1920s (in constant dollars) about 1958. Portfolio investment continued on an upward trend, reaching a high in 1964, then declined sharply in 1965 and 1966, while levels of foreign direct investment increased. After 1967, outflows of portfolio capital regained the level of the early 1960s, and, although never reaching their 1964 peak, increased steadily until the end of the Bretton Woods period in 1971. The 1970s saw almost explosive growth in foreign portfolio investment, out-pacing direct investment.

Investment in Western Europe. Focussing on private long-term foreign investment in Western Europe during the Bretton Woods period, one sees that capital outflows primarily took the form of direct investment rather than portfolio investment. (See Graph I.2.) While direct investment in Western Europe was very important and growing during this time, annual outflows of portfolio capital began to grow at a faster rate during the early 1960s; this was a significant component of the increase in total U.S. portfolio investment observed during these

years. Portfolio capital flows to Western Europe turned to net inflows beginning in 1965.

After the losses in international investments of the 1930s, it seemed that Americans were reluctant to undertake foreign portfolio investment, but, during the first decade after World War II, the reluctance of private American investors to invest in Europe was as likely to be due to its poor economic prospects at that stage. The United States government, however, wanted to promote economic growth in Europe in order to ensure the success of democratic governments friendly to the United States, and to counteract the influence of the Communist party in Europe. It was believed that ensuring the prosperity of our potential trading partners would help ensure the political and economic dominance of the United States. The government encouraged and supported private investment, and even tolerated European import tariffs and balance of payments surpluses in order to allow the European countries to build up foreign exchange reserves.

By the mid-1950s, Western Europe's industrial production capacity had increased, currencies were stabilized, and there were high rates of capital investment and growth across the continent. Private U.S. capital, both direct and portfolio investment, was drawn to Western Europe by expectations of future profit opportunities, at a time when rates of growth and capital formation were slower in the United States. The Europeans, on their part, found the U.S. capital markets to be more open than their own, and offering lower underwriting and borrowing costs. During the 1950s and 1960s, U.S. portfolio investment in Europe

was likely to take the form of common stocks, rather than the government bonds that had been the primary vehicle during the 1920s; bank loans also increased. It is possible that the experience of the interwar defaults influenced Americans' choice of foreign assets; but there was no sign that U.S. investors were generally risk-averse with respect to undertaking new investments in post-war Europe. Germany, the source of the most notorious defaults of the 1930s, had to impose a tax on interest payments to foreigners from 1964 to 1967 to keep them out of its domestic stock market.²

By 1960, there was international concern regarding the U.S. balance of payments deficit, and the gradual loss of the gold reserves needed to guarantee the convertibility of the dollar at its fixed rate. The U.S. government devoted a great deal of attention to the deficit problem, including consultations with international monetary institutions, and various borrowing arrangements with foreign central banks. Congressional hearings were held, and a Brookings Institution study was commissioned for the President's Council of Economic Advisers. Outflows of portfolio capital were viewed as the cause of the deficit; specifically blamed were exports of capital to the countries of Western

2 To view the investment experience of the Bretton Woods period from a contemporary perspective, consider that the stock markets of Mexico and the South American countries are now attracting U.S. investors barely a decade after the spectacular loan defaults of the 1980s. U.S. financial and direct investment capital are also drawn to the newly industrializing economies of Southeast Asia. At a time when U.S. growth is slow and domestic interest rates are low, the high rates of growth and investment in these countries, their increasingly sophisticated consumer markets, and relative political stability make their situation roughly analogous to post-war Europe.

Europe, where U.S. investment dollars were being used to build up foreign exchange reserves, and, with reduced demand for imports of U.S. manufactured goods, there was no compensating return flow of income as there was with other regions of the world. The Brookings report concluded that Western Europe was of "strategic importance" in reducing the U.S. deficit; that the surplus with Western Europe was the direct counterpart of the deficit.

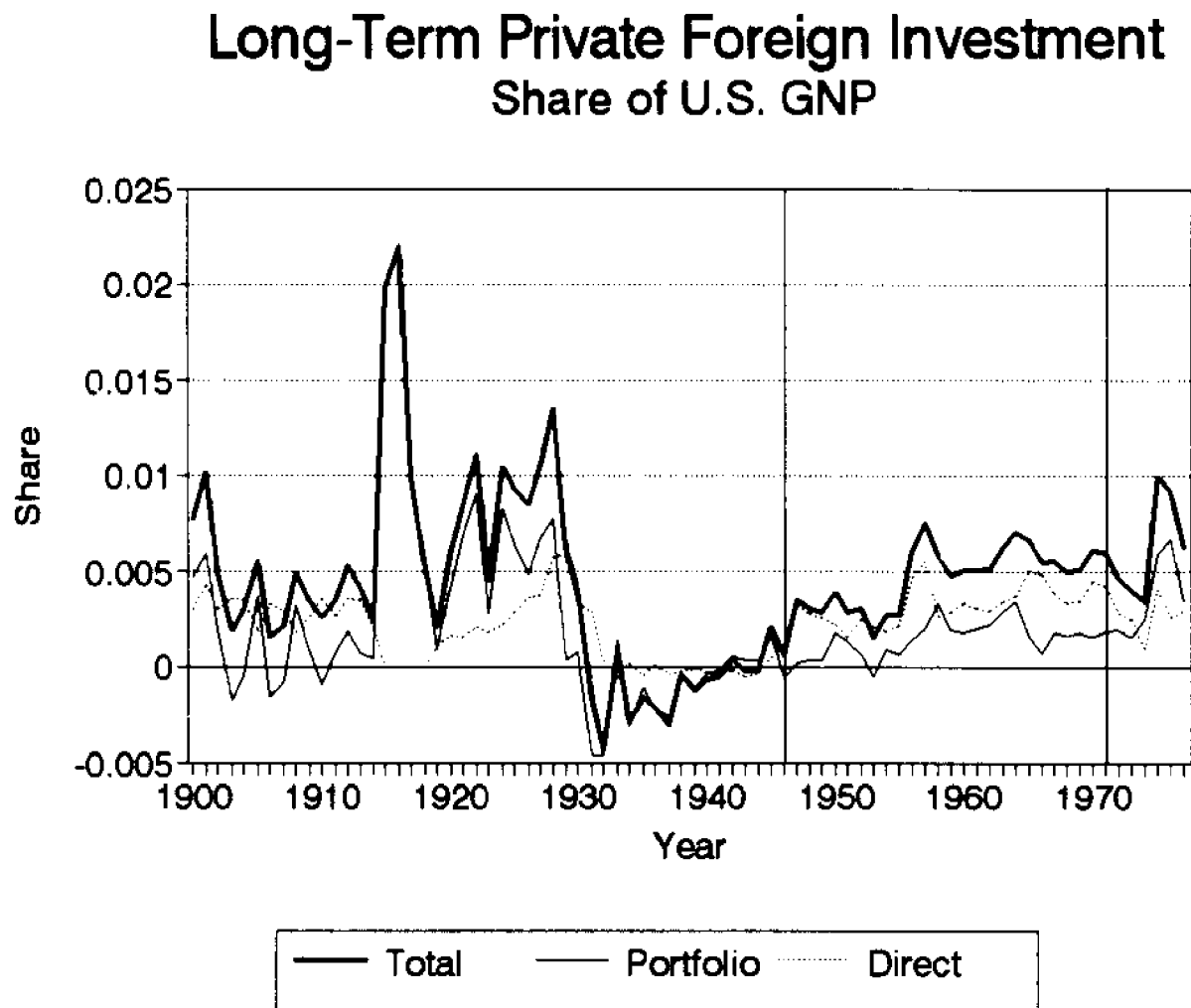
Controlling financial capital flows was easier in a political and practical sense than attempting to control other types of international transactions, especially trade, and was an accepted policy tool under the Bretton Woods system. Consequently, beginning in 1963, two capital control programs were imposed, one directed at portfolio investment, the other at direct investment and bank loans; both primarily targeted Western Europe and some other industrialized countries (for the most part exempting Canada and the developing world). The provisions of the control programs, through taxation, lending limits, and other quotas, were intended to stop the flow of financial capital to Western Europe. The U.S., therefore, went from being one of the most open capital markets in the world to being one of the most restrictive, at least as far as Western Europe and much of the industrialized world were concerned.

The capital control programs were effective for a number of years in curtailing financial capital flows from the U.S. to Western Europe. They could not, however, cut off the international capital market in

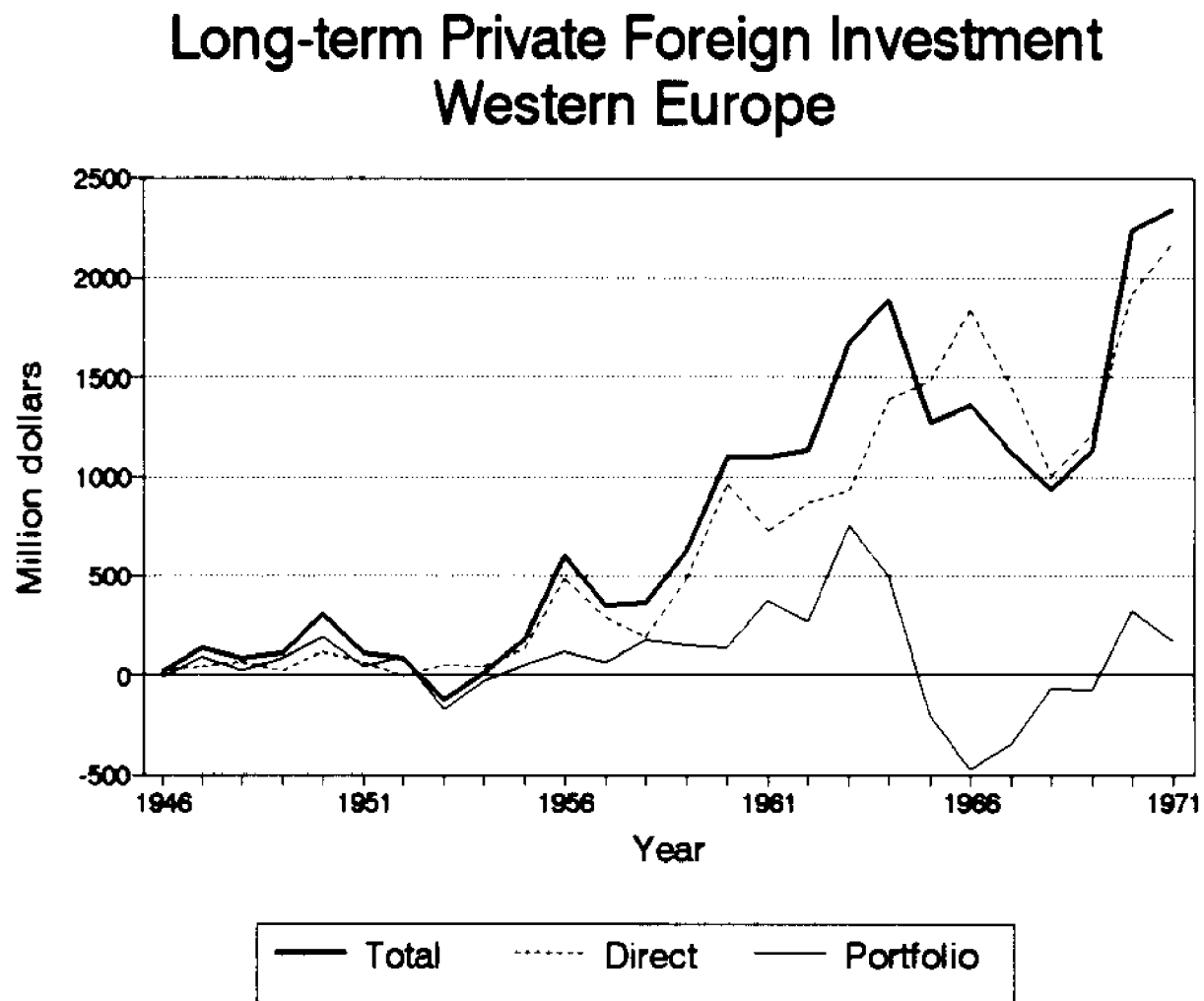
dollar assets. The U.S. dollar continued to be the most widely-accepted currency for international transactions. Dollar-denominated loans and securities were traded in the Euro-bond market, which was created when the U.S. market was closed to European borrowers in 1963, and grew dramatically during the time that U.S. controls were in effect. The number of foreign branches of U.S. banks increased, in part, to provide financing for the overseas operations of U.S. multinational corporations. Foreign direct investment grew, particularly in Western Europe; direct investment was less severely restricted under the capital control programs, and allowed U.S. investors to continue to participate in the European expansion.

The United States suspended dollar-gold convertibility in 1971, and eventually exchange rates were allowed to float. U.S. capital controls were lifted in 1974, and foreign portfolio investment resumed, now augmented by the activity of the international dollar bond market. The breakdown of the Bretton Woods system was also the end of United States dominance of international finance.

GRAPH I.1
(Source: See Appendix Table A.1)



GRAPH I.2
(Source: See Table III.1B)



B. RESEARCH OBJECTIVE

This study will review the history of United States foreign investment during the Bretton Woods period; analyze the patterns of and motivations for portfolio investment in Western Europe, including the external economic and political forces which may have influenced it; and test several hypotheses to explain the determinants of portfolio capital flows between the United States and Western Europe.

The research will attempt to answer these questions:

What were the important determinants of U.S. portfolio investment in Western Europe between 1946 and 1971? (What were the major United States supply forces and European demand forces?)

What was the impact, if any, of the 1930s defaults on the level, form or timing of portfolio investment?

How did the Bretton Woods system of adjustable peg exchange rates affect foreign investment?

What was the impact of the U.S. capital controls? Were they effective, and for how long? Did they operate as intended?

What was the impact of government policy and other political forces on investment: i.e., U.S. government spending in Europe, European political and economic policy, and the formation of the European Economic Community?

C. COMPARISON TO PREVIOUS RESEARCH

Much of the previous empirical research on foreign portfolio investment during the Bretton Woods years was conducted during or immediately after the period in question, included only part of the period (usually ten or twelve years), and covered investment in total, that is, to the rest of the world combined. The focus of the research often concerned the impact of investment on the balance of payments of the United States.

This study differs from most earlier ones in both scope and point of view. It covers a longer range of years from the Bretton Woods period, and has the advantage of historical perspective. This helps to reveal patterns in U.S. foreign investment during this period which may not have been apparent from close range; makes it possible to better identify the effects of the capital controls; and allows consideration of the environment created by the Bretton Woods monetary system, especially the exchange rate system, the central role of the U.S. dollar, and the effect of capital controls.

Studies of foreign investment that combined all regions receiving investment tended to have difficulty identifying a clear rate of return variable, since the pull forces of all countries and regions are combined; in addition, these studies are heavily influenced by investment in Canada, which was an important recipient of U.S. portfolio investment after World War II. Focussing on portfolio investment in

Western Europe alone has the drawback of using a smaller data set, but also allows the construction of a more precisely defined model.

The subject of study is restricted to explaining financial capital flows from the United States to Western Europe, that is, from the point of view of the U.S. investor; the study does not examine capital flows from Europe to the U.S., or analyze the effect on the U.S. balance of payments.

Like most of the other studies on this subject, a portfolio balance model was used to analyze investors' choices under conditions of relative return and risk. In this study, the more narrowly focussed subject together with an appropriately specified model, particularly with respect to rate of return, yielded results that showed that investors acted rationally and was able to prove or disprove some commonly held assumptions regarding U.S. portfolio investment during this period. The central results were consistent across a number of alternate versions of the model.

Finally, a detailed and internally consistent data set for portfolio capital flows to Western Europe from 1946 through 1971 was constructed. This involved piecing together the latest available revisions of reported capital flows which reported portfolio investment separately by type (e.g., dollar bonds, foreign currency bonds, bank loans, other securities), as well as attempting to understand the special characteristics and limitations of the available data sources. This insight was important in both quantitative and qualitative analyses of the data.

D. SCOPE OF THE STUDY

Forms of Investment

This study is concerned primarily with movements of private long-term foreign portfolio capital. Because the terms "portfolio investment", "long-term investment", and "private investment" are open to differing interpretations, it is necessary define the way in which they are used here.

Portfolio investment: There are four major forms of foreign portfolio investment: bonds, denominated in dollars or in foreign currency; other securities, usually stocks valued in foreign currency; bank loans and credits with maturity of one year or longer; and loans or other claims of institutions other than banks (referred to as non-bank claims), which may include long-term trade credit, or other long-term investment not included in the first three categories. The last category, non-bank claims, is relatively small and includes a number of very different types of investments--functioning as a kind of "all other" category. Consequently, while it will be included in total foreign portfolio investment, little can be said about the category itself. Since an investment is considered to be direct investment when U.S. ownership comprises at least ten percent, purchases of bonds sold by U.S.-owned (or U.S. majority-owned) overseas firms or subsidiaries, or the purchase of shares in such firms were considered to be direct

investment by the U.S. Commerce Department (in data published before 1975).

Direct investment, especially between the United States and Western Europe, was quite active during this time. The forces driving direct investment, however, are different from those that motivate portfolio investment. The decision to locate facilities in another country depends on variables such as technology, size and growth potential of markets, access to raw materials, and export possibilities. In addition, government regulation of direct investment does not operate through the same channels. Consequently, a model seeking to explain the determinants of direct investment would be substantially different from one constructed to explain portfolio investment. However, because of the importance of direct investment flows between the U.S. and Western Europe during the Bretton Woods period, discussion of direct investment, including its relationship to portfolio investment, is included throughout the study.

Long-term investment: A long-term investment is defined as an investment of one year maturity or longer. Short-term investment is concerned largely with trade finance and short-term currency flows. These are investments easily undertaken and liquidated to meet immediate needs or to react to short-term circumstances and are, consequently, not usually motivated by the same forces that drive long-term investments. Short-term capital flows also tend to be highly volatile, and their inclusion with long-term data can create a great deal of "noise." While the one-year cut-off point is sometimes an arbitrary distinction,

as in the case of securities that are traded in secondary markets or loans that may be renewed or rolled over, it does seem to serve to eliminate the more volatile short-term flows referred to above.

Private investment: Finally, this study will concentrate on private capital movements, treating government grants and loans as explanatory events. Government capital movements tend to follow a different agenda from that of private investments. During this period, there were large grants initially for war reconstruction (the Marshall Plan); later, much of government overseas funds were related to the political and military concerns of the Cold War and the war in Vietnam.

Regions Receiving Investment

Private long-term foreign portfolio investments were made by the United States (at some level) in almost every continent of the world during the Bretton Woods period. This study will focus on investment by the United States in Western Europe. Western Europe is defined as the European members of the Organization for Economic Cooperation and Development (OECD);³ a list of countries is included in the Appendix.

The majority of private foreign investment, both direct and portfolio, during this period went to high income, large market countries, those with relatively high standards of living, healthy economic growth, and political regimes sympathetic to the United States. The dominant recipients were Canada and Western Europe. However, a

3 Excluding Yugoslavia.

separate investigation of the relationship between the United States and Western Europe is more meaningful analytically than one which would combine investment in Western Europe with other areas, particularly Canada.

The largest single recipient of portfolio capital from the United States during this time was Canada. However, investment in Canada, while an important phenomenon, was in some ways an extension of investment within the United States itself.⁴ Canada was the United States' closest neighbor: its population had a similar ethnic background and history, its currency was linked to and easily convertible to the U.S. dollar. The Canadian government encouraged investment from the United States as a means of helping Canada to expand its economy;⁵ Canada had vast land and natural resources to exploit and the U.S. had financial capital. The U.S. government, in turn, frequently, gave concessions and exemptions to Canadian investments when investments in other parts of world were restricted. Therefore, while investment in Canada will be discussed as an important part of United States foreign investment, the major determinants of investment in Canada would be expected to be different from other regions, especially Western Europe.

4 Raymond Mikesell, "Postwar Growth of Private Portfolio Investment," in U.S. Private and Government Investment Abroad, in Raymond Mikesell, ed. (Eugene, Oregon: University of Oregon Books, 1962), 233.

5 Mira Wilkins, The Maturing of the Multinational Enterprise: American Business Abroad from 1914 to 1970 (Cambridge, Mass.: Harvard University Press, 1974), 347.

The developing world, primarily Latin America, Asia and Africa, received relatively little capital investment from the United States or other industrialized countries until relatively late in the Bretton Woods period.

E. SUMMARY OF FINDINGS

The major conclusions of the research may be briefly summarized as follows:

- Portfolio investment by the U.S. in Western Europe was driven primarily by expectations for economic growth in the region, signalled by the high rate of capital formation. Assets were probably acquired for future capital gains or international diversification.

In Europe, the shortage of internally mobile funds, due to restricted or underdeveloped domestic capital markets, created a strong demand for outside capital. European borrowers were attracted by the relative ease and lower cost of borrowing and underwriting in the U.S. equity and loan markets.

- The other principal determinant of portfolio investment in Western Europe was the negative impact of the capital control programs imposed by the United States during the 1960s, specifically targeting financial capital flows to Western Europe. During the 1960s, the United States was clearly in imbalance with the rest of the world in terms of economic performance and balance of payments. However, because the United States believed that it could not easily devalue the dollar

without fundamentally altering the world monetary system, capital controls were substituted for a devaluation of the dollar on capital transactions.

- The experience of the bond defaults of the 1930s most likely had the greatest impact on the form of portfolio investment in Europe During the Bretton Woods period, where most U.S. investment was now in prime corporate stock rather than government bonds. Regulatory and institutional changes that occurred in U.S. capital markets in reaction to the interwar defaults may also have restricted European participation.

II. HISTORICAL BACKGROUND:
INTERNATIONAL CAPITAL FLOWS, 1879 - 1939

The history of international economic relations from the late nineteenth century until the beginning of World War II influenced the attitudes of policy-makers toward international economic cooperation at the time of the Bretton Woods conference. The monetary system and institutions created at Bretton Woods reflected the perceived advantages and drawbacks of earlier regimes.

The sixty years prior to the drafting of the Bretton Woods agreements may be divided into three periods based on the international monetary regime in effect at the time and the predominant pattern of international capital movements. The first period is the era usually referred to as the classical gold standard, which lasted from the late 1870s until the outbreak of World War I in 1914. The years between the two world wars are divided into two different periods from the point of view of international economic relations: from 1919 until 1930 (or roughly the decade of the 1920s); and from 1931 until 1939, years of economic depression in the United States and much of the industrialized world.

The historical experience of each of these three periods will be briefly reviewed, emphasizing economic relations between the United

States and Europe, and those aspects of the international monetary and financial systems that are most relevant to events during the Bretton Woods era.

GOLD STANDARD: 1879 - 1914

The late nineteenth and early twentieth centuries saw the international movement of people and capital on a large scale, along with the expansion of trade. There was great demand for internationally mobile capital due to population growth, urbanization and industrialization.¹ Much of the supply of capital originated in Western Europe, especially Great Britain.

The international monetary system based on a common asset, gold, facilitated the free flow of trade and capital that characterized this period. Countries agreed to convert their currencies into gold at a fixed rate, and governments were committed to maintain that rate over the long run. Because of this assurance of long-run exchange rate stability, short-term capital flows could be used to correct temporary international payments imbalances by adjusting the interest rate.² Long-term differences in national rates of productivity growth which threatened the exchange rate were corrected through adjustments in price

1 James Foreman-Peck, A History of the World Economy: International Economic Relations Since 1950 (Totowa, N.J.: Barnes & Noble Books, 1983), Ch. 6.

2 Ronald McKinnon, "The Rules of the Game: International Money in Historical Perspective," Journal of Economic Literature 31 (March 1993): 3-11.

and output levels. The world gold market determined common international prices. These conditions contributed to the degree of international alignment of prices and interest rates,³ and to the relatively low rate of inflation which prevailed during the classical gold standard period, compared with later parts of the twentieth century.⁴

The stability afforded by the fixed exchange rate system encouraged foreign investment by increasing the predictability of the returns on investment and transaction costs, and the ability to repatriate earnings.⁵

A key element of the system's stability was the position of Great Britain as the center of international finance. The British pound sterling was strong enough that many countries actually held sterling in lieu of gold, and the Bank of England needed to hold a relatively low level of reserves against its outstanding liabilities.⁶ Britain was well motivated to uphold its responsibilities in maintaining the international gold standard since its national economic well-being depended in large part on foreign trade and investment. Within Britain itself, income and productivity growth rates were slower than in the

3 Ibid., 11.

4 Foreman-Peck, Ch. 6; and Allan Meltzer and Saranna Robinson, "Stability Under the Gold Standard in Practice," in Money, History and International Finance, ed. Michael Bordo (Chicago: University of Chicago Press (NBER), 1989), 164-165.

5 Foreman-Peck, Ch. 6.

6 Leland B. Yeager, International Monetary Relations: Theory, History and Policy, 2d ed. (New York: Harper & Row, 1976), 299-302.

growing overseas regions (especially the United States, Argentina and Australia) which were the recipients of its investment.⁷ The British at this time engaged in high levels of international lending, and foreign assets became a large part of United Kingdom wealth. Allowing free trade into Britain at the same time facilitated the transfer of payments to capital-receiving countries to provide foreign exchange for debt service and to pay earnings on investments; this also served to minimize gold flows.⁸

Foreign investment generally took the form of lending for development purposes to growing economies, often with newly opened territories, and was accompanied by labor immigration. The high productivity of investment, together with multilateral trade, ensured a continuing flow of investment income into Britain.

The United States, although not an international investor on the scale of Great Britain, did have a short period of significant foreign investment activity around the turn of the century. (Table II.1)⁹ There were relatively high levels of capital outflows from 1898 through 1901, and the U.S. continued to be a net capital exporter through 1905. Investment took the form of both direct and portfolio investments.¹⁰

7 Michael Edelstein, Overseas Investment in the Age of High Imperialism (New York: Columbia University Press, 1982), Ch. 13.

8 Albert Fishlow, "Lessons from the past: Capital markets during the 19th century and the interwar period," in The Politics of International Debt, ed. Miles Kahler (Ithaca: Cornell University Press, 1986), 46-53.

9 Tables are found at the end of the chapter.

10 Prior to 1900, only data on total net capital outflows are available, incorporating both direct and portfolio investments, as well as foreign capital inflows. For the years 1898 through 1900, it seems

A large part of the outflows of portfolio capital during these years probably consisted of repatriation of investments held by foreigners in the United States, motivated by an increase in U.S. stock prices after 1896, and a desire on the part of British financial institutions to increase liquidity when gold supplies were threatened during the Boer War. There were also a number of large loans floated in New York by the British government to finance the war, and these were likely offered at relatively high interest rates.¹¹

The bulk of foreign direct investments were made in market-oriented facilities in other developed countries with a large potential demand for industrial products. Other investments were made in nearby sources of raw materials, especially minerals and petroleum. Overseas investment was facilitated by the growth of a large-scale capital market in the United States, as well as the wave of mergers which created large businesses eager to expand abroad as well as at home.¹² Investments were made in financial firms in London and continental Europe for the

likely that both direct and portfolio investments were involved, although their relative shares are unknown. (Mira Wilkins--see n. 12--and Friedman and Schwartz--see n. 11--emphasize direct and portfolio investments, respectively, in their discussions.) From 1901 through 1914, the level of direct investment outflows was larger than portfolio investment on average.

11 Milton Friedman and Anna J. Schwartz, A Monetary History of the United States, 1867-1960 (Princeton, N.J.: Princeton University Press (NBER), 1963), 143-148.

12 Mira Wilkins, The Emergence of Multinational Enterprise: American Business Abroad from the Colonial Era to 1914 (Cambridge, Mass.: Harvard University Press, 1970), Ch. IV.

purpose of marketing American bonds. Foreign banking by American banks was limited because, prior to the Federal Reserve Act of 1913, national banks were prohibited from foreign banking.

The international gold standard along with the broadly-functioning markets in goods and capital essentially ended in 1914 with World War I. The international financial system broke down when convertibility of currencies into gold was generally suspended, and restrictions were imposed on trade, immigration and capital flows.

INTERWAR PERIOD: 1919 - 1930

The destruction and dislocation caused by World War I left Europe's economy in disarray. There was a decline in the overall volume of trade, with protective tariffs maintained by the United States and the Western European countries.¹³ Exchange rates generally floated between 1921 and 1925. Great Britain no longer held a leadership position in international finance, concentrating instead on trade and investment within the Commonwealth. British foreign portfolio investment was mostly confined to the government-issued securities of other Empire countries.¹⁴

During the early 1920s, there was a shift of leadership in international finance to the United States, accompanied by other changes

13 Fishlow, 79-81.

14 Ibid., 72.

in the character of international capital markets. The U.S. was now the principal source of international capital flows, becoming a net creditor on the long-term capital account. (Table II.2)

In the immediate postwar years, U.S. lending was confined to governments that were neutral during the war, and Canada--countries which by and large did not sustain war damage or economic disruption. Others were able to borrow only at relatively high cost.¹⁵ War debts were ultimately U.S. credits also, since much of U.S. lending at this time was based on debtor countries' own expectations of loan repayments or German war reparations.¹⁶ Since the U.S. government was opposed to canceling European debts which were secured by reparations payments, when payments fell short the U.S. made settlements with most countries regarding interest charges and length of payment period.¹⁷

The resumption of American private foreign investment, both direct and portfolio, during the early 1920s, was encouraged by a number of factors which signaled the appearance of increased economic stabilization in Europe, including the end to hyperinflation in the Central European countries, recovery in Germany, and an infusion of outside funds through League of Nations loans.¹⁸

15 Barry Eichengreen, "The U.S. Capital Market and Foreign Lending, 1920-1955," in Developing Country Debt and Economic Performance, Vol. I, ed. Jeffrey Sachs (Chicago: University of Chicago Press (NBER), 1989), 117.

16 Fishlow, 71.

17 Charles Kindleberger, A Financial History of Western Europe, 2d ed. (New York: Oxford University Press, 1993), 298-299.

18 Eichengreen, "The U.S. Capital Market," 117-118.

Portfolio investment, in particular, assumed significant proportions within the history of U.S. foreign economic relations. A key characteristic of U.S. foreign portfolio investment at this time was its political association. Foreign governments accounted for a high percentage of overseas investment, including loans for war reconstruction and other government finance, and public agency bonds (utilities, etc.). The Dawes Plan of 1924, which sponsored a loan to provide Germany with foreign exchange to pay part of its reparations to Great Britain and France, was an important catalyst for renewing interest in foreign investment among private U.S. investors.¹⁹ The U.S. tranche was so successful that it was over-subscribed. In addition, the increase in German interest rates, as the German government raised funds in the domestic capital market to pay reparations, caused private industrial firms and local government borrowers in Germany to seek loans in foreign markets, especially the United States. This was soon followed by U.S. loans to other European borrowers, and to Latin America and Australia.²⁰

Another critical feature of 1920s foreign lending was the role of the banks. Because the war had disrupted the ability of European banks to provide services such as export credits to international business, U.S. banks expanded overseas on a large scale, establishing a direct link between foreign borrowers and U.S. lenders. The banks established

¹⁹ Kindleberger, 294.

²⁰ Ibid., 294-295.

securities affiliates which took an active role in originating and retailing foreign bond issues.²¹ There was strong competitive pressure to enter foreign markets, and foreign bonds carried a premium over domestic returns until the late 1920s.²² (When the U.S. domestic stock market rose in 1928 and 1929, the flow of private funds going overseas fell.) There was little or no government regulation of the overseas activity of banks; the Federal Reserve was concerned primarily with domestic policy,²³ and foreign investment, even at its peak, was less than 1.5 percent of U.S. GNP.²⁴

There was a substantial increase in U.S. foreign direct investment during the 1920s, as well. Direct investment was driven both by a search for new markets abroad to enable U.S. businesses to expand further, and the need to develop sources of supply for industrial production (principally in the Western Hemisphere and other less developed regions). In Europe, where market-oriented investments predominated, the value of U.S. direct investments doubled during the 1920s. In Great Britain, the recipient of the greatest volume of funds, U.S. direct investment also provided a channel for exports to other Commonwealth countries which enjoyed a preferential relationship with Britain. Germany, another large recipient, had stabilized its currency

21 Eichengreen, "The U.S. Capital Market," 122.

22 Fishlow, 78.

23 Ibid., 80.

24 The U.S. experience with foreign portfolio investment during this period was to have a critical impact on regulatory reforms in the banking and securities industry enacted during the 1930s.

and curbed inflation, and the Dawes Plan loans had helped to restore investor confidence. U.S. business moved into Europe so aggressively that Europeans began to be concerned about the level of American presence; there was a rise in public sentiment regarding foreign ownership of domestic business, many European firms placed restrictions on foreign holdings, and there were proposals for legal impediments to foreign investment, such as taxes.²⁵

From about 1925 until the early 1930s, a semblance of the gold standard was restored. However, the parities established often did not properly reflect relative costs and prices among countries, and, unlike the classical gold standard period, exchange rates were actually heavily managed, and government domestic policy often prevented complete adjustment to international balance.²⁶

U.S. foreign portfolio investment was curtailed in 1929 with the rise in the domestic stock market (Table II.2), and this was to have an adverse effect on the ability of European creditors to repay existing debt. The Young Plan was initiated in 1930, succeeding the Dawes loan to further assist German payments and reparations. (In conjunction with the Plan, the Bank for International Settlements was established to transfer Germany's payments to its creditors; countries receiving reparations were to obtain deposits in the BIS rather than cash

25 Mira Wilkins, The Maturing of Multinational Enterprise: American Business Abroad from 1914 to 1970 (Cambridge, Mass.: Harvard University Press, 1974), 153-155.

26 Yeager, 332-334.

payment.) By the time the loan was floated, it was after the U.S. stock market crash and it went to discount immediately on issue.²⁷ The Plan was intended to last fifty-nine years; however, in June, 1931, financial conditions forced President Hoover to declare a one-year moratorium on payment of reparations and war debts. Due to worsening economic and political conditions in Germany, this effectively ended all reparation payments for good. There would be widespread default on foreign bonds and loans during the 1930s, and two-thirds of the foreign securities held by Americans eventually fell into default.

The effective collapse of the international capital market during the 1930s was provoked at least partly by the conditions created under United States leadership. Unlike the investment for development purposes undertaken by Great Britain during the gold standard period, the foreign loans of the 1920s did not necessarily create a basis for repayment. Loans tended to be more for consumption purposes, especially government finance, rather than for projects which would eventually yield income (e.g., railroads), but the very high real interest rates paid by capital-importing countries should have required an equally high return on the use of funds.²⁸ In addition, the restrictions on international trade during the 1920s, including protective measures on the part of the U.S., meant that insufficient export income was generated to repay debt; servicing outstanding debt, therefore, required

27 Kindleberger, 296.

28 Fishlow, 80.

a continuing flow of capital from the United States.²⁹ When the outflow was greatly reduced during the rise in the U.S. stock market at the end of the decade, the ability of foreign borrowers to service their loans was compromised.

The United States was not able or motivated to provide the leadership formerly provided by Great Britain at the center of the international financial system.³⁰ The U.S. was essentially a self-sufficient economy, and international trade and investment were not a significant part of national income. There was no close relationship between foreign borrowers and U.S. banks, since the banks functioned not as primary investors but only as intermediaries, through their securities affiliates, between individual bond holders and the borrowers. The lack of a strong commitment to foreign investment meant that there was no hope of a continuing flow of finance. Finally, there was little oversight of foreign investment activity on the part of U.S. government authorities, who were driven mainly by political interests in lending to allied countries and an over-riding belief in allowing market forces to regulate business activity.³¹

INTERWAR PERIOD: 1931 - 1939

After the onset of the Great Depression in the United States, and widespread depression throughout much of the rest of the world, countries withdrew into nationalistic, autarkic policies, and

²⁹ Ibid., 79.

international economic relations disintegrated. Governments were now mainly concerned with conserving monetary reserves, and increasing income and employment by protecting domestic industry and agriculture.³² World trade shrank due to declining national incomes and protective tariffs. In Great Britain, tariffs were imposed on imports, but with tariff preferences granted to other Commonwealth countries. In Germany, exchange controls and currency depreciations discouraged capital flows.³³

By 1932, many countries had left the gold standard. The 1930s were generally a period of "managed" floating exchange rates, with unilateral parity changes and competitive devaluations intended to gain a cost advantage over trading partners.³⁴

Even though the majority of foreign bonds and loans held by Americans had fallen into default, resumption of payments by foreign borrowers was not a priority of the New Deal economic recovery program in the United States. As described above, banks were intermediaries, not primary investors, so re-scheduling of foreign debt was not critical

30 Ibid., 78-81.

31 Eichengreen, "The U.S. Capital Market," 120-125.

32 Douglass C. North, "International Capital Movements in Historical Perspective," in U.S. Private and Government Investment Abroad, ed. Raymond Mikesell (Eugene, Oregon: University of Oregon Books, 1962), 16-17.

33 Kindleberger, 379-381.

34 Barry Eichengreen, Elusive Stability: Essays in the History of International Finance, 1919-1939 (New York: Cambridge University Press, 1990), 3.

to restoring health to the banking system. Because the individual investors were dispersed they were dependent on the banks to manage their foreign assets; this gave the banks the power, without direct risk, to impose settlement terms on the ultimate investors.

After 1931, the U.S. began repatriating capital holdings (Table II.2) and became a destination for refugee capital seeking to escape unsettled conditions in Europe; the U.S. was again in deficit on the capital account. The abuses in the market for foreign securities inspired new regulatory legislation. Of particular importance for future foreign portfolio investment, the Glass-Steagall Act separated commercial from investment banking, thus outlawing the securities affiliates which had so aggressively marketed foreign bonds to private U.S. investors.

In direct investment, the momentum of the 1920s initially continued even after the stock market crash. However, with a severe decline in U.S. domestic manufacturing output, the incentive for overseas expansion was curtailed. Also, the value of foreign investments declined as currencies were devalued. After the U.S. imposed the Smoot-Hawley tariff in 1930, European countries retaliated with tariffs on U.S. exports, and imposed exchange controls which prevented repatriation of profits. Government regulation of and control over business increased, inhibiting the operations of U.S. business interests abroad.³⁵ With worldwide depression, international diversification was no longer an

³⁵ Wilkins, The Maturing of Multinational Enterprise, 204.

advantage, and foreign expansion was curtailed. Many U.S. multinational firms stopped operations or sold off foreign subsidiaries. Only oil companies did not substantially reduce foreign direct investment during the 1930s because of a continuing need for Western Hemisphere sources of oil.

By the time the U.S. entered World War II, private foreign capital outflows had virtually ceased.

Table II.1

U.S. PRIVATE LONG-TERM CAPITAL FLOWS (*)
=====

Year	Direct Investment	Portfolio Investment
	(million dollars)	
1896		-40
1897		23
1898		279
1899		229
1900	56	87
1901	89	123
1902	65	40
1903	81	-40
1904	80	-11
1905	46	93
1906	92	-46
1907	89	-24
1908	48	87
1909	88	24
1910	124	-34
1911	95	28
1912	139	70
1913	138	27
1914	76	14
1915	0	790
1916	0	1064
1917	0	594
1918	0	396
1919	94	75

(*) Net inflow, i.e., incorporating repayments and redemptions, indicated by a minus sign (-)

Note: Prior to 1900, data represent total capital outflow, including government and short-term.

Source: Historical Statistics of the United States (1976), Series U19-20

Table II.2

U.S. PRIVATE LONG-TERM CAPITAL FLOWS (*)		
=====		
	Direct Investment	Portfolio Investment
=====		
Year	(million dollars)	
1920	154	400
1921	111	477
1922	153	669
1923	148	235
1924	182	703
1925	268	603
1926	351	470
1927	351	636
1928	558	752
1929	602	34
1930	294	70
1931	222	-350
1932	16	-267
1933	-32	80
1934	17	-202
1935	-34	-82
1936	12	-189
1937	-35	-241
1938	-16	-24
1939	-9	-104

(*) Net inflow, i.e., incorporating repayments and redemptions, indicated by a minus sign (-)

Source: Historical Statistics of the United States (1976), Series U19-20

III. U.S. FOREIGN INVESTMENT DURING THE BRETTON WOODS PERIOD

A. OVERVIEW

The following is a description of United States private long-term foreign investment during the Bretton Woods period, covering both capital flows and the economic events, in the United States and abroad, that influenced foreign investment. The discussion emphasizes portfolio investment in Western Europe, the focus of this study, but places it in the context of total U.S. foreign investment to all areas, including private and government, direct and portfolio.

During the years of the Bretton Woods period, United States foreign investment was undertaken to participate in the growing markets of the industrialized countries, principally in Western Europe, Canada and Japan; and to develop and ensure sources of raw materials for American industry, the primary motive for direct investment in Canada and the developing countries. While foreign investment was never a large proportion of U.S. economic activity--with annual gross capital flows less than 1% of gross domestic product--the value of foreign assets increased at a rate of about 9% per year during the Bretton Woods period, growing from 2% to 4% of total private net worth.¹

1 See Appendix Table A.7.

The majority of long-term private capital outflows from the United States during the Bretton Woods period were in the form of direct investment, which averaged over 70% of total foreign investment. (Table III.1A)² (This is in contrast to capital inflows to the U.S., which most often took the form of portfolio investment.) The level of direct investment flows generally increased steadily over this period. Manufacturing and petroleum were the most active sectors.

Levels of portfolio investment also increased overall, but followed a more irregular pattern than direct investment. Portfolio investment was more subject to non-market forces than was direct investment, especially government monetary policy and regulation. A key influence on foreign portfolio investment was the attempt by the U.S. government to control the flow of financial capital overseas because of concerns over the balance of payments deficit, the value of the dollar, and the declining level of domestic gold reserves.

From the mid-1950s until 1970, Western Europe and Canada were the most significant recipients of U.S. private capital, usually receiving at least half--and frequently much more--of all private capital outflows in a given year. Canada was the single largest recipient until 1960. Western Europe as a whole received the largest share during the first half of the 1960s; after 1965, the impact of U.S. capital controls became effective in restricting outflows to Western Europe. (Tables III.1B, III.1C)

² Tables and graphs are found at the end of each section.

International Investment Position of the United States. Despite the variability in the rate of capital flows year by year, the cumulative international investment position of the United States (total net accumulation of foreign assets) increased at a steady pace of about 9% annually from 1946 to 1971. (Table III.2A) The value of foreign investments also grew faster than total private net worth.

The fastest rate of growth was in the value of direct investment; consequently, the share accounted for by direct investment generally increased over the period, equaling nearly three-quarters of the total value of foreign assets in 1971. The growth rate in the value of portfolio investments (including securities, bank loans, and other non-bank claims) was comparatively slower. (Table III.2B)

Much of the increase in direct investment occurred in Western Europe, where, beginning at negligible levels after the war, the value of direct investment reached \$28 billion dollars in 1971. Western Europe's share of total U.S. direct investment doubled between the end of the Second World War and 1971, from 15% to 32%. (Tables III.2C, III.2D); this corresponded to a declining share for Canada. The most rapid increases in both share and volume of investment took place after 1960.

The U.S. portfolio investment position in Western Europe also increased between 1946 and 1971, but the growth pattern for both volume and share of investments was more episodic than was the case for direct investment. After reaching a high point in 1964 of nearly \$5.5 billion

dollars, the value of portfolio investments in Western Europe declined from 1965 to 1966, and again from 1969 to 1970. (Table III.2E). The dollar value of European assets rose again in 1971 to its 1964 level, but not its share of total foreign portfolio assets. Europe's share of total portfolio assets had risen quickly during the early 1960s reaching a high of 28% in 1963, but declined to only 19% in 1971. Canada's share of portfolio assets declined between 1946 and 1971 as well, but it still accounted for 45% of total U.S. foreign portfolio assets in 1971.

Annual Capital Flows. Three distinct sub-periods of capital flows may be identified, each marked by an increase in the general level of investment (Graph III.1):

1) 1946-1955: The decade immediately following World War II was dominated by government investment and government policy toward private investment. Following a virtual cessation in private investment during the Depression and the Second World War, there was a gradual renewal of interest in private foreign investment during the early 1950s, but absolute levels of capital flows were quite low.

2) 1956-1962: This was a period of dramatically increased levels of private capital outflows (compared with the immediate post-war decade), in nearly all categories of investment and across most industries. Western Europe received an increasing share of U.S. capital

beginning in 1959 (after the formation of the European Economic Community).

3) 1963-1971: The last years of the Bretton Woods period were characterized by continued attempts by the U.S. government to control capital outflows as a means of reversing the payments deficit and preserving the dollar-gold exchange rate. These controls were unsuccessful except in the short run. Investors used the fast-growing Euro-bond³ market for international trading in bonds and bank credits in order to evade government controls.

The following three sections will discuss in detail the patterns of capital flows and the relevant economic events of each of these periods.

3 The Euro-bond market was not the same as the Euro-dollar (or Euro-currency) market, which was primarily a short-term money market.

Table III.1A

U.S. PRIVATE LONG-TERM CAPITAL FLOWS			

ALL AREAS			

Total			
Long-term	Direct	Portfolio	
Investment	Investment	Investment	

(million dollars)			
Year			
1946	103	230	-127
1947	798	749	49
1948	790	721	69
1949	740	660	80
1950	1116	621	495
1951	945	508	437
1952	1066	852	214
1953	550	735	-185
1954	987	667	320
1955	1064	823	241
1956	2554	1951	603
1957	3301	2442	859
1958	2625	1181	1444
1959	2298	1372	926
1960	2530	1674	856
1961	2624	1599	1025
1962	2881	1654	1227
1963	3674	1976	1698
1964	4431	2328	2103
1965	4547	3468	1079
1966	3917	3661	256
1967	4429	3137	1292
1968	4297	3209	1088
1969	4873	3271	1602
1970	5783	4410	1373
1971	6689	4943	1746

Source: Balance of Payments, Statistical Supp. (1963): T1 (32-35)
Survey of Current Business, June issues
1968, 1970: T1 (33-37, 39); 1971, 1973, 1974: T2 (39-41, 44)

(Note: See Appendix B: Data Sources.)

Table III.1B

U.S. PRIVATE LONG-TERM CAPITAL FLOWS						
WESTERN EUROPE			CANADA			
Total	Direct	Portfolio	Total	Direct	Portfolio	
(million dollars)			(million dollars)			
Year						
1946	10	22	-12	41	47	-6
1947	135	43	92	-165	39	-204
1948	82	62	20	191	88	103
1949	110	22	88	113	100	13
1950	309	117	192	611	287	324
1951	105	64	41	467	235	232
1952	84	-6	90	460	430	30
1953	-132	48	-180	407	404	3
1954	7	45	-38	443	408	35
1955	177	130	47	277	353	-76
1956	602	488	114	992	601	391
1957	350	287	63	1044	678	366
1958	366	190	176	909	421	488
1959	631	484	147	835	417	418
1960	1095	962	133	624	451	173
1961	1103	724	379	561	302	259
1962	1129	866	263	647	314	333
1963	1674	924	750	913	365	548
1964	1888	1389	499	1171	298	873
1965	1270	1479	-209	1490	962	528
1966	1357	1835	-478	1714	1152	562
1967	1115	1458	-343	1318	408	910
1968	935	1001	-66	1416	625	791
1969	1134	1209	-75	1850	671	1179
1970	2236	1914	322	1394	908	486
1971	2338	2170	168	472	273	199

Source: Balance of Payments, Statistical Supp. (1963): T4 (32-35)
Survey of Current Business, June issues
1968, 1970: T8 (33-37, 39); 1971, 1972, 1974: T9 (39-41, 44)

Table III.1C

U.S. PRIVATE LONG-TERM CAPITAL FLOWS						
=====						
SHARE OF ALL AREAS						

	WESTERN EUROPE			CANADA		
	-----			-----		
Year	Total	Direct	Portfolio	Total	Direct	Portfolio
	=====			=====		
1946	0.10	0.10	0.09	0.40	0.20	0.05
1947	0.17	0.06	1.88	-0.21	0.05	-4.16
1948	0.10	0.09	0.29	0.24	0.12	1.49
1949	0.15	0.03	1.10	0.15	0.15	0.16
1950	0.28	0.19	0.39	0.55	0.46	0.65
1951	0.11	0.13	0.09	0.49	0.46	0.53
1952	0.08	-0.01	0.42	0.43	0.50	0.14
1953	-0.24	0.07	0.97	0.74	0.55	-0.02
1954	0.01	0.07	-0.12	0.45	0.61	0.11
1955	0.17	0.16	0.20	0.26	0.43	-0.32
1956	0.24	0.25	0.19	0.39	0.31	0.65
1957	0.11	0.12	0.07	0.32	0.28	0.43
1958	0.14	0.16	0.12	0.35	0.36	0.34
1959	0.27	0.35	0.16	0.36	0.30	0.45
1960	0.43	0.57	0.16	0.25	0.27	0.20
1961	0.42	0.45	0.37	0.21	0.19	0.25
1962	0.39	0.52	0.21	0.22	0.19	0.27
1963	0.46	0.47	0.44	0.25	0.18	0.32
1964	0.43	0.60	0.24	0.26	0.13	0.42
1965	0.28	0.43	-0.19	0.33	0.28	0.49
1966	0.35	0.50	-1.87	0.44	0.31	2.20
1967	0.25	0.46	-0.27	0.30	0.13	0.70
1968	0.22	0.31	-0.06	0.33	0.19	0.73
1969	0.23	0.37	-0.05	0.38	0.21	0.74
1970	0.39	0.43	0.23	0.24	0.21	0.35
1971	0.35	0.44	0.10	0.07	0.06	0.11

Source: Balance of Payments, Statistical Supp. (1963): T4 (32-35)
Survey of Current Business, June issues
1968, 1970: T8 (33-37, 39); 1971, 1972, 1974: T9 (39-41, 44)

Table III.2A

INTERNATIONAL INVESTMENT POSITION OF THE U.S.

Private Long-term Investment

Year	TOTAL	DIRECT	PORTFOLIO

	(million dollars)		
1946	12263	7227	5036
1947	13446	8366	5080
1948	14727	9625	5102
1949	15637	10700	4937
1950	17488	11788	5700
1951	19185	12979	6206
1952	20992	14721	6271
1953	22183	16253	5930
1954	24370	17631	6739
1955	26750	19395	7355
1956	30442	22505	7937
1957	33748	25394	8354
1958	37630	27409	10221
1959	41204	29827	11377
1960	44497	31865	12592
1961	49003	34664	14339
1962	52732	37226	15506
1963	58330	40686	17644
1964	64919	44343	20576
1965	71435	49474	21961
1966	75715	54711	21004
1967	81442	59267	22175
1968	89529	64983	24546
1969	96301	71016	25285
1970	104960	78178	26782
1971	115867	86198	29669

Source: Balance of Payments, Statistical Supp. (1963): T81
Survey of Current Business: 8/1963: T9; 8/1964: T12;
9/1965: T15; 9/1966: T14; 10/1968: T1; 10/1969, 1970: T2
10/1971, 1972: T3

Table III.2B

INTERNATIONAL INVESTMENT POSITION OF THE U.S.
=====

Annual Change in Investment Position

Year	TOTAL	DIRECT	PORTFOLIO
	=====		
	(billion dollars)		
1947	1.183	1.139	0.044
1948	1.281	1.259	0.022
1949	0.910	1.075	-0.165
1950	1.851	1.088	0.763
1951	1.697	1.191	0.506
1952	1.807	1.742	0.065
1953	1.191	1.532	-0.341
1954	2.187	1.378	0.809
1955	2.380	1.764	0.616
1956	3.692	3.110	0.582
1957	3.306	2.889	0.417
1958	3.882	2.015	1.867
1959	3.574	2.418	1.156
1960	3.293	2.038	1.215
1961	4.506	2.799	1.747
1962	3.729	2.562	1.167
1963	5.598	3.460	2.138
1964	6.589	3.657	2.932
1965	6.516	5.131	1.385
1966	4.280	5.237	-0.957
1967	5.727	4.556	1.171
1968	8.087	5.716	2.371
1969	6.772	6.033	0.739
1970	8.659	7.162	1.497
1971	10.907	8.020	2.887

Source: Balance of Payments, Statistical Supp. (1963): T81
Survey of Current Business: 8/1963: T9; 8/1964: T12;
9/1965: T15; 9/1966: T14; 10/1968: T1; 10/1969,1970: T2
10/1971,1972: T3

Table III.2C

INTERNATIONAL INVESTMENT POSITION OF THE U.S.						
----- Private Long-Term Investment -----						
Year	WESTERN EUROPE			CANADA		
	Total	Direct	Portfolio	Total	Direct	Portfolio
	----- (million dollars) -----			----- (million dollars) -----		
1946	2258	1041	1217	5448	2472	2976
1947	2448	1165	1283	5383	2628	2755
1948	2552	1307	1245	5765	2907	2858
1949	2612	1450	1162	6011	3146	2865
1950	3104	1733	1371	6993	3579	3414
1951	3437	1989	1448	7590	3969	3621
1952	3679	2153	1526	8173	4641	3532
1953	3737	2375	1362	8675	5349	3326
1954	4131	2643	1488	9685	6043	3642
1955	4623	3002	1621	10587	6761	3826
1956	5263	3561	1702	12048	7795	4253
1957	5944	4151	1793	12971	8769	4202
1958	6905	4573	2332	14343	9470	4873
1959	8229	5323	2906	15432	10310	5122
1960	9922	6645	3277	16560	11198	5362
1961	11398	7713	3685	17926	11614	6312
1962	12959	8930	4029	18612	12133	6479
1963	15343	10340	5003	20316	13044	7272
1964	17528	12109	5419	22688	13796	8892
1965	19187	13985	5202	24740	15223	9517
1966	20723	16209	4514	26565	16999	9566
1967	22569	17882	4687	28103	18069	10034
1968	24738	19407	5331	30581	19535	11046
1969	26829	21650	5179	32657	21127	11530
1970	29634	24516	5118	35221	22790	12431
1971	33295	27740	5555	37500	24106	13394

Source: Balance of Payments, Statistical Supp. (1963): T83,84
Survey of Current Business: 8/1963: T9; 8/1964: T12;
9/1965: T15; 9/1966: T14; 10/1968: T1; 10/1969,1970: T2
10/1971,1972: T3

Table III.2D

INTERNATIONAL INVESTMENT POSITION OF THE U.S.						
----- Private Long-Term Investment -----						
SHARE OF ALL AREAS						
Year	WESTERN EUROPE			CANADA		
	Total	Direct	Portfolio	Total	Direct	Portfolio
=====						
1946	0.18	0.14	0.24	0.44	0.34	0.59
1947	0.18	0.14	0.25	0.40	0.31	0.54
1948	0.17	0.14	0.24	0.39	0.30	0.56
1949	0.17	0.14	0.24	0.38	0.29	0.58
1950	0.18	0.15	0.24	0.40	0.30	0.60
1951	0.18	0.15	0.23	0.40	0.31	0.58
1952	0.18	0.15	0.24	0.39	0.32	0.56
1953	0.17	0.15	0.23	0.39	0.33	0.56
1954	0.17	0.15	0.22	0.40	0.34	0.54
1955	0.17	0.15	0.22	0.40	0.35	0.52
1956	0.17	0.16	0.21	0.40	0.35	0.54
1957	0.18	0.16	0.21	0.38	0.35	0.50
1958	0.18	0.17	0.23	0.38	0.35	0.48
1959	0.20	0.18	0.26	0.37	0.35	0.45
1960	0.22	0.21	0.26	0.37	0.35	0.43
1961	0.23	0.22	0.26	0.37	0.34	0.44
1962	0.25	0.24	0.26	0.35	0.33	0.42
1963	0.26	0.25	0.28	0.35	0.32	0.41
1964	0.27	0.27	0.26	0.35	0.31	0.43
1965	0.27	0.28	0.24	0.35	0.31	0.43
1966	0.27	0.30	0.21	0.35	0.31	0.46
1967	0.28	0.30	0.21	0.35	0.30	0.45
1968	0.28	0.30	0.22	0.34	0.30	0.45
1969	0.28	0.30	0.20	0.34	0.30	0.46
1970	0.28	0.31	0.19	0.34	0.29	0.46
1971	0.29	0.32	0.19	0.32	0.28	0.45

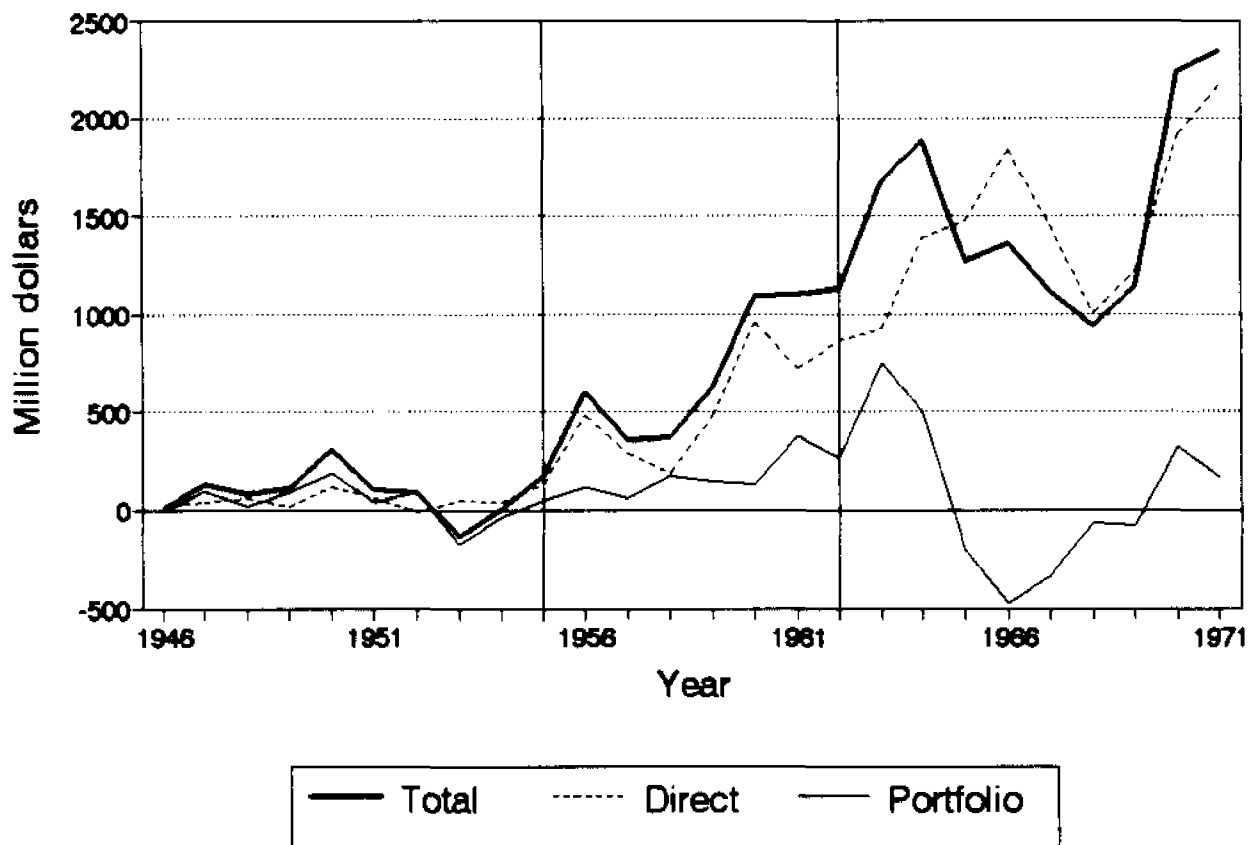
Source: Balance of Payments, Statistical Supp. (1963): T83,84
Survey of Current Business: 8/1963: T9; 8/1964: T12;
9/1965: T15; 9/1966: T14; 10/1968: T1; 10/1969,1970: T2
10/1971,1972: T3

Table III.2E

INTERNATIONAL INVESTMENT POSITION OF THE U.S.						
WESTERN EUROPE						
Year	Cumulative Position			Annual Change		
	Total	Direct	Portfolio	Total	Direct	Portfolio
	(million dollars)			(million dollars)		
1946	2258	1041	1217			
1947	2448	1165	1283	190	124	66
1948	2552	1307	1245	104	142	-38
1949	2612	1450	1162	60	143	-83
1950	3104	1733	1371	492	283	209
1951	3437	1989	1448	333	256	77
1952	3679	2153	1526	242	164	78
1953	3737	2375	1362	58	222	-164
1954	4131	2643	1488	394	268	126
1955	4623	3002	1621	492	359	133
1956	5263	3561	1702	640	559	81
1957	5944	4151	1793	681	590	91
1958	6905	4573	2332	961	422	539
1959	8229	5323	2906	1324	750	574
1960	9922	6645	3277	1693	1322	371
1961	11398	7713	3685	1476	1068	408
1962	12959	8930	4029	1561	1217	344
1963	15343	10340	5003	2384	1410	974
1964	17528	12109	5419	2185	1769	416
1965	19187	13985	5202	1659	1876	-217
1966	20723	16209	4514	1536	2224	-688
1967	22569	17882	4687	1846	1673	173
1968	24738	19407	5331	2169	1525	644
1969	26829	21650	5179	2091	2243	-152
1970	29634	24516	5118	2805	2866	-61
1971	33295	27740	5555	3661	3224	437

Source: Balance of Payments, Statistical Supp. (1963): T83
Survey of Current Business: 8/1963: T9; 8/1964: T12;
9/1965: T15; 9/1966: T14; 10/1968: T1; 10/1969, 1970: T2
10/1971, 1972: T3

Long-term Private Foreign Investment Western Europe



B. 1946 - 1955: POST-WORLD WAR II FOREIGN INVESTMENT

The United States emerged from World War II as the dominant economy in the world. It was not only virtually undamaged physically by the war, but U.S. and Allied war requirements had greatly strengthened its industrial capacity. The U.S. now produced one-third of world industrial output, and half of world manufacturing output. As the only universally acceptable, and freely convertible currency, the dollar functioned as the international reserve currency within the Bretton Woods monetary system.

The United States was also the largest source of investment capital for the rest of the world during these years. The United Nations estimated⁴ that the U.S. accounted for more than 70% of net private long-term capital flows between 1946 and 1952. Nevertheless, during the early postwar years, U.S. private foreign investment rates, though a significant increase over the war and Depression periods, were still quite low in absolute terms.

Immediately after the war, recovery prospects for Western Europe seemed poor. European real GNP per capita in 1947 was estimated to be 13% below its prewar level.⁵ There was great need for capital for rebuilding European industrial capacity, along with high demand for both

4 United Nations, The International Flow of Private Capital: 1946-1952 (New York: 1954), 2-5.

5 Leland B. Yeager, International Monetary Relations: Theory, History and Policy, 2d ed. (New York: Harper & Row, 1976), 383.

capital and consumer goods. At the same time, there was a lack of a multilateral payments mechanism in Europe because countries had insufficient gold reserves and most national currencies were not convertible. This meant that trade needed to be bilaterally balanced, contributing to industrial bottlenecks and shortages.⁶ European countries had severe balance of payments deficits which were being financed by loans from the United States and Canada. Government involvement in industrial planning inhibited U.S. firms from acquiring stakes in European business, either by restricting outside ownership directly or by raising fears of interference or nationalization.⁷ Since European currencies were not convertible, it was also difficult to repatriate profits.

There was an expectation that economic conditions in Europe would remain relatively weak for some time and that the region would continue to depend on the United States. It was assumed that the U.S. would remain superior in productivity and product quality, and maintain an export surplus with the other industrial countries; and that the dollar would continue to be needed throughout the world for use in international transactions.

U.S. manufacturing industries had greatly expanded capacity and needed to develop overseas markets for their goods; to accomplish this,

6 Ronald McKinnon, Money in International Exchange (New York: Oxford University Press, 1979), 250-251.

7 Mira Wilkins, The Maturing of the Multinational Enterprise: American Business Abroad from 1914 to 1970 (Cambridge, Mass.: Harvard University Press, 1974), 300-301.

potential trading partners would have to acquire the increased income and foreign exchange to purchase American products. U.S. foreign economic policy was guided by the belief that spreading world prosperity would benefit the United States by opening up markets for its products.

Promoting world prosperity was intended to serve a political purpose, as well. Concern over the emergence of Soviet influence in Eastern Europe, and the potential for Communism to exploit the social and political unrest which was arising from poor economic conditions in Western Europe, led the U.S. government to attempt to counter this threat with support for democratic, capitalist regimes through both government and private channels. Western Europe received large government grants under the Marshall Plan between 1948 and 1951 to aid in postwar reconstruction and to support U.S. political interests. The United States government was also committed to the defense of Western Europe through the establishment of the North Atlantic Treaty Organization (NATO), the mutual defense pact formed among the United States, Canada, and Western Europe.

The European Recovery Program (Marshall Plan) was begun in 1948 as a program of official aid and loans from the United States distributed and administered cooperatively by multilateral European institutions. (Table III.3) This official aid amounted to only about 4% of European GNP at that time,⁸ but the importance of the U.S. funds was not determined by their volume alone. The infusion of U.S. dollars allowed

⁸ McKinnon, 252.

European countries to invest more of their own output in increased industrial capacity; provided a source of foreign exchange (Marshall Plan aid amounted to 40% of "hard" foreign exchange in Europe at that time⁹) facilitating more efficient multilateral trade and allowing countries to conserve their own gold reserves; and relieved critical manufacturing bottlenecks by providing a source of parts and technology along with the means to purchase them. Perhaps more important than the material effects of the Plan, however, were the economic and political orientation which was imposed on European governments by the United States as conditions of Marshall aid. The U.S. encouraged the dominance of a free market system and restoration of financial stability.¹⁰ European countries were also encouraged to liberalize trade among themselves and expand exports to the U.S. and other dollar areas; at the same time, restrictions on dollar imports into Europe were tolerated in order to allow the build-up of dollar reserves with the aim of achieving currency convertibility, as required by the Bretton Woods agreement.¹¹ The influence of the United States in the economic policy-making of countries receiving Marshall Plan funds thus helped build the foundation for a favorable environment for future private investment.

Significant levels of direct U.S. government grants to Western Europe in fact continued beyond the end of the Marshall Plan until 1955.

9 Ibid.

10 J. Bradford DeLong and Barry Eichengreen, "The Marshall Plan: History's Most Successful Structural Adjustment Program," NBER Working Paper No. 3899 (Cambridge, Mass.: November 1991).

11 McKinnon, 254.

In conjunction with the Marshall Plan, the Economic Cooperation Act of 1948 provided incentives for U.S. companies and financial institutions to invest abroad, especially in Western Europe.¹² These included guarantees to insure U.S. investors against the risk of loss through inability to convert funds or through confiscation.¹³ By mid-1953, seventeen countries were covered by the program, including thirteen in Europe. There was additional help in the form of official grants and loans, and government-sponsored credit,¹⁴ and the Export-Import Bank which concentrated on Europe during this time.¹⁵ The Organization for European Economic Cooperation (OEEC) fostered economic cooperation within Europe.

The Korean War, beginning in 1950, changed the emphasis of U.S. foreign economic policy from assisting overseas economic recovery to national security.¹⁶ As a result, government funds went increasingly into military support, and private investment became more important in providing capital for industry.

Government foreign policy and capital exports thus shaped the U.S. foreign investment environment after World War II. Consequently, when private investment did resume after the war, it was under the influence

12 Wilkins, 288.

13 United Nations (1954), 55.

14 Wilkins, 288.

15 Barbara Stallings, Banker to the Third World: U.S. Portfolio Investment in Latin America, 1900-1986 (Berkeley: U. of California Press, 1987), 83.

16 Yeager, 385.

of a U.S. government agenda which encouraged private foreign investment as a means of serving both national economic and political ends.

Most direct investment activity immediately after the war was in the Western Hemisphere. Investments in Latin America predominated during the years immediately after the Second World War, but by 1950 Canada overtook the Latin American region, receiving about half of all private direct investment between 1950 and 1955. Canada offered abundant natural resources; it had experienced no war damage; the U.S. and Canada had close historical ties; and Canada offered a familiar environment to U.S. investors, with an existing industrial base and developed infrastructure. Moreover, foreign direct investment was encouraged by the Canadian government.¹⁷ Petroleum companies provided the largest share of U.S. overseas capital during this period, with mining interests important as well.

Private direct investment in Western Europe, by contrast, was very low and sporadic throughout this decade. (See Table III.1B above.) Despite the encouragement of the U.S. government, private direct investment did not assume significant levels in Western Europe until the mid-1950s, when European growth and rebuilding began to show significant promise.

U.S. private portfolio investment to all areas was relatively low throughout this first postwar decade, with the only significant block of activity in Canadian securities. Widespread foreign bond defaults had

¹⁷ Wilkins, 346-347.

wiped out the holdings of foreign portfolio assets by the time of World War II. In addition, European capital markets were not hospitable to foreign investors, and most currencies were not directly convertible to dollars. The international movement of capital was also hindered by the reduction in world trade caused by the Depression, the war, and countries' balance of payments problems. In the past, trade had been a means of transferring income from investment when goods were sold on the international market. After World War II, currency controls and other payments problems restricted a good deal of trade to bilateral exchange, eliminating opportunities for multilateral transfers of goods and funds.

There were also a number of significant changes in the international capital market following World War II, compared with the way in which it operated during the 1920s.

An important distinction was that the primary forms of international investment differed from those of the interwar period. The major vehicle for foreign investment during the 1920s, government bonds, was no longer sold on a broad scale. The government bonds that were floated tended to be sold between countries with close economic and political ties: for example, Canadian bonds sold in the United States, or sterling area bonds sold in the United Kingdom. The post-war period also saw the greatly increased involvement of governments and international organizations in providing outside capital to governments. These inter-governmental loans and grants often eliminated the need for governments to float bonds on the international market. The most notable example of this was United States Marshall Plan aid to Europe;

European countries themselves sent funds to their former colonies and dependencies.¹⁸ The World Bank would eventually become the major source of aid to developing countries by either directly supplying or sponsoring loans.

After World War II, there was also a turn away from investment for public infrastructure (railroads, utilities, etc.) or other national development purposes. The operations of public utilities now tended to be controlled by governments, often heavily subsidized or price-controlled, and hence less profitable to the private investor. National governments also discouraged foreign ownership of domestic infrastructure.

Direct investment again superseded portfolio investment as the primary form of private investment. (The 1920s had been an exception in this regard.) The investor had a significant amount of control over the management of the business or property, and investment was normally undertaken in an industry in which a firm had experience. The investment could be expanded through the reinvestment of profits, thus reducing some of the hazards of exchange controls, risks of inflation, and other external elements. Private direct investment was most often in industry, rather than utilities or public infrastructure, especially the extractive industries, petroleum refineries and manufacturing, stimulated by the pattern of post-war economic growth. After the war, there was high world demand for petroleum and both capital and consumer

¹⁸ United Nations (1954), 3-5.

goods, and the newly industrializing countries were potential markets for large-scale production of modern manufactured goods.

Post-war industrial growth also stimulated portfolio investment. Prime examples were financial stakes acquired in the common stock of multinational petroleum, mining, and marketing companies, and the bonds of the European Coal and Steel Community.

In the U.S., the profile of the investor in foreign financial assets also changed after World War II. The individual saver, the typical purchaser of foreign bonds during the 1920s, now tended to channel his savings through institutions such as savings banks, insurance companies, or pension funds. These financial intermediaries were now the major suppliers of funds for the international bond market. Since they were constrained by fiduciary responsibilities, and various legal regulations on their investments, this served to restrain the foreign bond market. Individuals who did invest directly in foreign securities tended to purchase common stock, especially in European multinational companies.¹⁹

19 Paul Meek, "United States Investment in Foreign Securities," in U.S. Private and Government Investment Abroad, ed. Raymond Mikesell (Eugene, Oregon: University of Oregon Books, 1962), 243.

Table III.3

U.S. GOVERNMENT CAPITAL TRANSFERS: WESTERN EUROPE					
Year	Non-Military			Military	Share of Non-Mil. Gov't Tr. (*)
	Total	Grants	Loans		
	(million dollars)				
1946	2711	382	2329	0	0.48
1947	4409	672	3737	43	0.70
1948	4079	2866	1213	249	0.75
1949	4454	3951	503	170	0.78
1950	2955	2775	180	454	0.76
1951	2401	2317	84	1068	0.69
1952	1906	1453	453	2130	0.68
1953	1310	1138	172	3360	0.51
1954	1123	1018	105	2266	0.58
1955	881	807	74	1682	0.39
1956	582	491	91	1853	0.26
1957	685	317	368	1518	0.26
1958	553	317	236	1304	0.20
1959	471	311	160	1221	0.18
1960	473	241	232	913	0.16
1961	530	254	276	611	0.14
1962	503	216	287	626	0.12
1963	450	147	303	782	0.11
1964	549	80	469	550	0.13
1965	516	79	437	538	0.12
1966	607	42	565	352	0.14
1967	695	36	659	412	0.13
1968	643	38	605	364	0.12
1969	571	35	536	297	0.11
1970	410	29	381	232	0.08
1971	536	30	506	272	0.09

(*) Western European share of non-military government transfers

Source: Balance of Payments, Statistical Supp. (1963): T4 (28,38)
Survey of Current Business, June, 1974: T9 (30-34)

C. 1956 - 1962: INCREASED PORTFOLIO INVESTMENT IN EUROPE

From 1955 to 1956, the level of U.S. long-term private investment more than doubled, and between 1956 and 1962 the rate of foreign investment outflows grew faster than the United States economy. Worldwide, international investment grew faster than trade, and the United States was the major investor on the international market (a United Nations report refers to the "overwhelming importance" of U.S. capital exports during this time).²⁰ Part of this sudden surge was due to the Suez Crisis, when Middle Eastern oil sources were threatened and large investments were made by the petroleum industry in other regions.

In foreign direct investment, the petroleum industry was the most active sector during these years. (Table III.4A) During 1956 and 1957, when the Suez Crisis threatened oil resources, there was heavy investment in Western Hemisphere oil sources, especially Venezuela. There was a contraction in 1958, but the annual level of investment remained higher than it had been before the Suez Crisis, and the industry continued to invest actively in Europe and Canada. Manufacturing and other industrial firms also increased their investments at this time, in Europe, Canada and other areas.

The rate of increase in foreign portfolio investment was extremely rapid after 1956, when the average annual flows were double and triple those observed during the previous decade. (Table III.5) The level of

²⁰ United Nations, The International Flow of Private Capital: 1956-1958 (New York: 1959), 18.

capital flows increased at a fairly steady rate until the early 1960s, with the exception of an unusually large flow in 1958, mostly due to a World Bank bond issue. From 1958 until 1964, portfolio investment accounted for over one-third, and often closer to half, of all foreign investment, a much higher proportion than was typical for the United States.

New foreign portfolio investment took the form of bonds and other securities. (The level of bank claims was declining.) (Table III.5A) The bulk of funds went to Canada, with the rate of portfolio investment in Western Europe comparatively modest until about 1961. (See Table III.1B above.) In 1962 there was a sudden jump in the volume of new foreign security issues, at double the rate of the previous year. Canadian issues accounted for over 40% of this, and levels of new issues from Canada continued to increase until 1970. There were also increases in 1962 and 1963 for new issues of Western European (about 20% of total volume) (Table III.5B) and Japanese securities.

United States private investment in Europe appeared at significant levels during the mid-1950s. By this time, European countries had been successful in increasing their levels of production and trade, and in raising their standards of living. Europe devoted a greater proportion of its output to capital investment, and was achieving real growth trends higher than that of the United States. (Tables III.6A, III.6B; Graphs III.2, III.3) With the restoration of economic growth and political stability in Europe, private long-term capital flows from the

U.S. increased significantly. In 1957, the Treaty of Rome established the European Economic Community. For U.S. industry, the existence of a European customs union meant that location of an industrial establishment in one EEC country facilitated access to consumers in the whole community through exports. In addition, in 1958 most European currencies became convertible for current and capital transactions, making it easier to repatriate profits.

By the early 1960s, the United States was in recession, while fast growth in Europe kept interest rates higher there. (Table III.7, Graph III.4) Western Europe received an increasing share of U.S. capital, with corresponding declines in shares for Canada (although absolute levels remained high) and for Latin America. Government funds and investment incentives during this time were directed toward developing countries or where U.S. security interests were at stake, but most private investment went to comparatively wealthy, industrialized countries, with Europe and Canada together accounting for over half of foreign investment in most years.

Both the level and share of direct investment going to Europe increased during the late 1950s and early 1960s. (Table III.4B; also see Table III.1B above.) Between 1959 and 1960, the rate of direct investment in Western Europe doubled, and continued at high levels during the succeeding years; after 1960, Western Europe as a whole became the largest recipient of U.S. foreign direct investment. The bulk of funds were in the manufacturing sector, driven by the demand for

manufactured products by industry and consumers. Oil marketing and refining operations were established in Europe in order to supply the growing demand for oil as industry expanded during the post-war rebuilding process, and to satisfy government restrictions concerning the domestic refining of petroleum (motivated in part by the desire to conserve foreign exchange reserves).²¹

Within Europe, the United Kingdom received a dominant share of direct investment, followed by West Germany and other EEC countries. The U.K. and the U.S. had long had a close economic relationship, and the British government had a generally liberal attitude toward foreign investment at this time. Germany was extremely open to outside investment to aid in rebuilding after the war, and the government limited its oversight of foreign investors to preventing excessive concentration in certain key industries, such as oil. Operating within the EEC was an advantage since if restrictions on investment were imposed by any single country, U.S. manufacturers would still have access to that country's market from facilities in a second EEC country. When France restricted inward direct investment, for example, U.S. interests invested elsewhere in Europe, especially Germany; total investment in the EEC was not reduced.²²

21 Wilkins, 315.

22 Robert Gillespie, "The Policies of England, France and Germany as Recipients of Foreign Direct Investment," in International Mobility and Movement of Capital, ed. Fritz Machlup, et al. (New York: National Bureau of Economic Research, 1972).

While Europe required large amounts of capital to satisfy high levels of investment and growth, capital was not very mobile within Europe itself. European national capital markets were not integrated with each other. Participation was usually restricted, often discriminating in favor of the government so as to ensure its access to both the maximum volume of funds and the most favorable borrowing terms. Great Britain, which at the time had the most sophisticated capital market with a strong tradition of international finance, did not join the European Economic Community until much later, so its financial institutions were not well integrated with those of continental Europe.

Capital controls were frequently used in Europe, particularly by weaker currency countries, in order to conserve foreign exchange supplies or ensure that capital flows did not interfere with the impact of domestic monetary policy. Britain, France, Italy and Sweden required the use of a special currency for capital account transactions, a currency whose value was not supported by the government and thus entailed extra risk for the investor. France, in addition, required that residents could only buy foreign assets from other French residents, effectively freezing the stock of foreign assets held in France. In France and Italy, capital inflows had to be made through or approved by an authorized bank, and the supply of foreign exchange available for foreign capital transactions was controlled. Even in the strong currency countries, Germany and the Netherlands, restrictions were sometimes placed on inward capital flows in order to forestall speculation in their currencies prior to an expected revaluation.

European capital markets were also generally unable to handle large volume issues, and underwriting costs and interest rates were higher than those in the New York capital markets, so that Europeans found it easier and less costly to raise funds in the United States. Because of these restrictions on capital flows within Europe, Europeans turned to the U.S. capital markets for both import and export of capital. In fact, Europeans themselves were major purchasers of the bond issues floated by other Europeans in the U.S.

Corporate stocks were the primary vehicles for individual Americans investing in Western Europe, while investments in Canada and other countries during this period were mostly dollar bonds. Corporate stocks purchased and sold in a foreign currency carry a risk of a change in relative currency values, although, under the fixed rate regime of the Bretton Woods system, this was theoretically minimal. Nevertheless, the fact that non-dollar investments were favored only in Western Europe indicates a faith in the stability of the Western European economies relative to the rest of the world.

Operation of the Markets for European Securities²³

The market for European corporate stocks was primarily an over-the-counter market because most European companies were not willing or able to comply with requirements for listing on U.S. stock exchanges. About

23 Most of the information on the operation of the markets in foreign stocks and bonds is taken from Meek, "Investment in Foreign Securities" and United Nations (1959), both cited above.

fifty foreign stocks were traded on the New York or American Stock Exchanges during late the 1950s and early 1960s. (The requirements for information disclosure were made more lenient for foreign firms since most European countries did not have comparable requirements.) These listed stocks were weighted heavily toward firms from the United Kingdom and the Netherlands since the necessary balance sheet and other financial information was commonly published in these countries.

Most of the market in foreign securities was handled by fewer than ten U.S. brokerage firms who had become specialists in the mechanics of international trading and the more difficult research it required. A number of New York commercial banks facilitated ownership of foreign securities through American Depository Receipts (ADR). An ADR is a contract between a bank and the U.S. owner of a foreign security. Foreign shares are deposited with the bank which registers them in the owners name, and collects and transfers dividends, so that the investor is freed from the need to exchange currencies or deal in foreign markets. The bank receives a fee for its services from the security owner. Besides being an important convenience for the individual investor, ADR's facilitated arbitrage among foreign markets, keeping the prices of internationally traded securities reasonably close in all countries.

There were also investment trusts which specialized in foreign securities. These tended to concentrate on a few well-established firms, usually in petroleum or mining.

When Americans began to buy European stocks during the mid-1950s, there was greatest interest in resource-oriented industries, especially oil. This corresponded with an increased demand for oil as countries rebuilt and industrialization spread after World War II, and with the rise in commodity prices after the Korean War. The emphasis on petroleum and mining stocks paralleled direct investment, where, for similar reasons, the U.S. firms most aggressive in overseas expansion were also in these industries. Among the first European stocks purchased in significant volume by Americans were Royal Dutch Petroleum (which launched the market in European stocks when it became the first to be listed on the New York Stock Exchange in 1954), Shell Transport and Trading, British Petroleum, Compagnie Francaise des Petroles, and several Rhodesian copper companies. Later, there was more diversification into prime European industrial companies in the automobile, chemical, electrical, metalworking and rubber industries. Examples included: Philips Lamps, Unilever and KLM Royal Dutch Airlines in the Netherlands; Montecatini (chemicals) and Fiat in Italy; Michelin and Machines Bull in France; Farbenfabriken Bayer and Siemens-Halske in Germany; British Motor; and Nestle and Hoffman LaRoche in Switzerland.

However, even though investors extended their range of stocks, the largest share of trading volume was still concentrated in a few companies, primarily the major petroleum companies and largest manufacturers, especially in Germany and the Netherlands. A few stocks traded quite actively among Americans. For example, in 1958, Royal Dutch Petroleum was the fourth most active issue on the New York Stock

Exchange; and at one time, New York was the leading market for Royal Dutch Petroleum and Philips Lamps, determining the world price for both stocks.

The average stock prices in Europe out-paced those in the U.S. during the mid- to late-1950s. The petroleum and mining stocks preferred by Americans performed somewhat below the European average, but still probably did better than their U.S. counterparts.²⁴ In any case, they would have been attractive to U.S. investors seeking capital appreciation and diversification rather than immediate profits.

While individual investors in European assets tended to buy common stocks, institutions were the major purchasers of European bonds. Like the market in European stocks, sales of bonds did not begin until the mid-1950s, when relative economic stability was restored in Europe. Bonds held before the war, of course, had had a notoriously high default rate. At the end of 1945, two-thirds of all foreign government bonds held by Americans were in default; in Europe over eighty percent had fallen into default, a higher percentage than in Latin America, Asia and Africa. Most of the European countries could not avoid default in the face of the rise of Nazi Germany and the onset of World War II. However, by 1957, full or adjusted service was restored to all but about one-fifth of European government bonds; the ones not fully repaid were mostly in Germany and Italy, where payments were being made according to debt settlement agreements.

²⁴ Meek, "Investment in Foreign Securities," 268.

Confidence in European bonds was sufficiently restored so that from 1954 to 1960, European issues accounted for about half of all publicly offered foreign bond sales to Americans, in dollar volume. (Table III.8) The European Coal and Steel Community was a major borrower, along with governments, and a few private corporations, in seven European countries: Austria, Belgium, Denmark, France, Italy, the Netherlands and Norway. Successful post-war borrowers were countries or entities with good payment records on outstanding debt, and whose economies were perceived to have the ability to service future debt. Good prospects were countries with adequate gold or foreign exchange reserves, and which had demonstrated willingness to use fiscal and monetary policy to control inflation and maintain the value of their currencies. Even countries with full service on past debt could not borrow again until economic stability was restored.

Foreign bonds sold in the United States were usually sold on terms that provided a greater safety margin than domestic bonds of comparable quality. They were initially offered at a discount to the underwriting syndicates to compensate them for the greater expense and uncertainty associated with foreign bonds. However, the bankers' spreads were lower than those required for foreign bonds sold during the interwar period. For example, in 1958, gross compensation cost to foreign borrowers averaged 2.75% of proceeds, compared with 4.5% on long-term bonds issued by European governments between 1915 and 1929. In addition, gross compensation to underwriters of foreign issues during the mid-1950s was only about one point higher than for domestic bonds of comparable size.

Rates of return on European bonds were considered attractive, even accounting for the extra margin to cover political or other unforeseeable risk, and they frequently moved to a premium price on the secondary market.²⁵ No post-World War II European bonds defaulted.

Europeans also found it much easier to borrow in the New York market which was more accessible than the heavily controlled European markets. U.S. long-term interest rates were below those in other capital markets, and underwriting costs were lower, as well. New York could accommodate large volume issues, that were too large for many of the European markets. European investors were themselves also major purchasers of European bonds sold in the United States. Dollar bonds were attractive because they had a strong secondary market, and interest paid to foreigners was exempt from U.S. withholding tax.

In addition to public offerings, there began to be some increase in direct placement of foreign bonds with institutional buyers, which increased the range of borrowers unwilling or unable to meet the costs and S.E.C. disclosure requirements for public offerings.

The sharp increase in U.S. foreign investment at this time might also have been motivated by a belief that the dollar was over-valued at the prevailing fixed exchange rates. There was international concern over the United States' balance of payments deficit and the corresponding decline in its gold holdings. In 1961, the U.S.

²⁵ Ibid., 253.

government implemented Operation Twist which was intended to hold down long-term interest rates, and allow short-term rates to rise in an attempt to restrain short-term capital outflows. This had very limited success, if any; however, it marked the beginning of a succession of capital control programs intended to preserve the gold value of the dollar by reducing the volume of dollars going abroad.

Table III.4A

U.S. DIRECT INVESTMENT BY INDUSTRY					
=====					
ALL AREAS					

Total	Mining	Petrol.	Manuf.	Other	
=====					
(million dollars)					
Year					
1950	621	87	248	192	94
1951	508	101	95	202	110
1952	852	287	254	228	83
1953	735	257	412	-27	93
1954	667	106	286	148	127
1955	823	46	392	224	161
1956	1951	116	1173	390	273
1957	2442	199	1408	432	404
1958	1181	177	649	269	86
1959	1372	231	410	468	262
1960	1674	155	452	801	266
1961	1599	70	793	462	274
1962	1654	97	606	712	239
1963	1976	85	828	774	289
1964	2328	136	760	1034	398
1965	3468	138	977	1525	828
1966	3661	305	885	1752	718
1967	3137	330	1069	1234	504
1968	3209	440	1231	945	592
1969	3271	93	919	1160	1099
1970	4410	393	1460	1295	1262
1971	4943	510	1950	1556	927

Source: Balance of Payments, Statistical Supp. (1963): T50
Survey of Current Business, Oct. 1970: T9; Sept. 1973: T7

Table III.4B

U.S. DIRECT INVESTMENT BY INDUSTRY					
WESTERN EUROPE					
Year	Total	Mining	Petrol.	Manuf.	Other (*)
(million dollars)					
1950	121	2	73	32	14
1951	64	0	37	21	6
1952	-6	0	-24	11	6
1953	48	0	33	-1	16
1954	45	0	20	31	-6
1955	130	1	54	53	23
1956	488	2	343	123	20
1957	287	1	135	120	29
1958	190	1	67	92	30
1959	484	0	150	244	90
1960	962	0	273	607	82
1961	724	0	376	233	115
1962	868	3	229	453	183
1963	924	1	362	395	166
1964	1388	6	414	619	353
1965	1479	(*)	342	761	376
1966	1834		657	899	277
1967	1458		523	684	250
1968	1001		317	562	123
1969	1209		218	595	395
1970	1914		652	773	488
1971	2169		782	1147	242

(*) Beginning in 1965, "Other" includes Mining

Source: Balance of Payments, Statistical Supp. (1963); T50
Survey of Current Business, Oct. 1970: T9; Sept. 1973: T7

Table III.5A

U.S. PRIVATE LONG-TERM PORTFOLIO INVESTMENT: ALL AREAS							
Securities				Other LT claims			
Total	Total Secur.	New issues	Redemp- tions	Other Secur. (outst.)	Bank claims	Non-bank claims	
(million dollars)							
Year							
1946	-127	-92	85	-308	131	-35	n.a.
1947	49	-36	396	-295	-137	87	-2
1948	69	95	150	-62	7	-39	13
1949	80	-27	118	-103	-42	29	78
1950	495	275	254	-301	322	177	43
1951	437	353	491	-113	-25	14	70
1952	214	87	286	-66	-133	36	91
1953	-185	-91	270	-138	-223	-115	21
1954	320	206	309	-124	21	102	12
1955	241	-20	128	-190	42	226	35
1956	603	421	453	-174	142	166	16
1957	859	470	597	-179	52	349	40
1958	1444	1250	955	-85	380	152	42
1959	926	668	624	-95	139	181	77
1960	856	663	555	-201	309	153	40
1961	1025	762	523	-148	387	136	127
1962	1227	969	1076	-203	96	127	131
1963	1698	1105	1250	-195	50	755	-162
1964	2103	677	1063	-192	-194	941	485
1965	1079	759	1206	-222	-225	232	88
1966	256	481	1210	-406	-323	-337	112
1967	1292	1266	1619	-469	116	-255	281
1968	1088	1226	1712	-546	60	-358	220
1969	1602	1495	1668	-478	305	-317	424
1970	1373	942	1456	-434	-80	-155	586
1971	1746	966	1562	-480	-116	612	168

n.a.: Not available

Source: Balance of Payments, Statistical Supp. (1963): T1 (33-35; T67
Survey of Current Business, June issues:
 1968,1970: T1 (34-37,39); 1971,1973,1974: T2 (40,41,44), T6

Table III.5B

U.S. PRIVATE LONG-TERM PORTFOLIO INVESTMENT: WESTERN EUROPE							
Year	Securities				Other LT claims		
	Total Secur.	New issues	Redemp- tions	Other Secur. (outst.)	Bank claims (*)	Non-bank claims	
(million dollars)							
1946	-12	42	0	-3	45	-54	
1947	92	44	18	-3	29	48	
1948	20	48	0	-2	50	-28	
1949	88	-9	16	-3	-22	97	
1950	192	-11	0	-2	-9	203	
1951	41	-18	0	-3	-15	59	
1952	90	-20	0	-9	-11	110	
1953	-180	-69	0	-7	-62	-111	
1954	-38	54	0	-12	66	-92	
1955	47	61	29	-11	43	-14	
1956	114	17	0	-10	27	97	
1957	63	-44	25	-20	-49	107	
1958	176	147	121	-16	42	29	
1959	147	155	78	-9	86	-8	
1960	133	124	24	-25	125	0	9
1961	375	260	57	-30	233	127	-12
1962	264	178	195	-33	16	85	1
1963	750	246	271	-23	-2	489	15
1964	499	-152	35	-35	-152	589	62
1965	-209	-59	95	-35	-119	-120	-30
1966	-478	-171	15	-37	-149	-386	79
1967	-343	24	0	-72	96	-443	76
1968	-66	16	42	-59	33	-230	148
1969	-75	-144	14	-68	-90	-62	131
1970	322	58	..	..	..	5	259
1971	168	-44	..	..	..	236	-24

(*) 1946-1959: includes non-bank claims

.. Not specified separately

Source: Balance of Payments, Statistical Supp. (1963): T5a (33-35), T67
Survey of Current Business, June issues:
 1968, 1970: T8 (34-37, 39); 1971, 1972, 1974: T6, T9 (40, 41, 44)

Table III.6A

GROSS DOMESTIC PRODUCT						
Current value and index vs. previous year						
Year	UNITED STATES	Index	EUROPE OECD	Index	EEC Countries	Index
	(billion US dollars)					
1950	284.8		150.6		81.1	
1951	328.7	115	179.0	119	97.3	120
1952	345.7	105	198.2	111	109.7	113
1953	364.6	105	210.3	106	116.7	106
1954	364.5	100	223.7	106	124.6	107
1955	397.3	109	244.9	109	137.0	110
1956	418.5	105	268.9	110	150.3	110
1957	440.5	105	285.3	106	160.7	107
1958	446.6	101	296.1	104	168.4	105
1959	484.6	109	304.1	103	172.6	102
1960	502.9	104	334.1	110	193.4	112
1961	520.7	104	367.5	110	214.8	111
1962	560.5	108	401.8	109	237.3	110
1963	591.8	106	439.1	109	260.8	110
1964	632.3	107	485.3	111	288.6	111
1965	685.2	108	527.7	109	312.7	108
1966	750.3	110	569.7	108	335.8	107
1967	793.7	106	605.0	106	356.5	106
1968	866.7	109	633.9	105	385.7	108
1969	937.1	108	699.0	110	427.9	111
1970	985.4	105	784.9	112	486.5	114
1971	1068.5	108	890.4	113	553.0	114

Note: GDP figures are purchasers' values;
current prices, current exchange rates
See Appendix for countries included in OECD, EEC.

Source: OECD, National Accounts (Main Aggregates)
(revised SNA in use after 1960)

GRAPH III.2
(Source: Table III.6A)

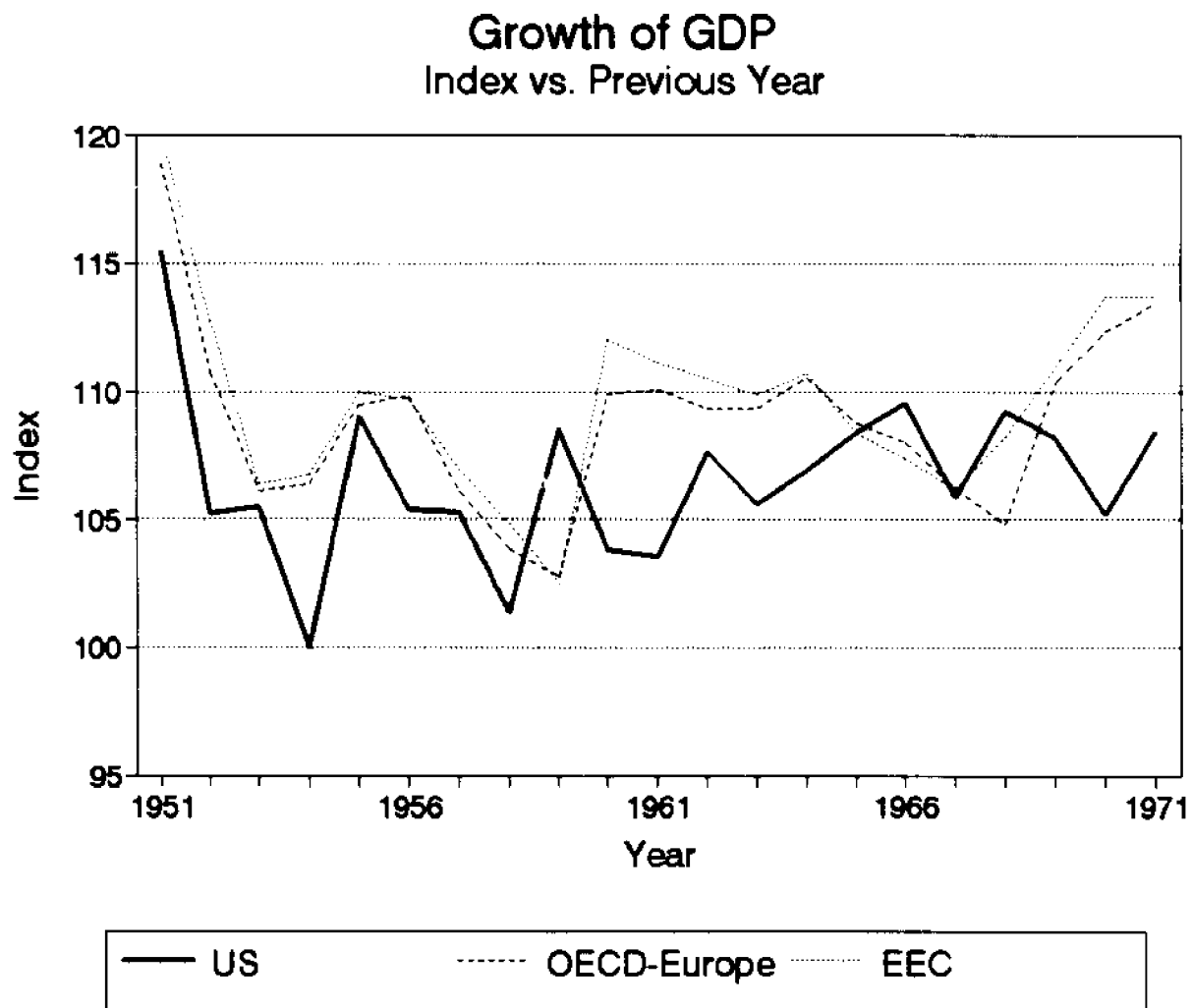


Table III.6B

GROSS FIXED CAPITAL FORMATION Share of GDP			
	UNITED STATES	EUROPE OECD	EEC Countries
Year			
1950	0.19	0.17	0.18
1951	0.18	0.17	0.18
1952	0.17	0.17	0.18
1953	0.18	0.18	0.19
1954	0.18	0.18	0.19
1955	0.19	0.19	0.21
1956	0.19	0.19	0.21
1957	0.19	0.20	0.21
1958	0.18	0.20	0.21
1959	0.18	0.20	0.21
1960	0.18	0.21	0.22
1961	0.17	0.22	0.23
1962	0.18	0.22	0.24
1963	0.18	0.22	0.24
1964	0.18	0.23	0.24
1965	0.19	0.23	0.24
1966	0.19	0.23	0.23
1967	0.18	0.22	0.23
1968	0.18	0.22	0.22
1969	0.18	0.22	0.23
1970	0.18	0.23	0.24
1971	0.18	0.23	0.24

Note: See Appendix for countries included in OECD, EEC.

Source: OECD, National Accounts (Main Aggregates)
(revised SNA in use after 1960)

GRAPH III.3
(Source: Table III.6B)

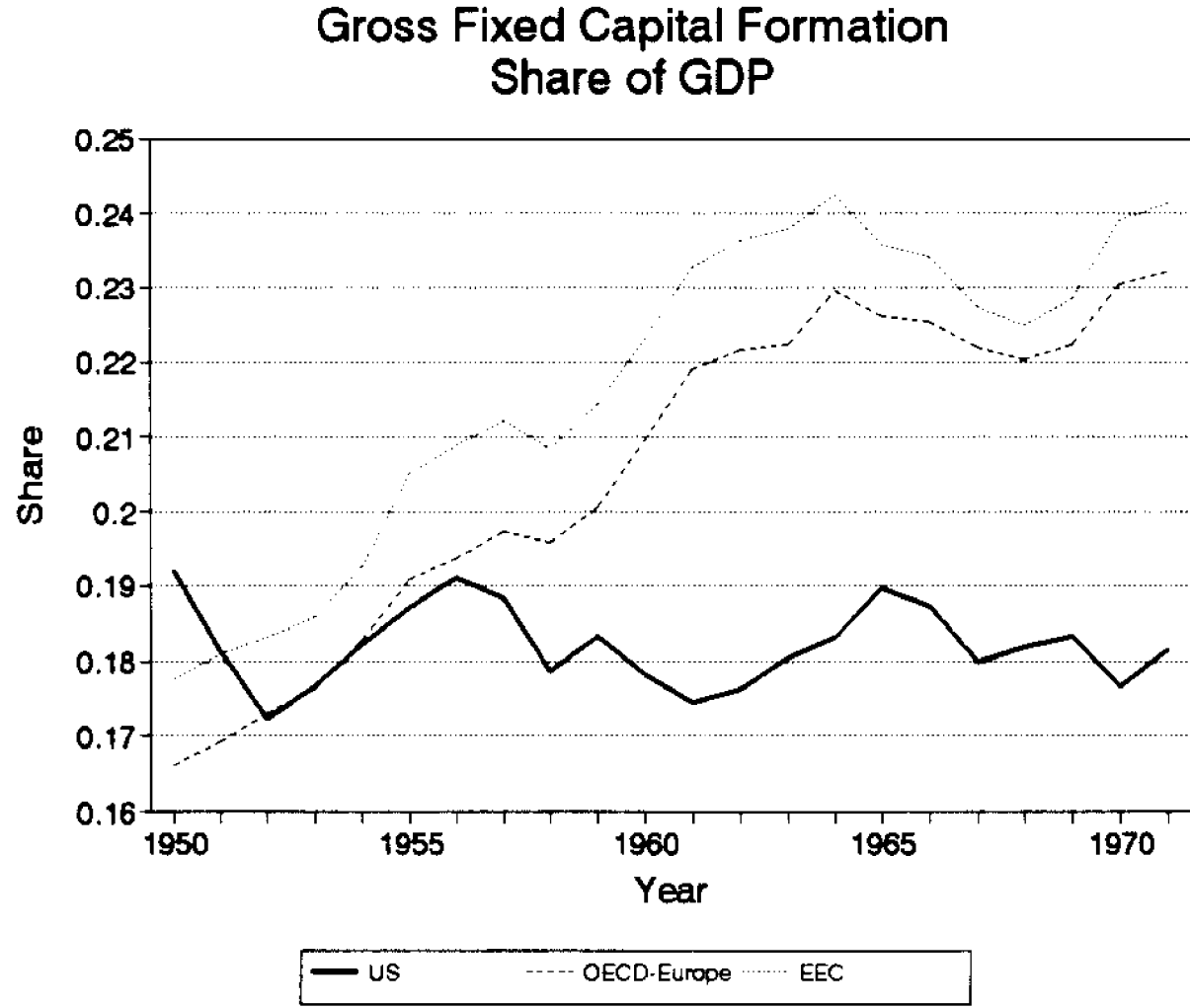


Table III.7

LONG-TERM INTEREST RATES				
=====				
Central Government LT Bond Yields (*)				

	United	United		
	States	Kingdom	Germany	France
=====				
Year				
1951	2.57	3.64	..	6.54
1952	2.68	4.26	..	5.60
1953	2.92	3.94	..	5.41
1954	2.52	3.55	..	5.38
1955	2.80	4.32	..	5.21
1956	3.06	5.16	6.90	5.38
1957	3.54	5.49	7.50	5.91
1958	3.48	5.48	6.80	5.71
1959	4.13	5.19	5.80	5.28
1960	4.06	5.77	6.40	5.15
1961	3.92	6.28	5.90	5.07
1962	4.00	5.90	5.90	5.02
1963	4.05	5.43	6.10	4.97
1964	4.19	5.98	6.20	5.08
1965	4.27	6.56	7.10	5.27
1966	4.77	6.94	8.10	5.40
1967	5.01	6.80	7.00	5.66
1968	5.46	7.55	6.50	5.86
1969	6.33	9.04	6.80	7.64
1970	6.86	9.22	8.30	8.06
1971	6.12	8.90	8.00	7.74

(*) Average yield to maturity in percent per annum
 .. Not published

Source: International Monetary Fund,
International Financial Statistics Yearbook 1980 (1950-1979),
 series 61

GRAPH III.4
(Source: Table III.7)

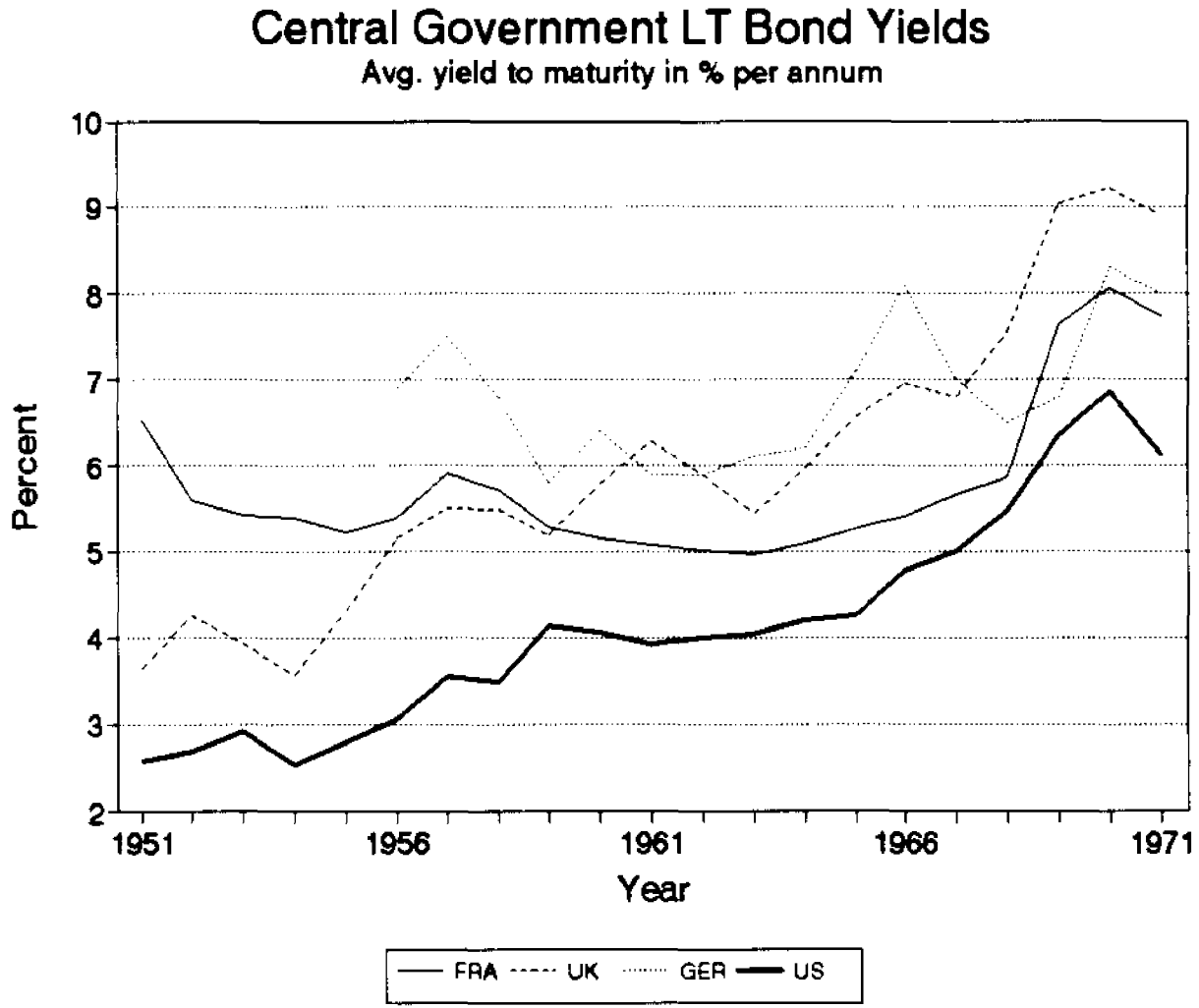


Table III.8

FOREIGN DOLLAR BONDS ISSUED IN THE UNITED STATES: 1954 - 1960			
Total	Publicly Offered	Direct Placement	
=====			
(million dollars)			
TOTAL EUROPE	507.3	402.0	105.3
Austria	25.0	25.0	--
Belgium	85.0	60.0	25.0
Denmark	20.0	20.0	--
France	96.0	50.0	46.0
Iceland	0.6	--	0.6
Italy	46.0	40.0	6.0
Netherlands	33.5	33.5	--
Norway	81.2	53.5	27.7
European Coal and Steel Community	120.0	120.0	--
TOTAL	1112.4	762.8	349.6
Europe Share of Total	0.46	0.53	0.30

Source: Paul Meek, "United States Investment in Foreign Securities," in Raymond Mikesell, ed., U.S. Private and Government Investment Abroad (Eugene: Ore.: U. of Oregon Press, 1962), Tables X-5, X-6

D. 1963 - 1971: CAPITAL CONTROLS AND THE EURO-MARKETS

During the early 1960s, there was international concern regarding the U.S. balance of payments deficit, and the gradual loss of the gold reserves needed to guarantee the convertibility of the dollar at its fixed value. (Table III.9) The trade balance was still in surplus, but had narrowed due to lower demand for U.S. imports from Western Europe and Japan, and an increase in spending abroad by the U.S. in connection with the build-up of the Vietnam War, and was therefore not sufficient to balance the increasing outflows on the capital account. The last period under consideration here was characterized by repeated attempts by the United States government to control capital outflows in an attempt to correct the balance of payments deficit and thus maintain the value of the dollar.

The United States government took various measures to contain the effect of the deficit, including consultations with international monetary institutions and borrowing arrangements with other central banks. In addition, a number of studies of the deficit problem and possible remedies were undertaken by various agencies of the government. These included a number of Congressional hearings with presentations of research and analyses by economists; studies issued by the Treasury Department; and a report commissioned from the Brookings Institution in 1963 by the President's Council of Economic Advisers. These studies generally pointed to outflows of financial capital as the cause of the deficit, and specifically blamed were exports of capital to Western

Europe. In Europe, U.S. investment dollars were being used to build up foreign exchange reserves, and, with reduced demand for U.S. exports of manufactured goods as Europe's own production expanded to meet internal needs, there was no compensating return flow of income. In other areas of the world, dollars exported as long-term capital outflows were returned in payment for U.S. exports or as income from investment.²⁶ The Brookings report concluded that Western Europe was of "strategic importance" in reducing the deficit--that the payments surplus enjoyed by Western Europe was, in fact, the direct counterpart of the U.S. deficit.²⁷

A differing interpretation of the U.S. balance of payments deficit, proposed by a number of economists contemporary with the period, was known as the financial intermediation theory. Generally, it held that the United States balance of payments deficit should not be viewed as a disequilibrium condition, but that the U.S. was functioning as a banker to the rest of the world, providing the credit and liquid assets (dollars) that enabled other countries to obtain needed goods and services. A much-quoted article in the Economist magazine by Depres, Kindleberger and Salant²⁸ is representative of this view. The authors

26 Walter Salant, et al., The United States Balance of Payments in 1968 (Washington, D.C.: Brookings Institution, 1963), 120.

27 Ibid., 23.

28 Emile Depres, Charles Kindleberger, and Walter Salant, "The Dollar and World Liquidity--A Minority View," The Economist, 5 February 1966. Reprinted in The International Monetary System: Problems and Proposals, ed. Officer and Willett (Englewood Cliffs, N.J.: Prentice-Hall, 1969).

maintained that the deficit was the result of the role of the U.S. as an international financial intermediary; European borrowers could not obtain funds on a long-term basis for capital investment, and, in any case, could not obtain all of the funds which they needed. Even when European currencies became convertible, and trade and capital flows were theoretically free, Europe still required foreign capital. National capital markets were still under-developed and restricted, while the demand for capital and credit remained high.

During the 1960s, a number of studies were made of the European capital markets, including an analysis commissioned by the European Economic Community, The Development of a European Capital Market, known as the Segre Report; the OECD Capital Markets Study; and a report prepared by the U.S. Department of the Treasury for the Congress. General observations included the restrictions placed on foreign participation in national markets and the lack of integration among European markets. U.S. Treasury Secretary Douglas Dillon complained that the lack of competition in European capital markets drove local borrowers to the United States.²⁹

Related to the financial intermediation theory, was the belief that the United States should encourage the liberalization of capital flows. This would promote economic growth in other parts of the world,

29 Charles Kindleberger, A Financial History of Western Europe, 2d ed. (New York: Oxford University Press, 1993), 438.

facilitate trade, and ultimately allow increased imports of U.S. goods.³⁰

Because of the threat to dollar-gold convertibility and the loss of gold reserves, however, the U.S. balance of payments deficit was viewed by most government policymakers as a serious problem. There were various proposals to reduce the flow of dollars abroad by limiting both private and public expenditures abroad, increasing exports, and encouraging firms with overseas operations to finance foreign investments abroad. Most importantly, however, addressing the concern that the long-term capital account was the major source of the balance of payments deficit, two major capital control programs were instituted. The Interest Equalization Tax (IET), first imposed in 1963, applied primarily to purchases of foreign bonds and stocks; the Voluntary Foreign Credit Restraint Program (VFCR), begun in 1965, affected primarily bank loans and direct investments.

The Interest Equalization Tax became law in July, 1963. Its purpose was to eliminate the interest rate advantage of the New York market to foreign, especially European, borrowers. An excise tax was imposed on foreign securities, both new and outstanding issues, purchased by United States citizens, resident corporations, and resident aliens. The tax took two forms: redeemable bonds were taxed on a sliding scale at a rate varying with the period from purchase to maturity; the scale was constructed so as to reduce the effective yield

30 Paul Meek, "The Revival of International Capital Markets," American Economic Review 50, no. 2 (May 1960): 283.

of a bond held to redemption by about one percent. Irredeemable bonds or those with a very long life (more than 28.5 years) and stocks were taxed at fifteen percent of the purchase price. At the beginning of 1967, the Act was amended to increase the tax on stocks to 22.5% and to increase the interest differential on dated bonds to 1.5%. The amended law provided that after August 29, 1967, the tax rate could be changed by executive order of the President to vary between zero and 22.5%. In fact, in August, 1967, the tax rate on stocks was lowered to 18.75%, with a parallel decrease for dated bonds.³¹ The rate was lowered somewhat again in 1969, but the IET remained in effect until 1974.

There were a number of major exceptions to the tax. First, all securities issued by the developing countries were exempt, as were Canadian and most Japanese issues, and those of international institutions. Securities purchased from other U.S. owners were also exempt. Funds for direct investment were also not subject to the IET.

The tax was clearly directed at European, British and sterling area borrowers; with the implementation of the Interest Equalization Tax, the New York market was effectively closed to Europeans. The various exemptions provided a number of obvious loopholes, however, such as channeling funds through exempt countries or falsely claiming current U.S. ownership of securities being sold. In order to prevent evasion of the tax, in 1966 it was applied to the purchase of securities in

31 John F. Chown and Robert Valentine, The International Bond Market in the 1960s: Its Development and Operation (New York: Frederick A. Praeger, 1968), 81.

Canadian corporations or trusts formed specifically to acquire other foreign securities; and, in 1967, new procedures were introduced to certify prior U.S. ownership of securities being traded.³² Despite these measures, many of the portfolio investments made in Latin America and other parts of the developing world during this time were assumed to be funds ultimately intended for European investments. (The number of exceptions and loopholes in the IET led some observers to the conclusion that the United States merely wished to project the appearance of doing something about the balance of payments deficit in the hopes of assuring foreign monetary authorities that it was indeed prepared to defend the dollar.³³)

The second capital control program, the Voluntary Foreign Credit Restraint Program was implemented in February, 1965. This was a broad program whose initial purpose was to attempt to improve the U.S. balance of payments through the "voluntary" cooperation of businesses, banks and private citizens. The original version of the program was kept on a relatively informal basis: about five hundred large corporations were asked to restrict or delay direct investment in the developed, industrialized countries, and to repatriate earnings and finance investments abroad wherever possible. The major countries or areas covered under the program were Western Europe, Australia, Japan and

32 Chown and Valentine, 83; and U.S. Department of the Treasury, "Maintaining the Strength of the U.S. Dollar in a Strong Free World Economy," (Washington, D.C.: January 1968), Part VI.

33 C. Fred Bergsten, The Dilemmas of the Dollar (New York: New York University Press, 1975), 301.

South Africa. Canada was exempt; however, firms were requested to ensure that funds sent to Canada were used for operating expenses in that country, and not diverted elsewhere.³⁴

In 1966, the VFCR program was expanded: Four hundred additional firms were asked to "participate." Limits on foreign investment were extended to the oil-producing countries in the Middle East and Indonesia, and restraints on Canadian investments were requested. The guidelines on direct investment were made more specific: investments made during 1965 and 1966 were to be limited to 90% of the total invested during the previous three years, including undistributed profits of foreign subsidiaries. In 1967, the quantitative limits were tightened even more.

In 1968, the program became mandatory, and the export of funds for direct investment in Western Europe was specifically prohibited, although financing could be raised locally. Specific targets were established for other regions.³⁵ Businesses were not discouraged from expanding their overseas operations, but requested instead to finance their activities abroad. This would eventually lead U.S. multinational corporations to make heavy use of the Euro-bond market, and contributed significantly to the rapid growth of that market. In 1970, controls on direct investment were liberalized somewhat, and the VFCR program was suspended in 1974.

³⁴ Chown and Valentine, 83-84; and U.S. Department of the Treasury, Part VI.

³⁵ U.S. Department of the Treasury, Part VI.

An important objective of the VFCR program was to stop the additional bank lending that had replaced some of the lost European bond issues. (Table III.10) Bank loans to Europe, which were exempt from controls under the IET, increased sharply following implementation of the tax, with increases occurring in almost all Western European countries. U.S. banks were also constrained at home by the Regulation Q interest rate ceilings, which kept them from attracting sufficient deposits for relending, and by relatively high reserve requirements. As a result, there was a substantial increase in the number of foreign branches established by U.S. banks to conduct business outside of U.S. banking restrictions. Under the VFCR program, banks were asked to limit foreign lending to 105% of the amount outstanding at the end of 1964, with priority given to loans intended to finance U.S. exports. Developing countries were to be given preference as borrowers, followed by Canada and Japan, which were heavily dependent on financing from the U.S. at that time.³⁶ Under the 1966 expansion of the program, the credit limit was raised to 109% of the 1964 base, but banks were asked to spread the additional lending over four quarters. In 1967, lending was further restricted to actual funds outstanding on September 30, 1966 plus a pro-rated share of the unused portion of the allowed increase as of that date. In practice, this virtually cut off further lending by banks to developed countries. Non-banking financial institutions were

³⁶ Chown and Valentine, 85.

permitted to increase foreign lending by 5% over their September, 1966 level.³⁷

Restraints on bank lending were tightened in 1968 (at the same time as the strengthening of direct investment controls described above) through a reduction in lending targets. Outstanding credits to Western Europe were to be reduced by not renewing term loans and by lowering the ceiling for new loans by the amount of repayment. Outstanding short-term loans were to be cut back as well.³⁸

U.S. capital control legislation had the greatest impact on portfolio investment. In 1964 there was a record-high outflow of total portfolio capital, over \$2 billion. This was partially inflated by reported bank credits: since banks were informed in advance of the upcoming lending limits, foreign bank claims were inflated when year-end revisions were reported.³⁹ Beginning in 1965, however, the effect of the capital controls can be seen, as the level of total portfolio investment was cut in half, and then dropped to only about \$250 million in 1966. Total portfolio investment rebounded the following year, but it would constitute a smaller percentage of total foreign investment than it had between 1956 and 1964. (Table III.10; also see Tables III.1A, III.5A above.)

37 Ibid., 85-86.

38 U.S. Department of the Treasury, Part VI.

39 Ralph Bryant and Patric Hendershott, "Financial Capital Flows in the Balance of Payments of the United States: An Exploratory Study," Princeton Studies in International Finance, No. 25 (Princeton, N.J.: Princeton University, 1970), 55.

The major effect of the controls was, as intended, a reduction in borrowing in the United States by Western Europeans. (Table III.11) There was, in fact, a net capital inflow from Western Europe to the U.S. between 1965 and 1969, mostly due to repaid bank claims. The total value of assets held in Western Europe declined in 1965 and 1966. (Table III.12) New securities issues by other countries continued to rise, with Canada accounting for the majority. The annual level of long-term investment flows to Canada was actually higher during the mid-1960s than in previous years. In some cases, Canada, as well as some countries in Latin America, may have become intermediaries for borrowing by countries affected by the IET or the foreign credit restraint program.

One apparent reaction to the virtual prohibition on portfolio investment was an increase in U.S. direct investment in Western Europe. Western Europe as a whole continued to be the largest recipient of direct investment funds from the United States, with about 40% of the total between 1963 and 1971. (See Tables III.1A, III.1B above.) Manufacturing was the leading sector, especially the automobile, chemical, machinery, metals and food products industries.⁴⁰ The moratorium on direct investment in Western Europe did result in sharp drops in investment in Europe in 1968 and 1969. However, investment returned to previous levels by 1970, much of it now being financed on the continent.

⁴⁰ Wilkins, 374-379.

Coinciding with the imposition of controls on long-term capital outflows, there was also an increase in the number of overseas branches of U.S. banks, with the largest increase in Europe. These branches or affiliates were established mainly to service U.S. multinational companies, including arranging local financing under the capital control guidelines, and to evade Regulation Q ceilings on interest paid on deposits. Profit does not seem to have been a principal motive; the European branches were not necessarily more profitable than their domestic counterparts, and studies have concluded that their role was mainly to accommodate market conditions and remain competitive with corporate clients.⁴¹ When investment in Europe was restricted or discouraged, U.S. banks and institutional investors did not substitute lending to other countries or regions where pre-control lending patterns generally continued. (Tables III.13A, III.13B)

Even though the U.S. government attempted to cut off the supply, the demand for dollar bonds and loans by European borrowers remained high. European economies continued to invest and expand, while private borrowers were denied access to adequate capital and credit from European sources. A goal of the U.S. capital control programs during the Bretton Woods period was to propel the growth of national capital markets, along with the reduction of long-term interest rates, in Europe in order to reduce the demand for U.S. capital.⁴²

41 Sarkis J. Khoury, Dynamic of International Banking (New York: Praeger Publishers, 1980), Ch. 4.

42 U.S. Department of the Treasury, Part VI.

One of the most important consequences of the U.S. capital controls was the development of the international bond, or Euro-bond, market, primarily a market in dollar bonds, which remains an important part of the international capital market today. Operations formerly conducted in New York now moved to Europe, principally London, which became an entrepot center for international lending. In fact, the Bank for International Settlements described the moving of international capital transactions from the U.S. to Europe as "more financial than real," with little effect on overall investment.⁴³ Funds for the international dollar bond market came from a number of sources, primarily within Europe, including some from refugee capital held in Switzerland, and some from the U.S. multinational corporations operating in Europe.

The growth of the Euro-bond market after 1963 was dramatic. (Table III.14) From trivial activity in 1963, there was significant trading by 1966, and in 1968 international bond issues exceeded foreign bonds placed on domestic markets in Europe and the United States. U.S. multinational firms entered the market in 1965, to finance overseas operations as required under the VFCR program. The huge increase in Euro-market activity in 1968 was due primarily to the quadrupling in the volume of borrowing by U.S. firms operating in Europe, when a complete moratorium on the export of dollars to fund investments in Europe went into effect. During that year, borrowing by Europeans declined, probably due to crowding out by U.S. borrowers, but during the following

⁴³ Bank for International Settlements, 36th Annual Report (Basle, Switzerland: 1966), 48ff.

years, when U.S. demand was lower, borrowing by Europeans, Japanese and Canadians increased again.

The majority of bond issues were in dollars. (The German Deutschmark was the second largest currency by volume, but never more than about one-quarter of total issues outstanding.⁴⁴) The dollar was desirable because it provided universal acceptance and liquidity for private investors. Their confidence in the dollar (despite U.S. and European central bank concerns regarding the U.S. balance of payments deficit and the adequacy of its gold reserves) was based on the lack of exchange controls on the U.S. dollar (such as existed in the case of a number of European currencies where the government would not guarantee to support the value of their currency at the established parity in capital transactions), and the fact that there was a ready secondary market, and therefore full liquidity, for dollar-denominated securities. The Euro-bond market operated outside of any national regulation (at least until the 1970s), and was generally free of any national taxation. Consequently, it was an efficient market, able to operate with a small spread between borrowing and lending rates, and with lower reserves held by lending banks. The Euro-markets gave investors more freedom and flexibility in the transfer of assets, by operating outside of governments' ability to control capital flows through monetary policy or regulation, and so grew quickly during the 1960s, the period of U.S. capital controls.

⁴⁴ Bank for International Settlements, 40th Annual Report, 46-47; and 41st Annual Report, 54-56.

In 1971, dollar-gold convertibility was officially suspended and exchange rates were allowed to float. Capital outflows from the U.S. increased immediately; with the lifting of controls in 1974, the level of long-term capital outflows again increased sharply, now augmented by the continuing trading in dollar bonds and loans in the Euro-markets.

Table III.9

U.S. BALANCE OF INTERNATIONAL PAYMENTS: 1960 - 1971

=====

Balance on Current Account and Long-Term Capital

	Current Account Balance	U.S. Gov't Capital Flows (*)	Long-term Private Capital Flows:Net
BALANCE	=====	=====	=====
Year	(million dollars)		
1960	-1188	1801	-889
1961	-15	3069	-901
1962	-1042	2456	-892
1963	-1328	3199	-1150
1964	-76	5783	-1348
1965	-1804	4306	-1532
1966	-1724	2320	-1469
1967	-3304	2051	-2423
1968	-1411	-443	-2158
1969	-3046	-1050	1191
1970	-3031	416	-1926
1971	-3031	416	-2018
	-9550	-2790	-2359
			-4401

(*) Includes some short-term flows.

Source: Survey of Current Business: June, 1973: T1

Table III.10

U.S. PRIVATE LONG-TERM PORTFOLIO INVESTMENT: WESTERN EUROPE							
Securities				Other LT claims			
Total	Total Secur.	New issues	Redemp- tions	Other Secur. (outst.)	Bank claims (*)	Non-bank claims	
Year	(million dollars)						
1946	-12	42	0	-3	45	-54	
1947	92	44	18	-3	29	48	
1948	20	48	0	-2	50	-28	
1949	88	-9	16	-3	-22	97	
1950	192	-11	0	-2	-9	203	
1951	41	-18	0	-3	-15	59	
1952	90	-20	0	-9	-11	110	
1953	-180	-69	0	-7	-62	-111	
1954	-38	54	0	-12	66	-92	
1955	47	61	29	-11	43	-14	
1956	114	17	0	-10	27	97	
1957	63	-44	25	-20	-49	107	
1958	176	147	121	-16	42	29	
1959	147	155	78	-9	86	-8	
1960	133	124	24	-25	125	0	9
1961	375	260	57	-30	233	127	-12
1962	264	178	195	-33	16	85	1
1963	750	246	271	-23	-2	489	15
1964	499	-152	35	-35	-152	589	62
1965	-209	-59	95	-35	-119	-120	-30
1966	-478	-171	15	-37	-149	-386	79
1967	-343	24	0	-72	96	-443	76
1968	-66	16	42	-59	33	-230	148
1969	-75	-144	14	-68	-90	-62	131
1970	322	58	..	..	..	5	259
1971	168	-44	..	..	..	236	-24

(*) 1946-1959: includes non-bank claims

.. Not specified separately

Source: Balance of Payments, Statistical Supp. (1963): T5a (33-35), T67
Survey of Current Business, June issues:
 1968, 1970: T8 (34-37, 39); 1971, 1972, 1974: T6, T9 (40, 41, 44)

Table III.11

FOREIGN BOND ISSUES PLACED ON U.S. DOMESTIC MARKET							

Borrowers:							

	Total	Cont. Europe	U.K.	Canada	Japan	Rest of World	Int'l Inst.

(million U.S. dollars)							
Year							
1963	1356	307	40	748	138	123	--
1964	1184	35	6	777	--	216	150
1965	1617	25	80	1034	63	215	200
1966	1448	--	--	1070	--	204	175
1967	1933	--	--	1172	15	237	510
1968	1905	--	--	1155	--	280	470
1969	1355	3	--	1104	9	239	--
1970	1390	--	--	890	--	199	300

Note: Bonds of 5 or more years maturity, including known private placements. Issues sold in the U.S. and Europe, with small amounts in other countries. 1968 excludes Canadian Churchill Falls bond of \$500 million to be paid 1969-73.

Source: Bank for International Settlements, Annual Reports 38,39,40,41

Table III.12

INTERNATIONAL INVESTMENT POSITION OF THE U.S.
IN WESTERN EUROPE

=====				
Private Long-term Portfolio Investment				

Year	Total	Foreign Dollar Bonds	Other For. Securities (*)	Bank/ Non-Bank Claims
=====				
(million dollars)				
1946	1217	82	637	498
1947	1283	91	641	551
1948	1245	76	634	535
1949	1162	96	409	657
1950	1371	85	409	877
1951	1448	86	419	943
1952	1526	84	384	1058
1953	1362	82	328	952
1954	1488	160	465	863
1955	1621	193	580	848
1956	1702	184	572	946
1957	1793	193	516	1084
1958	2332	244	974	1114
1959	2906	327	1473	1106
1960	3277	357	1798	1122
1961	3685	406	2044	1235
1962	4029	534	2172	1323
1963	5003	781	2379	1843
1964	5419	779	2095	2545
1965	5207	823	1973	2411
1966	4514	790	1634	2090
1967	4692	712	2252	1728
1968	5331	652	3003	1676
1969	5179	583	2840	1756
1970	(*) 5118	535	2563	2020
1971	(*) 5581	508	2832	2241

(*) Through 1969, "Other Foreign Securities" includes foreign corporate stocks, and some dollar obligations; 1970-1971 includes foreign corporate stock only.

Source: Balance of Payments, Statistical Supplement (1963): T83
Survey of Current Business: 8/1963: T9; 8/1964: T12;
9/1965: T15; 9/1966: T14; 10/1968: T1; 10/1969, 1970: T2;
10/1971, 1972: T3

Table III.13A

LONG-TERM CLAIMS ON FOREIGNERS REPORTED BY BANKS							

Position at end of year							

	1956	1957	1958	1959	1960	1961	1962

(million dollars)							
Austria	1.7	7.9	25.5	16.5	2.9	36.7	65.4
Belgium	13.9	19.3	29.9	22.1	35.1	38.7	11.8
Denmark	--	2.1	1.1	1.3	7.1	7.4	10.0
Finland	1.1	3.1	2.9	2.7	5.2	3.1	12.9
France	0.5	3.5	20.9	20.2	20.5	12.5	24.5
Germany, F.R.	2.6	13.2	10.6	9.3	23.2	69.8	80.3
Greece	2.3	1.5	0.4	6.1	4.0	7.4	13.4
Italy	15.6	12.9	24.4	35.2	37.1	26.2	31.6
Netherlands	18.9	25.7	14.9	10.2	13.6	46.4	1.1
Norway	70.9	97.0	128.3	137.7	144.6	164.7	201.9
Portugal	0.4	1.3	2.0	2.0	2.7	4.0	26.6
Spain	2.6	9.2	6.0	7.1	4.5	0.8	10.2
Sweden	28.9	32.7	24.4	33.3	38.8	50.1	39.1
Switzerland	4.6	3.5	2.1	2.9	2.2	9.4	17.6
Turkey	--	--	0.1	0.1	0.1	0.1	0.1
United Kingdom	66.5	132.9	89.5	49.8	15.3	10.7	25.2
Yugoslavia	--	--	--	0.1	1.8	2.1	1.1
Other Europe	3.1	8.4	11.3	10.0	7.9	2.9	4.8
TOTAL EUROPE	233.6	374.2	394.3	366.4	366.6	492.9	577.6
OTHER AREAS	631.3	800.9	967.7	1176.6	1331.7	1540.9	1573.5
TOTAL	864.9	1175.1	1362.0	1543.0	1698.3	2033.8	2151.0

Note: From 1958 on, Belgium includes Luxembourg; prior to that, Luxembourg included in Other Western Europe

Source: Balance of Payments, Statistical Supp. (1963): T68
Treasury Bulletin, December issues: TCM-IV

Table III.13B

LONG-TERM CLAIMS ON FOREIGNERS REPORTED BY BANKS								
Position at end of year								
	1963	1964	1965	1966	1967	1968	1969	1970
(million dollars)								
Austria	101	135	77	28	12	2	1	1
Belgium	57	87	95	104	73	35	18	13
Denmark	53	57	43	29	11	1	2	2
Finland	42	66	67	74	68	47	27	19
France	39	66	58	43	46	37	37	88
Germany, F.R.	136	160	205	129	61	32	36	35
Greece	16	50	84	98	80	73	56	39
Italy	161	383	342	200	58	14	3	4
Netherlands	5	15	7	5	1	1	2	8
Norway	238	275	222	188	126	72	49	24
Portugal	76	82	90	71	47	31	27	14
Spain	49	73	72	64	42	64	91	83
Sweden	45	109	93	60	32	18	23	35
Switzerland	16	37	38	16	11	5	2	3
Turkey	1	1	2	2	2	1	1	...
United Kingdom	38	87	86	70	56	68	67	71
Yugoslavia	1	3	4	9	12	12	13	25
Other Europe	28	33	16	25	38	31	24	18
Western Eur.	9	20	11	12	19	12	11	6
Eastern Eur.	19	13	6	13	19	19	13	12
TOTAL EUROPE	1101	1720	1604	1212	776	547	479	482
OTHER AREAS	1929	2565	2913	2968	3149	3020	2772	2592
TOTAL	3030	4285	4517	4180	3925	3567	3250	3075

... Less than \$50,000

Note: On 12/31/64, claims were revised upward by \$313 million.
Belgium includes Luxembourg.

Source: Treasury Bulletin, December issues: TCM-IV

Table III.14

FOREIGN AND INTERNATIONAL BOND ISSUES						

International Bonds						

	Total Issues Abroad	Total Foreign Bonds	Borrowers:			
			Total	United States	Western Europe	Rest of World

(million U.S. dollars)						
Year						
1963	1942	1805	137	--	88	50
1964	2219	1523	696	--	408	288
1965	2938	1892	1046	331	481	236
1966	3123	2015	1107	439	466	202
1967	4222	2333	1889	527	937	425
1968	6359	2991	3368	2059	792	517
1969	5284	2174	3110	1032	1317	761
1970	4762	1926	2836	742	1471	622

Notes: Bonds of 5 or more years maturity, including known private placements. Issues sold in the United States and Europe, with small amounts in other countries.

Source: Bank for International Settlements, Annual Reports 38,39,40,41

IV. CAPITAL MOVEMENTS AND CONTROLS UNDER THE BRETTON WOODS SYSTEM

A. THE PROVISIONS AND OPERATION OF THE BRETTON WOODS MONETARY SYSTEM

The following is a brief summary of the origins, provisions and operation of the Bretton Woods monetary system, particularly as these relate to international capital movements.

Origins. The foundation for post-World War II international economic relations was the monetary system established at the United Nations International Monetary and Financial Conference held in Bretton Woods, New Hampshire in 1944. The agreements signed at the conference laid down principles for the conduct of international transactions in trade and investment, including a system of exchange rates, and established two international financial institutions, the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (World Bank).

The negotiations at the Bretton Woods conference, led by the United States and Great Britain, reflected the economic objectives shared by the forty-four countries attending and in particular their reactions to the perceived problems in international economic relations of the recent

past.¹ The experiences of a world-wide depression and the destruction of war made full employment of domestic resources, including labor, a primary concern. The effects of the restrictive trade policies, competitive devaluations, and exchange controls practiced during the 1930s caused the framers of the agreement to be mistrustful of governments' ability to set responsible exchange rate and payments policies. They were concerned about the transmission of deflation and inflation, and the destabilizing effects of floating exchange rates and speculative capital flows. Countries wanted expansion of world trade to utilize resources and maintain high incomes.² To facilitate trade they needed a multilateral payments system and stable exchange rates.

The design of the system incorporated certain assumptions regarding economic relations which were generally held at the time.³ The performance of the national economy was assumed to be largely insulated from outside influence. Wages and prices were determined in the domestic market. Capital was not very mobile internationally: the regulatory controls placed on capital markets in reaction to the abuses

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- 1 J. Keith Horsefield, The International Monetary Fund, 1945-1965, Vol. I: Chronicle (Washington, D.C.: I.M.F., 1969), 4-5; and Michael Bordo, "The Bretton Woods International Monetary System," in A Retrospective on the Bretton Woods System, ed. M. Bordo and B. Eichengreen (Chicago: University of Chicago Press (NBER), 1993), 31.
 - 2 Article I, "Articles of Agreement of the International Monetary Fund," in Horsefield, The International Monetary Fund, Vol. III: Documents, 187-188.
 - 3 Peter Kenen, "Macroeconomic Theory and Policy: How the Closed Economy Was Opened," in Handbook of International Economics, Vol. 2, ed. Ronald Jones and Peter Kenen (Amsterdam: North-Holland, 1985), 628-636.

of the 1920s, the depressed economic conditions of the 1930s, and the break in normal economic relations brought on by World War II had reduced private capital flows to extremely low levels by the time of the Bretton Woods conference in 1944. Domestic short-term interest rates could be effectively controlled through monetary policy; foreign exchange flows could be sterilized by the central bank and need not affect the money supply.

Provisions of the IMF Agreement. The Articles of Agreement for the International Monetary Fund produced by the Bretton Woods conference established both the organization of the IMF and rules of conduct for international transactions. The major provisions of the IMF agreement concerned the systems for international exchange rates and multilateral payments, and the use of the Fund's resources.⁴ The IMF, the institution at the center of the new monetary system, was to function as both an international financial institution and a regulatory agency.⁵

Exchange rates would be set by international agreement according to a schedule of par values pegged to the relationship between gold and the U.S. dollar. This was an "adjustable peg" system: a system of fixed exchange rates, but one which provided the framework for rates to adjust

4 Articles III through VIII, "Articles of Agreement of the International Monetary Fund," in Horsefield, Vol. III: Documents.

5 Margaret Garritsen De Vries, The IMF in a Changing World: 1945-1985 (Washington, D.C.: The International Monetary Fund, 1986), 16.

to allow national authorities to pursue domestic full employment policies, unencumbered by balance of payments concerns.⁶

The U.S. dollar would be convertible to gold at its value fixed as of 1944, \$35 per ounce. Parities for other currencies were set in relationship to the U.S. dollar price of gold, and countries were expected to maintain the value of their currencies within 1% of the par value. In order to do this, central banks would have to keep sufficient reserves of internationally liquid assets to maintain the value of their domestic currency at parity, and in the immediate post-war period, this meant holding either gold or U.S. dollars. Because of the relative scarcity of world gold supplies, the dollar became the primary reserve medium, so that the Bretton Woods system was effectively a dollar-gold standard. The convertibility of U.S. dollars into gold guaranteed the value of other countries' international reserves. At the time the agreement was drawn up, the United States held a large proportion of the world's gold reserves, and dollar-gold convertibility seemed permanently assured.⁷

In cases of "fundamental" disequilibrium (never precisely defined by the framers of the agreement), a country's par value could be altered enough to restore external equilibrium, but only with the approval of the IMF. A system-wide change in par values would require approval of a majority of the voting power of the Fund.

6 De Vries, 15-18.

7 Robert Solomon, The International Monetary System, 1945-1976 (New York: Harper & Row, 1977), 19-20.

The adjustable peg system was intended to incorporate the advantages of both fixed exchange rates, stability in trade and international transactions; and floating exchange rates, freedom to conduct domestic policy without concern for external balance. Under fixed exchange rates, governments cannot conduct independent monetary policy if free movement of capital across borders is permitted, because capital mobility negates the effect of government efforts to control interest rates or the money supply. Under the Bretton Woods system, countries would give up the ability to enact unilateral exchange rate changes, but in return would have a stable economic environment to pursue both national policy and international trade.

The system was considered experimental, and the initial par values set when the Articles of Agreement of the IMF were ratified in 1945 were not expected to be permanent.⁸

It was an overriding concern of the architects of the agreement to eliminate any restrictions on trade among member countries. Member countries were supposed to make their currencies convertible for current account transactions within three years of the establishment of the Fund. Discriminatory currency arrangements and multiple exchange rates were discouraged; exceptions were to be made only on approval by the Fund.

⁸ De Vries, 11.

Operation of the System. In practice, the actual operation of the Bretton Woods monetary system deviated from the original plan, especially during its early years. The major European currencies were not made externally convertible until the end of 1958. In order to allow countries to build up dollar reserves to prepare for full convertibility, U.S. firms were encouraged to invest in Europe and discriminatory tariffs on U.S. imports in Europe were tolerated. Because of fear of a dollar "shortage," a United States balance of payments deficit was actually encouraged during the early post-war years.⁹ Even after convertibility was achieved, a number of countries retained controls on foreign exchange, particularly for capital transactions.

Although the exchange rate system was intended to be flexible, in practice parities were rarely changed. Following a general devaluation of the European currencies in 1949, the only significant changes were: the French devaluation in 1958, the German and Dutch revaluations in 1961, the British devaluation in 1967, and the German revaluation in 1969.¹⁰ In fact, during the period following restoration of convertibility of the European currencies (1958), real exchange rates in the industrialized countries had a lower mean rate of change than during any other time in the twentieth century, including regimes of both fixed

9 Leland Yeager, International Monetary Relations: Theory, History and Policy, 2d. ed. (New York: Harper & Row, 1976), 404-405; and Solomon, 17-20.

10 Bordo, Table 1.2.

and floating rates.¹¹ Changes in par values greater than 10% were only supposed to take place with the approval of the IMF, but, in practice, this was not enforceable. When a major rate change did occur, the IMF was rarely consulted in advance (even in the case of the significant devaluation of the French franc in 1958).

As the European economies grew, and especially after the formation of the European Economic Community, the volume of trade increased. International credit markets resumed operation, and private capital mobility increased beyond the level that had been anticipated in the system and beyond the reach of government control. The architects of the system had failed to provide the means for world reserves to grow along with the volume of international trade and other transactions. There was no clearing function to re-cycle surplus payments in one place in the system to correct a deficit in another situation. Balance of payments problems were being dealt with on an individual basis, frequently through the use of capital controls, without consideration for any impact on the rest of the system.¹²

As long as the country at the center of the system, the United States, followed stable financial and monetary policies, there was still confidence in the soundness of the system. However, by the mid-1960s, the U.S. had an increasingly severe balance of payments deficit, lower productivity growth and, by the end of the decade, a higher rate of

11 Ibid., Table 1.1.

12 Yeager, Ch. 20.

inflation than the other industrialized countries. This should have constituted the "fundamental disequilibrium" to be corrected by a currency devaluation as provided in the IMF Agreement; but, as the numeraire and universal reserve currency, the U.S. dollar could not easily be devalued without undermining the system as a whole.

The only way to increase international reserves was for the U.S. to maintain a balance of payments deficit; but the loss of gold reserves that accompanied this put pressure on the value of the dollar and threatened the United States' ability to guarantee convertibility (the so-called "Triffin dilemma"). There was thus an inherent conflict between the role of the dollar as a reserve currency and the need to maintain the value of dollar in order to guarantee its convertibility to gold at a fixed price. As more dollars flowed overseas, the United States' balance of payments deficit worsened, and, beginning in the early 1960s, the U.S. government initiated a series of capital control measures to prevent the outflow of dollars.

The Bretton Woods monetary system ended in 1971 when the United States did, in fact, suspend dollar-gold convertibility. The dollar was devalued and a system of managed floating exchange rates was attempted under the terms Smithsonian Agreement of 1971; but by 1973 this, too, had collapsed and all major currencies began freely floating against the dollar.

Capital Movements and Controls. The countries involved in the design of the Bretton Woods monetary system were concerned primarily with the promotion and expansion of trade, which they saw as a way to fulfill their domestic goals of full resource utilization and increasing national income. Capital flows were generally viewed as impediments to a government's ability to control internal interest rates and the money supply, as well as a threat to stability in international economic relations.

Controls on capital movements, however, were permitted and even expected. The countries signatory to the agreement had experienced the boom and bust periods of international capital flows during the 1920s and 1930s, and did not trust markets to regulate capital movements. Moreover, under a fixed exchange rate system, they feared the transmission of price changes (inflation or deflation) and the loss of control over internal interest rates and demand management policies which could result from the free movement of money and financial capital across borders. An expansion of the money supply will induce a capital outflow; raising interest rates or otherwise restricting credit will attract a capital inflow. In each case, the government must buy or sell foreign exchange to maintain the par value of the domestic currency and the money supply remains the same in the long run, with only the composition of the central bank's balance sheet changed. The interest rate will tend toward the world rate (adjusted for any differences in risk or other variables specific to the country). Speculative capital flows could also force otherwise unwarranted parity changes which would

be destabilizing to the system as a whole. The IMF Articles of Agreement, therefore, assumed that controls could and would be used to suppress international capital flows.

The two draft plans which were the basis for negotiating the Articles of Agreement of the IMF, the Keynes Plan from Great Britain and the White Plan from the United States, had somewhat different perspectives on the subject of capital movements. The Keynes Plan reflected Britain's position at the end of the war, severely weakened economically and in debt. The country needed the freedom to work toward full domestic employment without balance of payments concerns. Keynes assumed that controls on outward capital flows would normally be in place to control speculative movements and ensure against a drain on reserves.¹³ The White Plan reflected the United States' position as a current and potential lender of capital, as well as the U.S. experience during the 1930s with currency arrangements and tariffs used to discriminate against U.S. exports. The White Plan advocated encouraging the flow of capital for productive purposes, including private funds, and the elimination of exchange controls and other practices that impeded international payments.¹⁴

In both plans, however, the presumption was that capital flows could not be entrusted entirely to the market and would always be under

13 Horsefield, Vol. I: Chronicle, p. 20.

14 Robert Oliver, International Economic Cooperation and the World Bank (New York: Holmes & Meier, 1975), 110-114; and Horsefield, Vol. I: Chronicle, pp. 21-22.

some form of government regulation. In drafting the final Articles of Agreement there was general consensus among countries regarding the provisions of Article VI on capital transfers.¹⁵ The article consisted of three parts: Section 1 states: "A member may not make net use of the Fund's resources to meet a large or sustained outflow of capital, and the Fund may request a member to exercise controls to prevent such use of the resources of the Fund."¹⁶ The only exception to the use of Fund resources in this case was for "capital transactions of reasonable amount" for expanding exports or other commercial purposes. Section 2 was an amendment that allowed drawings for capital transfer purposes provided the Fund's holdings of a member's currency quota remained within certain limits. Lastly, Section 3 specifically authorized the use of capital controls by members as long as such controls did not restrict trade: "Members may exercise such controls as are necessary to regulate international capital movements, but no member may exercise these controls in a manner which will restrict payments for current transactions or which will unduly delay transfers in settlement of commitments, except as provided in [specific articles of the agreement]."¹⁷

Later, there were discussions at the Fund as to whether Article VI, Section 3 overrode the obligations laid down elsewhere in the IMF Agreement regarding the avoidance of discriminatory currency

15 Horsefield, Vol. I: Chronicle, p. 104.

16 Horsefield, Vol. III: Documents, pp. 193-194.

17 Ibid.

arrangements and multiple currency practices. A decision of the Executive Board of the Fund in 1956 concluded that members had a sovereign right to regulate capital movements in any way which did not restrict current payments, including the use of exchange controls or special currency arrangements, without the approval of the Fund.¹⁸ It was the practice in some countries (including Great Britain) to require that currency for capital transactions be purchased in special foreign exchange markets. The maintenance of par values was required by the IMF only for current and not for capital transactions; therefore, international investment could entail the additional risk that the value of the currency involved would not be supported by the government.

In addition, when countries used capital controls to insulate changes in domestic monetary policy from the effect of external capital flows, they were effectively departing from true convertibility of their currencies at the fixed par value.¹⁹

In practice, countries were not able to control capital flows to the extent anticipated by the framers of the Bretton Woods system. Greater international mobility and communications, and the growth of multinational business and banking greatly increased capital mobility across national borders. The restrictions placed on capital movements by governments during the Bretton Woods period sparked the development of an international financial marketplace, the Euro-markets, largely

¹⁸ Horsefield, Vol. II: Analysis, 411.

¹⁹ Bank for International Settlements, 36th Annual Report (Basle, Switzerland: 1966), 45.

outside of national controls. By increasing international capital mobility, the Euro-markets probably hastened the collapse of the Bretton Woods system. It was a system designed under the assumption of low capital mobility, and required the ability of governments to effectively control international capital flows in order to function as intended.

B. ATTITUDES TOWARD CAPITAL CONTROLS IN THE U.S. AND EUROPE

The Bretton Woods system was designed with the assumption that capital controls would be used, and this reflected a widespread attitude regarding the role of international capital movements among governments in the United States and Western Europe in the post-war world.

The United States. At the beginning of World War II, the U.S. State Department was concerned about German economic influence in Latin America. The Department drafted a plan, during 1939 and 1940, for an Inter-American Bank to provide capital for economic development projects in the Western Hemisphere. The proposed bank, while never realized, was a kind of prototype for the Bretton Woods financial institutions, the IMF and the World Bank. Significantly, the discussions included the involvement of Harry Dexter White of the Treasury Department, and is believed to have influenced the proposals which he presented at the

Bretton Woods conference.²⁰

The purpose of the Inter-American Bank was to facilitate sound international investment, aid in stabilizing currencies and serve as a clearing house for international payments. Capital would be made available on a more prudent basis than the planners believed would occur based on market forces alone. Earlier capital flows to Latin America and other developing areas were considered to have been imperialist²¹, and that this led to the unwillingness of the borrowing countries, in some instances, to re-pay. Capital movements should not be for private profit, but should be in support of government plans for economic development; investment on this basis was less likely to fall into default. Finance for profit was also susceptible to being cut off too quickly, and could not assure the continuous flow of funds necessary for successful development projects. In addition, the Bank would be a cooperative institution in which the risks would be shared among the member countries, and the burden of a default would not fall on a single country lender.

Towards the end of World War II, both the State Department and the Treasury Department began to plan for a post-war political and economic order. One problem addressed by both departments was that of international long-term investment. A group led by Jacob Viner of the University of Chicago prepared a report on this issue on behalf of the

²⁰ Oliver, 92-99.

²¹ Ibid.

State Department. The Department's perspective on international investment was, not surprisingly, focussed on the effect of capital movements on the political relationships among countries. The State Department was concerned with past disputes between debtor and creditor countries and the imperialist overtones in private investment. They advocated the establishment of a multinational agency to provide capital to areas and in situations where it would be unprofitable or on too large a scale for private investment; to promote investment for reconstruction and development purposes; and to settle disputes between debtors and creditors so that they would not become the basis for political or other problems between nations. The agency would also survey outstanding inter-country debt liabilities and negotiate settlements on mutually acceptable terms. Finally, it would be responsible for regulating any private investment which was undertaken.

At the Treasury Department, the Division of Monetary Research studied the problems that international finance had caused during the interwar period, particularly its contribution to the dissolution of the international monetary system during the 1930s. It was believed that the sudden withdrawal of private foreign investment had contributed to the severity of the Depression and the breakdown of the gold standard. Foreign investment should be guided by the government. This would ensure that it would not fluctuate with business cycles, and that funds would be used for purposes which would encourage productivity growth and generate foreign exchange reserves, increasing the likelihood of repayment. Given the beggar-thy-neighbor currency and tariff practices

of the 1930s, revival of international capital flows would require a structure to ensure international cooperation. Also essential for investment would be stable exchange rates and free markets in foreign exchange. While the Treasury analysts believed in the need for more government control, they did not intend that government would compete with private investors and borrowers in the international capital markets.

The belief that markets could not be relied upon to regulate international capital flows persisted almost until the end of the Bretton Woods era. The 1967 Annual Report of the President's Council of Economic Advisers stated that "...foreign investment...was being overdone in the early 1960s."²² The report claimed that U.S. capital outflows were subverting the government's ability to use monetary policy to fulfill domestic goals. Therefore, "given the alternatives and the need to improve its payments position, the United States has restrained the outflow of capital as preferable to cutting essential international commitments, limiting international trade or restricting domestic--and world--economic growth."²³

The European Economic Community. The acceptance of restrictions on capital movements was also reflected in the provisions of the Treaty of

22 As quoted in U.S. Department of the Treasury, "Maintaining the Strength of the U.S. Dollar in a Strong Free World Economy," (Washington, D.C.: January 1968), Part VI.

23 Ibid.

Rome (1958) which established the European Economic Community (EEC). A preliminary report prepared as background to the treaty negotiations, suggested that countries would initially require protection against free movement of capital to prevent speculation from affecting the balance of payments.²⁴ The Treaty of Rome itself took a position not unlike that of the IMF Agreement in which capital transactions were subordinated to trade. Liberalization of restrictions on capital flows was advocated as a goal not for its own sake, but as a means of facilitating trade and payments related to trade.

During the 1960s, concerns were raised regarding the lack of capital market integration in the EEC. A study commissioned by the Community, The Development of a European Capital Market (known as the Segre Report),²⁵ described restrictions on outward and inward flows of capital in European capital markets, discrimination in favor of domestic borrowers, especially governments, and the sanctioning of special exchange markets for capital transactions. The report suggested that in many cases exchange controls were being used, not, as earlier, to preserve the balance of payments, but to ensure the autonomy of domestic monetary policy.

24 Etienne-Sadi Kirschen, Financial Integration in Western Europe (New York: Columbia U. Press, 1969), 41-44.

25 European Economic Community, The Development of a European Capital Market (Brussels: 1966).

The Organization for Economic Cooperation and Development (OECD).

The OECD, which includes the United States, Canada, Western Europe and other industrialized countries, as late as 1990 described the still incomplete compliance with the provisions of the OECD Code (established in 1961) regarding liberalization of capital movements.²⁶ While widespread progress toward liberalization was made during the 1980s, partly because technological advances in communications and financial services had moved capital transactions beyond the practical control of governments, completely free movement of capital was still not regarded as desirable by most member governments who viewed private capital movements as potentially interfering with domestic policy objectives. The function of international capital flows was seen primarily to be to facilitate trade and direct investment, or to otherwise help investors gain access to foreign markets. Large capital movements were discouraged out of fear that they could adversely affect the balance of payments, exchange rates or domestic monetary conditions. Controls on capital were sometimes also considered necessary to conserve domestic savings.

26 Organisation for Economic Co-operation and Development, Liberalisation of Capital Movements and Financial Services in the OECD Area (Paris: 1990).

V. HYPOTHESES CONCERNING U.S. PORTFOLIO INVESTMENT IN WESTERN EUROPE

A number of influences on portfolio capital investment by the U.S. in Western Europe during the Bretton Woods period are suggested by the historical record and in the literature. In the following, some possible determinants of investment are presented and their validity as explanations of U.S. portfolio investment in Western Europe during this period is evaluated based on historical evidence and economic theory.

1) Western Europe experienced high rates of growth of output, productivity, and investment during the Bretton Woods period. The rate of growth of GDP in Western Europe was approximately double the growth rates during the periods before and after Bretton Woods: average annual growth rate of GDP in real terms for OECD Europe was nearly 5% from 1953 to 1973; it was approximately 2 to 2.5% from 1870 through 1937, and from 1973 to 1979.¹ Growth rates rose in the United States, also, but more modestly: from an annual average of 3% from 1913 to 1950 to about 4% between 1950 and 1970.² Rates of productivity growth and investment

1 Andrea Boltho, "Growth" in The European Economy, ed. Andrea Boltho (New York: Oxford University Press, 1982), Table 1.1.

2 Historical Statistics of the United States, Colonial Times to 1970 (Washington, D.C.: U.S. Department of Commerce, Bureau of the Census, 1976), Series F, 10-16.

were higher in Western Europe than in the United States, as well. Average annual growth in productivity was over 4% for OECD Europe, and only slightly over 2% for the United States during the Bretton Woods period.³ Most importantly, rates of investment were higher and rising in Western Europe during these years, while they remained stagnant in the United States. Western European rates of gross fixed capital formation rose from 17% in 1950 to 23% in 1971, while U.S. rates (total government and private investment) averaged 18% throughout the period.⁴

Investment opportunities in the U.S. appeared to be less favorable than those available in Europe. Average yields in the U.S. stock market were declining over the Bretton Woods years. (Graph V.1)⁵ By comparison, in Germany, for example, stock market yields were rising dramatically. (Graph V.2) From 1964 through 1967, demand for West German bonds by foreigners was so high, that, in order to restrain outside pressure on domestic interest rates, Germany imposed a 25% percent coupon tax on interest payments on domestic bonds held by

3 Data for OECD Europe from Boltho, "Growth," Table 1.4; years covered were 1953 to 1973. Data for the United States from Historical Statistics; years covered were 1950 to 1969.

4 OECD, National Accounts Statistics. Rates of GDP growth, productivity and investment for Great Britain during these years, while higher than levels observed during the first half of the twentieth century, tended to be lower than in the other major countries of continental Western Europe (especially Germany, France and Italy); on these measures, Great Britain was actually very close to the U.S. However, Great Britain was still an important destination for U.S. capital exports because of its role as a conduit to the Commonwealth and continental Europe.

5 Graphs are found at the end of the chapter.

foreigners. During this period, "non-resident" bond issues were sold in Germany at interest rates somewhat below domestic rates.⁶

Western Europe, because its industrial base had been severely damaged by the war, was experiencing the high rates of growth and productivity more typical of a developing region, but had, in addition, the advantages of pre-existing industrial economy and a developed-country consumer market. From the point of view of a potential investor, these rates of growth and industrial development could be evidence of both high potential return as well as the capacity to service future debt.

2) European government policy was supportive of economic growth. This inspired the confidence of business and investors, both domestic and foreign, and contributed to the high capital formation rates in post-World War II Europe.⁷ Governments were spending for post-war reconstruction and were prepared to follow Keynesian policies of demand management to smooth cyclical fluctuations.⁸ However, the strong macroeconomic performance of the European economies during this period usually made direct government support of the economy unnecessary, and government consumption spending as a percentage of output remained much lower, and grew more slowly than total investment expenditure.

6 Bank for International Settlements, 37th Annual Report (Basle, Switzerland: 1967), 48, n.2.

7 Boltho, 16-19.

8 Ibid.

The formation of the European Coal and Steel Community, and, later, the European Economic Community, reinforced the expectation of continued growth and provided a structure for European economic cooperation which would, in theory, facilitate trade and investment.

3) There was little inter-country capital movement within Europe itself. Although the level of private savings available was generally equal to or greater than demand for investment capital, the volume of transactions on European capital markets was small.⁹ Continental Europe depended on U.S. and British financial institutions to provide and/or mobilize outside sources of capital.¹⁰

The major European currencies were restored to external convertibility for current transactions at the end of 1958; however, convertibility for capital transactions was guaranteed only where necessary to facilitate trade (e.g., for short-term commercial credits). A number of European countries used special exchange markets for capital transactions in which the exchange rate was not required to be supported by the central bank according to the provisions of the IMF Agreement.

National capital markets in Western Europe were highly restrictive and not well integrated with each other. Markets discriminated in favor of domestic borrowers, especially the government, by requiring

9 European Economic Community, The Development of a European Capital Market. (Brussels: 1966), p. 77 and Statistical Annex, Table 1.

10 Bruce Bassett and Henry Bloch, "Introduction" to Financial Integration in Western Europe by Etienne-Sadi Kirschen (New York: Columbia University Press, 1969), vii-xv.

government approval for issuing foreign securities, by restricting the payment of interest or dividends to foreigners, or by controlling the amount of foreign exchange available for capital transactions. There were government controls on capital flows, both inward and outward, throughout the Bretton Woods period, in the form of exchange controls and restricted access to capital markets, and limits on bank lending. These were imposed in order to retain control over domestic monetary policy, and to ensure governments a sufficient volume of funds at low interest rates to fund reconstruction and other spending needs.

Few corporate shares were listed outside their home countries. Because Britain did not join the European Economic Community, the expertise and institutional framework of the London international capital market was not automatically available to the smaller national markets on the Continent.

Data from the EEC¹¹ show that all member countries imported significant amounts of portfolio (as well as direct investment) capital after the formation of the community. Long-term interest rates and underwriting costs were lower in the United States than in Europe, and the New York market could accommodate larger volume issues. Bonds denominated in dollars had a strong secondary market, and therefore provided high liquidity, in contrast to the special capital account exchange markets required by a number of European countries. Europeans, in fact, were major purchasers of European securities on the New York

¹¹ European Economic Community, Statistical Annex, Table 14.

capital market. After the U.S. imposed restrictions on lending to European borrowers (primarily through the Interest Equalization Tax), Europeans turned in large numbers to another source of funds outside their national capital markets, the Euro-markets.

4) The United States and Western Europe had a close relationship which would have been supportive of U.S. investment in Europe. The two regions had a long history of political, social and economic exchange. This took the form of not only immigration, trade and capital flows, but, in part because Europeans had settled much of the U.S., the two regions shared similar industries and many economic, social and legal institutions. There was a history of previous investment both by the U.S. in Europe and by Europeans in the United States. Great Britain, France and other Western European countries had fought along side the United States as Allies during the Second World War. U.S. government funds in the form of the Marshall Plan were sent to aid in the rebuilding of Western Europe following the war and to ensure the maintenance of democratic, capitalist governments. West Germany was occupied jointly by the United States and the other Allied victors; its return to economic stability through a program which included currency reform and strict price controls was heavily influenced by the U.S. military government in Germany.¹²

12 Charles Kindleberger, A Financial History of Western Europe, 2d ed. (New York: Oxford University Press, 1993), 401.

Commercial banks started opening branches in Europe in increasing numbers beginning in 1958, and European operations rapidly expanded during the 1960s so that, by the 1970s, the majority of funds held in overseas branches of U.S. banks were in Western Europe. This would have been a natural outlet for the channeling of funds from the U.S. to Europe. U.S. corporations were active in direct investment in Europe during this period, which gave the United States a stake in European economic growth, and was evidence of Americans' confidence in the health of the European economies.

Investment in Europe also opened channels, directly or indirectly, to other parts of the world through the British Commonwealth and the dependencies and former colonies of the other Western European countries.

5) The United States government was spending heavily in Western Europe, particularly during the early post-war years, and this could have crowded out private investment.

During the early part of the Bretton Woods period, large amounts of aid in the form of grants and loans for war reconstruction were invested in Europe under the aegis of the Marshall Plan, and significant levels of inter-government transfers, including military spending, continued until about 1955. These funds may have discouraged or eliminated the need for private investment in the short term. However, during these years, the economic and political situation in most of Europe was still precarious, and, of critical importance, European currencies were not

externally convertible, so that relatively little private investment would have been expected. In the long run, U.S. government assistance may have made private investment opportunities in Europe more attractive by helping to rebuild infrastructure and maintain political order.

6) Americans' most recent experience with foreign capital investment, the period between the two world wars, had been disastrous: Many foreign bonds of questionable quality were sold during the boom years of the capital markets in the 1920s, and subsequently fell into default. During the Depression of the 1930s, two-thirds of the foreign bonds and loans held by Americans fell into default; in Europe, this percentage was even higher, with about 80% of the European bonds held by Americans defaulting. The memory of this experience, together with the collapse of the U.S. domestic stock market, might have made investors wary of undertaking overseas investment. The reaction to the problems of the interwar period is frequently mentioned as an impediment to portfolio investment by the United States after World War II.

However, an examination of available evidence and hypotheses concerning the influence of the interwar defaults reveals a number of diverse, and possibly counter-balancing, effects which leaves the aggregate impact unclear.

There was a gap of about twenty years between the period of widespread foreign bond defaults in the early 1930s and the early to mid-1950s when the economies of Western Europe were stable enough for portfolio investment to be feasible again. Nearly a generation had

passed, encompassing a depression, world war and significant changes in the international political order.

More importantly, because of the problems of the interwar years there were now legal safeguards and information disclosure requirements imposed on the sale of securities and the operations of banks. While it is likely that these regulations restricted the sale of some foreign securities in the U.S., this was intentional. The objective of the new securities and banking laws was to curb irresponsible investment and to provide a secure environment for productive investment.

The new regulation could also have had a positive effect on investment by increasing the quantity and quality of information available to investors. A paper by Sylla and Smith on the history of capital market regulation in the United States and Great Britain gives evidence that government regulation encourages the development of efficient, active capital markets by increasing the amount and accessibility of information on which to base investment decisions. In particular, they maintain that the greater availability of information in U.S. capital markets after World War II was instrumental in attracting investors to capital markets and in promoting the inclusion of corporate stocks in both individual and institutional investment portfolios.¹³

¹³ Richard Sylla and George D. Smith, "Information and Capital Market Regulation in Anglo-American Finance" (N.Y.U. Salomon Center Conference on Anglo-American Finance: December, 1993), mimeo.

There is some general evidence relating to the reputational effects of the interwar loan defaults on individual countries' ability to borrow when international capital movements resumed after World War II. This evidence supports the view that while foreign loan defaults may have had a general impact on total U.S. foreign investment, they did not have a significant negative effect on an individual country's subsequent ability to borrow.

As part of a study on international lending between 1920 and 1955, Eichengreen¹⁴ conducted a test of the determinants of foreign borrowing by governments immediately after World War II. He concluded that, while the overall level of private portfolio lending may have been reduced due to the 1930s loan defaults, an individual country's debt service history had no significant impact on its postwar foreign borrowing.

Eichengreen used a cross-section of thirty-two countries (with approximately half in Latin America) to estimate his model. He tested several alternative equations with two dependent variables: the change in external public debt (government or government-guaranteed) between 1945 and 1955, and the value of the stock of public debt held in 1955. The extent of interwar default was represented by a country's share of all external government debt in default as to interest or sinking fund at the end of 1935. Other explanatory variables tested were factors suggested in the literature as determinants of borrowing: country size

14 Barry Eichengreen, "The U.S. Capital Market and Foreign Lending, 1920-1955," in Developing Country Debt and Economic Performance, Vol. I, ed. Jeffrey Sachs (Chicago: University of Chicago Press (NBER), 1989).

(GNP), the ratio of imports to GNP, and the amount of debt outstanding as of 1945. The results of the various versions of the model were similar: Larger, more open countries borrowed more, and countries with more debt outstanding at the end of the war tended to borrow less. But the most striking finding was that interwar default in most cases was positively correlated with postwar borrowing at a statistically significant level. (In the log version of the stock model, interwar debt is unrelated to postwar borrowing, a less powerful, but nonetheless consistent, result.) There was no evidence that countries that defaulted on foreign obligations during the 1930s found it more difficult to borrow immediately after World War II.

A summary of the key equations from the study is in Table V.1 below:

Table V.1

DETERMINANTS OF FOREIGN BORROWING, 1945 - 1955			

Dependent variable (million \$US):			

	Change in	Stock of Debt, 1955	
	External Debt	-----	
	1945 - 1955	Level of Debt	Log of Debt
	-----	-----	-----
Constant	-1169.87 (3.88)	-1169.87 (3.88)	-2.65 (1.78)
Share of debt in default, 1935	557.65 (2.91)	557.65 (2.90)	0.75 (1.56)
GNP	0.07 (10.34)	0.07 (10.34)	--
Log GNP	--	--	0.81 (5.50)
Import/GNP ratio	3497.55 (3.10)	3497.55 (3.10)	1.01 (0.38)
Debt in 1945	-0.32 (1.41)	0.68 (2.99)	--
Log debt in 1945	--	--	0.17 (3.56)
No. of observations	32	32	32
R ²	0.82	0.88	0.74
F-Ratio	30.38	47.67	19.29

(t-statistics in parentheses)

Source: Barry Eichengreen, "The U.S. Capital Market and Foreign Lending, 1920-1955," in Developing Country Debt and Economic Performance, Vol. I, ed. Jeffrey Sachs (Chicago: University of Chicago Press (NBER), 1989), Tables 3.11, 3.12.

The scope of Eichengreen's study differs from the present one in that it concerned only government borrowing, included borrowing from all sources (government, multilateral and private), and aggregated across a variety of countries and regions. Consequently, when the cases of specific countries or regions are examined, the evidence regarding the relationship between a country's record on servicing past loans and subsequent foreign borrowing leads to a more ambiguous conclusion than that reached by Eichengreen.

Germany was the source of the most notorious foreign loan defaults of the 1930s. Of all outstanding German pre-World War II external debt, approximately one-third was held by Americans (principal and interest amounting to about \$547 million), making the United States Germany's largest single creditor at the end of the war.¹⁵ All outstanding dollar bonds were in complete default as to interest and sinking fund as of the end of 1952.¹⁶ At the same time, the Allied powers occupying West Germany felt that it was important to include Germany in the European economic recovery program. Germany received large amounts of U.S. aid, and strict economic and monetary reforms were imposed by the occupation government. By the early 1950s, the rebuilding of industry destroyed by war, along with economic stabilization and domestic investment policies, gave West Germany one of the highest rates of growth in Europe, along

15 U.S. Congress, Senate, Committee on Foreign Relations, Agreements with the Federal Republic of Germany, message from the President of the United States, 83d Cong., 1st sess., 1953, p.6 and Table II.

16 Foreign Bondholders Protective Council, Inc. Report 1951 through 1952 (New York: Foreign Bondholders Protective Council, Inc., 1954), 112.

with a stronger currency than those of some of its European neighbors. The German recovery was so successful that German industry was to export industrial goods during the Korean War, and became a creditor within the European Payments Union by 1953. However, the U.S. State Department concluded that the debt overhang cut Germany off from external sources of credit, and this restricted the course of its economic recovery and necessitated continued controls on foreign exchange.¹⁷ The accumulated debt now included wartime claims and postwar economic aid along with the defaulted bonds and loans originating in the 1930s.

In order to restore normal economic and financial relations (including investment) between Germany and rest of the world, the three occupying countries, the United States, Great Britain and France, initiated a program of debt settlement between Germany and its creditor nations. A Tripartite Commission on German Debts was convened in 1951 to set the objectives and framework for an international debt conference. These objectives were to establish procedures to settle Germany's debts and eliminate the defaults, and to restore Germany's creditworthiness on the international market. The three powers further agreed to modify the priority and amount of their claims on Germany for post-war loans contingent on a satisfactory settlement of the earlier debts. They were willing to do this because the primary goal was the integration of a democratic Germany into the economy of Europe, and while it was generally held that Germany should be made to honor its

¹⁷ U.S. Congress, 8 (Report from Secretary of State John Foster Dulles to the President submitting the agreements for ratification).

pre-war debts, the governments of the occupying powers were sensitive to the fact that imposing punitive or unreasonable terms on Germany would only further delay or inhibit that goal.¹⁸

Following the recommendations of the Commission, the London Conference on German Debt was held during 1952, and an agreement signed by the Federal Republic of Germany (West Germany) and nineteen creditor governments in February 1953. The agreement covered four types of debt: German government obligations (including the Dawes and Young loans), medium and long-term private debt, "standstill" debt, that is, obligations frozen during the economic crisis in 1931, and commercial and miscellaneous debt. The general terms of the agreements were similar for all types of obligations: no reduction in principal; future interest rates were to be reduced and interest in arrears before 1944 either recalculated at the new rate or added to principal (payment of interest in arrears from 1944 to 1952 was postponed); maturities were extended; and amortization of principal was to begin after five years (except in the case of some commercial and trade-related debt where payment could be demanded earlier). The U.S., Britain, and France agreed to reduce their claims for repayment for post-war aid (in the U.S. case, from \$3.2 billion to \$1.2 billion). Not included in the agreement were claims held in East Germany (the Soviet-occupied zone), since the three Allied powers had not been able to gain the cooperation

¹⁸ Ibid., 10-13.

of the Soviet Union in the settlement agreements.¹⁹ The agreement was ratified by the U.S. Congress in September 1953.

The objective of the German debt settlement was to encourage growth and investment in Germany, and to restore the creditworthiness of Germany, not to punish or otherwise reinforce the effect of the 1930s defaults. In submitting the agreement to the U.S. Congress for ratification, Secretary of State Dulles said that Germany would be motivated to fulfill its obligations by the restoration of credit, and that this would contribute to its financial recovery and create a basis for new private investment.²⁰ The Foreign Bondholders Protective Council expected that trading in German dollar bonds on the U.S. stock exchange would resume following implementation of the terms of the agreement.²¹

The goals of the debt agreements appear to have been met. By the end of 1957, virtually all West German loans were being serviced according to the agreement.²² During the 1950s and 1960s, West Germany had the most rapid rate of growth in Europe; it followed free-market economic policies and welcomed both direct and equity investment. All these factors made it an attractive destination for outside, including U.S., capital.

19 Ibid., 203-243.

20 Ibid., 4.

21 Foreign Bondholders Protective Council, 1951-1952, 123.

22 Foreign Bondholders Protective Council, Inc. Report 1955 through 1957 (New York: Foreign Bondholders Protective Council, Inc., 1958).

Latin America had also been the source of widespread bond defaults during the 1930s.²³ Between 1931 and 1933 virtually every Latin American borrower fell into default (with a few still providing partial service on loans). By the end of World War II, outstanding loans were reduced by means of various settlement agreements to repay principal, sometimes with reduced interest, or the re-purchase of loans below par; in the case of Mexico and Brazil, there were reductions in both principal and interest. The defaults plus the collapse of the U.S. domestic economy during the 1930s put an end to new lending to Latin America until the mid-1950s. Bond underwriting in Latin America by U.S. banks virtually disappeared through the Bretton Woods period. In addition, the legislation reforming the U.S. securities markets made it difficult for Third World countries to meet the stricter disclosure requirements for issues on the U.S. capital markets. Unlike its role in the settlement of the German loans after World War II, the U.S. government in the 1930s denied any responsibility regarding foreign lending, and offered only minimal help to U.S. investors holding defaulted Latin American loans.

During the first decade after World War II, the U.S. government, for political and strategic reasons, concentrated its efforts on rebuilding Europe, paying relatively little attention to Latin America. For example, while Latin America had formerly been a major client of the

23 Barbara Stallings, Banker to the Third World: U.S. Portfolio Investment in Latin America, 1900-1986 (Berkeley: U. of California Press, 1987), 75-94.

Export-Import Bank, between 1946 and 1950, 70% of all loans went to Europe. By the mid-1950s, the U.S. again turned its attention to Latin America, and some U.S. investment resumed. This now took the form of government loans and multilateral aid (through the World Bank and the Inter-American Development Bank), with private investment primarily limited to direct investment. During the Suez Crisis, there was an increase in direct investment in the petroleum industry, especially in Venezuela, and also Mexico and Brazil.

However, there was very little private portfolio investment by the U.S. in Latin America during the early post-World War II years,²⁴ and significant activity would not be seen until the 1970s. Beginning in the mid-1950s, some bank lending and, later, bond issues, resumed. Mexico was a major borrower, followed by Argentina and Brazil, and including Venezuela, which, because of its oil wealth, had not borrowed during the 1920s.²⁵ The Cuban nationalizations had a chilling effect on direct investment in Latin America during the 1960s, and may have served as a deterrent to portfolio investment, as well. (The more democratic or left-leaning governments that came to power in Venezuela and Brazil eventually reduced capital inflows there.)²⁶ The 1970s saw the rapid growth of direct bank loans to Latin America, again with Mexico the dominant borrower. The Latin American countries that did borrow from

24 U.S. Department of Commerce, Balance of Payments, Statistical Supplement, rev. ed. (Washington, D.C.: 1963), Table 4 (31-38).

25 Stallings, 126.

26 Ibid., 84.

the U.S. during the Bretton Woods years do not fit a simple pattern with respect to past debt service or economic performance. Mexico, consistently the largest post-war borrower, did not completely fulfill its earlier loan obligations, but it had borrowed comparatively less than others during the 1920s. Mexico may have continued to be a desirable target for investment because (along with Peru) it had the strongest continuous rate of growth in the region over this century. Brazil generally grew over this time, also, but less consistently.²⁷ Argentina's economy generally declined, but it had been one of the countries to maintain at least partial debt service during the 1930s.²⁸

It could be that the debt service records of Latin American countries during the 1930s had a more direct effect on subsequent portfolio investment in that region than had been the case in Europe, possibly because of the lack of support of the U.S. government for the creditors left holding defaulted loans. In Europe, the U.S. and other Allied governments took pains to restore the creditworthiness of Germany (and, as occupying forces, had the political leverage to do so). Compared to Europe, Latin America also had a somewhat higher dollar volume of bonds in default (although a lower percentage), which may have magnified the perception of loss. While there is a relationship between

27 Ibid., 181-182. Stallings does not place much weight on the economic performance of Latin America as a region in attracting foreign investment, emphasizing political factors, instead; however, she acknowledges that a relationship between growth and foreign investment may hold for some individual countries.

28 Ibid., 76.

the experience of the 1930s and subsequent borrowing for Latin American countries, evidence points to past debt service as one of a number of factors influencing U.S. portfolio investment, including economic factors such as growth rate and possession of natural resources, the political orientation of the national government, and the U.S. government's strategic interests there.

To summarize what is a complicated issue: The clearest impact of the 1930s defaults was on the type of foreign lending. The private portfolio investment that did resume in Europe during the mid-1950s took place in the context of a more conservative regulatory environment. Investors were now highly selective. Where the primary form of investment during the 1920s had been foreign government bonds, after World War II the preferred form was prime corporate stock in a relatively small number of manufacturing and petroleum firms. There were few new government bond offerings even after settlement of most past debts. The European bonds which were sold were usually denominated in dollars, and were purchased primarily by institutional investors who tended to be cautious in undertaking foreign investments, either because of regulatory mandate or risk-aversion. (For example, insurance companies in New York were prohibited from investing more than 1% of their assets in foreign securities.²⁹) The cautiousness and selectivity of U.S. investors is further evidenced by the relative lack of private

29 Paul Meek, "United States Investment in Foreign Securities" in U.S. Private and Government Investment Abroad, ed. Raymond Mikesell (Eugene, Oregon: University of Oregon Books, 1962), 269-270.

investment at this time in developing countries, countries without a pre-existing industrial base and whose growth potential was unproven.

With respect to the volume of portfolio investment, the impact of the memory of past defaults is more difficult to characterize. Private foreign portfolio lending was lower during the first decade following World War II compared with the period after World War I, but the extent to which the interwar experience was responsible for this is hard to quantify. Eichengreen's research, based on the period through 1955, indicates that there was a general, but not a country-specific, effect of the earlier defaults in depressing the overall volume of private portfolio investment. Private portfolio investment was catching up to the 1920s rate by 1960, but the impact of the past would naturally diminish with time, and, in any case, it is difficult to separate investors' memory of past experience from their evaluation of future creditworthiness. Countries in which investments were made were not necessarily those with the best record on servicing past debts, but those with the best future prospects. Even though a higher percentage of bonds defaulted in Europe than in other areas, when U.S. portfolio investment did resume in the 1950s, Europe received more funds than any other area except Canada. Of the foreign bonds which were floated in the U.S. between 1954 and 1960, approximately half were of European origin.³⁰

³⁰ Ibid., Tables X-5, X-6.

The timing of the resumption of portfolio investment in Western Europe after the war seems to have been related both to economic performance and the execution of the German debt settlement. By the mid-1950s, there was a re-opening of international capital markets and increasing investments in European securities by individual American investors.³¹ This was the time when renewed economic growth seemed apparent in Western Europe, but investment also clearly followed the U.S. ratification of the German debt settlement at the end of 1953. The debt agreement certainly had a direct effect on external investment in Germany, and, since Germany was a leader in economic growth on the continent, may have had a more general effect on the opening up Western Europe to investment by Americans during the mid-1950s. Similarly, by the late 1950s, as the volume of portfolio investment was approaching the level of the 1920s (in real terms) and the ratio of portfolio to direct investment in Europe was increasing, one could point to the fulfillment of most of the terms of the German debt settlement in 1957, and but also to economic factors such as the restoration of European currency convertibility in 1958. It is likely that there would have been no investment in Germany (and possibly less in the rest of Western Europe) without a satisfactory debt agreement. However, it would be equally true that there would have been much less investment without good prospects for future economic growth and a favorable environment for foreign investment, even given the conclusion of a debt settlement.

³¹ Ibid., 241-243.

In brief: While the 1930s defaults clearly mattered, the effect of the defaults interacted with a number of other forces driving private portfolio investment in Western Europe. The opportunities available in Western Europe were attractive: European economic performance was impressive, and, in many cases, Europeans welcomed or even sought out U.S. investment. Regulations imposed as a consequence of the interwar experience may have both limited foreign access to U.S. capital markets and attracted additional investors through the availability of a greater quantity and quality of information. Enough time had passed, approximately twenty years, to dim the memory of the earlier defaults. And finally, the primary source of the earlier defaults, Germany, had settled its past debts by means of a treaty involving the majority of its foreign creditors, and had fulfilled the terms of the agreement.

7) One consequence of the failures in both the domestic and international capital markets was the regulatory and institutional reforms instituted in the U.S. financial markets beginning in the 1930s. These changes, intended to safeguard and facilitate foreign investment, may have had both a positive and a negative influence.

From the point of view of the U.S. investor, the risk in foreign investment was reduced. Foreign securities as a class can be inherently riskier than equivalent domestic investments because of currency differences, the greater difficulty in obtaining information on foreign investment opportunities, and the unpredictability of foreign government action which might affect the value of the investment. The Securities

and Exchange Commission now regulated the sale of securities and required the disclosure of certain information by firms listing securities on public stock exchanges. A small number of investment banking houses now handled most foreign security transactions in the U.S. and these were able to provide research and practical expertise for the individual investor.³² Foreign exchange risk was reduced since most foreign bonds sold in New York were denominated in U.S. dollars. American Depository Receipts (ADR's) were developed to facilitate the purchase and trading of foreign securities by Americans through commercial banks.

At the same time, regulations intended to prevent a recurrence of the abuses in security selling during the 1920s may also have reduced the supply of foreign capital. The information disclosure requirements for selling securities in the U.S. may have been difficult for foreign firms to meet. The Johnson Act prohibited lending to countries which were in default to the United States government. The Glass-Steagall Act separated commercial and investment banking; commercial banks could no longer underwrite securities, and investment banks could not accept deposits, thus separating the source and use of investable funds. There was also an increase in the role of financial intermediation in the channeling of savings, with most savings being invested through institutions--banks, savings and loans, pension funds, insurance companies. The portfolio managers in these institutions tended to be

³² Ibid., 256.

conservative in their investments, either because of perceived risk or regulatory requirements.

8) The exchange rate system in effect during the Bretton Woods era was intended to provide a stable environment for foreign economic relations. It was an "adjustable peg" system of exchange rates: exchange rates were fixed in relationship to the U.S. dollar price of gold, and were supposed to be maintained within 1% of parity. In cases of temporary payments imbalances, countries could turn to the IMF for interim financing without having to alter exchange rates. In the case of a "fundamental" imbalance (usually interpreted to be a persistent or structural payments deficit or surplus), changes in the par value were allowed in consultation with the Fund. The flexibility built in to the adjustable peg system was to forestall unilateral, competitive devaluations and other destabilizing activity, but it retained the security of fixed rates which theory holds should be conducive to international investment. The stability of a fixed rate system, with a strong currency, the U.S. dollar, at its center, should have assured predictable prices to international investors.

During the 1960s, the U.S. did, in fact, come to be in "fundamental imbalance" with the rest of the system. The U.S. had lower productivity growth along with a growing balance of payments deficit. During the late 1960s, when spending for the Vietnam War increased rapidly, the United States also had a higher inflation rate than the other industrialized countries, exacerbating the imbalance.

There was a general conviction among governments during the early and mid-1960s, however, that exchange rate changes were to be avoided. The fixed price of gold at \$35 per ounce was considered to be fundamental to the system since a large part of the world's foreign exchange holdings were held in U.S. dollars on the assumption that the dollar would maintain its value in gold indefinitely. If the gold-dollar value changed, this would undermine the value of the foreign exchange reserves held by many countries. As a result, the United States dollar, as the numeraire and reserve currency of the system, could not be easily devalued even in the case of a fundamental imbalance. In addition, the U.S. government believed that devaluing the dollar would call into question the economic stability of the country and the competence of its leaders.³³

The Europeans, in turn, were reluctant to revalue their currencies as long as the U.S. had a current account surplus with Europe and because they believed that it would relieve the United States of its responsibility to control its own balance of payments and inflation rate. Towards the end of 1968, when the U.S. current account surplus with Europe had declined, serious discussion of the possibility of exchange rate realignment began to be heard for the first time.³⁴ Germany revalued its currency in 1969. Finally, in August of 1971, the U.S. was forced to suspend convertibility of the dollar into gold.

³³ Robert Solomon, The International Monetary System, 1945-1976 (New York: Harper & Row, 1977), 61.

³⁴ Ibid., Ch. III.

Although nominal exchange rates during the Bretton Woods era were seldom altered, the fixed exchange rate system did not seem to promote international investment. The effectiveness of a fixed rate regime in promoting investor confidence depends on how the market judges the commitment of governments to maintain a rate system consistent with relative economic performance among countries. The apparent stability of the official exchange rate system during the Bretton Woods period was maintained in spite of a certain amount of uncertainty in both central bank behavior and the foreign exchange markets. This included discussions of parity realignments, beginning in 1960, in response to the loss of gold reserves by the United States; deviations in the market price of gold from the official \$35 per ounce; the devaluations of the French franc and the British pound; and speculation in the German mark preceding its revaluation. Instead of allowing the exchange rate system to adjust when necessary to facilitate trade and capital flows, governments allowed the fixed exchange rates themselves to become the goal.³⁵ When parity changes were needed on economic grounds, they were deferred primarily for political reasons. The effect of exchange rate realignment was accomplished through capital controls, instead.

This contrasts with the situation during the classical gold standard period during the late nineteenth century, when investors could have confidence that exchange rates (mint parities) would remain fixed.

35 Hugo Kaufmann, Germany's International Monetary Policy and the European Monetary System (New York: Columbia U. Press, 1985), 12-17; and Solomon, 59-62.

If parities were temporarily altered due to short-term crises, or if a country suspended gold convertibility altogether during war, full gold convertibility would be restored at the same (pre-crisis) parity. Exchange rates among the United States, United Kingdom and the other major European countries remained fixed between 1880 and 1914. The major economic powers never used capital controls to remedy balance of payments problems, and there was free trade in gold and free movement of capital internationally throughout the period.³⁶

9) Under the Bretton Woods monetary system, if governments were unwilling to resort to a formal readjustment of exchange rates in the case of severe balance of payments problems or other fundamental imbalance, capital controls were the only other external adjustment option officially sanctioned by the IMF Articles. Under a fixed exchange rate system, any tightening or loosening of domestic monetary policy can be offset by capital inflows or outflows. Restrictions on capital flows were used when governments were unwilling or unable to compromise their ability to conduct independent monetary policy, or to otherwise subordinate domestic interests to the maintenance of external balance.

36 Francisco L. Rivera-Batiz and Luis Rivera-Batiz, International Finance and Open Economy Macroeconomics (New York: Macmillan Publishing Co., 1985), 511-512; and Ronald McKinnon, "The Rules of the Game: International Money in Historical Perspective," Journal of Economic Literature 31, no. 1 (March, 1993), 3-11.

Attributing the payments imbalance to the deficit on the long-term capital account, the U.S. government, in an attempt to maintain the value of the dollar, imposed a series of controls on outward capital flows: the Interest Equalization Tax on portfolio investment, and the Voluntary Foreign Credit Restraint Program to control direct investment and foreign bank lending. The Interest Equalization Tax, by raising the cost of borrowing in the United States for foreigners, was equivalent to a devaluation of the dollar for capital transactions.

The IET certainly restricted portfolio capital outflows to Western Europe, but the reaction of the marketplace was not always as policymakers had intended. Bank loans and possibly direct investment were substituted for financial capital at different times, and there was evasion of the tax, most notably by channeling funds through countries exempt from the tax. The Europeans on their part turned to other outside sources of capital in the Euro-bond market. The impact of the tax was short-lived, also; during the period of turbulence in international monetary circles prior to the closing of the gold window in 1971, net capital outflows to Western Europe again turned positive. Consequently, the real impact of capital controls relative to other forces, both positive and negative, which influenced portfolio investment in Europe is not completely clear.

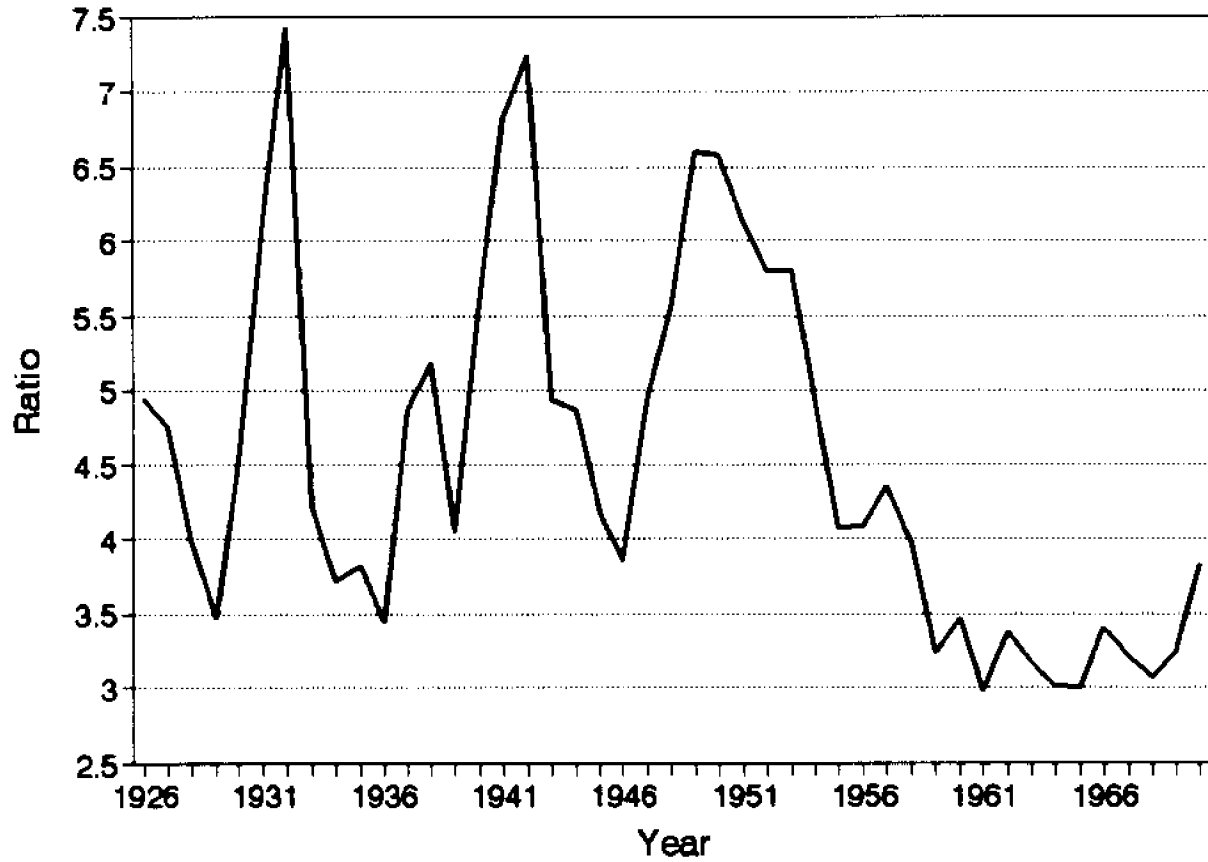
To summarize the potential influences on United States portfolio investment in Western Europe during the Bretton Woods era:

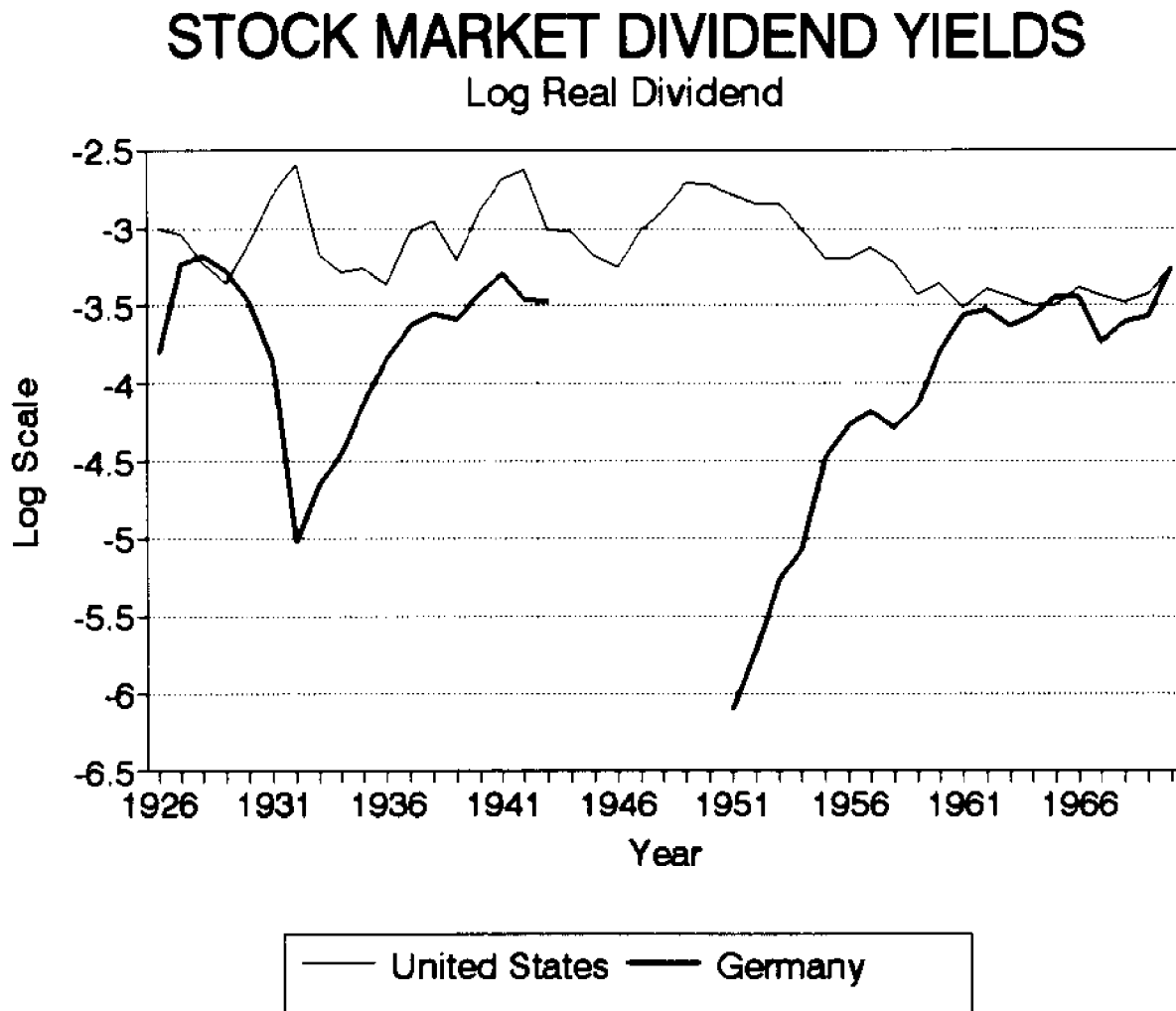
Positive economic forces during the Bretton Woods era conducive to U.S. investment in Western Europe were: high rates of growth and investment in Europe, but comparatively little internally mobile capital, creating demand for outside capital; European government policies supportive of investment; a close political and economic relationship between the United States and Western Europe; changes in U.S. capital markets and institutions designed to minimize the risk in investing abroad.

Negative forces were the greater caution among investors regarding foreign investments, based on their memory of massive defaults on foreign investments during the 1930s; regulatory restrictions on securities trading in U.S. capital markets; possible crowding out by U.S. government funds; and capital controls imposed by the United States to retain autonomy in carrying out domestic monetary and fiscal policy while still preserving the value of the dollar and the existing exchange rate regime. The international monetary system based on a fixed but flexible exchange rate regime was intended to create a stable environment for international investment; however, it is uncertain whether this was in fact the case.

U.S. STOCK MARKET YIELDS

Dividend/Price Ratio





VI. RESEARCH ON INTERNATIONAL CAPITAL INVESTMENT

A. THEORIES OF INTERNATIONAL PORTFOLIO CAPITAL MOVEMENTS

The theory of the capital account has been developed comparatively recently compared with that of the current account. The foundation for most of the models of financial capital flows in use today was first developed during the late 1960s as part of an attempt to understand the role of the capital account in the balance of payments problems of the United States (in response to the events discussed in this paper) and, if possible, to formulate an appropriate policy for correcting the deficit. Later work, during the 1980s, tended to be concerned more with capital inflow, as public concern shifted to the increasing level of foreign investment in the United States.

The general model which emerged is an asset demand model based on the portfolio choice theory developed by Markowitz and Tobin to analyze behavior in financial markets. Earlier models based on a flow theory of capital movements proved to be inadequate in explaining real-world behavior. Flow models assume that capital movements are a function of the level of interest rates, and that capital will always move to the country of the higher return. However, this implies that capital flows will be infinite as long as relative interest rates among countries

remain fixed. This, of course, does not conform to observed investment patterns, including capital flows occurring even under circumstances of zero or negative interest rate differentials and simultaneous investments by two countries in each other.

In the portfolio balance model, international capital flows occur when investors allocate parts of their net worth among alternative investment opportunities based on their preferences regarding combinations of return and risk. As long as the returns on foreign and domestic assets are not perfectly correlated, the investor will maximize utility through portfolio diversification: that is, by holding a combination of foreign and domestic assets, the investor can maximize the return and minimize the variance of his portfolio. Portfolio diversification explains the holding of foreign securities even without a yield advantage over comparable domestic investments. Observed capital movements come from two sources: continuing flow movements of capital occur as investors allocate increments in their net worth among various assets; and one-time adjustments in the composition of the portfolio due to changes in the levels, or the expected levels, of the return and risk variables. Thus, it is the change in the level of an explanatory variable, not the absolute level, which results in a capital flow. (For example, the theory says that an increase in foreign interest rates will result in a one-time increase in the proportion of foreign securities in the investor's portfolio; the size of the portfolio will then continue at its previous rate, with a higher percentage of new funds now invested in foreign assets.)

Some special characteristics of international capital movements, which differ from the exchange of other goods and services, need to be considered in analyzing or modeling capital flows:

Investors may respond to expectations regarding changes in the yield or risk of an investment and not necessarily to observed past returns or nominal interest rates or prices. Investments in equities may be made for long-term capital gains; for bonds as well as stocks, the presence of secondary markets, and variables such as exchange and default risk can affect the expected return.

Non-price variables play an important role in allocating funds to foreign investment, especially during the period under study here, when the use of capital controls was common.

Institutions play an important role in the movement of financial capital.¹ During the Bretton Woods period, for example, there was frequent discussion of the inadequacy of domestic European capital markets to facilitate the movement of capital within the continent. In the United States, the increase in financial intermediation after World War II, placing more investable funds in the control of institutional investors, influenced the movement of capital overseas.

Different forms of assets and different types of investors behave differently, responding to different forces on both the supply and demand side. Stocks and bonds may be purchased by both individual and institutional investors. Individuals will evaluate the relative risk

1 Edward Leamer and Robert Stern, Quantitative International Economics (Chicago: Aldine Publishing Co., 1970), Ch. 4.

and return of various assets in determining which to include in their portfolios; they act primarily to maximize their own utility and there are few legal restraints on their behavior. Institutional investors will also attempt to optimize the value of their portfolios, but may be subject to some legal or other outside constraints such as shareholder pressure, state regulations concerning the percentage of foreign assets which may be held, etc. Bank loans and credits made by commercial banks are subject to a different set of regulations, due to the laws governing their activities, including restrictions on areas of business, interest rate ceilings and reserve requirements.

Portfolio Balance Model

The portfolio balance model of international capital flows was based on the theories of Markowitz and Tobin and gradually adapted and modified to reflect the problems and interests of subsequent researchers and theorists.² The most recent versions of the model incorporate the effects of flexible exchange rates.

In a typical asset demand model, the desired stock of assets is a function of a scale variable and a set of preference variables. In the portfolio balance model of international investment, the quantity of foreign assets (or the share of foreign assets in the investor's

2 The following is based primarily on Leamer and Stern, Ch. 4, with additional material from Ralph Bryant, "Empirical Research on Financial Capital Flows," in International Trade and Finance, ed. Peter Kenen (New York: Cambridge U. Press, 1975).

portfolio) is a function of the investor's net worth (or the size of his portfolio), rates of return on foreign assets and competing domestic assets, a measurement of the riskiness of the foreign and domestic assets, and other variables relevant to the allocation of wealth among alternative assets. For example,

$$F = f(W, i, i^*, r, r^*, X)$$

where F is the quantity of foreign assets; W is the net worth of the investor; i and i^* are rates of return on domestic and foreign assets, respectively; r and r^* are measures of risk associated with domestic and foreign assets; and X is the set of all other variables that influence portfolio allocation (e.g., transaction costs, regulation, capital controls).

The function is often assumed to be linear homogeneous in the net worth variable³.

$$F = g(i, i^*, r, r^*, X)W$$

This assumption is useful analytically. It allows the researcher to decompose the general asset demand function into the flow effect, the impact of changes in the net worth variable and the stock adjustment effect, the impact of changes in the return and risk variables.

3 Bryant, "Empirical Research," 330.

$$\Delta F = g(\) \Delta W + W \Delta g(\)$$

(flow) (stock adjustment)

The change in the desired quantity of foreign assets is the result of the sum of the flow effect and the stock adjustment effect. The first term on the right-hand side represents the flow effect, the effect of continuing changes in the net worth of the investor or the size of the portfolio. The second term represents the stock adjustment effect, the reallocation of the existing portfolio, given a one-time change in the return or risk variables. This demonstrates that how one distributes an increase in wealth among assets depends on the yields associated with those assets; and how much one adjusts an existing portfolio in response to a change in relative returns and risks depends on the size of the portfolio.

In practice, the stock effect is usually observed to be much larger than the flow effect, since investors will respond relatively rapidly to a significant change in the return or risk attributes of domestic and foreign assets; the flow effect depends on additions to the net worth of the investor (the total portfolio of assets) which are assumed to follow a relatively stable, incremental trend.

The stock-adjustment effect may, in fact, be spread over a number of periods, due to transaction costs, taxes, the time necessary to re-allocate existing investments, and other factors. In that case, one observes a series of partial adjustments rather than a one-time shift,

such that a stock adjustment appears as a flow effect. In that case, choosing the appropriate aggregation of time periods may isolate the impact of the stock shift from the continuing change due to increases in net worth. Conversely, it may be difficult to detect the continuing flow effect at all if relative rates of return are constantly changing.

B. CONSIDERATIONS FOR THE BRETTON WOODS PERIOD

Some special characteristics of the Bretton Woods period also have an impact on doing research on international capital movements between the U.S. and Europe during this time.

A very important aspect of the period was the position of the United States in the world economy. While other industrialized countries (primarily Western Europe and Japan) gained in competitiveness relative to the United States over the course of the period, the U.S. continued to dominate the world economy through the size of its output, the volume and value of its trade, and the role of the U.S. dollar as an international currency. Even when the gold value of the dollar was challenged, the dollar remained an internationally accepted currency; while the balance of payments deficit caused concern over the ability of the U.S. to maintain convertibility of the dollar at the rate determined at Bretton Woods, the deficit was not large enough in absolute terms to have a significant impact on the U.S. domestic economy.

The U.S. was also the largest source of investment capital in the world at that time. However, because of the size of the U.S. economy, overseas investments comprised a relatively small proportion of total output (less than 1% of annual GDP), and the level of foreign investment activity was unlikely to affect rates of return in the U.S. domestic capital market. Consequently, it is realistic to assume that United States and European interest rates were largely independent of each other. (Rates within a particular European country could be influenced by outside investment or speculation from the U.S. or elsewhere, and it was theoretically possible for U.S. investors to influence interest rates or affect the market for a specific security in a small capital-receiving country.)

One of the most important features of the Bretton Woods period was the exchange rate regime. Under the adjustable peg exchange rate system, changes in parity were expected to be made only in situations of extreme external imbalance, were supposed to be confined to a specified range, and allowed only with the approval of the IMF. As long as investors had confidence that governments would strive to maintain their par values and, if a change was necessary, abide by the rules, exchange risk was predictable. In practice, several different exchange regimes were in effect at different points during the period, and the provisions of the IMF Agreement were not always followed. At the time of the Bretton Woods agreements exchange rate values for all member countries were set, but until the end of 1958 actual conversion was not, in fact, a practical option for the European currencies. The U.S. dollar

dominated international transactions and functioned not only as the numeraire currency but as virtually the only internationally recognized currency. At the end of 1958, around the time of the establishment of the European Economic Community, European currencies became convertible for most transactions, although some controls on foreign exchange for capital transactions remained. Until the late 1960s, most par values remained fixed, with very few, carefully controlled devaluations. From about 1960 until the collapse of the Bretton Woods exchange rate regime, there were increasing concerns regarding the stability of the gold-dollar relationship and ability of the U.S. to maintain the convertibility of the dollar. This caused some speculation by private investors in gold markets and caused the central banks in Europe and the United States to take action in an attempt to maintain the dollar at its current position. The question of whether or not the adjustable peg system as it actually functioned had an influence on investor confidence needs to be considered in analyzing international capital movements during this period.

The majority of foreign bonds sold during this time were denominated in U.S. dollars. This means that a U.S. purchaser would bear no exchange risk; any risk of change in the value (nominal or real) of the dollar relative to the borrower's own currency would be borne by the borrower. In the case of European securities, however, transactions were made in the national currency of the issuer, so that any exchange risk would be borne by the U.S. investor.

U.S. foreign investment in Europe during the Bretton Woods period is divided into several time periods characterized by very different types of economic conditions (including the foreign exchange regime) and investment activity. A model attempting to explain this period must recognize the clear differentiation of activity in different years. The decade or so immediately after the end of World War II, roughly 1946 to 1957, was dominated by U.S. government investment in Europe through the Marshall Plan, military assistance and other inter-governmental aid; there were only very low levels of private capital flows to Europe. Beginning in 1958, with the formation of the European Economic Community and the practical fulfillment of the provisions of the IMF Agreement, until about 1964, there were increasing levels of private investment in Europe, with Western Europe receiving an increasing share of total U.S. foreign investment. During 1963, after the imposition of the IET, there was a strong shift in the primary form of investment from securities to bank claims, until 1965 when the VFCR was applied to bank loans and those were also curtailed. After 1965, demand for dollar loans and credits by Europeans was served by the Euro-bond market, which began to be a significant force in international finance during the early 1960s. From 1965, redemptions of securities and repayment of bank claims exceeded new issues of securities, and U.S. investment flows to Europe were negative. While some positive activity resumed during 1970 and 1971, it was at a much lower level than had been undertaken prior to the initiation of the capital control programs.

The capital control programs themselves are, of course, an essential part of any model representing foreign investment during the 1960s and 1970s. It is also important to consider the way in which the two major programs operated: the Interest Equalization Tax (IET) raised interest rates for foreign borrowers in the U.S. capital market; the Voluntary Foreign Credit Restraint (VFCR) program was a quantitative restriction on the export of capital by U.S. individuals, institutions or corporations.

There was also a growing level of direct investment by the United States in Western Europe during this time, and the relationship between direct and portfolio investment was important. It is possible that restrictions on foreign exchange or capital movements caused U.S. investors to undertake direct investment in Europe in lieu of increased portfolio investment. While the two forms of foreign investment are not perfect substitutes, they are both ways of profiting from European economic growth. U.S. multinational corporations depended more on borrowing and less on equity financing, with much of the funds being raised locally. This increased both the number and level of activity of foreign branches of American banks, especially after the imposition of capital controls restricted the export of financial capital from the U.S.

C. REVIEW OF PREVIOUS RESEARCH

The first systematic empirical work applying portfolio choice theory to financial capital flows was conducted during the late 1960s, and by the 1970s the majority of research in this area was based on the portfolio balance/stock-adjustment model described above.⁴ Various applications of the model were used to explain why capital flows were not necessarily responsive to differences in interest rates, and to analyze the effects of government intervention such as changes in monetary policy and the imposition of capital controls on international capital flows. During the late 1970s and 1980s, the use of the portfolio balance approach, with its roots in an asset demand function from microeconomic theory, was adapted to the macroeconomic analysis of open economies.⁵

Grubel⁶ published one of the earlier papers (1968) to apply the portfolio choice theory of Markowitz and Tobin to international capital flows. Using portfolio theory, he postulates that the quantity of foreign securities demanded depends on the total wealth of the investing country, the size of the return differential between foreign and

4 Bryant, "Empirical Research," 322.

5 William H. Branson and Dale W. Henderson, "The Specification and Influence of Asset Markets," in Handbook of International Economics, Vol. 2, ed. Ronald Jones and Peter Kenen (Amsterdam: North-Holland, 1985), 750-751.

6 Herbert Grubel, "Internationally Diversified Portfolios: Welfare Gains and Capital Flows," American Economic Review 58(5), Part 1 (December 1968): 1299-1314.

domestic assets, the size of the risk differential, the correlation between returns on domestic and foreign assets, and the tastes of the public with respect to return and risk and short-term and long-term gains from investment. Using this model, Grubel demonstrates that international capital movements are a function not only of interest rate differentials, but of the growth rates of total asset holdings of investors, as well. Therefore, capital flows may occur in the absence of interest rate differentials between countries, or even when the differential is negative. Because portfolio diversification will optimize the portfolio by reducing risk, the rate of return alone will not explain observed capital flows.

To test his theory, Grubel studied rates of return obtained on capital markets in eleven industrial countries, including the United States, from 1959 to 1966, and compared these with some hypothetical internationally diversified portfolios. He found that international diversification would yield both higher returns and lower variance for the investor, and concluded that this greater efficiency is ultimately a source of world welfare gain. He surmised that the increase in the level of U.S. investments in Europe after 1958 was a stock adjustment in response to the return to currency convertibility in Europe, with continuing demand for European assets during the following years due to the increasing size of the U.S. portfolio (volume of investable funds). Under these circumstances, adjusting interest rates through capital controls would not be effective in correcting the U.S. balance of

payments since it addresses only the rate of return without necessarily affecting the other components of the motivation for foreign investment.

Two examples of the use of the portfolio balance model with particular relevance to the research discussed here were the studies by Miller and Whitman and by Bryant and Hendershott.

Miller and Whitman (1970)⁷ adapted a mean-variance analysis of portfolio selection, based on the Markowitz-Tobin theory, to the study of long-term international capital flows. Their model sought to explain the percentage of foreign assets in a portfolio consisting of foreign and domestic risky assets, as a function of the return and risk associated with the foreign and domestic assets. The rate of return was a ratio between two yield differentials: the difference between the yields on foreign and domestic assets, and the difference between the yields on risky domestic assets and a riskless asset. The model assumes that a foreign asset is always riskier than a comparable domestic one.

In the empirical application of their model, they used the total stock of U.S. long-term foreign portfolio assets during the years 1957 through 1966. The investment portfolio was represented by a group of risky assets assumed likely to be held by a potential investor in foreign securities. The return on domestic assets was represented by the U.S. corporate bond rate; foreign returns were represented by an average of the yield on long-term government bonds from ten countries

7 Norman Miller and Marina von N. Whitman, "A Mean-Variance Analysis of U.S. Long-term Portfolio Foreign Investment," Quarterly Journal of Economics, 84(2) (May 1970): 175-196.

which accounted for the majority of U.S. foreign investment at that time. The U.S. balance of payments was included to adjust the return for any exchange risk which might have been perceived by investors. Because of the small percentage of foreign assets in the total portfolio of risky long-term investments held by Americans, the authors assumed that the foreign supply of long-term assets was infinitely elastic within the relevant range of expected return on the portfolio, and that U.S. purchase of foreign bonds would not affect the U.S. interest rate or the composite of foreign interest rates used (although it could affect the rate in a single small country).

Miller and Whitman defined the risk associated with holding foreign assets as the contribution made by foreign assets to the overall riskiness of an investor's portfolio. The authors represented this risk factor through the deviation of U.S. national income from its long-term trend (assuming higher risk during periods of higher U.S. growth), and through dummy variables for the capital control programs, IET and VFCR, (conveying increased uncertainty regarding the yield on foreign investments), and the return to convertibility of the European currencies (lower risk). The risk on domestic assets was represented by the deviation in the level of U.S. national income from its long-term trend (assuming that risk decreases during high-growth periods because tighter credit will channel funds to the more reliable borrowers, default rates on bonds and loans will be lower, and firm profits will tend to be higher).

In their results, Miller and Whitman found that the variable for the VFCR program, the balance of payments term, the total portfolio size and the lagged share of foreign assets in the portfolio were significant in determining the stock of foreign assets held by Americans. The variables for the IET⁸ and the establishment of European currency convertibility were not significant, nor were changes in income and interest rates. Applying the results of the model to capital flows, they estimated that adjustments to changes in yield or portfolio size were generally completed within three quarters. Changes in interest rates and income had a significantly greater impact on the stock-adjustment component of capital flows than on the continuing flow component.

The Bryant and Hendershott⁹ study is interesting for its explicit modeling of the effect of capital controls, instead of merely representing the presence of controls through dummy variables. An equation describing the determinants of the desired quantity of foreign assets is not valid if non-price mechanisms, such as government controls, clear the market. In that case, changes in the economic determinants will have a reduced effect or no effect on the observed

8 Because the study covered total U.S. foreign investment, a large proportion of the data would reflect investments in countries not affected by the IET.

9 Ralph Bryant and Patric Hendershott, "Financial Capital Flows in the Balance of Payments of the United States," Princeton Studies in International Finance, no. 25 (Princeton, N.J.: Princeton University, 1970).

holdings of foreign assets, depending on the degree to which agents are constrained by the controls. They represent this by:

$$F = \alpha F^* \quad 0 < \alpha \leq 1$$

where F^* is the desired quantity of foreign assets, and α conveys the impact of the controls. This impact is, in turn, determined through the following relationship:

$$\alpha = 1 + \sum \beta_i C_i$$

where the C_i are variables which represent capital controls, and the β_i are the effect of the controls on α .

This method, while theoretically plausible, is dependent on formulating a hypothesis for the deviation of the observed quantity of asset holdings from the desired quantity, and having prior knowledge of or making assumptions as to the true impact of the controls (i.e., the extent to which agents are actually constrained). Bryant and Hendershott were able to accommodate these requirements because, in their empirical example, they dealt with a very small universe, Japanese bank borrowing in the United States, and with one constraint, the VFCR program as it applied to banks. Even under these conditions, however, the estimation process involved a procedure which required a large number of iterations to arrive at satisfactory results.

While the portfolio balance model as described above is rooted in microeconomic theory, it has also been used to analyze the effect of policy instruments on international capital movements at the macroeconomic level. Macroeconomic models have been used to study problems such as the interaction between capital flows and changes in national income, savings behavior and the balance of payments, and the welfare effects of capital exports and imports; and to serve as an aid in the formulation of optimal policy with respect to domestic credit, capital controls and taxation.

Branson¹⁰ applied the portfolio balance model of capital flows to analyze the impact of monetary policy. A rise in domestic interest rates will cause a one-time stock-adjustment inflow of capital; once portfolios have been redistributed between foreign and domestic assets, capital flows will resume at the rate of growth in total portfolio size with marginal additions to total assets directed to domestic investments. (Like Miller and Whitman, he found that the stock-adjustment effect greatly outweighed the flow effect.) Consequently, a tightening of credit for international borrowers, such as that attempted through the Interest Equalization Tax, would have only a short-run impact on capital outflows. One would need continually rising interest rates in order to reverse the direction of capital flows altogether. He also draws the implication that constraints on monetary policy due to

10 William Branson, "Monetary Policy and the New View of International Capital Movements," Brookings Papers on Economic Activity, 1970 (2): 235-270.

the exchange rate regime were smaller than commonly assumed; any reaction on the part of international investors to a change in monetary policy would have a temporary impact which could be handled through central bank financing rather than necessitating a reversal of domestic policy.

Kouri and Porter¹¹ present another example of a macroeconomic analysis of portfolio adjustment which integrates portfolio choice theory and the monetary approach to the balance of payments. They derive a model of portfolio equilibrium for a small, open economy under fixed exchange rates, including the offsetting effect of capital flows on domestic monetary policy. While most of the results of their research are not directly relevant here because of their emphasis on money supply and demand and their use of a small-country model, of interest is their finding that capital flows reflect differing growth rates and business cycles among countries.

Macroeconomic models of international capital movements from the 1980s focused on analysis of the overall balance of payments and international capital market integration. Reflecting the shift to flexible exchange rates during the early 1970s, they emphasized the influence of exchange rates and changes in exchange rates on international capital flows.

11 Pentti Kouri and Michael Porter, "International Capital Flows and Portfolio Equilibrium," Journal of Political Economy 82(3) (May/June, 1974): 443-467.

Branson and Henderson¹² apply portfolio balance theory in a macroeconomic model where wealth is allocated among foreign and domestic money and securities; all assets are gross substitutes. They discuss the microeconomic foundations of the portfolio model which is based on the optimization of the individual investor's portfolio based on the expected returns and variance of returns among the various assets. The optimal portfolio can be expressed as a weighted average of a portfolio based on minimum variance of returns and one based on the return differential among assets. As risk aversion, or the variance in exchange rates, increases, the demand for foreign securities becomes less sensitive to a shift in the expected differential among returns.

Allen and Kenen¹³ incorporated a portfolio analysis of financial capital flows into a general equilibrium model of goods and asset markets in an open economy. They established a relationship between the demand for stocks of assets and the capital flows through which these stocks are altered over time. Holdings of assets are constrained by total wealth, which is defined as domestic money and domestic and foreign bonds. All markets are perfectly competitive and clear continuously. The demand for financial assets, both foreign and domestic, depends on relative return and the investor's wealth. The supply of foreign bonds is perfectly elastic at a constant rate of return (interest rate).

12 Branson and Henderson, "The Specification and Influence of Asset Markets."

13 Polly R. Allen and Peter B. Kenen, Asset Markets, Exchange Rates, and Economic Integration (New York: Cambridge U. Press, 1980).

Ruffin¹⁴ develops a model of international factor movements to analyze the welfare gains from capital exports and imports, and to determine optimal levels of capital restrictions (taxes) or tariffs. He derives the result that a large country (i.e., one which can influence the world interest rate) can gain by restricting capital exports, provided there is no retaliation from the rest of the world. If a country cannot influence the world interest rate, it gains from exporting or importing capital, through either a higher return on investment or a lower cost of borrowing, depending on whether its domestic interest rate is lower or higher than the world rate. Capital movements can complement trade in goods if there are differences in levels of technology among countries. If capital flows to the more advanced country, this will result in greater specialization, and, therefore, a higher level of trade. Capital-exporting countries finance the higher level of imports through income on investments.

The U.S. Federal Reserve Board developed an econometric model to study the U.S. economy as a part of an interdependent world system and the influence of international phenomena on the U.S. economy. The Multicountry Model¹⁵ consists of a set of national models for the United States and four other industrialized countries and a model for the "rest

14 Roy J. Ruffin, "International Factor Movements," in Handbook of International Economics, Vol. 1, ed. Ronald Jones and Peter Kenen (Amsterdam: North-Holland, 1984).

15 Guy V. G. Stevens, et al., The U.S. Economy in an Interdependent World: A Multicountry Model (Washington, D.C.: Board of Governors of the Federal Reserve System, 1984).

of the world." The country models are linked through trade and capital flows, exchange rates, interest rates, and prices. Equations used to explain the demand and supply of foreign assets follow the portfolio balance approach, with the rate of return represented by the nominal foreign interest rate and the expected rate of change in the exchange rate. The model finds only a marginal response of long-term foreign portfolio claims to changes in net worth, and that the long-run impact of a change in interest rates is much smaller than the short-run impact.

To summarize the points in the literature on international portfolio capital movements relevant to this study:

The portfolio balance/stock-adjustment model has been accepted in both theory and empirical research, at both the micro and macro levels, as a satisfactory representation of international capital movements.

The findings of empirical researchers support the theory that international diversification will yield a higher return and lower variance (risk) for an investor's portfolio, and that, consequently, interest rate differentials alone are not sufficient to explain international capital movements. Where interest rates were used as a rate of return variable, individual country rates (for the U.S. or foreign countries) were not found to be significant. An average of a number of interest rates was sometimes found to be significant; however, the interpretation of this result is not completely clear, either because averaging a large number of rates masks any changes in patterns of return in individual or small groups of countries or areas, or because the specification of the variable was somewhat doubtful, as in

the case of Miller and Whitman who use the U.S. corporate bond rate and foreign government bond rates. In the case of the Federal Reserve multicountry model, the long-run impact of the interest rate variable (an average) was much smaller than the short-run impact, which supports the theory that interest rate changes will cause a one-time stock-adjustment in the investor's portfolio. Grubel's analysis of capital market rates of return in a number of countries demonstrated that an investor could lower risk (variance in return) through diversification. The small country model of Kouri and Porter showed that capital flows will reflect differing growth rates and business cycles among countries, which is consistent with observed movements of capital from stagnant to growing economies or from those with lower productivity to those with higher rates of productivity.

The flow effect on capital movements was found to be much smaller than the stock adjustment. The Federal Reserve model found changes in investor net worth to have only a marginal effect in general. This is probably especially true in the case of the United States where international capital flows are a relatively small part of national output. Long-run adjustment to a given shift in the return/risk characteristics of foreign investments generally took place within one year.

In empirical research, those studies which tested for the effect of capital controls always found them to be significant. In most cases, dummy variables were used. (The one successful attempt to model the effect of controls on the investment return, while an important

contribution to the literature, relied on a very narrowly focussed subject, and a strict set of ex ante assumptions regarding the effect of the controls.) Theories of international factor movements say that a country which can influence the world interest rate (a large country such as the United States) can gain from restricting capital outflows as long as other countries do not retaliate. However, drawing implications for the effect of capital controls from the portfolio balance model, Branson concludes that the effect of a change in relative interest rates such as that caused by the Interest Equalization Tax should be short-term, since its primary impact will be a one-time stock adjustment.

Where the effect of exchange rate changes was addressed, the theory derived says that as the variability of exchange rates increases (i.e., the risk associated with a given foreign return increases), the investor's sensitivity to the nominal return on an investment will decrease. Another result drawn from empirical testing indicates that a fixed rate regime (such as Bretton Woods) is not as restrictive for domestic monetary policy as government authorities assume; since the major impact of interest rate changes will be a temporary adjustment in stocks, the effect of capital movements or foreign exchange reserve losses can be handled through central bank financing. Both results argue against the effectiveness or need for capital controls.

D. EMPIRICAL PROBLEMS

While the portfolio balance model is theoretically very sound in that it describes the actual behavior and motivations of international investors, a number of practical problems arise in attempting to apply it empirically, and many of these problems have opened it up to discussion and criticism in the literature:¹⁶

A net worth/portfolio size variable appropriate to the investor(s) represented in the model may be difficult to specify. Leamer and Stern suggest that private sector net worth (defined as private capital stock, plus net claims on foreigners, plus government debt) may be approximated with GNP. Miller and Whitman define the total portfolio as the "stock of risky assets held by U.S. investors who are actual or potential buyers of foreign long-term portfolio assets."¹⁷ Their proxy for this is the sum of long-term corporate, state and local bonds; non-mortgage long-term commercial bank loans; short-term bank loans other than commercial paper and long-term foreign portfolio assets held by U.S. residents. This representation is problematic because it assumes that only U.S. residents who currently hold domestic financial assets would hold comparable foreign assets, and that there is a deterministic relationship between domestic and foreign investment. Leamer and Stern also caution against using domestic investments as an explanatory

¹⁶ See, for example: Bryant, "Empirical Research" and Leamer and Stern, Ch. 4.

¹⁷ Miller and Whitman, 195 (Appendix).

variable for holding of foreign assets; they predict that this might result in a good fit for the model, but it may be confusing cause and effect.

Modeling the rate of return on investment has also presented a variety of problems for researchers. An obvious and convenient choice to represent rates of return, interest rates, have actually yielded very poor results in explaining international capital flows. A review of previous research in a recent International Monetary Fund study of international capital movements¹⁸ found that most studies had difficulty establishing a stable empirical relationship between interest rates and capital flows. This could be due to conditions affecting the rate of return which are not reflected in interest rates, or because investors are motivated by differences in risk or a desire to diversify holdings, as implied by the portfolio balance model. Moreover, the effect of interest rates, or another rate of return measurement, may not be observable because of an "infinitely" elastic supply or demand curve due to a disparity in size between the capital-investing and capital-receiving countries.

Expectations play an important part in an investor's evaluation of the yield of an asset; however, expected returns are difficult to model, and observed returns are usually used instead. (Leamer and Stern

18 International Monetary Fund, Determinants and Systemic Consequences of International Capital Flows, Occasional Paper no. 77 (Washington, D.C.: IMF, 1991), 21.

suggest estimating periods of "normal" and "speculative" activity separately, if necessary.)

Different types of investments are known or believed to respond differently to changes in the return/risk environment; however, in practice, data on individual investment vehicles are usually too sparse for meaningful econometric analysis, forcing the researcher to aggregate data to higher levels than may be desired.

The lag in response to changes in explanatory variables may confuse the identification of stock and flow effects, when the stock effect takes several periods to be completed.

The risk variable has posed perhaps the most intractable problem. No researcher seems to have found a completely satisfactory proxy for the risk associated with alternative assets. The riskiness of an asset not only varies subjectively with the individual investor, but can be different for different assets within a class, and can change over time. Uncertainty surrounding acquisition of foreign assets can derive from risk of currency devaluation, exchange or capital controls, or economic instability. Changes in risk conditions may be reflected in the allocation of investments among countries, but may not affect total U.S. foreign investment. Most researchers seemed to have assumed that foreign assets are inherently riskier than comparable domestic ones. However, this disregards the fact that many of the European securities purchased by U.S. investors were issues of prime multinational corporations which may not have been perceived as being riskier than

their U.S.-based counterparts, except in so far as changes in exchange rates were anticipated.

Miller and Whitman make the most extensive effort to include a measurement of risk in their model. They use changes in U.S. national income to represent risk in both foreign and domestic assets, assuming foreign investment to be countercyclical to income. This has some theoretical validity; however, the income variable appeared to interact with the variable representing the investors' portfolio, and was not significant in their final results. Bryant and Hendershott were unable to identify an appropriate variable for risk; Branson omits the risk variable altogether. The more recent macroeconomic models do not treat risk as an independent variable, but assume that it is incorporated in the exchange rate or assume an already risk-adjusted return.

In representing the effect of capital controls, most researchers used dummy variables to identify periods when the controls were in effect. This method has been criticized because it does not yield any information about the specific effect of the control¹⁹. For example, the Interest Equalization Tax was a tax on the yield from a foreign security which effectively increased the cost of borrowing to the foreign issuer; the Voluntary Foreign Credit Restraint program was a set of quantitative controls for direct investment and ceilings for bank lending. However, incorporating the effect of the control presupposes

19 Bryant, "Empirical Research," 339-342.

that the true effect of the control (as opposed to that intended by policymakers) is known, and that it had a similar impact on all agents.

VII. TESTS OF HYPOTHESES

A. CONSTRUCTION OF MODEL

The subject of this study differs in several important ways from the studies reviewed in the previous chapter:

The scope is more specific in that it covers only private long-term portfolio capital flows to Western Europe, and not total long-term investment or total private investment. It seeks to explain only capital flows from the United States to Europe, and not the net capital account in the U.S. balance of payments.

The time period covered is longer than that used in most of the previous studies, covering the twenty-one years from 1950 through 1970. This begins when a meaningful flow of investment is observed and data for many of the independent variables become available, and ends during the last full year of dollar-gold convertibility. The range of years includes observations before the use of U.S. capital controls and under different control regimes, whereas many of the other studies, especially those conducted during the late 1960s or early 1970s did not have enough perspective to fully assess the impact of capital controls.

Whereas many of the previous studies had used quarterly data, this study uses annual data in the estimation of the model. The quarterly

data were generally not revised, and thus often do not add up to the final annual total; in addition, because of the narrower focus of the study, the numbers tend to be quite small and the changes from quarter to quarter can be somewhat erratic. A number of researchers also found that the speed of adjustment to changes in the independent variables was approximately one year or less.¹ While a number of the previous studies used quarterly data, they covered a smaller number of years and used a higher aggregation of the data. (Miller and Whitman, in fact, make quarterly interpolations of annual data for the stock of foreign assets and the total stock of risky assets.)

Finally, the model used here differs in its specification of the rate of return variable and in its attempt to find a way to represent risk and the analysis of the problems in representing risk. These are described in separate sections below.

In constructing the model an attempt must be made to address, either directly or indirectly, each of the suggested determinants of U.S. portfolio investment in Western Europe which were proposed in Chapter V:

- 1) Western European rates of growth and investment
- 2) European government policy and formation of the EEC

1 William Branson, "Monetary Policy and the New View of International Capital Movements," Brookings Papers on Economic Activity, 1970(2), 235-270; and Norman Miller and Marina von N. Whitman, "A Mean-Variance Analysis of U.S. Long-term Portfolio Foreign Investment," Quarterly Journal of Economics, 84(2) (May 1970), 175-196.

- 3) Lack of capital mobility within Western Europe
- 4) The relationship between the United States and Western Europe
- 5) United States government spending in Europe
- 6) Defaults on foreign investment during the 1930s
- 7) Regulation restricting foreign participation in U.S. capital markets
- 8) Investor concerns regarding the stability of the exchange rate system
- 9) Capital controls imposed by the U.S. government

The components of the model used in this study are as follows:

Dependent variable

Following the form of the portfolio balance model, the variable to be explained by the tests is the change in the stock of private long-term portfolio assets held by the United States in Western Europe. Portfolio assets include stocks, bonds and bank loans, incorporating redemptions and repayments. (A detailed definition of private long-term portfolio investment in is Chapter I.)

An argument can be made for examining bank loans separately from other long-term portfolio investments (predominantly stocks and bonds). However, in this case, bank loans formed a significant proportion of U.S. investment in Western Europe during many years, and were clearly substituted for other long-term portfolio investments following the enactment of the Interest Equalization Tax. In his empirical work,

Branson² studied bank loans and other long-term portfolio investments separately, using data on U.S. financial capital flows during the 1960s. His results for bank loans (even though his data were not confined to Western Europe) were much less stable than those for the other portfolio investments because of the wide fluctuation in bank claims on foreigners after 1963 due to the shift to bank loans from securities after imposition of the IET. This supports the hypothesis that bank loans were substituted for other investments and, therefore, should be included in total portfolio investment.

The area covered in the data is Western Europe as a whole, including the United Kingdom (the European members of OECD). Data are also available for the United Kingdom alone, and for the European Economic Community as a whole. However, there is little evidence that Americans undertaking foreign portfolio investment normally sought to invest in specific European countries: as described in Chapter III, investments were concentrated in specific industries, in large "blue chip" companies, and in firms which were able to fulfill the requirements for listing on a U.S. stock exchange. Even when data on investment in individual countries is available, the ultimate destination of the funds may be different from the published country, and may not be known.³ (An attempt was made to apply the model to

2 Branson, "Monetary Policy."

3 Notes to Table 9a, U.S. International Transactions by Selected Countries, Survey of Current Business (various issues), U.S. Department of Commerce: "The geographic breakdown of security transactions reflects country with which transaction occurred but may not necessarily reflect the ultimate sources of foreign funds or ultimate destination of U.S. funds."

portfolio investment in the United Kingdom, the country for which the most complete set of data is available, but the results were completely insignificant. One reason for this may have been that the U.K. was a conduit to other countries in Western Europe or the Commonwealth; therefore, economic variables from the U.K. may not have been applicable to the investment decision.) The relevant decision criterion, therefore, is the return/risk profile of the individual investment vehicle--for example, the expected growth of the stock, or the financial soundness of the corporation or borrower.

Portfolio size/ Net worth

A number of researchers have used GDP to represent national net worth in studies seeking to explain aggregate capital flows such as total long-term investment. However, since the subject of study here is focused on private sector portfolio investment in Western Europe, a more specific proxy for the U.S. investment portfolio than total national income was felt to be required.

Private sector net worth may be defined as private capital stock, plus net claims on foreigners, plus government debt. Since the data here are in the form of annual change in portfolio stocks, the annual change in U.S. private net worth was used, which is conceptually the sum of net investment, the current account, and the government budget deficit. (This implies that both the government deficit and current

account balance influence asset demands through private net worth.⁴) The data are taken from the publication of the Federal Reserve Board, Balance Sheets for the U.S. Economy, 1945-1990. This contains data on tangible and financial assets, liabilities and net worth for the private sectors of the U.S. economy based on the National Income and Product Accounts from the Department of Commerce (Bureau of Economic Analysis) and the Flow of Funds Accounts from the Federal Reserve.

Rate of return

Since interest rates have not been found to be a very useful measure of the rate of return in explaining capital flows in past studies, a variable was sought that might better represent expected returns on European investments. Bond rates, in any event, are not necessarily a relevant measure of rates of return sought by U.S. investors in Western Europe since the majority of investments were in the form of corporate stocks where long-term capital gains and perhaps international diversification were important aspects of the expected return.

Europe, during this time, was a growing economy, with high rates of capital investment producing increasing levels of industrialization and living standards. At the same time, there was demand for outside capital in Western Europe due to immobility of investable funds within

4 Guy V. G. Stevens, et al., The U.S. Economy in an Interdependent World: A Multicountry Model (Washington, D.C.: Board of Governors of the Federal Reserve System, 1984), 98, n.38.

the continent. The region would likely be seen as a market with long-term profit opportunities for U.S. investors.⁵ Many measures of economic growth in Europe, such as level of GDP, growth rate of GDP, and level of gross fixed capital formation, are highly correlated with comparable variables for the United States, since most of the industrialized world was experiencing high growth rates during the Bretton Woods period. The major difference between the United States and Western Europe, in terms of economic performance, was the rate of investment relative to national income. Therefore, gross fixed capital formation as a share of Western European GDP was used to represent the expected return on European investment.

Using the rate of gross fixed capital formation to represent the rate of return is consistent with portfolio balance theory, which holds that investment is motivated by expected future yields and the desire to diversify asset holdings, as well as numerical yield superiority. The rate of capital formation captures expectations for future growth as well as the differential growth patterns between the United States and Western Europe. (While it may be argued that the direction of causation might be the opposite way, that is, that the level of U.S. investment influenced the rate of capital formation in Western Europe, the contribution of U.S. funds to total Western European capital investment is too small--less than 1%--for this to be a credible hypothesis.)

5 Much as the newly industrializing economies of Southeast Asia appeal to U.S. investors today.

Risk

The difficulty encountered by most previous researchers in identifying a suitable variable to represent risk may be attributable to the fact that risk is not a directly observable economic factor, but the probability distribution of the expected return on an investment. Consequently, risk is not only an intangible and subjective element--because it reflects expected variation in economic phenomena--but it is also closely related to the rate of return variable.

It may be that a variable which accurately represents the expected return on an investment is already "risk-adjusted." A number of the suggested determinants of portfolio investment discussed in Chapter V fall into the category of increasing or decreasing the risk associated with the expected returns on investing in Western Europe. Reducing the perceived risk of investment would be the economic policies supportive of business investment followed by European governments, and the relationship between the U.S. and Western Europe.

Increasing perceived risk might be the widespread defaults on foreign bonds during the 1930s. The effect of past defaults may be embodied in the timing and form of portfolio investment in Europe. Significant private investment did not begin immediately after World War II, but only during the mid-1950s, after economic and political conditions in Europe had improved. European output and trade were increasing, along with economic cooperation among countries within Europe. Most Western European countries had relatively stable

governments, and outstanding interwar debts were being repaid or settled. Even when investment did resume, American investors chose different vehicles than they had during the 1920s. Individual investors tended to purchase stocks of prime multinational companies rather than bonds, which had been involved in the defaults of the 1930s. Bonds, now bought mostly by institutional investors, were purchased selectively (for example, the European Coal and Steel Community accounted for a large share of the bonds purchased), and were largely denominated in U.S. dollars.

Since the risk factor embodied in rate of return can only be inferred, a proxy was sought which might signal the response of U.S. investment to these external risk factors.

One candidate used by Miller and Whitman was the level of United States GDP, under the assumption that foreign investment would be countercyclical with changes in U.S. income. Miller and Whitman found that this term seemed to interact with their portfolio size/net worth term. When tried here, variables representing U.S. GDP, whether in terms of constant or current dollars or expressed in terms of growth rate, were not significant at all. This was probably the case because the data here cover U.S. investment in Western Europe exclusively, and, as discussed above concerning the rate of return variable, GDP growth rates in the U.S. and Europe were closely related. Therefore, changes in foreign investment patterns would not be expected to be sensitive to changes in U.S. national income in these data.

It could be argued that the level of direct investment in Western Europe, which was an important and increasing part of United States overseas investment during this time, signified confidence in the prospects of the Western European economies, and would, therefore, be indicative of the level of perceived risk of investing in the continent. Direct investment requires the commitment of physical (and human) as well as financial resources, and portfolio and direct investment were concentrated in similar industries. However, it is most likely that the level of direct investment had an ambiguous relationship with portfolio investment: that it was complementary to portfolio investment in Western Europe as described above, but also served to some degree as a substitute for portfolio investment after the enactment of the Interest Equalization Tax. In any case, both the level of direct investment flows and the level of exports to Western Europe (as a proxy for market opportunities) were tried as explanatory variables in the model and did not prove to be significant in explaining portfolio investment.⁶

Although, as will be demonstrated, a satisfactory proxy for risk was never found, a number of experiments were conducted in attempts to represent risk, using variables derived from the suggested hypotheses for determining investment outlined in Chapter V which could be quantified:

6 Acknowledging the fact that portfolio and direct investment may be simultaneously determined by the same economic phenomena, the two-stage least squares method was used to first derive independent estimates for direct investment to use in an earlier version of the final model. However, this did not produce significant results and the use of direct investment as an explanatory factor was dropped.

- Exchange rates. A potential risk factor for investors was the possibility of changes in the exchange rates between the U.S. dollar and the Western European currencies, which was provided for under the adjustable peg system. This is of particular interest in studying U.S. portfolio investment in Western Europe, since private investment consisted largely of European corporate stocks or bank loans, and not dollar-denominated bonds, the most common form of investment in most other areas of the world. The anticipation of a devaluation or revaluation in European exchange rates sometimes did, in fact, provoke speculation in the currency markets. Changes in exchange rates, therefore, should capture some of the variability in expected yields on investments in Western Europe. The problem in choosing a variable to represent exchange risk is that, until near the end of the period covered in this study, when the Bretton Woods system was unraveling, actual changes in the parities of most Western European currencies were relatively small, with the exception of a devaluation of the French franc in 1958.

The ideal risk variable would be one which reflected economic conditions in Europe, but which was not closely linked with U.S. conditions, a problem which plagued many of the variables available to represent return or risk. France accounts for a large share of Western European GDP (close to one-fifth of OECD Europe); however, largely because of restrictions imposed by the French government, it was not a

very important recipient of U.S. investment in Europe. Therefore, changes in the exchange rate between the French franc and the U.S. dollar should be related to economic performance in Western Europe, but not necessarily correlated with conditions in the United States. In addition, since the French franc did undergo a significant change in parity, its inclusion could potentially have an impact on the model results, if the hypothesis is correct that expected or actual exchange rate changes influenced U.S. investment in Western Europe. In the model, it is expected that the coefficient on the variable for the franc-dollar exchange rate would be negative, since an increase in the exchange rate would represent a devaluation in the franc which would mean a decline in the value of investments denominated in francs, and might also indicate some underlying problems in the economy (i.e., a current account imbalance due to low productivity, inflation, etc.). For comparison, the exchange rates for three countries which were important recipients of U.S. portfolio investment, the United Kingdom, Germany, and the Netherlands, were also tested in the model. (The exchange rates for Germany and the Netherlands do not really represent risk, since these currencies were revalued, that is, became stronger relative to the dollar, but were included for analytical purposes.)

- Interest rates. It was decided to use a variable representing relative interest rates as an alternative risk variable in one version of the model. One factor in financial markets which partly addresses risk is the interest rate. While interest rates are primarily viewed as indicative of time preference, expected inflation, and the supply and

demand for funds, they also reflect risk in that investments which are believed to be inherently riskier will carry a higher interest rate (including a "risk premium") than other investment vehicles, given the same economic conditions. Differences in interest rates have not been found useful when used by themselves to represent rates of return on foreign investment; but in the presence of a variable which is significant in representing rate of return, a variable based on the rate of interest might help to explain some of the variation in expected return. As before, a variable was needed which reflected investment risk in Europe but was not highly correlated with conditions in the United States. A common rate of interest which is available for almost all of the years and countries covered by this study is that for long-term government bonds. Based on the same reasoning behind the choice of an exchange rate variable, the difference between the French and U.S. long-term rate government bond rates was chosen as a promising candidate. It was hoped that this might serve as an instrumental variable for risk on European investment, where at least a small part of the difference between the U.S. and French interest rates would reflect the level of risk attached to European investments by the international capital market. If this did serve as a proxy for risk, its coefficient would be expected to be negative.

For comparison, separate versions of the model were also run using the difference between the U.S. government bond rate and an average of the interest rates for France and the United Kingdom, and the difference

between the U.S. and an average of France, the U.K., and Germany.⁷ (An average of interest rates in all major European countries is not useful because of the large variation among countries in both the level and pattern of changes in interest rates.) If significant, these could also serve as an approximate measure of the effect of the lack of mobility of capital within Europe, since the lack of integration of national capital markets could increase variability of interest rates within the continent and also increase the differential relative to the United States.

- European government spending. European governments were spending for war reconstruction and social support services, often borrowing in national capital markets. This may have had a positive effect on U.S. capital exports (based on contemporary accounts) by limiting funds available to private businesses in Europe and forcing them to raise funds abroad. But it may also have had a negative impact on U.S. investors if they believed European government fiscal policies to be inflationary, and therefore likely to put pressure on the exchange rate.

- Restoration of currency convertibility/Formation of the EEC. Another potential risk factor which could be specified concretely in the model is the restoration of currency conversion in most of Western Europe, symbolizing the ability to repatriate profits and the full adoption of the IMF Articles, which might indicate stronger

7 Data for the German long-term government bond rate were not available for the early years of the data series. Therefore, the German rate was not used alone as a variable in the model, but it was included in the aggregate average when available.

international monetary stability. In addition, the formation of the European Economic Community (at about the same time) would further bolster confidence in the European economies. Miller and Whitman included a variable for this and did not find it to be significant; however, because the subject of this study is specifically Western Europe, it was decided to use a dummy variable for currency convertibility and EEC formation in one version of this model.

Other variables

Several other variables likely to affect the flow of investment capital from the United States to Western Europe were also included in the model:

- Capital controls. The two capital control programs, the Interest Equalization Tax, beginning in mid-1963, and the Voluntary Foreign Credit Restraint program, beginning in 1965, were intended to block or reduce capital flows to Europe. The IET was intended to tax American purchases of foreign securities such that the effective interest rate was reduced to that of comparable domestic securities, in theory a decrease of about one percentage point; the actual tax rate varied over the period during which the IET was in force. The VFCR affected portfolio investment through its treatment of banks, which, in their lending to Europe, were restricted to a percentage of recent lending volume. In practice, the impact of the two control programs was somewhat different than what had been intended by the lawmakers.

Interest rate differentials between the U.S. and Europe were, on average, greater than one percentage point. In addition, while rates in the Western European countries were, with very few exceptions, always higher than the U.S. rate during this period, the pattern of interest rate changes, both in terms of the absolute rate and the difference between an individual country and the United States, varied greatly among countries. The IET was a sufficient deterrent that new purchases of stocks and bonds dropped significantly; in the short term they were replaced by bank loans until these, too, were restricted under the VFCR program. Consequently, it is the change in the pattern of investment in Western Europe caused by the two control programs, and not necessarily their intended quantitative effect, which is relevant here. In the model, therefore, capital controls are most appropriately represented by a dummy variable. This is introduced beginning in 1964, the first full year in which the IET was in effect.

- Lagged portfolio investment. The change in the stock of portfolio investments lagged one year was included as an independent variable to attempt to capture the rate of adjustment to the long-run desired level of asset holdings. Since previous researchers had found that the rate of adjustment was generally within one year, and annual data are used here, this might not have a significant impact on the model results.

- U.S. government spending in Europe. Since crowding out by U.S. government loans and grants to Western Europe was suggested as a reason

for lack of capital mobility, a variable for United States government spending in Europe was added in an alternative version of the model, comprising non-military grants and loans. This spending included the last two years of the Marshall Plan and continued in significant volume through the mid-1950s.

In summary, the general form of the proposed model in functional notation is as follows:

$$PI = f(PI_{.1}, EURGFCF\%, CONT, USGOVT, [RISK]) NW$$

Definitions of variables and their expected impact are explained below:

<u>Variable</u>	<u>Symbol</u>	<u>Expected Sign</u>
Change in stock of U.S. portfolio investments in Western Europe	PI	
as a function of:		
Change in stocks for previous period	PI _{.1}	
Share of capital formation in European GDP	EURGFCF%	positive
IET and VFCR capital control programs (dummy variable)	CONT	negative
U.S. government spending in Western Europe	USGOVT	negative
[Risk variables: to be discussed below]		
Annual change in U.S. private sector net worth	NW	positive

The proportion of the change in the flow of portfolio investment due to the increase in size of the "portfolio," U.S. private sector net worth, is expected to be quite small. Earlier studies have found the

continuing flow effect to be a minor factor.⁸ In the case of U.S. portfolio investment in Western Europe, the annual increase in U.S. private sector net worth averaged about 6% per year between 1950 and 1970; the share of total U.S. portfolio investment in Western Europe in the increase in U.S. net worth was less than 1% in each year. In light of the large shifts in the other variables during many of the years, it is unlikely that the continuing flow effect (the effect due to an increase in U.S. net worth) on portfolio investment in Western Europe alone is of sufficient size that it can be measured separately. Therefore, values for portfolio investment flows were divided by the change in U.S. private sector net worth for the same year. This standardizes the data (serves the purpose of a price index), and removes the continuing flow effect from the results.

A basic version of the model was tested first, with additional independent variables added in subsequent versions:

$$PI/NW = \beta_0 + \beta_1 PI.1/NW + \beta_2 EURGFCF\% + \beta_3 CONT$$

The model is specified in additive form because there are a number of negative values (when redemptions or repayments exceed new issues) which precludes the use of a logarithmic or multiplicative relationship. The model was estimated using ordinary least squares (OLS) regression. The change in portfolio investment position, both current and lagged,

⁸ See, for example: Branson, Miller and Whitman, and Stevens, et al..

are expressed as shares of the annual increase in U.S. private net worth. The variable for the rate of gross fixed capital formation (EURGFCF%) is expressed as a decimal. The dummy variable for capital controls (CONT) was set at zero from 1950 through 1963, and at one from 1964 through 1970.

B. RESULTS OF EMPIRICAL TESTS

The results of the basic model are given below, with t-values in parentheses:

$$(1) \quad \text{PI/NW} = - .026 + .142 \text{PI}_{.1}/\text{NW} + .152 \text{EURGFCF\%} - .009 \text{CONT}$$

$$\quad \quad \quad (2.359) \quad (0.747) \quad \quad \quad (2.647) \quad \quad \quad (3.579)$$

adjusted R²: .463

D-W d-statistic: 2.030

The coefficients on the capital control variable and the rate of gross fixed capital formation have the expected signs and are significant at about the 1% level. The coefficient for lagged portfolio investment was not significant.

The presence of the lagged value of the dependent variable in the equation poses some concern in interpreting the model results because it technically violates the OLS assumption of non-stochastic regressors.

However, a lagged dependent variable may still be considered to be predetermined, in that, while it may be correlated with past disturbances, it is not correlated with the disturbance term in the equation in which it appears as a regressor. In this case, the OLS estimator is biased, but it can be shown to be consistent and asymptotically normally distributed. Therefore, OLS may be properly used to estimate a model with a lagged dependent variable, as long as the disturbance terms are serially uncorrelated.⁹

The Durbin-Watson d-statistic, the most common test of serial correlation, is not valid in models which contain a lagged value of the dependent variable, however, because the value of "d" tends to be biased toward 2, the value which indicates absence of autocorrelation. Durbin developed an alternate test to use in such cases, the "h" statistic which is asymptotically normally distributed in large samples.¹⁰ When the h-statistic was computed for equation (1), the hypothesis of first-order autocorrelation may be rejected. This result must be treated with some caution since the sample size in this study (21) is relatively small. Studies evaluating the h-statistic have found that the power of the test in finite samples can be quite low, and its value in small samples may be very different from its asymptotic value.¹¹ Because this

9 J. Johnston, Econometric Methods, 3d ed. (New York: McGraw-Hill, 1984), 360-362; and George G. Judge, et al., Introduction to the Theory and Practice of Econometrics, 2d ed. (New York: John Wiley & Sons, 1988), 737-738.

10 Johnston, 318.

11 Judge, et al., 401.

study uses time series data, the presence of serial correlation would not be unexpected. However, plots of autocorrelations in the residuals and of the standardized residuals reveal no evidence of a pattern of serial correlation. This, combined with the value of the Durbin h-statistic test justify rejecting the hypothesis of serial correlation in the error terms, and the use of OLS estimation is assumed to be valid.

Because the lagged dependent variable is not significant, the model was run without a lagged dependent variable but with the independent variable for European capital formation lagged one period. In this equation, the constant term and the capital control variable remained nearly the same, but neither the current nor the lagged value of the capital formation variable was significant.

Since neither of the lagged variables proved to be significant, a version of the model was tested without any lagged variable (equation (2)). As would be expected, this yielded similar results for the other explanatory variables, with the coefficient on the capital formation variable slightly larger.

$$(2) \quad \text{PI/NW} = - .030 + .175 \text{ EURGFCF\%} - .009 \text{ CONT}$$

$$\quad \quad \quad (3.201) \quad (3.675) \quad \quad \quad (4.412)$$

adjusted R²: .476

D-W d-statistic: 1.838

It would appear, therefore, that the use of annual data covers complete adjustment to the long-run desired value of asset holdings as a result of annual changes in the explanatory variables. Subsequent versions of the model were run with and without the lagged dependent variable in order to determine whether changes in other variables might cause a varying rate of adjustment; however, the lagged value of portfolio investment was never significant, and the value of its coefficient varied very little among the equations. Because the lack of significance of past values of portfolio stock adjustment is actually a finding of the model, the lagged dependent variable is retained in all variations of the equation tested below. The major effect of including it is to slightly depress the value of the coefficient on European gross fixed capital formation.

An alternative version of the model was tested with the inclusion of an independent variable representing U.S. government spending in Western Europe. The level of U.S. government spending is expressed as a share of the annual increase in U.S. net worth ($USGOVT/NW$). As can be seen in equation (3), the level of U.S. government spending had virtually no impact on portfolio investment at all. The coefficients on the other variables remain virtually identical; the major difference is that the coefficient on the capital formation variable is now significant at only the 10% level, instead of below the 5% level.

$$(3) \quad \text{PI/NW} = - .026 + .142 \text{PI}_{-1}/\text{NW} + .155 \text{EURGFCF}\% - .009 \text{CONT}$$

$$\quad \quad \quad (1.390) \quad (0.720) \quad \quad \quad (1.731) \quad \quad \quad (3.442)$$

$$+ .006 \text{USGOVT/NW}$$

$$(0.041)$$

adjusted R²: .430

D-W d-statistic: 2.025

The lack of impact for government spending is not entirely unexpected, given that the highest levels of aid and loans were during and immediately after the period of the Marshall Plan (1948 through 1951), only part of which is included in these data. The years of greatest inter-government aid were also those in which prospects for economic growth in Western Europe were poor, and the region would not be expected to attract much private investment. (See Chapter III.)

A summary of the results of the three model specifications follows:

Table VII.1

SUMMARY OF MODEL RESULTS: Dependent Variable PI/NW
 =====
 Coefficient (T-value):
 =====
 Equation

 1 2 3
 =====

Variable ¹²	Equation		
	1	2	3
CONSTANT	-0.026 ** (2.359)	-0.030 ** (3.201)	-0.026 (1.390)
PI-1/NW	0.142 (0.747)		0.142 (0.720)
CONT	-0.009 ** (3.579)	-0.009 ** (4.412)	-0.009 ** (3.442)
EURGFCF%	0.152 ** (2.647)	0.175 ** (3.675)	0.155 * (1.731)
USGOVT/NW			0.006 (0.041)
Adjusted R ²	0.463	0.476	0.430
F-Ratio	6.755 **	10.102 **	4.769 **
D-W d-statistic	2.030	1.838	2.025

** Significant at .05 level (or below)

* Significant at .10 level

¹² See text for variable definitions.

A series of alternative versions of the basic model was tested next, using the various suggested proxies for risk associated with U.S. portfolio investment in Western Europe.

Exchange rates.

Variables representing the exchange rates for France (EXCHFRA), the United Kingdom (EXCHUK), Germany (EXCHGER), and the Netherlands (EXCHNETH), were each used in a separate equation. The exchange rates for France, Germany and the Netherlands are expressed as units of national currency per U.S. dollar; for the United Kingdom the exchange rate is the number of U.S. dollars per British pound.

As illustrated in Table VII.2A below, none of the exchange rate variables was significant. In the equations which include the French and British exchange rates, the coefficient on the European rate of capital formation is similar to what is in equation (1). However, in the equations which include the two currencies which were revalued, the German and the Dutch, the coefficient on capital formation is much smaller and not significant. This is probably because the rising value of these two currencies is correlated with economic growth trends in Europe. The failure of the exchange rate variables in general is probably due to the collinearity of exchange rate changes with other economic variables, which was, in fact, what they were supposed to reflect.

<u>Variable</u>	<u>Symbol</u>	<u>Expected Sign</u> (if represents risk)
Exchange rates vs. U.S. dollar:	EXCHFRA	negative
	EXCHUK	positive
	EXCHGER	
	EXCHNETH	

Table VII.2A

MODELS TESTED WITH ALTERNATE SPECIFICATIONS OF RISK				
Dependent Variable PI/NW				

Coefficient (T-value)				

Exchange Rates (vs. \$US):				

Variable	France	U.K.	Germany	Netherlands
-----	-----	-----	-----	-----
CONSTANT	-0.017 (0.326)	-0.015 (0.814)	-0.020 * (1.846)	0.056 (0.686)
PI ₋₁ /NW	0.151 (0.744)	0.161 (0.814)	0.088 (0.477)	0.156 (0.817)
CONT	-0.009 ** (3.351)	-0.009 ** (3.403)	-0.009 ** (3.925)	-0.009 ** (3.721)
EURGFCF _t	0.144 * (1.930)	0.150 ** (2.552)	0.043 (0.500)	0.089 (1.043)
-----	-----	-----	-----	-----
EXCHFRA	-0.002 (0.167)			
EXCHUK		-0.004 (0.536)		
EXCHGER			0.004 (1.619)	
EXCHNETH				-0.018 (1.011)
Adjusted R ²	0.431	0.440	0.510	0.464
F-Ratio	4.784 **	4.926 **	6.204 **	5.328 **
D-W d-statistic	2.031	2.043	2.113	2.000

** Significant at .05 level (or below)

* Significant at .10 level

Interest rates.

Three variables which express interest rate differentials between the United States and major Western European countries were used in three separate versions of the model: the difference between the U.S. and the French long-term government bond rate (DIFFFRA), the difference between the U.S. rate and an average of the French and United Kingdom rates (DIFF2), and the difference between the U.S. and an average of the French, U.K., and German rates (DIFF3). As can be seen in Table VII.2B below, the interest rate terms had almost no impact on the basic equation, with the coefficients on the other variables remaining about the same. This confirms that interest rates on bonds were not an important determinant of private U.S. investment in Western Europe, where most investments were in the form of corporate stocks, and implies that interest rate variability within Europe or relative to U.S. rates was not a factor related to U.S. investment. This result is also consistent with those of other studies which failed to obtain significant results for variables representing various specifications of national interest rates.

<u>Variable</u>	<u>Symbol</u>	<u>Expected Sign</u> (if represents risk)
Interest rate differentials:		
France	DIFFFRA	negative
France/U.K.	DIFF2	negative
France/U.K./Germany	DIFF3	negative

European government spending.

European government fiscal policy was represented by government consumption spending as a share of GDP in Europe (EURGOVT). This was also insignificant in explaining U.S. portfolio investment. (See Table VII.2B.) Government spending in Western European countries was not as large a share of GDP, nor did it rise as fast as the rate of gross fixed capital formation, so it is unlikely to have undermined investor confidence in expected returns on private investment. If government spending was seen to be supportive of economic growth--e.g., improving infrastructure, providing health and education services--it may even have reinforced investor confidence, in which case it may be highly correlated with the capital formation variable.

Restoration of currency convertibility/Formation of the EEC.

A dummy variable for the formation of the European Economic Community and the restoration of currency convertibility in Western Europe (CURCONV), which is equal to one in years from 1958 through 1970, and zero prior to 1958, was not significant; this is consistent with Miller and Whitman's results for a similar dummy variable. In addition, the coefficient on capital formation in that equation was smaller. (See Table VII.2B.) Since the dummy variable for the EEC/currency convertibility is actually a crude measure of the turning point in Western European post-war growth, it is probably highly correlated with the rate of capital formation.

<u>Variable</u>	<u>Symbol</u>	<u>Expected Sign</u> (if represents risk)
European government spending	EURGOVT	negative
Currency conversion/EEC formation (dummy variable)	CURCONV	positive

Table VII.2B

MODELS TESTED WITH ALTERNATE SPECIFICATIONS OF RISK
Dependent Variable PI/NW

----- Coefficient (T-value) -----					
Interest Rate Differential:					
Variable	France	UK & France	UK, Fra., & Ger.	European Government Spending	EEC/ Currency Convert.
-----	-----	-----	-----	-----	-----
CONSTANT	-0.021 (0.841)	-0.026 (1.637)	-0.023 (1.659)	-0.028 (1.017)	-0.016 (1.025)
PI ₋₁ /NW	0.138 (0.701)	0.143 (0.717)	0.130 (0.645)	0.147 (0.718)	0.083 (0.407)
CONT	-0.009 ** (3.435)	-0.009 ** (3.429)	-0.009 ** (3.484)	-0.009 ** (3.091)	-0.009 ** (3.646)
EURGFCF%	0.134 (1.202)	0.153 ** (2.143)	0.145 ** (2.243)	0.151 ** (2.462)	0.097 (1.143)
-----	-----	-----	-----	-----	-----
DIFFFRA	0.000 † (0.195)				
DIFF2		0.000 † (0.022)			
DIFF3			0.000 † (0.262)		
EURGOVT				0.016 (0.079)	
CURCONV					0.003 (0.885)
Adjusted R ²	0.431	0.430	0.432	0.430	0.456
F-Ratio	4.789 **	4.768 **	4.806 **	4.772 **	5.197 **
D-W d-statistic	2.028	2.031	2.011	2.025	2.111

** Significant at .05 level (or below)

* Significant at .10 level

+ Less than 0.0005

C. CONCLUSIONS

The major conclusions to be drawn from the results of these tests are as follows:

The rate of gross fixed capital formation in Western Europe had a strong, positive impact on U.S. portfolio investment which was consistent across almost all specifications of the model. This validates its use as a rate of return measure. The rate of capital formation is also clearly a more appropriate indicator of potential return than interest rates where investment primarily took the form of purchases of corporate stock, for which long-term capital gains and/or international diversification were important objectives of investment.

The multiplier effect for the rate of European capital formation, based on equation (1), can be estimated as follows. The impact on the change in stock of European assets as a share of the change in U.S. private net worth (PI/NW) of each full share point change (expressed as a decimal) in the rate of European gross fixed capital formation is .152. Therefore, each increase in the capital formation rate, in increments of .01, would raise the share of European assets by 1.5%. To obtain the impact on the actual volume of portfolio investment for a given year, this value would be multiplied by the increase in U.S. net worth for that year ($PI/NW * NW = PI$). For example, if the rate of increase in U.S. private net worth were \$100 billion, the impact of the rate of European capital formation derived from equation (1) would be about \$1.5 billion. After 1964, when U.S. capital controls were in

effect, annual increments to U.S. net worth ranged from \$118 to \$218 billion, averaging about \$170 billion. An increase in the rate of European capital formation of .01, therefore, could cause an average increase of \$2.6 billion in the volume of investment (with other influences remaining unchanged).

The effect of U.S. capital controls was also consistent across all specifications of the model. The controls had a strong, negative impact, accounting for almost a 1% loss in the share of the increase in U.S. net worth allocated to portfolio assets held in Western Europe. Since the total share of European portfolio assets in the annual growth in U.S. private net worth was never more than about 1.5%, this would be tantamount to eliminating the acquisition of financial assets in Western Europe, which was, in fact, the purpose of the Interest Equalization Tax and the foreign credit restraint program.

A crude estimate of the share and volume of the increase in Western European assets, in the absence of the IET, is calculated in Table VII.3 and illustrated in Graph VII.1. As can be seen, it suggests that U.S. portfolio investment in Western Europe could have grown dramatically in the absence of controls.¹³ There are two main forces behind this rate of growth: the rate of growth in European gross fixed

13 The effect of capital controls should properly be applied to flows of portfolio claims, and not the additions to stocks, as it is here, since the latter includes changes in value not subject to control, such as price or currency changes. However, in practice, the size of these other changes was relatively small compared to the changes in portfolio holdings due to capital outflows; annual changes in stocks and portfolio outflows are closely correlated.

capital formation, which was at its peak during the middle and late 1960s, and the rate of increase in U.S. private sector net worth which was also relatively high during this period. The size of the projected level of investment in the absence of controls is consistent with what actually took place during these years. The severity of the IET, combined with the limits on direct investment imposed through the VFCR, demonstrates that the U.S. government had grave concerns regarding the potential volume of capital outflows to Western Europe. (It was the volume of capital outflows, not the share of U.S. net worth, which was of concern to policymakers.) In addition, the continued demand by Europeans for outside sources of funds is evidenced in the rapid development of the Euro-bond market following the enactment of U.S. capital controls.

The estimate predicts a sharp rise in the level of investment in 1968. This reflects both an unusually large increase in U.S. private net worth as well as the influence of pull forces in Europe; even under the influence of the capital controls, there had been an increase in securities holdings in Western Europe during that year. In order to test whether the effect of the capital control programs on portfolio investment changed beginning in 1968, equation (1) was re-run with two dummy variables for capital controls: the first equal to one from 1964 through 1967, and zero otherwise; the second equal to one from 1968 through 1970, and zero otherwise. The coefficients were nearly identical to each other and to the coefficient for the original dummy variable, $-.009$ for the earlier period, $-.008$ for the later period, and

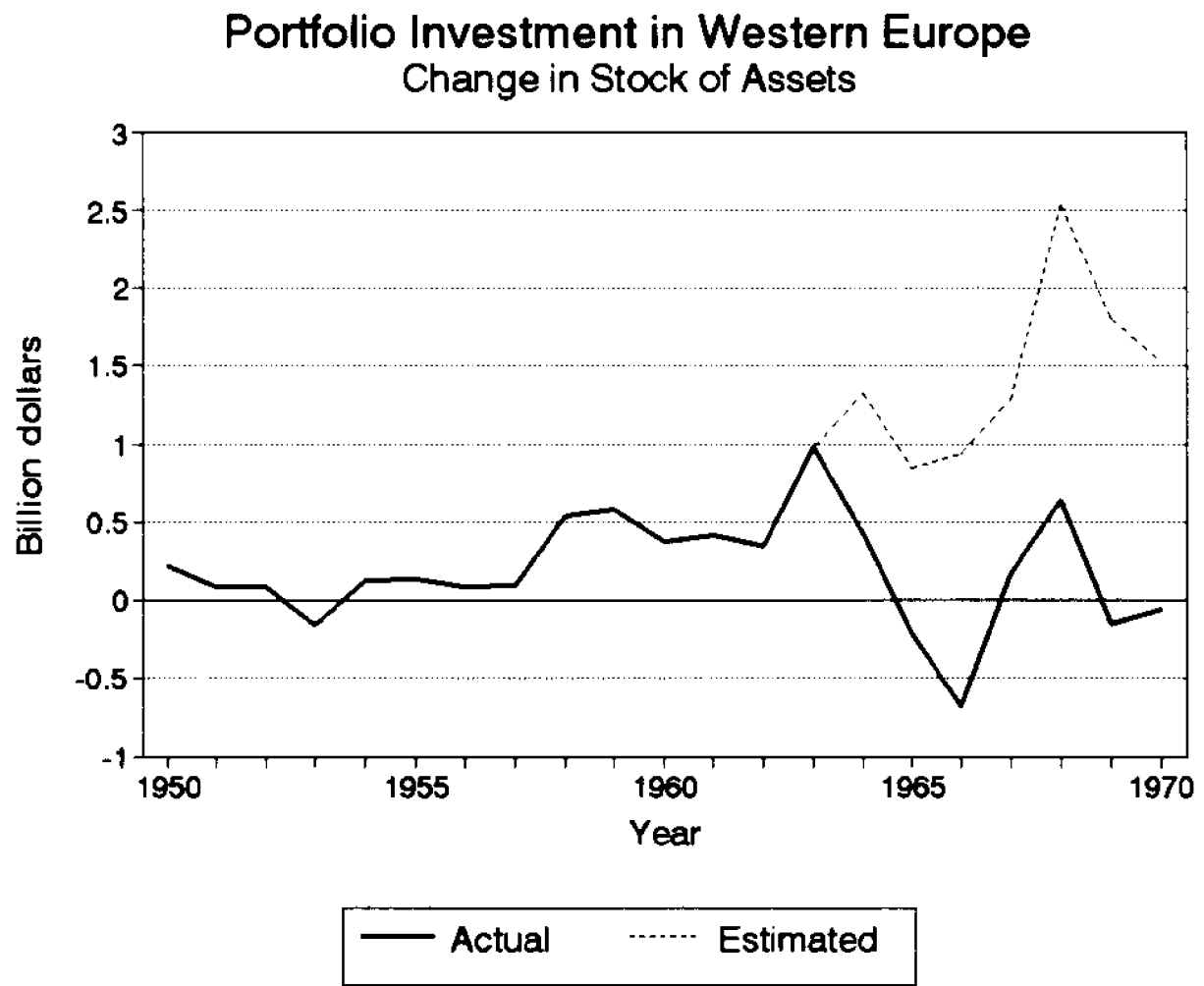
-.009 for the combined period. Therefore, the spike in portfolio investment position observed in 1968 is assumed to be due to forces motivating investment and not to a softening of the effect of capital controls.

Table VII.3

U.S. PORTFOLIO INVESTMENT POSITION IN WESTERN EUROPE ACTUAL VS. ESTIMATED					
ACTUAL:			ESTIMATE:		
Year	Annual Change in Stock (billion dollars)	Share of Change in U.S. Net Worth *****	Change in Stock w/o Controls		Change in U.S. Net Worth (billion dollars)
			Position ----- (billion dollars)	Share ----- *****	
1950	0.209	0.002			110.850
1951	0.077	0.001			95.172
1952	0.078	0.002			49.379
1953	-0.164	-0.004			44.043
1954	0.126	0.003			45.196
1955	0.133	0.002			86.898
1956	0.081	0.001			110.366
1957	0.091	0.001			73.420
1958	0.539	0.010			55.312
1959	0.574	0.009			66.530
1960	0.371	0.006			58.984
1961	0.408	0.008			53.179
1962	0.344	0.005			64.479
1963	0.974	0.015			64.754
1964	0.416	0.004	1.323	0.013	100.819
1965	-0.217	-0.002	0.843	0.007	117.724
1966	-0.688	-0.004	0.929	0.005	179.671
1967	0.173	0.001	1.283	0.010	123.324
1968	0.644	0.003	2.532	0.012	209.800
1969	-0.152	-0.001	1.808	0.008	217.749
1970	-0.061	-0.000	1.531	0.009	176.886

Source: Balance of Payments, Statistical Supp. (1963): T83
Survey of Current Business: 8/1963: T9; 8/1964: T12;
9/1965: T15; 9/1966: T14; 10/1968: T1; 10/1969, 1970: T2;
10/1971, 1972: T3
Federal Reserve: Balance Sheets for the U.S. Economy, 1945-90

GRAPH VII.1
(Source: Table VII.3)



The lack of significance of both government spending variables, U.S. spending in Western Europe and domestic spending by European governments, and the dummy variable for EEC formation and currency convertibility, implies that economic factors, such as the rate of capital formation, were far more powerful determinants of investment flows than political forces.

Based on these results, then, equation (1) was felt to be a convincing, if incomplete, explanation of the determinants of U.S. portfolio investment in Western Europe during the Bretton Woods period.¹⁴ Attempts to identify variables for rate of return and risk superior to those in equation (1) were not successful. Other measures of investment yield in Western Europe, such as the growth rate or level of GDP, and the level of capital formation were not significant, most likely due to their high correlation with similar measures for the United States. Interest rates in the United States, the long-term government bond rate and corporate bond rates, were not significant, nor was the performance of the U.S. stock market.

The remaining explanation for U.S. portfolio investment in Western Europe may lie in two factors related to the risk attributes of investment in Europe for which adequate quantitative proxies were not found. One factor is the effect of the generally more cautious investment climate brought about by the experience of the 1930s

14 Its coefficient of determination is less than .5, which, although not in itself a reason to reject the model, is not impressive for time series data.

defaults. Memory of past defaults may have depressed investment during the early post-World War II years, and the regulatory changes in U.S. capital markets made it more difficult for Europeans to raise funds here or for U.S. financial firms to market foreign investments.

The other factor concerns the misalignment of exchange rates that caused concern among monetary authorities and aroused some speculation in foreign exchange and gold markets during the 1960s. Evidence from this test which indicates some correlation between European growth rates and exchange rate changes, implies that if parity changes were perceived as supportive of investment, then a lack of change under conditions of imbalance might also influence patterns of investment. (The direction of influence is not always clear, however; if the dollar is perceived to be over-valued, Americans might be more likely to want foreign assets, but Europeans might not be as likely to want dollars.) The capital controls, themselves, were an attempt to compensate for exchange rate misalignment.

However, the major inference from this study is that the primary motivation for investors was the growth potential of the Western European post-war economies relative to that of the United States, and that factors such as past defaults, exchange risk and political considerations, although clearly operative, were secondary. Certainly, post-World War II experience shows that American investors, both institutions and individuals, are willing to undertake foreign investment, especially in growing or developing economies, despite current or past risk associations.

VIII. SUMMARY AND CONCLUSIONS

The various hypotheses proposed in Chapter V as determinants of portfolio investment in Western Europe may be evaluated in light of quantitative and qualitative analysis of the data, the results of empirical testing, and historical evidence:

i) Portfolio investment in Western Europe was driven primarily by expectations for economic growth in the region. During the post-World War II period, European countries experienced high rates of growth in output and productivity, while growth rates in the United States were comparatively slower. The most outstanding feature of European economic performance was the share of gross fixed capital formation in GDP; this variable had a consistently strong, positive impact on the level of U.S. investment, accounting for a large part of the addition to the stock of European assets.

The high rate of capital formation in Western Europe, along with the lack of capital mobility within the continent, created a strong demand for outside capital. In Europe, capital markets were generally closed to foreign investors and borrowers, and there was a lack of integration among the various national markets. Demand for borrowing by

Europeans was motivated by the greater ease and lower cost of raising funds in New York compared with the European capital markets.

Although long-term interest rates were generally higher in Western Europe than in the U.S. during most of the period, interest rates were not significant in determining the level of long-term investment in Europe. Investment was more likely driven by expected capital gains, and the desire for international diversification of assets.

There were also a number of economic and political factors that were supportive of investment in Western Europe during the Bretton Woods period:

- Western Europe had a close relationship with the United States: There were social, political and economic ties between the two regions, European governments were generally friendly to the United States, and Western Europe had strategic importance to the U.S., both economically, as a market for its products; and politically, as an ally against the Soviet bloc.

- Western European governments followed policies supportive of business and investment.

- Investment in Western Europe often served as a conduit to the former colonies and dependencies of the European countries, which were also developing or industrializing regions.

- The United States had significant direct investment stakes in Western Europe, often in the same industries or countries which received portfolio investment.

ii) The other major determinant of portfolio investment in Western Europe was the negative impact of the capital control programs imposed by the United States during the 1960s. As the currency at the center of the prevailing international monetary system, it was believed that the U.S. dollar could not easily be devalued. The U.S., however, had come to be in imbalance with the rest of the world in terms of economic performance and had a growing balance of payments deficit, attributed to the long-term capital account, and a steady loss of gold reserves which threatened dollar-gold convertibility. Two sets of capital controls were imposed, the Interest Equalization Tax and the Voluntary Foreign Credit Restraint Program, in an effort to check the balance of payments deficit. Specifically targeted were the Western European countries which were believed to be responsible for the largest part of the deficit, since dollar outflows were accumulated there as reserves and not returned through trade or other international exchange. For a short period of time, the controls succeeded in curtailing new financial capital outflows to Western Europe. The long-term capital account briefly improved, but the overall balance on current account and long-term capital continued to worsen.

The controls proved to be a short-term solution as U.S. investors and Europeans seeking outside capital found alternate channels for investment. After the passage of the IET, bank loans were substituted for securities. When bank loans were themselves restricted under the VFCR, Europeans turned to the Euro-bond market for borrowing. By 1971,

the exchange rate system collapsed, and U.S. capital outflows increased sharply; the controls were lifted in 1974.

There is evidence that, in the absence of controls, outflows to Western Europe would have increased rapidly due to the effect of European growth and investment rates and the increase in U.S. net worth.

iii) United States investment in Western Europe was driven more by economic than by political forces: variables related to government spending policies and other political factors were not significant.

- U.S. government spending in Western Europe to aid war reconstruction did not crowd out private U.S. funds, possibly because the bulk of the inter-governmental spending was at a time when the European economies were still weak.

- European government spending did not appear to cause fears of inflation or interference in the economy; in any case, rates of government consumption, as a share of GDP, were lower and grew more slowly than gross fixed capital formation in Europe.

- The formation of the European Economic Community and restoration of currency convertibility in the major European countries did not seem to influence patterns of investment.

iv) Although risk factors in investing in Western Europe during this period were not successfully quantified in a form independent of the rate of return, evidence from the empirical testing and historical events point to two risk factors which probably influenced investors:

- The widespread bond defaults of the 1930s may have created a more cautious attitude toward foreign portfolio investment during the Bretton Woods period. This could have depressed the overall level of portfolio investment in Western Europe by contributing to a reluctance to invest there during the early post-war years (although the weak economic prospects for Europe at this time would have been at least as strong a deterrent to investment). Memories of government bond defaults most likely influenced the form of investment by leading Americans in the post-war period to invest more heavily in common stocks or dollar-denominated bonds. In addition, the regulatory restrictions imposed as a result of the collapse of domestic and foreign capital markets, might have made it more difficult for many Europeans to borrow or to sell equities on the U.S. capital markets.

- Concerns regarding misalignment of exchange rates may also have influenced international capital flows. Underlying disequilibrium resulting from differences in economic performance and an imbalance in international payments, especially between the United States and Western Europe, may have been perceived by the market, even though actual exchange rate realignment was avoided by governments in both the U.S. and Europe. Political considerations which precluded a devaluation of the dollar in the face of a fundamental imbalance with the European economies, led to a de facto devaluation for capital transactions in the form of capital controls. In addition, by attempting to keep domestic credit conditions separate from external capital flows, governments--in Western Europe as well as the United States--were effectively departing

from true convertibility of their domestic currencies at the fixed par value.

Problems concerning the U.S. dollar's role as the primary reserve currency and the numeraire of the international monetary system, which led to the collapse of the Bretton Woods monetary system, did not lead to a loss of confidence in the dollar in the international capital markets, where trading in dollar bonds and credits in the Euro-bond market grew explosively while U.S. controls were in effect.

The construction of the model itself yielded insights into both the determinants of investment and the application of the portfolio balance model to international investment:

- i) A rate of return measure other than interest rates, the rate of gross fixed capital formation, was used and found to be significant in nearly all specifications of the model. This proxy for rate of return was chosen because it was especially relevant to the circumstances in the region receiving investment.
- ii) The attempts to identify an independent proxy for risk, although not successful, provided some understanding of the probable risk/return factors that motivated U.S. investors in Europe during this period. Experiments with variables for exchange rate changes, interest rate differentials and political factors in Europe benefited the analysis of the more significant variables.

iii) The results of the basic model used were quite robust under various alternative specifications, lending credibility to the impact of the capital formation and capital control variables. Where comparable measures were taken, the results of these tests are also consistent with results obtained by other researchers.

APPENDIX

CONTENTS

- A. COUNTRY GROUPS
- B. DATA SOURCES
- C. TABLES
 - A.1 Private Long-Term Capital Flows: Historical Summary
 - A.2 U.S. Private Long-Term Capital Flows:
Western Europe (excluding U.K.)/United Kingdom
 - A.3 International Investment Position of the U.S.:
All Areas/Western Europe Share of Total
 - A.4 U.S. Government Capital Transfers: Non-Military
 - A.5 Long-Term Claims on Foreigners Reported by Banks (by Region)
 - A.6 United States: Key Economic Data
 - A.7 United States Private Sector Net Worth
International Investment Position: Share of Net Worth
 - A.8 Western Europe: Key Economic Data
 - A.9 Comparison of Growth Trends:
United States and Major European Countries
 - A.10 Consumer Prices: Percent Change vs. Previous Year
 - A.11 Exchange Rates vs. U.S. Dollar
 - A.12 U.S. Stock Market Prices and Yields
 - A.13 Stock Yields: United States/Germany
 - A.14 Data Input for Models

A. COUNTRY GROUPSWESTERN EUROPE / OECD EUROPE

Austria
Belgium
Denmark
Finland
France
Germany (Federal Republic of Germany)
Greece
Iceland
Ireland
Italy
Luxembourg
Netherlands
Norway
Portugal
Spain
Sweden
Switzerland
Turkey
United Kingdom

Investment data may include:

Bank for International Settlements (BIS)
European Coal and Steel Community
European Payments Union (EPU) (through 1958)
European Productivity Agency
Organization for European Economic Cooperation (OEEC) (through 1961)

EUROPEAN ECONOMIC COMMUNITY (through 1972)

Belgium
France
Germany
Italy
Luxembourg
Netherlands

COUNTRY GROUPS (continued)

OTHER EUROPE

Albania
Bulgaria
Czechoslovakia
Estonia
Germany (German Democratic Republic)
Hungary
Latvia
Lithuania
Poland
Romania
Union of Soviet Socialist Republics (USSR)
Yugoslavia¹

1 Yugoslavia not included in OECD Europe.

B. DATA SOURCES

The principal sources of data on U.S. foreign investment flows and stocks of foreign assets are the publications of the U.S. Department of Commerce: the monthly periodical, Survey of Current Business, for data beginning in 1960; and the Balance of Payments, Statistical Supplement to the Survey, published in 1963 (rev. ed.), for data from 1946 through 1959. For data prior to 1946 (as well as other economic data), the Historical Statistics of the United States (1976), which summarizes the data published in the Survey, was used. The Treasury Bulletin (U.S. Department of Treasury) was the source for information on bank claims by country for all years, used in conjunction with the Survey of Current Business.

Other variables for the United States were taken from the Federal Reserve Board publications: Banking and Monetary Statistics, 1945-1970, for data on stock market yields; and Balance Sheets for the U.S. Economy, 1945-90, for private sector net worth.

Gross domestic product (GDP) and gross fixed capital formation data for the United States and the Western European countries are from the OECD (Organization for Economic Cooperation and Development) National Accounts Statistics, a source which could provide consistent information for all countries covered here. (United States GNP for tables which include years prior to 1946 are from the Historical Statistics.) Interest rates on long-term government bonds and exchange rates between

the U.S. dollar and European currencies come from the International Monetary Fund, International Financial Statistics Yearbook.

In many cases, most notably in using the Survey of Current Business, the organization or aggregation of the published data changed over time, reflecting the current interests of government or the business community. Data were also revised up to several years following the reporting period; occasionally, these revisions were significant (in percentage terms). In order to obtain a consistent data set at the level of detail necessary for this study, data for individual years or groups of years often had to be recombined, sometimes taking data from several different tables. Every effort was made to obtain the latest revised figure for each year. In some cases, a compromise had to be made between the latest revision and the level of detail; however, where an "interim revision" was used, it was felt, based on observation of other years or data points, that any error was probably small. This situation also occurred to some extent in using the National Accounts Statistics and the Treasury Bulletin.

In addition, all data on capital flows from the Survey of Current Business had to be taken from publications prior to 1975. In 1975, the definitions of direct and portfolio investment were changed slightly (see Chapter I), and the sample of firms used to estimate direct investment was revised, along with some other adjustments in reporting foreign investment. Consequently, data in historical tables published after that date in the Survey do not always match those in earlier issues.

C. TABLES

Table A.1 (p.1)

PRIVATE LONG-TERM CAPITAL FLOWS: HISTORICAL SUMMARY							
Year	LT Capital Flows			LT Capital Share of GNP			GNP:
	Total	Direct	Port- folio	Total	Direct	Port- folio	Current Prices
	(million dollars)						(billion dollars)
1900	143	56	87	0.0076	0.0030	0.0047	18.7
1901	212	89	123	0.0102	0.0043	0.0059	20.7
1902	105	65	40	0.0049	0.0030	0.0019	21.6
1903	41	81	-40	0.0018	0.0035	-0.0017	22.9
1904	69	80	-11	0.0030	0.0035	-0.0005	22.9
1905	139	46	93	0.0055	0.0018	0.0037	25.1
1906	46	92	-46	0.0016	0.0032	-0.0016	28.7
1907	65	89	-24	0.0021	0.0029	-0.0008	30.4
1908	135	48	87	0.0049	0.0017	0.0031	27.7
1909	112	88	24	0.0034	0.0026	0.0007	33.4
1910	90	124	-34	0.0025	0.0035	-0.0010	35.3
1911	123	95	28	0.0034	0.0027	0.0008	35.8
1912	209	139	70	0.0053	0.0035	0.0018	39.4
1913	165	138	27	0.0042	0.0035	0.0007	39.6
1914	90	76	14	0.0023	0.0020	0.0004	38.6
1915	790	0	790	0.0198	0.0000	0.0198	40.0
1916	1064	0	1064	0.0220	0.0000	0.0220	48.3
1917	594	0	594	0.0098	0.0000	0.0098	60.4
1918	396	0	396	0.0052	0.0000	0.0052	76.4
1919	169	94	75	0.0020	0.0011	0.0009	84.0

Source: Historical Statistics of the United States (1976),
Series U19-20, F1

Table A.1 (p.2)

PRIVATE LONG-TERM CAPITAL FLOWS: HISTORICAL SUMMARY

Year	LT Capital Flows			LT Capital Share of GNP			GNP:
	Total	Direct	Port- folio	Total	Direct	Port- folio	Current Prices
	(million dollars)						(billion dollars)
1920	554	154	400	0.0061	0.0017	0.0044	91.5
1921	588	111	477	0.0084	0.0016	0.0069	69.6
1922	822	153	669	0.0111	0.0021	0.0090	74.1
1923	383	148	235	0.0045	0.0017	0.0028	85.1
1924	885	182	703	0.0104	0.0021	0.0083	84.7
1925	871	268	603	0.0094	0.0029	0.0065	93.1
1926	821	351	470	0.0085	0.0036	0.0048	97.0
1927	987	351	636	0.0104	0.0037	0.0067	94.9
1928	1310	558	752	0.0135	0.0058	0.0078	97.0
1929	636	602	34	0.0062	0.0058	0.0003	103.1
1930	364	294	70	0.0040	0.0033	0.0008	90.4
1931	-128	222	-350	-0.0017	0.0029	-0.0046	75.8
1932	-251	16	-267	-0.0043	0.0003	-0.0046	58.0
1933	48	-32	80	0.0009	-0.0006	0.0014	55.6
1934	-185	17	-202	-0.0028	0.0003	-0.0031	65.1
1935	-116	-34	-82	-0.0016	-0.0005	-0.0011	72.2
1936	-177	12	-189	-0.0021	0.0001	-0.0023	82.5
1937	-276	-35	-241	-0.0031	-0.0004	-0.0027	90.4
1938	-40	-16	-24	-0.0005	-0.0002	-0.0003	84.7
1939	-113	-9	-104	-0.0012	-0.0001	-0.0011	90.5
1940	-68	-32	-36	-0.0007	-0.0003	-0.0004	99.7
1941	-66	-47	-19	-0.0005	-0.0004	-0.0002	124.5
1942	65	-19	84	0.0004	-0.0001	0.0005	157.9
1943	-40	-98	58	-0.0002	-0.0005	0.0003	191.6
1944	-9	-71	62	-0.0000	-0.0003	0.0003	210.1
1945	454	100	354	0.0021	0.0005	0.0017	211.9

Source: Historical Statistics of the United States (1976)
Series U19-20, F1

Table A.1 (p.3)

PRIVATE LONG-TERM CAPITAL FLOWS: HISTORICAL SUMMARY							
Year	LT Capital Flows			LT Capital Share of GNP			GNP:
	Total	Direct	Port- folio	Total	Direct	Port- folio	Current Prices
	(million dollars)						(billion dollars)
1946	103	230	-127	0.0005	0.0011	-0.0006	208.5
1947	798	749	49	0.0035	0.0032	0.0002	231.3
1948	790	721	69	0.0031	0.0028	0.0003	257.6
1949	740	660	80	0.0029	0.0026	0.0003	256.5
1950	1116	621	495	0.0039	0.0022	0.0017	284.8
1951	945	508	437	0.0029	0.0015	0.0013	328.4
1952	1066	852	214	0.0031	0.0025	0.0006	345.5
1953	550	735	-185	0.0015	0.0020	-0.0005	364.6
1954	987	667	320	0.0027	0.0018	0.0009	364.8
1955	1064	823	241	0.0027	0.0021	0.0006	398.0
1956	2554	1951	603	0.0061	0.0047	0.0014	419.2
1957	3301	2442	859	0.0075	0.0055	0.0019	441.1
1958	2625	1181	1444	0.0059	0.0026	0.0032	447.3
1959	2298	1372	926	0.0048	0.0028	0.0019	483.7
1960	2530	1674	856	0.0050	0.0033	0.0017	503.7
1961	2624	1599	1025	0.0050	0.0031	0.0020	520.1
1962	2881	1654	1227	0.0051	0.0030	0.0022	560.3
1963	3674	1976	1698	0.0063	0.0033	0.0029	590.5
1964	4431	2328	2103	0.0070	0.0037	0.0033	632.4
1965	4547	3468	1079	0.0066	0.0051	0.0016	684.9
1966	3917	3661	256	0.0052	0.0049	0.0003	749.9
1967	4429	3137	1292	0.0056	0.0040	0.0016	793.9
1968	4297	3209	1088	0.0050	0.0037	0.0013	864.2
1969	4873	3271	1602	0.0052	0.0035	0.0017	930.3
1970	5783	4410	1373	0.0059	0.0045	0.0014	977.1
1971	6689	4943	1746	0.0063	0.0047	0.0017	1056.8
1972	5382	3214	2168	0.0046	0.0028	0.0019	1164.1
1973	5195	3195	2000	0.0040	0.0025	0.0015	1297.3
1974	4786	1275	3511	0.0034	0.0009	0.0025	1399.8
1975	15166	6196	8970	0.0100	0.0041	0.0059	1518.3
1976	15542	4253	11289	0.0092	0.0025	0.0067	1687.7
1977	11804	5494	6310	0.0063	0.0029	0.0034	1881.7

Source: Historical Statistics of the United States (1976), Series F1
Survey of Current Business, June issues:
 1968, 1970: T1 (33-37, 39); 1971, 1973, 1974: T2 (39-41, 44);
 1981: T1 (49, 51, 52, 54)

Table A.2

U.S. PRIVATE LONG-TERM CAPITAL FLOWS						
WESTERN EUROPE, EXCL. U.K.			UNITED KINGDOM			
Year	Total	Direct	Portfolio	Total	Direct	Portfolio
	(million dollars)			(million dollars)		
1946	-11	21	-32	21	1	20
1947	105	30	75	30	13	17
1948	42	38	4	40	24	16
1949	11	8	3	99	14	85
1950	217	68	149	92	49	43
1951	12	43	-31	93	21	72
1952	25	13	12	59	-19	78
1953	-95	51	-146	-37	-3	-34
1954	-9	31	-40	16	14	2
1955	105	98	7	72	32	40
1956	215	206	9	387	282	105
1957	123	116	7	227	171	56
1958	329	127	202	37	63	-26
1959	549	294	255	82	190	-108
1960	544	373	171	551	589	-38
1961	857	528	329	242	196	46
1962	979	696	283	151	170	-19
1963	1416	800	616	258	124	134
1964	1647	1183	464	241	206	35
1965	902	1155	-253	368	324	44
1966	952	1432	-480	405	403	2
1967	710	1127	-417	405	331	74
1968	376	638	-262	559	363	196
1969	652	893	-241	470	316	154
1970	1418	1269	149	818	645	173
1971	1527	1485	42	811	685	126

Source: Balance of Payments, Statistical Supp. (1963): T5b,5c (32-35)
Survey of Current Business, June issues:
1968,1970; T8 (33-37,39); 1971,1972,1974: T9 (39-41,44)

Table A.3

INTERNATIONAL INVESTMENT POSITION OF THE U.S.								
Private Long-term Portfolio Investment								
Year	ALL AREAS				WESTERN EUROPE SHARE OF TOTAL			
	Total	Foreign Dollar Bonds	Other Foreign Secur. (*)	Bank/ Non-Bank Claims	Total	Foreign Dollar Bonds	Other Foreign Secur. (*)	Bank/ Non-Bank Claims
	(million dollars)							
1946	5036	1524	2572	940	0.24	0.05	0.25	0.53
1947	5080	1563	2482	1035	0.25	0.06	0.26	0.53
1948	5102	1658	2425	1019	0.24	0.05	0.26	0.53
1949	4937	1728	2073	1136	0.24	0.06	0.20	0.58
1950	5700	1692	2641	1367	0.24	0.05	0.15	0.64
1951	6206	2071	2674	1461	0.23	0.04	0.16	0.65
1952	6271	2244	2431	1596	0.24	0.04	0.16	0.66
1953	5930	2383	2048	1499	0.23	0.03	0.16	0.64
1954	6739	2720	2406	1613	0.22	0.06	0.19	0.54
1955	7355	2660	2821	1874	0.22	0.07	0.21	0.45
1956	7937	2863	3011	2063	0.21	0.06	0.19	0.46
1957	8354	3255	2653	2446	0.21	0.06	0.19	0.44
1958	10221	3931	3650	2640	0.23	0.06	0.27	0.42
1959	11377	4314	4189	2874	0.26	0.08	0.35	0.38
1960	12592	4941	4577	3074	0.26	0.07	0.39	0.36
1961	14339	5405	5602	3332	0.26	0.08	0.36	0.37
1962	15506	6348	5520	3638	0.26	0.08	0.39	0.36
1963	17644	7335	5964	4345	0.28	0.11	0.40	0.42
1964	20533	8218	6248	6067	0.26	0.09	0.34	0.42
1965	21570	9115	6098	6357	0.24	0.09	0.32	0.38
1966	21004	9513	5354	6137	0.21	0.08	0.31	0.34
1967	22214	9666	6351	6197	0.21	0.07	0.35	0.28
1968	24546	10565	7591	6390	0.22	0.06	0.40	0.26
1969	25266	10579	8086	6601	0.20	0.06	0.35	0.27
1970	26782	13160	6437	7185	0.19	0.04	0.40	0.28
1971	29552	14604	7069	7879	0.19	0.03	0.40	0.28

(*) Through 1969, includes foreign corporate stocks and some dollar obligations; 1970-71, includes foreign corporate stocks only.

Source: Balance of Payments, Statistical Supp. (1963): T81,83
Survey of Current Business: 8/1963: T9; 8/1964: T12;
 9/1965: T15; 9/1966: T14; 10/1968: T1; 10/1969, 1970: T2
 10/1971, 1972: T3

Table A.4

U.S. GOVERNMENT CAPITAL TRANSFERS NON-MILITARY						
Year	ALL AREAS			WESTERN EUROPE		
	Total (million dollars)	Grants	Loans	Total (million dollars)	Grants	Loans
1946	5617	2274	3343	2711	382	2329
1947	6302	1897	4405	4409	672	3737
1948	5449	3894	1555	4079	2866	1213
1949	5681	4997	684	4454	3951	503
1950	3898	3484	414	2955	2775	180
1951	3493	3035	458	2401	2317	84
1952	2807	1960	847	1906	1453	453
1953	2553	1837	716	1310	1138	172
1954	1953	1647	306	1123	1018	105
1955	2284	1901	383	881	807	74
1956	2278	1733	545	582	491	91
1957	2609	1616	993	685	317	368
1958	2792	1616	1176	553	317	236
1959	2684	1633	1051	471	311	160
1960	2877	1664	1213	473	241	232
1961	3792	1853	1939	530	254	276
1962	4044	1916	2128	503	216	287
1963	4121	1917	2204	450	147	303
1964	4270	1888	2382	549	80	469
1965	4271	1808	2463	516	79	437
1966	4423	1910	2513	607	42	565
1967	5443	1805	3638	695	36	659
1968	5431	1709	3722	643	38	605
1969	5138	1649	3489	571	35	536
1970	5032	1734	3298	410	29	381
1971	6224	2043	4181	536	30	506

Source: Balance of Payments, Statistical Supp. (1963): T4 (28,38)
Survey of Current Business, June issues:
1970: T1 (29,42); 1974: T2,9 (30,34)

Table A.5 (p.1)

LONG-TERM CLAIMS ON FOREIGNERS REPORTED BY BANKS								

Position at end of year								

	1945	1946	1947	1948	1949	1950	1951	1952

(million dollars)								
EUROPE (Total)	87.1	41.4	113.6	90.9	115.5	290.1	281.9	317.3
Canada	11.6	13.9	10.4	10.1	14.1	10.2	8.2	7.9
Latin America	76.6	76.8	98.3	86.6	82.0	73.1	80.3	73.5
Asia	--	--	5.3	0.1	5.2	12.0	7.0	8.8
Africa	nss	nss	nss	nss	nss	nss	nss	nss
Other Countries	0.3	8.6	--	--	--	5.0	26.5	32.9
TOTAL	175.6	140.7	227.5	187.7	216.7	390.4	403.9	440.5

nss Not shown separately

Source: Balance of Payments, Statistical Supp. (1963): T68
Treasury Bulletin, December issues: TCM-IV

Table A.5 (p.2)

LONG-TERM CLAIMS ON FOREIGNERS REPORTED BY BANKS								

Position at end of year								

	1953	1954	1955	1956	1957	1958	1959	1960
=====								
(million dollars)								
EUROPE (Total)	207.0	136.6	118.7	233.6	374.2	394.3	366.4	366.6
Canada	22.2	13.4	15.7	37.8	71.3	98.6	103.8	75.5
Latin America	61.8	169.9	410.3	478.5	594.8	657.6	784.7	910.5
Asia	9.2	93.5	100.5	76.9	87.4	105.2	116.3	134.1
Africa	nss	nss	nss	nss	nss	nss	nss	nss
Other Countries	24.6	27.5	29.2	38.1	47.4	106.3	171.8	211.6
TOTAL	324.9	441.2	674.3	864.9	1175.1	1362.0	1543.0	1698.3

nss Not shown separately

Source: Balance of Payments, Statistical Supp. (1963): T68
Treasury Bulletin, December issues: TCM-IV

Table A.5 (p.3)

LONG-TERM CLAIMS ON FOREIGNERS REPORTED BY BANKS					

Position at end of year					

	1961	1962	1963	1964	1965

(million dollars)					
EUROPE (Total)	492.9	577.6	1100.7	1719.6	1603.8
Canada	273.9	303.6	289.8	327.3	346.4
Latin America	931.3	886.0	1015.3	1275.3	1295.6
Asia	170.1	222.1	443.5	684.5	835.8
Africa	nss	nss	112.9	155.9	207.8
Other Countries	165.6	161.8	67.7	121.6	227.0
International and Regional	--	--	--	0.7	0.6
TOTAL	2033.8	2151.0	3029.8	4284.7	4516.9

nss Not shown separately

Note: On 12/31/64, claims were revised upward by
by \$313 million in anticipation of the VFCR
lending ceilings.

Source: Treasury Bulletin, December issues: TCM-IV

Table A.5 (p.4)

LONG-TERM CLAIMS ON FOREIGNERS REPORTED BY BANKS						

Position at end of year						

	1966	1967	1968	1969	1970	1971
=====						
(million dollars)						
Total EUROPE	1212	776	547	479	482	723
Canada	326	427	428	408	312	228
Latin America	1346	1556	1375	1329	1325	1458
Asia	734	629	738	656	663	829
Africa	229	233	204	162	127	181
Other Countries	332	301	273	215	164	240
International and Regional	1	3	2	2	1	5
TOTAL	4180	3925	3567	3250	3075	3664

Source: Treasury Bulletin, December issues: TCM-IV

Table A.6

UNITED STATES: KEY ECONOMIC DATA						
Year	GDP		CONSUMPTION		GROSS FIXED CAPITAL FORMATION	
	Current Prices	Deflator 1958=100	Private	Gov't (*)	Total	Private
(billion dollars)						
1950	288.7	80.2	192.0	30.8	54.7	47.0
1951	333.3	85.6	207.1	49.4	59.6	48.9
1952	350.2	87.5	217.1	65.0	59.6	49.0
1953	369.0	88.3	229.7	71.0	64.4	52.9
1954	368.6	89.6	235.8	63.7	66.4	54.3
1955	401.1	90.9	253.7	63.0	74.4	62.4
1956	422.6	94.0	266.0	65.7	80.0	66.3
1957	444.7	97.5	280.4	72.0	83.0	67.9
1958	450.7	100.0	289.5	78.6	79.8	63.4
1959	487.7	101.6	310.8	81.2	88.9	72.5
1960	505.2	103.3	324.9	83.7	89.6	73.0
1961	523.2	104.6	335.0	89.9	90.8	72.5
1962	563.4	105.8	355.2	98.4	98.8	79.2
1963	594.6	107.2	374.6	101.8	106.8	84.9
1964	635.5	108.8	400.5	105.7	115.8	91.7
1965	688.5	110.9	430.4	112.0	130.0	103.6
1966	753.5	113.9	465.1	129.7	140.6	111.6
1967	797.1	117.6	490.3	149.9	142.8	112.5
1968	870.2	122.3	536.9	166.9	157.6	125.5
1969	940.4	128.2	581.8	176.4	171.9	139.5
1970	988.6	135.2	621.7	186.9	174.2	141.0
1971	1073.1	142.1	672.2	199.8	193.9	158.8

(*) Excluding government investment

Sources: Historical Statistics of the United States (1976), Series F1-5
OECD, National Accounts Statistics

Table A.7

U.S. PRIVATE SECTOR NET WORTH INTERNATIONAL INVESTMENT POSITION: SHARE OF NET WORTH				
Year	U.S. Private Sector Net Worth		Foreign Investment Position Share of NW	Change in Investment Position Share of Chng in NW
	Year-end Outstanding	Annual Change		
	(billion dollars)			
1946	577.153	94.144	0.02	--
1947	682.731	105.578	0.02	0.01
1948	752.768	70.037	0.02	0.02
1949	784.189	31.421	0.02	0.03
1950	895.039	110.850	0.02	0.02
1951	990.211	95.172	0.02	0.02
1952	1039.590	49.379	0.02	0.04
1953	1083.633	44.043	0.02	0.03
1954	1128.829	45.196	0.02	0.05
1955	1215.727	86.898	0.02	0.03
1956	1326.093	110.366	0.02	0.03
1957	1399.513	73.420	0.02	0.05
1958	1454.825	55.312	0.03	0.07
1959	1521.355	66.530	0.03	0.05
1960	1580.339	58.984	0.03	0.06
1961	1633.518	53.179	0.03	0.08
1962	1697.997	64.479	0.03	0.06
1963	1762.751	64.754	0.03	0.09
1964	1863.570	100.819	0.03	0.07
1965	1981.294	117.724	0.04	0.06
1966	2160.965	179.671	0.04	0.02
1967	2284.289	123.324	0.04	0.05
1968	2494.089	209.800	0.04	0.04
1969	2711.838	217.749	0.04	0.03
1970	2888.724	176.886	0.04	0.05
1971	3122.954	234.230	0.04	0.05

Source: Federal Reserve: Balance Sheets for the U.S. Economy, 1945-90
Balance of Payments, Statistical Supp. (1963): T81,83
Survey of Current Business: 8/1963: T9; 8/1964: T12;
9/1965: T15; 9/1966: T14; 10/1968: T1; 10/1969,1970: T2
10/1971,1972: T3

Table A.8

WESTERN EUROPE: KEY ECONOMIC DATA								
EUROPE-OECD					EEC COUNTRIES			
Year	GDP	CONSUMPTION		GROSS FIXED CAP. FORM.	GDP	CONSUMPTION		GROSS FIXED CAP. FORM.
		Private	Gov't			Private	Gov't	
(billion US dollars)					(billion US dollars)			
1950	150.6	104.7	19.8	25.0	81.1	54.5	10.0	14.4
1951	179.0	120.9	24.3	30.3	97.3	63.9	12.6	17.6
1952	198.2	132.1	29.1	34.3	109.7	71.2	15.4	20.1
1953	210.3	139.8	30.7	37.1	116.7	76.0	16.1	21.7
1954	223.7	147.5	31.5	40.9	124.6	80.1	16.3	24.0
1955	244.9	160.0	33.0	46.8	137.0	86.7	17.1	28.1
1956	268.9	174.9	36.8	52.1	150.3	95.6	19.4	31.4
1957	285.3	184.3	39.0	56.3	160.7	101.4	20.7	34.1
1958	296.1	191.5	40.3	58.0	168.4	105.8	21.8	35.1
1959	304.1	194.7	42.2	61.0	172.6	106.8	22.7	37.0
1960	334.1	209.2	45.5	70.0	193.4	116.3	25.6	43.2
1961	367.5	228.2	50.8	80.5	214.8	128.7	28.9	50.0
1962	401.8	250.4	57.1	89.0	237.3	142.4	33.1	56.1
1963	439.1	275.1	63.9	97.7	260.8	157.9	37.9	62.0
1964	485.3	298.1	69.5	111.4	288.6	171.6	41.2	70.0
1965	527.7	323.4	77.0	119.3	312.7	185.8	45.5	73.7
1966	569.7	349.5	84.0	128.4	335.8	200.5	49.0	78.7
1967	605.0	371.8	91.4	134.4	356.5	214.3	52.6	81.1
1968	633.9	386.4	95.4	139.8	385.7	230.0	56.7	86.7
1969	699.0	421.9	104.5	155.4	427.9	252.8	62.8	97.8
1970	784.9	465.5	118.7	180.9	486.5	282.2	71.8	116.3
1971	890.4	527.1	141.0	206.6	553.0	320.5	86.7	133.4

Note: GDP in purchasers' values
All values in current prices, current exchange rates

Source: OECD, National Accounts (Main Aggregates)
(revised SNA in use after 1960)

Table A.9

COMPARISON OF GROWTH TRENDS:						

United States and Major European Countries						

AVERAGE ANNUAL GROWTH						

		UNITED STATES	UNITED KINGDOM	GERMANY	FRANCE	ITALY

GNP						

Years:						
1870-1913	(a)	4.3	2.1	2.8	1.6	1.4
1913-1929		3.1	0.8	0.4	1.7	1.8
1929-1950		2.9	1.6	1.9	0.0	1.0
1950-1969	(b)	3.9	2.7	6.8	5.3	5.6
PRODUCTIVITY						

Years:						
1870-1913	(c)	1.9	1.0	1.6	1.4	0.8
1913-1929		1.5	0.4	-0.2	2.0	1.5
1929-1950		1.7	1.1	1.2	0.3	1.0
1950-1969	(d)	2.3	2.2	5.3	5.2	5.6

(a) Data for U.S. begin in 1871

(b) Data for Italy begin in 1951

(c) Data for U.S. and Germany begin in 1871

(d) Data for France begin in 1954, for Italy begin in 1953

Source: Historical Statistics of the United States (1976), Series F10-16

Table A.10

CONSUMER PRICES				

Percent Change vs. Previous Year				

	UNITED STATES	UNITED KINGDOM	FRANCE	GERMANY

Year				
1951	8.1	9.9	17.6	7.8
1952	2.1	6.3	12.0	2.1
1953	0.8	1.6	-2.1	-1.9
1954	0.4	1.6	0.6	0.2
1955	-0.2	3.5	0.9	1.7
1956	1.4	4.3	4.2	2.5
1957	3.6	3.2	-0.6	2.2
1958	2.7	2.8	15.3	2.2
1959	0.9	0.6	5.7	0.9
1960	1.5	1.1	4.0	1.6
1961	1.1	2.7	2.5	2.1
1962	1.1	4.0	5.1	3.1
1963	1.2	2.0	5.3	3.0
1964	1.2	3.2	3.0	1.8
1965	1.7	4.6	2.7	3.8
1966	3.1	3.9	2.7	3.5
1967	2.6	2.7	2.8	1.6
1968	4.2	4.8	4.5	1.7
1969	5.4	5.4	6.2	1.8
1970	5.9	6.3	5.8	3.3
1971	4.3	9.4	5.5	5.3

Source: International Monetary Fund,
International Financial Statistics Yearbook 1981 (1951-1980),
series 64x

Table A.11

EXCHANGE RATE vs. U.S. DOLLAR						
Year	United Kingdom	Germany	France	Italy	Netherlands	Belgium
1950	2.7996	4.1950	3.5000	624.61	3.8092	50.231
1951	2.7996	4.1950	3.5000	625.00	3.8075	50.341
1952	2.7926	4.1950	3.5000	625.00	3.8001	50.293
1953	2.8127	4.1950	3.5000	625.00	3.7965	49.963
1954	2.8087	4.1950	3.5000	625.00	3.7906	50.054
1955	2.7913	4.2079	3.5000	625.00	3.8124	50.233
1956	2.7957	4.2042	3.5000	625.00	3.8295	49.921
1957	2.7935	4.2012	3.6164	625.00	3.8210	50.233
1958	2.8099	4.1919	4.2048	624.74	3.7851	49.890
1959	2.8089	4.1790	4.9043	621.09	3.7748	49.972
1960	2.8077	4.1704	4.9039	620.89	3.7718	49.866
1961	2.8023	4.0184	4.9052	621.09	3.6321	49.870
1962	2.8078	3.9978	4.9003	620.83	3.6032	49.769
1963	2.8003	3.9863	4.9003	621.60	3.6010	49.871
1964	2.7925	3.9748	4.9005	624.50	3.6068	49.753
1965	2.7962	3.9940	4.9012	624.90	3.6004	49.643
1966	2.7932	3.9985	4.9136	624.48	3.6193	49.835
1967	2.7466	3.9863	4.9200	624.13	3.6020	49.689
1968	2.3937	3.9920	4.9513	623.40	3.6198	49.936
1969	2.3903	3.9253	5.1991	627.32	3.6240	50.136
1970	2.3960	3.6465	5.5282	627.16	3.6166	49.656
1971	2.4441	3.4820	5.5118	618.36	3.4945	48.594

Note: United Kingdom: dollars per units of national currency;
all others, units of national currency per U.S. dollar.
All rates are annual averages.

Source: International Monetary Fund,
International Financial Statistics Yearbook 1980 (1950-1979),
series af

Table A.12 (p.1)

U.S. STOCK MARKET PRICES AND YIELDS			
Year	Standard & Poor's Stock Price Index (a) -----	Stock Yields (b)	
		Dividend/ Price Ratio -----	Earnings/ Price Ratio -----
1926	12.59	4.94	9.19
1927	15.34	4.76	6.29
1928	19.95	3.98	5.67
1929	26.02	3.47	7.51
1930	21.03	4.51	6.33
1931	13.66	6.15	7.51
1932	6.93	7.43	5.95
1933	8.96	4.21	4.36
1934	9.84	3.72	5.16
1935	10.60	3.82	7.23
1936	15.47	3.44	6.57
1937	15.41	4.86	8.25
1938	11.49	5.18	5.55
1939	12.06	4.05	7.34
1940	11.02	5.59	9.80
1941	9.82	6.82	12.14
1942	8.67	7.24	11.42
1943	11.50	4.93	7.82
1944	12.47	4.86	7.34
1945	15.16	4.17	6.39
1946	17.08	3.85	6.31
1947	15.17	4.93	10.69
1948	15.53	5.54	14.60
1949	15.23	6.59	15.12

(a) Average price movements of 500 common stocks
(90% of value of all common stocks on NYSE)
Aggregate market value of stocks expressed
as % of base period: 1941-43 = 10.

(b) Percent per annum

Source: Federal Reserve Board, Banking and Monetary
Statistics, 1941-1970: T12.16, 12.19

Table A.12 (p.2)

U.S. STOCK MARKET PRICES AND YIELDS			
Year	Standard & Poor's Stock Price Index (a)	Stock Yields (b)	
		Dividend/ Price Ratio	Earnings/ Price Ratio
1950	18.40	6.57	15.20
1951	22.34	6.13	10.89
1952	24.50	5.80	9.56
1953	24.73	5.80	10.36
1954	29.69	4.95	8.93
1955	40.49	4.08	8.72
1956	46.62	4.09	7.14
1957	44.38	4.35	7.78
1958	46.24	3.97	6.02
1959	57.38	3.23	5.92
1960	55.85	3.47	5.88
1961	66.27	2.98	4.76
1962	62.38	3.37	6.06
1963	69.87	3.17	5.68
1964	81.37	3.01	5.54
1965	88.17	3.00	5.87
1966	85.26	3.40	6.72
1967	91.93	3.20	5.71
1968	98.70	3.07	5.64
1969	97.84	3.24	6.08
1970	83.22	3.83	6.51

(a) Average price movements of 500 common stocks
(90% of value of all common stocks on NYSE)
Aggregate market value of stocks expressed
as % of base period: 1941-43 = 10.

(b) Percent per annum

Source: Federal Reserve Board, Banking and Monetary
Statistics, 1941-1970: T12.16. 12.19

Table A.13 (p.1)

STOCK YIELDS					
UNITED STATES			GERMANY		
Year	Dividend/Log Price Div/Price Ratio Ratio		Dividend Yield	Log Real Stock Price	Log Real Dividend
1926	0.049	-3.008	0.056	-0.927	-3.813
1927	0.048	-3.045	0.071	-0.596	-3.237
1928	0.040	-3.224	0.083	-0.687	-3.177
1929	0.035	-3.361	0.084	-0.801	-3.285
1930	0.045	-3.099	0.081	-0.969	-3.488
1931	0.062	-2.789	0.065	-1.133	-3.866
1932	0.074	-2.600	0.028	-1.465	-5.031
1933	0.042	-3.168	0.033	-1.228	-4.651
1934	0.037	-3.291	0.035	-1.115	-4.458
1935	0.038	-3.265	0.043	-0.974	-4.130
1936	0.034	-3.370	0.052	-0.881	-3.843
1937	0.049	-3.024	0.057	-0.773	-3.638
1938	0.052	-2.960	0.064	-0.804	-3.553
1939	0.041	-3.206	0.066	-0.865	-3.590
1940	0.056	-2.884	0.066	-0.702	-3.421
1941	0.068	-2.685	0.064	-0.550	-3.301
1942	0.072	-2.626	0.054	-0.536	-3.464
1943	0.049	-3.010	0.052	-0.530	-3.479
1944	0.049	-3.024			
1945	0.042	-3.177			
1946	0.039	-3.257			
1947	0.049	-3.010			
1948	0.055	-2.893			
1949	0.066	-2.720			

Source: Federal Reserve Board: Banking and Monetary Statistics, 1941-1970: T12.19

J. Bradford DeLong and Marco Becht, "'Excess Volatility' and the German Stock Market, 1876-1990" (NBER, 1992)

Table A.13 (p.2)

STOCK YIELDS					
UNITED STATES			GERMANY		
Year	Dividend/Log Price Ratio	Div/Price Ratio	Dividend Yield	Log Real Stock Price	Log Real Dividend
1950	0.066	-2.723			
1951	0.061	-2.792	0.011	-1.567	-6.111
1952	0.058	-2.847	0.020	-1.800	-5.730
1953	0.058	-2.847	0.029	-1.717	-5.271
1954	0.050	-3.006	0.027	-1.445	-5.077
1955	0.041	-3.199	0.031	-1.017	-4.489
1956	0.041	-3.197	0.042	-1.094	-4.275
1957	0.044	-3.135	0.046	-1.115	-4.186
1958	0.040	-3.226	0.033	-0.876	-4.291
1959	0.032	-3.433	0.022	-0.324	-4.147
1960	0.035	-3.361	0.020	0.128	-3.805
1961	0.030	-3.513	0.025	0.132	-3.561
1962	0.034	-3.390	0.034	-0.149	-3.520
1963	0.032	-3.451	0.032	-0.179	-3.634
1964	0.030	-3.503	0.031	-0.088	-3.568
1965	0.030	-3.507	0.039	-0.217	-3.452
1966	0.034	-3.381	0.048	-0.400	-3.446
1967	0.032	-3.442	0.035	-0.373	-3.732
1968	0.031	-3.483	0.030	-0.103	-3.609
1969	0.032	-3.430	0.029	-0.021	-3.572
1970	0.038	-3.262	0.044	-0.140	-3.267

Source: Federal Reserve Board: Banking and Monetary Statistics, 1941-1970: T12.19
 J. Bradford DeLong and Marco Becht, "'Excess Volatility' and the German Stock Market, 1876-1990" (NBER, 1992)

Table A.14 (p.1)

DATA INPUT FOR MODELS

YEAR	PI/NW	PI. ₁ /NW	EURGFCF%	CONT	USGOVT/NW
1950	0.0019	-0.0026	0.166	0.000	0.027
1951	0.0008	0.0019	0.169	0.000	0.025
1952	0.0016	0.0008	0.173	0.000	0.039
1953	-0.0037	0.0016	0.176	0.000	0.030
1954	0.0028	-0.0037	0.183	0.000	0.025
1955	0.0015	0.0028	0.191	0.000	0.010
1956	0.0007	0.0015	0.194	0.000	0.005
1957	0.0012	0.0007	0.197	0.000	0.009
1958	0.0097	0.0012	0.196	0.000	0.010
1959	0.0086	0.0097	0.201	0.000	0.007
1960	0.0063	0.0086	0.210	0.000	0.008
1961	0.0077	0.0063	0.219	0.000	0.010
1962	0.0053	0.0077	0.222	0.000	0.008
1963	0.0150	0.0053	0.222	0.000	0.007
1964	0.0041	0.0150	0.230	1.000	0.005
1965	-0.0018	0.0041	0.226	1.000	0.004
1966	-0.0038	-0.0018	0.225	1.000	0.003
1967	0.0014	-0.0038	0.222	1.000	0.006
1968	0.0031	0.0014	0.220	1.000	0.003
1969	-0.0007	0.0031	0.222	1.000	0.003
1970	-0.0003	-0.0007	0.231	1.000	0.002

Table A.14 (p.2)

DATA INPUT FOR MODELS

YEAR	EXCHFRA	EXCHUK	EXCHGER	EXCHNETH
1950	4.1950	2.7996	3.5000	3.8092
1951	4.1950	2.7996	3.5000	3.8075
1952	4.1950	2.7926	3.5000	3.8001
1953	4.1950	2.8127	3.5000	3.7965
1954	4.1950	2.8087	3.5000	3.7906
1955	4.2079	2.7913	3.5000	3.8124
1956	4.2042	2.7957	3.5000	3.8295
1957	4.2012	2.7935	3.6164	3.8210
1958	4.1919	2.8099	4.2048	3.7851
1959	4.1790	2.8089	4.9043	3.7748
1960	4.1704	2.8077	4.9039	3.7718
1961	4.0184	2.8023	4.9052	3.6321
1962	3.9978	2.8078	4.9003	3.6032
1963	3.9863	2.8003	4.9003	3.6010
1964	3.9748	2.7925	4.9005	3.6068
1965	3.9940	2.7962	4.9012	3.6004
1966	3.9985	2.7932	4.9136	3.6193
1967	3.9863	2.7466	4.9200	3.6020
1968	3.9920	2.3937	4.9513	3.6198
1969	3.9253	2.3903	5.1991	3.6240
1970	3.6465	2.3960	5.5282	3.6166

Table A.14 (p.3)

DATA INPUT FOR MODELS

YEAR	DIFFFRA	DIFF2 ^a	DIFF3 ^b	EURGOVT	CURCONV
1950	4.20	4.20	4.20	0.13	0.000
1951	3.97	2.52	2.52	0.14	0.000
1952	2.92	2.25	2.25	0.15	0.000
1953	2.49	1.76	1.76	0.15	0.000
1954	2.86	1.95	1.95	0.14	0.000
1955	2.41	1.97	1.97	0.13	0.000
1956	2.32	2.21	2.75	0.14	0.000
1957	2.37	2.16	2.76	0.14	0.000
1958	2.23	2.12	2.52	0.14	0.000
1959	1.15	1.11	1.29	0.14	1.000
1960	1.09	1.40	1.71	0.14	1.000
1961	1.15	1.76	1.83	0.14	1.000
1962	1.02	1.46	1.61	0.14	1.000
1963	0.92	1.15	1.45	0.15	1.000
1964	0.89	1.34	1.56	0.14	1.000
1965	1.00	1.64	2.04	0.15	1.000
1966	0.63	1.40	2.04	0.15	1.000
1967	0.65	1.22	1.48	0.15	1.000
1968	0.40	1.25	1.18	0.15	1.000
1969	1.31	2.01	1.50	0.15	1.000
1970	1.20	1.78	1.67	0.15	1.000

a DIFF2: Difference between U.S. long-term government bond rate and an average of long-term government bond rates for the United Kingdom and France.

b DIFF3: Difference between U.S. long-term government bond rate and an average of long-term government bond rates for the United Kingdom, France, and Germany.

BIBLIOGRAPHY

- Acheson, A.L.K., J.F. Chant, and M.F.J. Prachowny, eds., Bretton Woods Revisited, Toronto: U. of Toronto Press, 1972.
- Allen, Polly R. and Peter B. Kenen. Asset Markets, Exchange Rates, and Economic Integration. New York: Cambridge University Press, 1980.
- Bank of England. Quarterly Bulletin. Vol. IV (1) (March 1964); and Vol. IV (2) (June 1964).
- Bank for International Settlements. Annual Reports, nos. 36-41. Basle, Switzerland, 1966-1971.
- Behrman, Jack N. "Foreign Associates and Their Financing" and "Economic Effects of Private Direct Investment," in , U.S. Private and Government Investment Abroad, ed. Raymond Mikesell. Eugene, Oregon: University of Oregon Books, 1962.
- Bell, Geoffrey. The Eurodollar Market and the International Financial System. New York: John Wiley & Sons, 1973.
- Bergsten, C. Fred. The Dilemmas of the Dollar. New York: New York University Press, 1975.
- Block, Fred. The Origins of International Economic Disorder: A Study of U.S. International Monetary Policy from World War II to the Present. Berkeley: U. of California Press, 1977.
- Boltho, Andrea. "Growth," in The European Economy, ed. Andrea Boltho. New York: Oxford University Press, 1982.
- Board of Governors of the Federal Reserve System. Banking and Monetary Statistics, 1941-1970. Washington, D.C.: 1976.
- _____. Balance Sheets for the U.S. Economy 1945-90. Washington, D.C.: March 1991.
- Bordo, Michael. "The Bretton Woods International Monetary System," in A Retrospective on the Bretton Woods System, ed. Michael Bordo and Barry Eichengreen. Chicago: University of Chicago Press (NBER), 1993.
- Branson, William. "Monetary Policy and the New View of International Capital Movements," Brookings Papers on Economic Activity 1970, no. 2: 235-270.

- _____. "Trends in United States International Trade and Investment since World War II," in The American Economy in Transition, ed. Martin Feldstein. Chicago: University of Chicago Press (NBER), 1980.
- Branson, William and Dale W. Henderson. "The Specification and Influence of Asset Markets," in Handbook of International Economics, Vol. 2, ed. Ronald W. Jones and Peter B. Kenen. Amsterdam: North-Holland, 1985.
- Bryant, Ralph. "Empirical Research on Financial Capital Flows," in International Trade and Finance, ed. Peter Kenen. New York: Cambridge University Press, 1975.
- Bryant, Ralph and Patric Hendershott. "Financial Capital Flows in the Balance of Payments of the United States: An Exploratory Study." Princeton Studies in International Finance, No. 25. Princeton: Princeton University, 1970.
- Chown, John F. and Robert Valentine. The International Bond Market in the 1960s: Its Development and Operation. New York: Frederick A. Praeger, 1968.
- De Long, J. Bradford and Barry Eichengreen. "The Marshall Plan: History's Most Successful Structural Adjustment Program." National Bureau of Economic Research, Working Paper No. 3899. Cambridge, Mass.: NBER, November 1991.
- De Long, J. Bradford and Marco Becht. "'Excess Volatility' and the German Stock Market, 1876-1990." Cambridge, Mass.: National Bureau of Economic Research, March 1992.
- Depres, Emile, Charles Kindleberger, and Walter Salant. "The Dollar and World Liquidity--A Minority View," The Economist, Feb. 5, 1966. Reprinted in The International Monetary System: Problems and Proposals, ed. L.H. Officer and T.D. Willett. Englewoods Cliffs, N.J.: Prentice-Hall, 1969.
- De Vries, Margaret Garritsen. The IMF in a Changing World: 1945-1985. Washington, D.C.: International Monetary Fund, 1986.
- Edelstein, Michael. Overseas Investment in the Age of High Imperialism: The United Kingdom, 1850-1914. New York: Columbia University Press, 1982.
- Eichengreen, Barry. "The U.S. Capital Market and Foreign Lending, 1920-1955," in Developing Country Debt and Economic Performance, Vol. I, ed. Jeffrey D. Sachs. Chicago: University of Chicago Press (NBER), 1989.

- _____. Elusive Stability: Essays in the History of International Finance, 1919-1939. New York: Cambridge University Press, 1990.
- Einzig, Paul. The Euro-bond Market, 2d ed. London: The Macmillan Press, Ltd., 1969.
- European Economic Community. The Development of a European Capital Market. Brussels: EEC, 1966.
- Fishlow, Albert. "Lessons from the past: Capital markets during the 19th century and the interwar period," in The Politics of International Debt, ed. Miles Kahler. Ithaca, N.Y.: Cornell University Press, 1986.
- Foreign Bondholders Protective Council, Inc. Report 1951 through 1952. New York: Foreign Bondholders Protective Council, Inc., 1954.
- _____. Report 1955 through 1957. New York: Foreign Bondholders Protective Council, Inc., 1958.
- Foreman-Peck, James. A History of the World Economy: International Economic Relations Since 1850. Totowa, N.J.: Barnes & Noble Books, 1983.
- Friedman, Benjamin. "Postwar Changes in the American Financial Markets," in The American Economy in Transition, ed. Martin Feldstein. Chicago: University of Chicago Press (NBER), 1980.
- Friedman, Milton and Anna J. Schwartz. A Monetary History of the United States, 1867-1960. Princeton, N.J.: Princeton University Press (NBER), 1963.
- Gillespie, Robert. "The Policies of England, France and Germany as Recipients of Foreign Direct Investment," in International Mobility and Movement of Capital, ed. Fritz Machlup, Walter Salant, and Lorie Tarshis. New York: National Bureau of Economic Research, 1972.
- Grubel, Herbert. "Internationally Diversified Portfolios: Welfare Gains and Capital Flows." American Economic Review 58, no. 5, Part 1 (Dec. 1968): 1299-1314.
- Horsefield, J. Keith. The International Monetary Fund, 1945-1965, Vol I: Chronicle; Vol. III: Documents. Washington, D.C.: International Monetary Fund, 1969.
- International Monetary Fund. International Financial Statistics Yearbook. Washington, D.C.: International Monetary Fund, 1980/1981.

- . Determinants and Systemic Consequences of International Capital Flows, Occasional Paper No. 77. Washington, D.C.: International Monetary Fund, 1991.
- Johnston, R.B. The Economics of the Euro-Market: History, Theory and Policy. New York: St. Martin's Press, 1982.
- Johnston, J. Econometric Methods, 3d. ed. New York: Mc-Graw Hill, 1984.
- Judge, George G., et al. Introduction to the Theory and Practice of Econometrics, 2d ed. New York: John Wiley & Sons, 1988.
- Kaufmann, Hugo. Germany's International Monetary Policy and the European Monetary System. New York: Columbia Press, 1985.
- Kenen, Peter B. "Macroeconomic Theory and Policy: How the Closed Economy Was Opened," in Handbook of International Economics, Vol. 2, ed. Ronald W. Jones and Peter B. Kenen. Amsterdam: North-Holland, 1985.
- Khoury, Sarkis J. Dynamics of International Banking. New York: Praeger Publishers, 1980.
- Kindleberger, Charles. A Financial History of Western Europe, 2d ed. New York: Oxford University Press, 1993.
- Kirschen, Etienne-Sadi. Financial Integration in Western Europe. New York: Columbia University Press, 1969.
- Kouri, Pentti and Michael Porter. "International Capital Flows and Portfolio Equilibrium." Journal of Political Economy 82, no. 3 (May/June 1974): 443-467.
- Leamer, Edward and Robert Stern. Quantitative International Economics. Chicago: Aldine Publishing Co., 1970.
- Lewis, Cleona. United States and Foreign Investment Problems. Washington, D.C.: Brookings Institution, 1948.
- Lipsey, Robert. "Changing Patterns of International Investment in and by the United States," in The United States in the World Economy, ed. Martin Feldstein. Chicago: University of Chicago Press (NBER), 1988.
- McKinnon, Ronald. Money in International Exchange. New York: Oxford University Press, 1979.

- _____. "The Rules of the Game: International Money in Historical Perspective." Journal of Economic Literature 31, no. 1 (March, 1993): 1-44.
- Meek, Paul. "The Revival of International Capital Markets." 50, no.2 American Economic Review (May 1960): 282-300.
- _____. "United States Investment in Foreign Securities (excluding Canadian and IBRD Issues)," in U.S. Private and Government Investment Abroad, ed. Raymond Mikesell. Eugene, Oregon: University of Oregon Books, 1962.
- Meltzer, Allan. "U.S. Policy in the Bretton Woods Era." Federal Reserve Bank of St. Louis Review 73 (May/June 1991): 54-83.
- Meltzer, Allan and Saranna Robinson. "Stability Under the Gold Standard in Practice," in Money, History and International Finance: Essays in Honor of Anna J. Schwartz, ed. Michael Bordo. Chicago: U. of Chicago Press (NBER), 1989.
- Mikesell, Raymond. "U.S. Postwar Investment Abroad: A Statistical Analysis" and "Postwar Growth of Private Portfolio Investment" in U.S. Private and Government Investment Abroad, ed. Raymond Mikesell. Eugene, Oregon: University of Oregon Books, 1962.
- Miller, Norman and Marina von N. Whitman. "A Mean-Variance Analysis of U.S. Long-Term Portfolio Foreign Investment." Quarterly Journal of Economics 84, no.2 (May 1970): 175-196.
- North, Douglass C. "International Capital Movements in Historical Perspective," in U.S. Private and Government Investment Abroad, ed. Raymond Mikesell. Eugene, Oregon: Oregon University Books, 1962.
- Obstfeld, Maurice. "The Adjustment Mechanism," in A Retrospective on the Bretton Woods System, ed. Michael Bordo and Barry Eichengreen. Chicago: University of Chicago Press (NBER), 1993.
- Oliver, Robert. International Economic Co-operation and the World Bank. New York: Holmes & Meier, 1975.
- Organization for Economic Cooperation and Development. Liberalisation of Capital Movements and Financial Services in the OECD Area. Paris: OECD, 1990.
- _____. National Accounts Statistics: Main Aggregates (various issues). Paris: OECD.
- Rees, David. Harry Dexter White: A Study in Paradox. New York: Coward, McCann & Geoghegan, 1973.

- Rivera-Batiz, Francisco and Luis Rivera Batiz. International Finance and Open Economy Macroeconomics. New York: Macmillan, 1985.
- Ruffin, Roy J. "International Factor Movements," in Handbook of International Economics, Vol. 1, ed. Ronald W. Jones and Peter B. Kenen. Amsterdam: North-Holland, 1984.
- Salant, Walter, et al. The United States Balance of Payments in 1968. Washington, D.C.: Brookings Institution, 1963.
- Solomon, Robert. The International Monetary System, 1945-1976. New York: Harper & Row, 1977.
- Stallings, Barbara. Banker to the Third World: U.S. Portfolio Investment in Latin America, 1900-1986. Berkeley: U. of California Press, 1987.
- Stevens, Guy V. G., et al. The U.S. Economy in an Interdependent World: A Multicountry Model. Washington, D.C.: Board of Governors of the Federal Reserve System, 1984.
- Sylla, Richard and George D. Smith. "Information and Capital Market Regulation in Anglo-American Finance." N.Y.U. Salomon Center Conference on Anglo-American Finance. New York: December 1993. Mimeo.
- Triffin, Robert. "The Balance of Payments and the Foreign Investment Position of the U.S.," Essays in International Finance, No. 55. Princeton: Princeton University, 1966.
- United Nations, Department of Economic Affairs. The International Flow of Private Capital: 1946-1952. New York: United Nations, 1954.
- _____. The International Flow of Private Capital: 1956-1958. New York: United Nations, 1959.
- U.S. Congress. Senate. Committee on Foreign Relations. Agreements with the Federal Republic of Germany. Message from the President of the United States. 83d Cong., 1st sess., 1953.
- U.S. Department of Commerce, Bureau of the Census. Historical Statistics of the United States, Colonial Times to 1970. Washington, D.C.: 1976.
- U.S. Department of Commerce. Survey of Current Business (various issues). Washington, D.C.
- _____. Balance of Payments: Statistical Supplement, rev. ed. Washington, D.C.: 1963.

U.S. Department of Treasury. "Maintaining the Strength of the U.S. Dollar in a Strong Free World Economy." Washington, D.C.: January 1968.

Wilkins, Mira. The Emergence of Multinational Enterprise: American Business Abroad from the Colonial Era to 1914. Cambridge, Mass.: Harvard University Press, 1970.

. The Maturing of Multinational Enterprise: American Business Abroad from 1914 to 1970 . Cambridge, Mass.: Harvard University Press, 1974.

Yeager, Leland B. International Monetary Relations: Theory, History and Policy, 2nd ed. New York: Harper & Row, 1976.