

From Benign Neglect to Malignant Preoccupation: U.S. Balance-of-Payments Policy in the 1960s¹

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1. Introduction

The title of this paper, taken from an April 1971 *Newsweek* column by Paul Samuelson, summarizes the conventional wisdom regarding U.S. balance-of-payments policy in the 1960s. Over the course of the decade the U.S. international financial position moved from strength to weakness; the balance of payments, which had previously been treated with neglect, became a growing concern. The 1960s was the first peacetime period for more than a quarter of a century when the external constraint mattered for the United States. The country emerged from World War II in a position of unrivaled strength, and the 1950s had presented no balance-of-payments challenges; U.S. monetary gold reserves at the beginning of 1958 were even larger than ten years before.² In contrast, the net liquidity balance, the most widely cited contemporary measure of the external position, was in deficit throughout the 1960s, while the more conventional official settlements balance was in deficit every year except 1966 (when it was essentially zero) and 1968-

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²As Mikesell (1970, p.6) puts it, “Neither the U.S. government nor the informed public expressed concern about the U.S. balance of payments before 1959.”

9.³ (See Figure 1.) U.S. gold stocks, which had once seemed all but unlimited, had by the end of the 1960s fallen to dangerously low levels. The dollar shortage had become a dollar glut, rendering the currency overvalued.

Given the commitment to peg the dollar to gold at \$35 an ounce, these balance-of-payments developments were regarded with growing concern as the decade progressed. It became impractical to treat the external position with neglect, benign or otherwise. But neither was there a readiness to subordinate other economic and political goals to the maintenance of external balance. Other objectives — the New Society and the Vietnam War but above all the pursuit of demand-driven growth — took precedence. The Kennedy, Johnson and Nixon Administrations resorted to a series of indirect policy initiatives -- differential tax treatment of domestic and foreign investments, reductions in the value of the goods American tourists could bring into the country, tied foreign aid, and finally an across-the-board import surcharge -- in an effort to remedy the balance of payments problem and free up monetary and fiscal policies for the pursuit of domestic objectives.⁴

³The net liquidity balance excluded from the credit side of the balance-of-payments ledgers both private short-term capital flows and U.S. government foreign borrowing, the rationale being that such flows could reverse direction quickly. The official settlements balance, adopted in the mid-1960s, was a comprehensive measure that defined the overall balance as the change in U.S. foreign exchange reserves minus the increase in official foreign claims on the United States.

⁴As the Council of Economic Advisors put it (referring to the voluntary foreign direct investment program of 1965), “[c]ompared with reliance solely on restrictive general monetary measures that might conceivably hold down capital flows to the same extent, [these measures]...have the obvious advantage of allowing monetary policy to respond to the needs for domestic credit, as well as to affect that 5-10 per cent of total credit that flows abroad.” Council of Economic Advisors (1966), p.168. In addition, this was the period (starting in March 1961) when first the Treasury and then the Fed began to engage in sterilized intervention in the foreign exchange market, in what can be understood as an effort to influence the direction of gold and capital flows without having to alter the stance of monetary policy.

These expedients, however, failed to address the fundamental conflict between internal and external objectives -- in particular, between “external pressures for higher [interest] rates and the needs of the domestic economy for monetary expansion,” as the point was put in the report of the President’s Task Force on Foreign Economic Policy in 1964.⁵ And insofar as financial capital became more mobile over the course of the 1960s, these jerry-rigged policies to limit U.S. capital outflows were neutralized and overwhelmed. Thus, the microeconomic and structural expedients to which successive administrations resorted in an effort to reconcile the monetary and fiscal policies desired for domestic purposes with the external constraint were rendered ineffectual. And in the absence of a reconciliation to the policy conflict, it became inevitable that the dollar would come crashing down.

This now traditional interpretation has informed a number of influential accounts of U.S. balance-of-payments policy in the 1960s.⁶ Yet there are also aspects of the period that do not fit so neatly into this tidy historical framework. For one, it is not obvious that the balance-of-payments problem in fact grew progressively worse as the period progressed. The first crisis of the dollar occurred at the beginning of the decade, in 1960. Could the policy conflicts of the

⁵Reprinted in Duncan et al. (1999), p.39. The point carries over to attempts to alter the macroeconomic policy mix to better reconcile internal and external objectives. Stimulating domestic investment meant adopting a mix of loose monetary and tight fiscal measures, according to the prevailing policy orthodoxy of the 1960s, while strengthening the external accounts meant adopting precisely the opposite mix. Thus, the Bank for International Settlements in its annual report for 1962 urged the U.S. to tighten monetary policy while loosening fiscal policy (and repeated the recommendation annually.) Hence, efforts to adjust the policy mix did not finesse the fundamental conflict between internal and external balance. And the same can be said of Operation Twist, the effort to limit the rise in long-term interest rates while at the same time tightening monetary policy to address balance of payments concerns (as I explain below).

⁶See for example Willett (1980) and Gowa (1983).

Johnson and Nixon Administrations have been at the root of the problem given that payments pressures manifested themselves before either president took office? References in the “Record of Policy Actions” of the Federal Open Market Committee to terms like “gold outflows,” “trade deficits,” and “balance of payments” peak in 1963 and 1967, not at the end of the decade (see Figure 2).⁷ And the characterization of U.S. policy toward the balance of payments as benign neglect is difficult to reconcile with increases in Federal Reserve discount rates in 1963, 1965 and 1967, all taken in response, at least in part, to concern over external balance.

Second, there are some uncomfortable facts about U.S. economic performance. For one thing, the payments position strengthened at the end of the 1960s rather than deteriorating as the crisis approached. For another, U.S. inflation did not exceed foreign inflation; in fact the opposite was true. Nor did the rate of growth of the monetary base accelerate significantly as the crisis approached. It shot up only in 1972 -- that is, after the dollar had been devalued.⁸

Third, and related to the above, there are reasons to question that U.S. policy was responsible for the country’s payments problems in the sense that even significantly different policies would have produced significantly different outcomes. In particular, there is Triffin’s argument that the country’s external deficit reflected not excessively expansionary domestic policies but rather the appetite of an expanding world economy for dollar reserves, an appetite that could be satisfied only if other countries ran surpluses vis-a-vis the United States. The 1960s

⁷Figure 2 is a count of references in this Fed publication to “gold outflow(s)” and “outflow(s) of gold,” “gold loss(es)” and “loss(es) of gold,” “balance of payments” and “balance-of-payments,” and “trade deficit” (whenever “trade” and “deficit” appeared within ten words of one another, they were counted as a reference).

⁸A point emphasized by Richard Cooper in Bordo and Eichengreen (1993).

was a decade of rapid expansion in Europe and Japan, the regions on which contemporary discussions of the U.S. balance of payments focused. These countries needed additional international liquidity to buffer their economies from trade-related shocks, and given capital controls and tight domestic financial regulations outside the United States, accumulating reserves meant accumulating dollars. Foreign claims on the U.S. exceeded U.S. monetary gold reserves as early as 1960, and that excess widened as the period progressed (Figure 3). The U.S. was acting as “banker to the world” (in the words of Depres, Kindleberger and Salant 1966), importing short-term capital while investing long-term abroad, providing a function necessary for the functioning of the Bretton Woods System. But while essential to the operation of the Bretton Woods System, this behavior was also a source of financial fragility, since foreign holders of dollars could “run on” U.S. gold reserves at any time. In this view, the fundamental conflict was not between the domestic and foreign economic policies of the United States but between the liquidity needs of an expanding world economy and the unresponsiveness of global gold supplies. The problem was less that the dollar was fundamentally overvalued relative to the yen and the European currencies; it was more that the dollar was increasingly overvalued relative to gold, reflecting the inelasticity of monetary gold supplies and the growing overhang of foreign dollar balances.

In the remainder of this paper I will argue that these observations can in fact be reconciled with the traditional interpretation. I will emphasize that the 1960s was a decade of secularly declining U.S. international competitiveness. These were the years when European and Japanese producers, having moved up the product ladder and improved their marketing and quality-control

techniques, first emerged as a serious competitors for U.S. basic industries.⁹ These trends are evident in the steady deterioration of the U.S. current account balance, from a surplus of \$1-2 billion in the mid-1960s to a deficit of \$1-2 billion in the early 1970s. A close look at inflation rates and unit labor costs is consistent with this view. This intensification of competitive pressures rendered the dollar increasingly overvalued. At the same time, the framers of U.S. monetary and fiscal policies remained reluctant to counter the trend. The problem in 1970-1 was not so much that monetary and fiscal control was lost; it was that monetary and fiscal policies remained on hold. As the modern literature on balance-of-payments crises shows, it is not necessary to point to a sudden increase in the rate of growth of the monetary base to explain the timing of a speculative attack. Even without it, a secular deterioration in competitiveness can precipitate a sudden crisis, leading to large capital outflows like those observed in 1970-71.

That this trend was not universally appreciated reflected the fact that the external accounts strengthened in 1965-6 and 1968-9, suggesting to some that the country had successfully adjusted to the more competitive international economic environment. However, these improvements were temporary. They were engineered by exceptional macroeconomic policy responses that were sustainable neither economically nor politically and by microeconomic and structural expedients whose effectiveness was at best transitory. Once their effects wore off, the external crisis returned, and with a vengeance.

⁹This is when they first became a serious competitive presence in markets like those for U.S. motor vehicles and steel. In the case of steel, these pressures culminated in the 1968 voluntary steel quotas under which foreign producers agreed to limit their shipments to the U.S. market. In the case of autos, there was, working in the other direction, the 1965 auto pact with Canada, under whose provisions U.S. companies could shift component production and assembly north of the border, again reflecting the realities of cost competition.

Thus, real overvaluation created by monetary and fiscal policies fundamentally inconsistent with the external constraint was the key factor setting the stage for the 1971 run on the dollar.¹⁰ To be sure, the inelasticity of world gold supplies and the dependence of the world economy for meeting its growing liquidity needs on foreign dollar holdings also played a role. The accumulation by foreign central banks and markets of short-term dollar claims rendered the United States vulnerable to a loss of confidence on the part of its foreign creditors. A shared interest in the stability of the international system prevented foreign central banks from rushing to convert their dollar balances into gold. This shared interest in regime maintenance, buttressed by veiled U.S. threats of retaliation against governments that converted their dollars into gold, allowed the system to stagger on for longer than it would have otherwise, as foreign authorities absorbed ever larger dollar balances in an ultimately futile effort to prevent Bretton Woods from falling apart. While the Bretton Woods System was flawed in ways that required international cooperation for it to survive even for the short 12 years from the restoration of convertibility in 1959 to the denouement in 1971, the ironic fact is that awareness of those flaws led it to be sustained, in the face of the U.S. government's unwillingness to adjust, for even longer than would have been the case otherwise.

But it could not survive indefinitely. The overvaluation of the dollar against foreign currencies raised the costs of regime maintenance to America's European and Japanese allies. And private investors could force the issue: no shared interest in regime maintenance deterred

¹⁰In terms of the theoretical literature, the kind of model Krugman (1979) used to model balance-of-payments crises, in which the run on reserves results from the pursuit of macroeconomic incompatible with the exchange-rate commitment, would appear to explain much of what needs explanation.

them from selling dollars as the currency became increasingly overvalued, requiring the authorities to buy all the dollars they sold.¹¹ The two-tier gold market created in 1968 prevented the private sector from converting their dollars into U.S. gold, but there was still nothing to prevent them from swapping their dollars for other currencies. While private investors had every reason to hold liquid dollar claims so long as they believed that others were inclined to do likewise — indeed, to increase their holdings as the world economy grew — they also had an incentive to scramble out of dollars if they thought others were preparing to do likewise and that the currency would be devalued.

The last seven words are critical: the denouement could have been averted by a sharp rise in U.S. interest rates or massive unsterilized intervention by foreign central banks. But the fact that the U.S. payments position had deteriorated, while U.S. unemployment and European inflation had risen, meant that these responses were unattractive. Given the weakness of the position, effective support would have required a drastic course correction by the Fed, or ongoing intervention by foreign central banks. But U.S. officials could not credibly attach priority to external stability relative to internal balance. Stability therefore hinged on the continued provision of support by foreign central banks and governments. And the latter were unwilling to indefinitely accept the inflationary consequences of supporting the dollar, collective interest in the maintenance of the Bretton Woods regime or not. Once they signaled their reluctance, the run was on. Closing the gold window became unavoidable.¹²

¹¹Or for that matter U.S. residents.

¹²As these veiled and overt references to the notions of multiple equilibria and coordination games imply, a full explanation for the dollar crisis thus also requires referring to the sort of second-generation model of speculative attacks analyzed by Eichengreen and Jeanne

2. The Problem and its Setting

In this section I set the stage for the analysis to follow by reviewing the U.S. balance of payments problem and its setting.

The Setting. The setting for this problem was the international monetary arrangement agreed to by delegates from 44 countries in Bretton Woods, New Hampshire in 1944. The Bretton Woods System was a peculiar hybrid of pegged exchange rates and adjustable exchange rates, of gold-based and fiat money regimes. It can be understood as a compromise between the competing objectives of the United States and United Kingdom, given concrete form in the plans drawn up by Harry Dexter White and John Maynard Keynes.

That compromise had a number of key features for the problem at hand. First, it was a compromise between Keynes's proposal for a Clearing Union with the power to create and issue international reserves as a way of meeting the liquidity needs of the expanding world economy, and White's vision of a world in which every country would float on its own bottom (and the financial obligations of the United States would be minimized). Resources could be transferred from surplus to deficit countries through the International Monetary Fund only to a limited extent. Critically, the IMF would not have the power, and did not acquire the power until very late in the Bretton Woods period, to create international reserves.¹³ This meant that the only way for

(1998). One of the principals, Bator (1968, pp.58-59), appears to anticipate the key point when he writes "In part because \$35 was a credible floor, it became an increasingly non-credible ceiling, and in this sort of situation non-credibility tends to be self-confirming."

¹³As we shall see, this situation changed in 1969 with the issue of Special Drawing Rights, but this was too late and much too little to shape the financial dynamics discussed below.

countries needing additional international reserves to smooth fluctuations in their trade and payments was by accumulating foreign exchange.

Second, the Bretton Woods Agreement split the difference between the U.S. desire for currency convertibility, which would advance the country's dual objectives of nondiscrimination and expanding international trade, and the British desire for insulation from international financial pressures, which could inhibit the use of macroeconomic policy to counter unemployment. The compromise, of course, was the provisions in the IMF Articles of Agreement mandating the restoration of currency convertibility on current account, but authorizing (and, tacitly, encouraging) countries to retain controls on capital-account transactions. As a result, all the major economies except the United States retained controls on capital flows for extended periods — in more than a few cases, as late as the 1990s. This meant that currencies other than the dollar were slow to acquire an international role. And in turn this left central banks seeking to acquire foreign exchange reserves few alternatives to acquiring dollars.

Third, Bretton Woods was a compromise between the British desire for monetary freedom of action, a priority which led British officials to regard the gold standard as anathema, and the U.S. desire for a system rooted in traditional values and capable of inspiring investor confidence. Both in the 1920s and in wartime, fiat money had meant inflation, which had been demoralizing to investors; gold was still the obvious confidence-inspiring alternative. Hence the famous Bretton Woods compromise in which the dollar was pegged to gold, as under a traditional gold standard, but other currencies were pegged to the dollar. Changes in currency pegs were permissible in the event of “fundamental disequilibria,” whatever that meant, but the asymmetry in the way the dollar and other currencies were pegged created uncertainty about whether the U.S. could change

the dollar exchange rate. While other countries could devalue against the dollar, the U.S. could only raise the dollar price of gold. And if concerns for their competitiveness, lobbying by export interests, or other considerations rendered other countries reluctant to see their currencies appreciate, they could prevent this from happening by doing nothing — in other words, simply by maintaining their par values expressed in terms of the dollar. There was a question, in other words, of whether the U.S. could use the exchange rate to address its balance of payments.

This was the background against which the U.S. postwar payments position developed. The U.S. balance of payments in the 1960s has a peculiar cast to an observer schooled in the currency crises of the 1990s. There was no trade deficit, no current account deficit, and no large capital inflow to fuel a domestic credit boom, reverse suddenly, and precipitate a crisis. The payments problems of the ‘sixties were of a different sort. The U.S. trade balance had been in surplus continuously since World War II.¹⁴ The merchandise trade surplus peaked at \$10 billion in 1947, reflecting the exceptional import needs and limited capacity to export of Europe’s war-devastated economies and the fact that the United States was the principal source of supply for traded goods. The European economies were being run under high pressure of demand, and U.S. foreign aid, under the provisions of the Marshall Plan and successor programs, financed other countries’ deficits. European growth accelerated further once postwar reconstruction was complete.

The Statistics. Reflecting strong demand abroad, the U.S. surplus widened even further in the first half of ‘sixties. In the second half of the ‘sixties, however, the situation began to shift. The merchandise trade surplus dwindled to less than \$1 billion in 1968, and remained at low levels

¹⁴Indeed, U.S. merchandise trade had been in surplus in every year since 1936.

in 1969 and 1970.¹⁵ The dominant interpretation was that this reflected “soaring [domestic] demand, approximately full employment, and rising prices in the United States.”¹⁶

U.S. trade in services was also in surplus in this period, the main credit item being net interest earnings on foreign investments, which rose from \$2 billion in 1960 to \$7 billion in 1970. But the swing in the current account was limited by growing imports of transportation and travel services and rising military expenditures abroad (Figure 5).

Superimposed on this was the steady outflow of U.S. long-term investment, which made the absence of a substantial current account surplus problematic. In the immediate postwar period, international financial transactions had been dominated by foreign aid, after which U.S. capital exports fell to low levels. The restoration of current convertibility in Europe and the relaxation of statutory restrictions on international capital flows then stimulated increases in U.S. foreign lending. Public and private outflows both rose (as shown in Figure 6), the former reflecting U.S. military and economic aid to developing countries, the latter attracted by a growing range of attractive investment opportunities. Thus, the maintenance of external balance required continued short-term capital inflows into the U.S. — equivalently, the continued accumulation by foreign central banks and residents on short-term liquid claims on the United States.

The capital account deficit peaked in 1963-64, not at the end of the 1960s when pressure on the dollar mounted. The improvement following the difficulties of 1963-64 was driven by the decline in private capital outflows after 1964 and a rise in inflows after 1965. The authors of one

¹⁵Note that Figure 4 shows goods and services, not just merchandise.

¹⁶Federal Reserve Bank of Philadelphia (1970), p.9.

widely-circulated study of balance-of-payments trends (Federal Reserve Bank of Philadelphia, 1970) conjectured that this indicated a structural shift in the capital account, as the obvious opportunities for foreign direct investment by American corporations were exhausted and investors overseas began to access this country's relatively advanced and efficient securities markets. This, however, was not to be.

The Policies. The fact that both the trade and current accounts remained in surplus all through the 1960s (with the exception of two quarters in 1968) and that the current account strengthened rather than weakening in 1969 is invoked by those who deny the existence of a competitiveness problem. In fact the current account had trending downward, quarter by quarter almost without interruption, from its peak in 1964 through 1968. Extrapolating its trend behavior from mid-1964 to mid-1968 leads to a deficit of \$1-2 billion in 1972, which is the level that in fact obtained.¹⁷ That there was confusion about this projection in the late 1960s and early 1970s is hardly surprising. In 1969 U.S. import demands were compressed by the onset of recession. And in 1971 they were stimulated as importers scrambled to beat the price increases that would result from devaluation. The actual current account oscillated increasingly wildly around its underlying trend.

Monetary and fiscal policies can largely explain these exceptional movements in the current and capital accounts. The continued deterioration in the external accounts through 1967 reflected pressure of demand as the budget deficit widened in the face of the Vietnam War, monetary policy was reined in only modestly, and the labor market tightened. Their subsequent

¹⁷Meltzer (1991) shows that the underlying trend remained unchanged — that the 1972 deficit lay on an extension of the straight line drawn through the 1964-70 balances.

improvement mirrored policy's turn in a more contractionary direction, which in turn reflected fears that the economy was overheating. Fiscal policy tightened in 1968, as the income-tax surcharge intended to finance the country's growing social and military expenditures came into effect, and a cap was placed on government spending.¹⁸ Federal spending stopped rising by the end of 1968 and fell in real terms by 7 per cent from the last quarter of 1968 to the last quarter of 1969.¹⁹ The constant employment budget balance shifted from a deficit of \$11 billion in 1967 to a surplus of \$12 billion in 1969. Monetary policy tightened as the Fed grew increasingly concerned about mounting inflationary pressures. The Fed Funds rate was ratcheted up from less than 4 per cent in 1967 to 6 per cent in mid-1968 and 9 per cent in 1969.

Higher taxes and interest rates had the obvious effect of compressing U.S. import demands. In addition, higher interest rates encouraged U.S. banks, which had placed funds abroad in higher-yielding eurodollar deposits, to repatriate these balances (accounting for an inflow of nearly \$2 billion in 1968) and foreign banks and investors to deposit their liquid balances in New York. Foreigners continued to pour money into U.S. financial markets, so long as bond yields remained high and the stock market held up. This last effect was particularly important; the net inflow of foreign capital nearly tripled between 1966-7 and 1968, which by itself accounted for the shift of the capital account from deep deficit to balance (Table 1). Morawetz (1971) attributes these changes in U.S. merchandise and capital imports in large part to the country's

¹⁸The tax surcharge became law in June 1968, retroactive to April 1st for individuals and January 21st for corporations. Government spending restraint was the quid pro quo demanded by Republicans in Congress in return for agreeing to the Johnson Administration's request for a tax increase.

¹⁹Solomon (1982), p.107.

tighter monetary policy.²⁰

The result of these restrictive monetary and fiscal impulses, aside from their balance-of-payments consequences, was, predictably, recession. The growth of constant-dollar GNP decelerated from 4.1 per cent in 1968 to 2.4 per cent in 1969 and turned negative in 1970 for the first time in more than a decade. 1970 was not too soon, the Watergate Tapes reveal, for President Nixon to be thinking about reelection.²¹ The idea that tight monetary and fiscal policies would be maintained in the face of a serious recession was as inconceivable on political grounds as it was undesirable on economic ones. The ten per cent tax surcharge was allowed to expire in the first half of 1970. The Nixon Administration pressed Fed Chairman Burns, in both public and private, to get the Fed to adopt a more expansionary policy.²² Monetary policy shifted in a more expansionary direction after February: short-term interest rates were allowed to fall in the first half of the year and were joined by long-term rates in the second. The fact that fiscal policies were turning in more stimulative directions implied that commodity imports would recover along with the rest of the economy. And lower U.S. interest rates implied that the exceptional capital inflows of 1968-9 would not be sustained. Predictably, these fell back in 1970, as U.S. banks returned the money they had borrowed in the eurodollar market. And with this return to

²⁰In the interest of balance, it should be admitted that this is not the entire story. In addition to the level of interest rates, the capital account was strengthened by capital flight from Europe, reflecting political unrest in France and the movement of Soviet troops into Czechoslovakia. In addition, there were a variety of exceptional U.S. measures to discourage capital outflows, to which I return below.

²¹As Kettl (1986, p.121) puts it (citing a Nixon phone call to Ehrlichman in late 1969), “Nixon focused single-mindedly on economic growth high enough to bring unemployment down to the 1972 election, if that meant higher inflation.”

²²Kettl (1986), pp.124-125.

macroeconomic normalcy, equally predictably, the balance-of-payments problem reemerged.

While the stance of fiscal policy is not in dispute, the stance of monetary policy is. The reference here is to the conclusion of, *inter alia*, Darby et al. (1983) that Fed policy was too expansionary to be compatible with the exchange-rate constraint. Richard Cooper and Ronald McKinnon both argue that the facts are inconsistent with this assertion.²³ Cooper observes that the growth of the U.S. monetary base did not accelerate significantly in the years leading up to 1971. McKinnon similarly suggests that the data on U.S. monetary aggregates do not display a big enough jump in the late 1960s to explain the timing of the crisis. Other commentators have further observed that U.S. inflation was persistently below foreign inflation, consistent with the skeptical view of the role of monetary policy.

There is reason to think that the role of monetary policy is not so easily dismissed. For one thing, there was an increase in the rate of growth of the base in the final months leading up to the crisis: it doubled from 4 to 8 per cent between early 1970 and early 1971. In any case, it is not just the base that is relevant for balance-of-payments outcomes, but also broader monetary aggregates. Those broader aggregates may not be under direct control of the authorities, but their evolution is still something to which they should respond. The rise in M2 was especially rapid in the second half of the 1960s. More importantly, the *excess* growth of the broader aggregates, defined by Bordo (1993) as the rate of money growth minus real GNP growth, accelerated sharply after 1969. To be sure, the sharp increase after 1969 reflected the recession into which the U.S. economy plunged (most of the action in Bordo's measure of excess growth, in other words, reflects the fall in GNP rather than the rise in money supplies), but the fact that the Fed directed

²³See their discussion of the issue in Bordo and Eichengreen (1993).

monetary policy toward the imperatives of internal rather than external balance (allowing this measure of excess monetary growth to rise) created a conflict with the external constraint. And the owners of internationally-mobile capital were surely more alarmed than they would have been otherwise because this behavior took place against the backdrop of a secular acceleration in the rate of excess M1 growth starting in 1966.

U.S. money-supply growth must be considered in relation to that prevailing in the rest of the world. Genberg and Swoboda (1993), upon undertaking the relevant analysis using a two-region model of the world economy, reach exactly the same conclusion. They show how the demand for money in the U.S. fell significantly between 1967 and 1970 relative to money demand in the rest of the world, while money supplies in the U.S. (here, a broad measure that depends on both changes in the base and changes in the multiplier) rose sharply relative to those in the rest of the world. Again, it would appear that monetary policy was looser than necessary for the maintenance of external balance.

Moreover, modern models of balance-of-payments crises do not suggest, contrary to the suggestions of Cooper and McKinnon, that an acceleration in the rate of growth of the monetary aggregates need be observed prior to a sharp deterioration of the capital account. To the contrary, an unchanged monetary (and fiscal) policy can precipitate a run on reserves.

Finally, that U.S. inflation was lower than foreign inflation does nothing to undermine this emphasis on trends in monetary policy. Foreign countries, most notably Japan but also Europe, were still in the process of catching up to the United States. Faster growth and higher incomes meant faster rates of inflation through the operation of the Balassa-Samuelson effect. Thus, the fact that U.S. consumer prices were falling relative to foreign consumer prices does not tell us

that there was no monetary problem. A better measure of international competitiveness, free of Balassa-Samuelson bias, is export prices.²⁴ Between 1963 and 1969, these rose by 15 per cent in the United States but only half that fast in France, and by a third or less of U.S. rates in the Germany, Italy and Japan.²⁵ And contemporaries were well aware of these facts.²⁶

One can argue that this statement that U.S. monetary policy was too expansionary for the maintenance of external balance is uninteresting, or even tautological. U.S. interest rates were not raised sufficiently, after all, to avert the dollar crisis. I disagree with the critique; the observation is important because it place in bold relief the proximate source of the imbalance. And this in turn directs attention to the more fundamental underlying political factors constraining policy.

3. Short-Term Expedients

There is no strong support for the theme of this paper, that the U.S. authorities were fundamentally unwilling to subordinate monetary and fiscal policies to the imperatives of defending the dollar peg, than the expedients to which they resorted to avoid having to direct

²⁴Or, more precisely, export unit values, since data on actual export prices were not yet gathered by the U.S. government. Given the rough-and-ready nature of export unit values as a proxy for export prices, their movement too should be taken with a grain of salt.

²⁵Moreover, that the ratio of the U.S. CPI to a trade-weighted index of foreign CPIs, which had been falling from 1960 through 1965, reversed direction in 1966 and trended upward through the remainder of the decade provides further evidence of mounting inflationary pressure. So is the rise in unit labor costs relative to the country's trading partners, again starting in 1968-9. To be sure, as foreign countries closed the per capita income gap vis-a-vis the United States and the Balassa-Samuelson effect was played out, one would expect to see some normal deceleration in the decline in the ratio of U.S. to foreign CPIs. One would not, however, expect to see the ratio reverse direction as dramatically as it did.

²⁶See for example Sohmen (1963), p.13.

macroeconomic policies at the balance-of-payments problem.

European Support for U.S. Military Commitments. On the current-account side, steps were taken to reduce the deficit associated with U.S. military expenditures abroad. The U.S. military, starting in 1960, was instructed to reduce its foreign purchases and to repatriate dependents of U.S. servicemen abroad. The Defense Department simultaneously began giving preference to domestic goods in meeting foreign procurement requirements.²⁷ Under pressure from the Kennedy Administration, various European countries, led by Germany and Italy, agreed to purchase military hardware from the United States to offset the impact on the U.S. balance of payments of American military expenditures there. And in the summer of 1962 the Defense Department instituted a Buy America Program, under which price preferences for U.S. goods were raised to 50 per cent.²⁸

Fieleke (1969) calculates that the Buy America Program reduced the Defense Department's foreign purchases by \$80 million in 1963-4. But lower U.S. purchases abroad meant lower foreign exchange receipts for other countries, reducing other U.S. exports. Assuming standard multipliers, Fieleke estimates that the program strengthened the balance of payments by less than \$50 million in 1963-4.²⁹ Meltzer (1991) suggests that even this effect was

²⁷This last measure was instituted by the Eisenhower Administration but reversed by Kennedy upon taking office.

²⁸The extra cost in terms of Defense Department operations was factored into the military budget (and referred to as the Department's "gold budget"). In 1963 the 50 per cent rule was extended to all government agencies except AID, which discriminated even more heavily against foreign goods.

²⁹This number which may have risen somewhat in subsequent years, but at considerable welfare cost, since the U.S. military was purchasing unnecessarily expensive goods. The estimates of Morawetz (1971) suggest a smaller effect insofar as two-thirds of any reduction in

neutralized by inducing additional business support for stationing American troops in these European countries.³⁰

Tied Foreign Aid. U.S. foreign aid was tied, formally and informally, to purchases of American goods. From the early 'sixties, new aid commitments were limited to countries that agreed to spend the dollars on commodities in the United States.³¹ Additionality provisions insured that aid funds were not merely substituted for nonaided purchases in the United States that the recipient country would have made anyway. In 1966 nine of every ten dollars of recipient countries' commodity spending financed by USAID went to U.S. suppliers, up from four or five of every ten dollars prior to the program.³² Bergsten (1975) estimates that as a result of extensive tying, the balance-of-payments cost of U.S. foreign aid was at most 20 cents on the dollar. Morawetz's (1971) econometric estimates suggest an even smaller effect. But since foreign aid was only a small share of U.S. overseas expenditures, the overall balance-of-payments impact of even such extensive tying was negligible.

Tighter Rules for Tourists. On the import side, the value of the duty-free goods

U.S. military purchases abroad was offset by reductions in U.S. exports. Fieleke's estimate of the welfare cost is roughly \$25 million in 1963-4. Hitch (1965) suggests that the budgetary cost at this time was even higher, in the range of \$30-40 million.

³⁰The more extreme policy of stationing troops at home rather than abroad was not pursued, owing to the even higher welfare losses that would have been associated with the budgetary costs of increased sealift capacity (Fried 1971).

³¹In addition, U.S. contributions to multilaterals such as the Inter-American Development Bank were tied; the country's contributions to the Bank's Fund for Special Operations were subject to restrictions which made it difficult to use them for purposes other than purchasing U.S. merchandise.

³²Hyson and Strout (1968), p.64.

American tourists were allowed to bring into the country was cut from \$500 to \$100. Insofar as such measures discouraged foreign travel, their effects would have been magnified. The expected impact was to reduce spending abroad by \$50 million to \$100 million a year.

Operation Twist. Starting in 1961, the Treasury, in cooperation with the Federal Reserve, attempted to “twist” the yield curve by purchasing Treasury bonds and selling Treasury bills, as a way of reconciling the imperatives of internal and external balance. The rationale was that financial capital flows were responsive to short-term interest differentials, while the domestic investment plans on which economic activity and productivity growth depended were responsive mainly to long-term rates. The idea was that twisting the yield curve would make it possible to use higher interest rates to produce a stronger capital account without at the same time slowing recovery from the 1960-61 recession.

The resulting changes in the term structure were disappointing. Long rates fell slightly from 3.89 per cent in February 1961 to 3.73 per cent in May but then rose as high as 4.06 per cent in December. Short rates fluctuated, rising from 2.41 in February to 2.62 in December. In 1962 short rates rose slightly, by 11 basis points from January through December, while long rates fell by 21 basis points. Both short and long rates rose in 1963, the former by 66 basis points, the latter by 27. The only general statement that can be made about these movements in the yield curve is that none of them was large.

Campagna (1987, p.285) concludes on the basis of these relatively small changes in the term structure that “Operation Twist could be considered only a very modest success at best.” Meltzer (1991, p.59) argues that it was ineffective “since the market for government securities is very active and highly competitive,” allowing “participants...[to] reverse any temporary change in

interest rates achieved by the twist.” It is not clear what he means; private agents could issue not issue Treasury bonds and bills themselves in response to changes in relative interest rates.

Perhaps he means that Treasury bonds and bills were close substitutes for one another, so that the “very active and highly competitive” market prevented the Treasury and the Fed from significantly shifting the slope of the yield curve. Perhaps he means that Operation Twist was undone by the close substitutability of private and government paper and of bonds and time deposits and by the incentive for the corporate sector to change the mix of corporate bonds and commercial paper it issued and for households to shift from bonds to time deposits in response to changes in the yield curve.³³ This is Okun’s (1963) conclusion: that Treasury bills and bonds were very close substitutes for one another, and that changes in their mix would have only a modest impact on the term structure of interest rates and hence on the short-term capital flows associated with a given long-term rate.

Above all there was the fact that the Fed’s purchases of bonds remained limited. Chairman Martin had to be leaned on continuously not to revert to the Fed’s traditional “bills only” policy (Kettl 1986). More fundamentally, increasing the supply of interest-bearing government securities that were relatively close substitutes for money threatened to excite inflationary fears. The basic problem with Operation Twist was not that it was conceptually flawed but that the policy, though designed to address balance of payments problems in a manner broadly consistent with other goals, still created a conflict with the Fed’s overriding domestic objectives. The policy might have been more effective had it been pursued more aggressively, but

³³Campagna notes that households did in fact shift from securities into time deposits in response to the initial upward move in bond prices, consistent with this view.

— consistent with the central theme of this paper — this was not something that the Fed was prepared to countenance for domestic reasons.

The Interest Equalization Tax. The Interest Equalization Tax (or IET) was designed to discourage long-term lending to foreign countries.³⁴ A tax equal to a one per cent rate of interest was imposed in 1963 on foreign bonds sold in the United States.³⁵ The obvious limitation of the measure was that it applied only to certain types of foreign assets and encouraged substitution from taxed to untaxed investments. There was an obvious incentive to purchase short-term foreign securities with a maturity of less than a year and to substitute bank loans for bonds. Prachowny (1969) estimates that such substitution completely neutralized the IET in a matter months.³⁶ In response, the tax was extended in 1965 to bank loans to foreigners with a maturity of more than one year.

Meltzer (1966) and Laffer (1969) conclude that even these more comprehensive measures had little effect. For one thing, restraints on foreign lending by U.S. banks discouraged those same institutions from funding themselves by attracting foreign deposits.³⁷ Thus, foreigners

³⁴Canada and World Bank loans were exempted.

³⁵The policy was kept in place until 1973. Simultaneous with the announcement of the IET, the U.S. announced that defense spending abroad would be reduced by \$1 billion and that it had obtained a \$500 million standby credit from the IMF. (The U.S. drew \$300 million of this in 1965.) The Administration followed up with a White House conference on export expansion, at which the President and various Cabinet officials spent more than three hours exhorting business to sell more products abroad.

³⁶The IET also had a major positive impact on foreign investment in the months between its announcement and imposition (Johnson 1966).

³⁷This is the heterodox Kindleberger-Salant view, also endorsed to an extent by Bergsten (1972), that U.S. banks and the U.S. economy generally were acting as banker to the world, borrowing short and lending long.

reduced their deposits in U.S. banks in 1965 for the first time in 15 years.

Agreements with U.S. Companies. In addition, a series of voluntary agreements with U.S. companies was concluded starting in 1965 with the intent of limiting the deficit on long-term capital account. Each company was asked to submit a “corporate balance-of-payments account” and to suggest means of improving its balance by 15 to 20 per cent. Late in 1965 company-by-company ceilings were set for the subsequent calendar year.³⁸ In 1966 such agreements were drawn up for some 900 major corporations. From 1968 the program was made mandatory and administered by the Office of Foreign Direct Investment (OFDI).

The Commerce Department tabulated the early results of the program on the basis of a sample of 233 participating companies in early 1966, concluding that the estimated improvement of the credit balance of these countries was 13 per cent. At the same time, there were signs that U.S. corporations, in order to satisfy the agreement, had simply pushed their 1965 foreign investments into 1966.³⁹ In addition, much of the reported improvement was achieved not by less FDI by U.S. firms but rather by more intense efforts on their part to finance that investment on foreign markets.

In response, the government doubled the target for the desired reduction in FDI, nearly doubled the number of participating companies, and added targets for reductions in the foreign short-term assets held by U.S. companies and their foreign affiliates. The results obtained for 1966 suggested that the program delivered perhaps a third of the targeted improvement in the

³⁸A *Business Week* article referred to this program as an administrator’s nightmare (*Business Week*, 9 October 1965, p.53).

³⁹Secretary Fowler having initially promised that the restraints would be temporary, and that they would in any case not extend beyond two years.

U.S. balance of payments. Johnson (1966) reluctantly concludes that the program had some effect, though firms found various ways of limiting the reduction in foreign investment to lower levels than mandated by the government's targets.

The program was also applied to U.S. banks from 1965. Because the Fed's ability to exercise moral suasion over the banks exceeded the Commerce Department's influence over corporations, it was never necessary to make the guidelines for the banks mandatory. Each bank was asked not to let its lending at the end of 1965 exceed 105 per cent of that outstanding at the end of 1964. Largely as a result of this program, U.S. financial transfers abroad declined by \$2.5 billion between 1964 and 1965. A similar ceiling was set for end-1966 lending, this time at 109 per cent of 1964 levels. Again, however, substitution from controlled to uncontrolled channels cast doubt over the long-term effectiveness of the program. From 1966, non-bank financial institutions were also requested to limit the rate of growth of their foreign investments, to limit the scope for further substitution. The effectiveness of these guidelines is less clear, since the Fed had less leverage over nonbank institutions.

While all of these studies considered impact effects, it is worth recalling that less foreign investment now meant lower foreign earnings later. Given estimated rates of return on foreign direct investment by U.S. manufacturing in the 10 to 20 per cent range in the first half of the 1960s, this offset could have been substantial (Lindert 1971).

The Gold Pool. A final initiative designed to contain the pressure on the dollar was the London Gold Pool. As early as March of 1960, the price of gold rose above \$35 an ounce on the London gold market. Policy makers worried that a rise in the free market price would lead to a drain of U.S. gold reserves. Foreign central banks would have an incentive to convert their

dollars into gold at the U.S. Treasury and resell that gold at higher market prices. Even if they could be induced to resist the temptation to engage directly in arbitrage, any central bank with extra gold would obviously prefer to sell in the market, while those wishing to buy gold would have every reason to come to the United States.⁴⁰ Hence, until 1968 it was viewed as essential to prevent the London gold price from rising significantly above \$35.

From late 1960, European central banks agreed to refrain from buying gold in the London market for monetary purposes whenever the price rose above \$35.20, the official U.S. price plus costs of shipping and insurance. In late 1961 this agreement was succeeded by the creation of the gold pool. The U.S. and seven European governments undertook to jointly supply the gold needed to keep the price in London from rising above \$35.20.

Over its lifetime, the United States provided \$1.6 billion of the \$2.5 billion of net gold sales by the members of the pool on the London market. Clearly, the existence of the gold pool did not eliminate the pressure on U.S. monetary gold reserves. What it did was give the other members a sense of shared responsibility for preventing the market price of gold from rising. It was a mechanism whereby the U.S. could exert moral suasion for their central banks and governments to sell gold and accumulate dollars instead of the reverse.

The pool functioned until March of 1968, when a surge of private buying led to its suspension and to the creation of a two-tier gold market with significantly higher prices for private than for official transactions. That buying surge can be understood in terms of declining confidence in the dollar peg. The 1967 devaluation of sterling had telegraphed the message that no reserve currency was immune from market pressures. France terminated its participation in the

⁴⁰Solomon (1982), p.115.

gold pool out of dissatisfaction with U.S. monetary policy, a fact which became publicly known following sterling's devaluation, leading to fears that other countries would also withdraw. And the fact that the official price of gold had not been changed over a period of many years of secular inflation created the perception of a one-way bet. When Senator Javits issued a statement at the end of February 1968 calling for the suspension of dollar convertibility (Javits 1968), the gold rush was underway, and the gold pool was history.

4. Evidence from the Behavior of Interest Differentials

A number of these policies — the Interest Equalization Tax, voluntary restraint agreements with U.S. banks not to increase their lending overseas — were designed to break the link between domestic and foreign monetary policies and give the U.S. authorities more room to tailor interest rates to domestic conditions without having to worry so much about the balance of payments. If these policies were less easily evaded than suggested in Section 3 above, then we should expect to see a change in the behavior of U.S. and foreign interest rates following their imposition in 1963 and 1965.

I therefore analyzed short-term interest rates for the U.S., Canada, Germany and the UK from early 1960 through August 1971.⁴¹ These are end-of month rates in each case. I am interested in how quickly a gap between U.S. and foreign rates tended to close once it opened up.

I start by testing whether it is possible to reject the hypothesis of a unit root in the interest

⁴¹The interest rate series are from the OECD data base distributed with RATS. I use Treasury bill rates for the US, Canada and the UK, three month loan rates for Germany.

differential and then turn to the question of convergence speed. It seems relatively implausible that there should be a unit root in the interest differential, as opposed to the individual interest rate series themselves, given the incentives for arbitrage. The interest differentials plotted in Figure 7 appear consistent with the hypothesis of mean reversion. Nonetheless, the augmented Dickey-Fuller test does not speak loudly. We can strongly reject the null of a unit root for the UK, but we just barely fail to reject at the 10 per cent level for Canada, and we fail to reject by a wide margin for Germany. The problem, as Elliot and Rogers (1999) observe, is that the test has extremely low power for short time spans. Daily or weekly interest rate data would not help, since the power is increasing in the length of the time span, not the number of observations. Following Levin and Lin (1992), who suggest that panel estimation can dramatically increase the power of the test, I run the augmented Dickey-Fuller test for the panel of three countries. This permits us to decisively reject the null of a unit root in any of the three interest differential time series.

To examine speed of convergence, I posit a zero-mean AR(1) process and regress the change in the interest differential on the lagged level of the interest differential and four lags of the dependent variable.⁴² I then probe for changes over time in the coefficient on the lagged level of the interest differential by plotting the recursive coefficient estimates obtained by first estimating the relationship on a small sample and then adding additional data points one by one. The full sample estimates are shown in Table 2, the recursive coefficient estimates in Figure 8. Speed of adjustment is fastest for the UK-US interest differential and slowest for the German-US

⁴²Four lags are sufficient to deal with serial correlation in the residuals, according to Durbin's H test.

differential, with Canada in the middle.⁴³ These coefficients imply half-lives of approximately four months for the UK-U.S. differential, five months for Canada-U.S. differential, and 11 months for German-U.S. differential.

The recursive coefficients show their standard instability at the beginning of the period, when the data set is still short. For Canada and the UK they show essentially no movement thereafter. For Germany, there is a decline in adjustment speed in 1967. But the timing is wrong for it to be attributable to U.S. balance-of-payments initiatives. A more likely explanation lies in the 100 per cent reserve requirements which the Bonn Government slapped on Deutsche mark deposits held by non-residents in 1968 (Barker 1994). In any case, the fall in speed of adjustment is small relative to the two standard-error band. A variety of stability tests fail to reject the null of a constant convergence coefficient.

These findings are consistent with the skeptical view of the effectiveness of the various non-macroeconomic expedients to which the U.S. resorted to address its balance-of-payments problem, there being no sign of a decline in the speed of adjustment to interest differentials as would have been the case had initiatives like the Interest Equalization Tax and mandatory restraints on foreign investment succeeded in throwing significant sand in the wheels of international finance. It is possible, to be sure, that the constancy of the estimated speed of adjustment conflates two offsetting trends: one the one hand, the tendency for capital mobility to rise over the course of the 1960s; and, on the other hand, the tendency for these policy initiatives to slow adjustment. Be that as it may, there is no evidence of what U.S. officials sought, namely, greater policy autonomy.

⁴³As could have been inferred from the country-by-country Dickey-Fuller tests.

5. Limited Policy Options

This discussion assumes that the U.S. payments imbalance was a policy problem caused by inadequate international competitiveness and that it was solvable by devaluation of the dollar, revaluation of foreign currencies, or the adoption of more restrictive domestic policies. The dilemma was that, to a large extent, all three options were ruled out. To be sure, Germany revalued the mark by 9.3 per cent in October 1969. But revaluation by one country could not solve a global financial problem. Reaching a wider agreement to revalue required surmounting collective-action problems, since individual countries seeking to steal a competitive advantage had an incentive to free ride, and not all countries other than the United States were in a strong international position. Indeed, the UK and France could plausibly argue that the shoe was on the other foot. And engineering a blanket revaluation of European currencies was all the more difficult when first the British and then the French currencies came under pressure and ultimately had to be devalued, eroding the competitive position of their neighbors. Even in the strong-currency countries, powerful lobbies opposed revaluation. As *The New York Times* put it in an editorial, “Washington underestimated the resistance of foreign business and farm groups that saw their interests being hurt by currency changes as well as the bitterness of foreign governments over what they regarded as a crisis bred by the United States but foisted upon them.”⁴⁴

Dollar devaluation was debated by academics and discussed by officials but similarly ruled out by policy makers. Here too there were free-rider problems. Under Bretton Woods, the U.S. declared a par value for the dollar in terms of gold, while other countries declared par values vis-

⁴⁴*New York Times* (May 8, 1971).

a-vis the dollar. While the U.S. could raise the dollar price of gold, nothing guaranteed that other countries would simultaneously alter the dollar price of their domestic currencies, owing to the aforementioned “resistance of...business and farm groups.” To prevent their currencies from appreciating against the dollar, they would buy gold using their domestic currency, which would further undermine the stability of the Bretton Woods System. George Shultz, a member of Nixon’s kitchen cabinet, suggests that this was a real and pressing concern.⁴⁵ On the basis of interviews with the principals, Gowa (1983) reports that this fear was shared by members of the Volcker Group (made up of high-ranking representatives of the Department of the Treasury, the Federal Reserve, the CEA, the State Department, and the Assistant for National Security Affairs).⁴⁶

Beyond that was the danger that raising the dollar price of gold would prompt other foreign central banks and market participants suffering capital losses on their dollar balances -- including even those prepared to see their currencies revalued against the dollar -- to convert those dollar reserves into gold in order to protect themselves against further losses at the hands of the United States. Dollar devaluation, in other words, threatened to damage the credibility of the gold-dollar system. Thus, the fact that the international system was still a gold-dollar system, with a fixed dollar link to gold, prevented the United States from solving the problem the way it ultimately did after 1973.

The two-tier gold market, which obviated the need for the United States to sell gold from its reserves to prevent a rise in the market price, and the Gentlemen’s Agreement, under which

⁴⁵Shultz and Dam (1977), p.114.

⁴⁶Gowa (1983), p.74.

foreign central banks and governments agreed to refrain from converting their existing dollar holdings into U.S. monetary gold, were the responses taken to relieve the pressure on the dollar. These responses can be understood in terms of collective interest in the preservation of the system. Specifically, Gowa (1983, p.53) concludes that the other industrial countries acceded to the two-tier market in response to a warning by Chairman Martin that, absent such an agreement, the U.S. would be forced to close the gold window. But U.S. pressure could be even more direct. Thus, the U.S. government implied to its German ally that conversions of German government's dollars into gold would jeopardize the future of American troops stationed in Germany, which elicited a letter from Karl Blessing, the president of the Bundesbank, that Germany would abstain from further conversions.⁴⁷ It was made clear to Canada and Japan that the preferential treatment they enjoyed under the provisions of U.S. government programs to restrain capital exports was linked to similar restraint.⁴⁸

But insofar as these measures succeeded in relieving that pressure, they also weakened the incentive for the U.S. to adjust. If dollars could no longer be converted into gold, there was one less constraint on the ability of the U.S. to pump dollars into the international system. Events like those of 1967-8, when the monetary gold holdings of national authorities had declined as private investors shifted from dollars to gold in anticipation of an increase in the dollar price, could not recur. And so long as foreign central banks could be depended on to hold any additional dollars supplied by the United States that were not absorbed by private investors, the pressure for adjustment was minimal. This was the basis for the advice of experts like Lawrence Krause that

⁴⁷Hirsch and Doyle (1977), p.41 and passim.

⁴⁸Block (1977), p.184; Gowa (1983), p.54.

the United States adopt a posture of benign neglect toward its balance of payments.

But this overestimated the insulation the dollar enjoyed. In fact, nothing about the two-tier gold market or the Gentlemen's Agreement prevented private market participants, either Americans or foreigners, from converting their dollars into other currencies. With the development of European financial markets, the range of assets available to investors had expanded greatly compared to, say, ten years before. Market participants therefore had the same opportunities to speculate on a dollar devaluation as in any system of pegged exchange rates and open capital markets.

In this environment, the liquidity of foreign dollar holdings exposed the U.S. to the threat of a bank-run-like crisis. If private investors converted their claims on the United States into foreign currencies *en masse*, the dollar would come tumbling down. This, of course, was the problem that the creation of Special Drawing Rights was designed to address. But by the time the decision to issue SDRs was taken in 1969, short-term foreign dollar balances massively exceeded U.S. gold reserves. The creation of SDRs held out hope for limiting future problems, but they did not remove the financial inheritance.

Whether or not investors rushed for the exits depended on the strength of their belief that central banks would defend the dollar. So long as market participants were confident that the U.S. would hike interest rates if they sold dollars or that other central banks would purchase the dollars they sold, there was no incentive to sell dollars in the first place. The credibility of the commitment to support the dollar would be both necessary and sufficient for stability. But in 1970, with the rise in U.S. unemployment, doubts deepened that the Fed had the stomach to raise interest rates to whatever levels were needed to defend the dollar. And as foreign inflation

accelerated, it became less credible that other central banks would purchase however many dollars market participants sought to sell. The 1968 Gentlemen's Agreement obligated foreign monetary authorities to hold onto their inherited dollar balances but not to absorb all additional dollars they acquired as a result of capital flight from the United States, especially if these fueled unacceptable rates of inflation.

In early 1971 there were signs that the united front was breaking down. The Netherlands and Belgium exchanged dollars for gold toward the beginning of the year. Germany made known its desire to buy \$500 million of U.S. gold in a step which was technically consistent with the Gentlemen's Agreement (on the grounds that Germany had sold this same amount gold to the U.S. in 1969) but hardly confidence inspiring. France demanded the conversion of some of its dollars into gold in May, and in early August the press reported that it was preparing to ask for \$191 million in gold to make a repayment to the IMF. The last straw was on August 13th, when Britain also requested gold. Flight from the dollar rose to high levels. Reluctant to use monetary or fiscal policy to defend the currency and conscious that European central banks had reached the end of their rope, the U.S. was left with no alternative to closing the gold window.

6. Devaluation as a Non-Option

Given the perspective developed in this paper, devaluing the dollar was the obvious way of squaring the circle. Devaluation would have enhanced the competitiveness of U.S. exports, improved the trade balance (given sufficient time), and altered the direction of foreign investment flows by raising the profitability of domestic production relative to foreign production. This solution would not have required higher interest rates or budgetary economies that would have

jeopardized the pursuit of the country's other economic and military objectives. Contemporaries were aware of the argument: unilateral devaluation was one of three policy options submitted to President Nixon by the Volcker Group in 1969. Similar arguments had been placed before President Johnson during the final years of his administration.

Why then was the option shunned? One explanation is fear that devaluation would damage the credibility of the Bretton Woods System and, perhaps of more relevance to U.S. officials, of the dollar itself. A government which devalued revealed itself to be less than fully committed to the maintenance of its currency peg. If its priorities came to be questioned, investors would run at the first sign of trouble, and trouble would proliferate. The French and British governments, having caved in to pressure for devaluation, were saddled with just such a reputation. If the dollar fell under the same cloud as sterling and the franc, suffering from chronic weakness and being devalued repeatedly, the very *raison d'être* for the Bretton Woods System, in which other countries pegged to the dollar so as to achieve a semblance of international monetary stability, would be destroyed, and the system likely along with it.

Unilateral devaluation therefore would have antagonized the United States' allies and trading partners, who saw themselves as possessing a collective interest in the maintenance of this international monetary system which offered them a favorable climate for export-led growth. Germany and Japan, to cite only two examples, had predicated their entire postwar recoveries on this export-led strategy. In both countries, export-oriented producers were key supporters of the political status quo. An attempt by the United States to solve its domestic economic problems, not to mention to pursue its controversial foreign-policy aims and to establish beachheads for American multinationals in places like France, at the expense of European exporters would not

have been well received. It would have frayed the Western alliance at a time when Cold War tensions were high. It would have thrown a wrench in the works of ongoing GATT negotiations. For all these reasons it was unacceptable.

Finally, there was the possibility that if the U.S. government raised the dollar price of gold, which was the only instrument it in fact controlled, other governments would also raise the domestic-currency price of gold, leaving exchange rates and U.S. international competitiveness unchanged. Europe and Japan, for all the aforementioned reasons, were reluctant to see the competitiveness of their exports erode. Export interests would scream if their governments acquiesced in policies with this effect, and they were too important to ignore. Germany might agree, under the most intense pressure, to revalue, but only to a very limited extent. Moreover, the structure of the Bretton Woods System made more than their mere acquiescence necessary; positive steps on their part were required in order for the dollar to be devalued against their currencies, given that they had declared par values in terms of the dollar. If the dollar depreciated against gold, non-action on their part meant that their currencies would depreciate along with the dollar. There would be no benefits for U.S. competitiveness. And given their domestic political situation, non-action was the likely outcome. This was what Treasury Secretary Fowler presumably meant when he said that “the U.S. under the present rules cannot change its own parity.”⁴⁹

To be sure, a higher price of gold, even if achieved in this way, was not totally without benefits. It would raise the dollar value of U.S. monetary gold relative to foreign dollar liabilities, reducing the likelihood, *ceteris paribus*, of a run on U.S. gold reserves. By increasing the value of

⁴⁹Cited in Duncan et al. (1999), p.604.

the world stock of monetary gold, it would limit the need for foreign central banks and governments desperate for additional reserves to further augment their claims on the United States. It would be easier, in other words, for the U.S. to reduce its payments deficit without at the same time starving the rest of the world of international liquidity. No longer having to import reserves, those governments would be encouraged to stimulate demand. And more demand abroad would be unambiguously good for the U.S. balance of payments. Because the reduction in the deficit would be brought about by foreign expansion, not U.S. contraction, this approach was compatible with domestic objectives.

But a one-time increase in the dollar price of gold offered only a one-time source of relief. The shock to confidence would mean that every effort had to be made to reassure investors that it would not be repeated. This was easier said than done. And if the relief was only temporary, reasonable people could question whether the risk was worth taking.

Framing the problem this way makes clear that dollar devaluation was simply not feasible in this historical context. The structure of Bretton Woods meant that it required foreign cooperation which was unlikely to be forthcoming. It meant that it would damage systemic stability. The economic policy strategies and domestic politics of America's European allies mean that they would be antagonized, and the Cold War context rendered this price unacceptable. That the Soviet Union was one of the world's two leading gold producers (and South Africa was the other) compounded the problem further. So did the fact that the policy would penalize countries that had cooperated by accumulating dollars, while rewarding others like the French who had insisted on acquiring gold.

All this meant that devaluation was beyond the pale. Bator's (1968, p.61) summary

cannot be improved on: “Raising the price of gold was judged by the U.S. Government, rightly I think, a medieval expedient, inefficient in providing for the need (which is for a continuous, relatively smooth expansion in reserves); inequitable in its first-round benefits; and last, given the history, politically out of the question.” At least it was beyond the pale until 1971, when the U.S. had its back against the wall -- when the policy could be portrayed as the only remaining choice. And even then negotiating a limited realignment of the dollar against the other major currencies required months of acrimonious negotiations. As early as 1973 it was clear that the modest exchange rate changes agreed to at the Smithsonian had been grossly inadequate.

7. Further Issues

In this section I consider some potential qualifications and extensions of the aforementioned arguments.

The 1960 Crisis. The first U.S. balance-of-payments crisis occurring in the years covered by this paper was in 1960. Capital outflows became increasingly worrisome as the year progressed. The London price of gold shot up to \$40 in October, alarmingly higher than the U.S. Treasury’s \$35 selling price.

Is the 1960 crisis consistent with this paper’s interpretation of the roots of U.S. balance of payments problems? After all, the competitiveness problems emphasized here had not yet reached serious proportions by the early 1960s. The U.S. current account actually moved from deficit to surplus between 1959 and 1960, U.S. exports of merchandise rising by 20 per cent. Admittedly, there were concerns in 1958-9 that military and economic aid to other countries was becoming a structural drain on the U.S. balance of payments, although these too were small

relative to subsequent years. And 1960 was the first year when foreign claims (private plus official) exceeded U.S. monetary gold reserves.⁵⁰ But references and, by implication, concern on the part of the FOMC to gold losses, trade deficits and the balance of payments were minimal in 1959-60. It is hard to believe that there had yet developed a strongly held belief that the U.S. external position was unsustainable.

The simple explanation for this crisis, consistent with the theme of this paper, is the belief that Kennedy might take unilateral action to devalue the dollar as a way of removing the constraint on policy initiatives to reduce unemployment. The president elect had campaigned on a promise to “get the economy moving again,” it having been becalmed in recession for much of 1959-60. If Kennedy was going to raise the dollar price of gold, market participants and for that matter foreign central banks had obvious incentives to sell dollars for gold and foreign currencies in anticipation, regardless of the likely future evolution of the balance of payments.⁵¹

Kennedy was not the first presidential candidate ever to have campaigned on a promise of implementing policies to stimulate economic growth. But it is important to recall that the last newly-elected Democratic president, facing similar concerns, had devalued the dollar within weeks of taking office. Anticipations of that policy had precipitated the 1933 financial crisis (Wigmore 1984). Seen in this historical light, it is not surprising that fears that Kennedy might devalue the dollar were taken seriously. And, in turn, recollections of 1933 led Kennedy to issue a strong, unambiguous statement to reassure the markets, something FDR failed to do in 1932-

⁵⁰Although this gold overhang was tiny by the standards of subsequent years.

⁵¹Thus, purchases by foreign central banks were responsible for some \$2 billion of U.S. monetary gold losses in the second half of the year.

33.⁵² When the new president followed up on these statements with his first comprehensive balance of payments program, signaling his concern with the external value of the dollar, the pressure on the currency subsided. The fact that his public statements caused the pressure on the dollar to evaporate is the single strongest bit of evidence that it was temporary uncertainty about policy priorities that lay behind this episode.

Fed Policy and the Balance of Payments. 1963, 1965 and 1967 were three times when the Fed's concern with the external position reached a peak. In each instance the balance of payments was cited as a rationale for the decision to raise interest rates. This raises the question of whether it is accurate to interpret U.S. monetary policy in the 1960s as taking an attitude of benign neglect toward the balance of payments.

In fact, the first two decisions were resisted and criticized by the Administration, intensifying the pressure on the Fed to reverse direction sooner rather than later. In contrast, the third one, taken in a period of high employment and accelerating inflation, was desired on domestic as well as international economic grounds. We thus see in these episodes the operation of the political constraints that prevented the Fed from pursuing a monetary policy consistent with external balance.

In July 1963, concern with the balance of payments led the Fed to raise the discount rate

⁵²Kennedy devoted an entire speech, in Philadelphia on the eve of the election, to the balance of payments. The famous passage was "we pledge ourselves to maintain the current value of the dollar. If elected President, I shall not devalue the dollar from the present rate. I shall defend its value and soundness" (Roosa 1967, p.268). Subsequently, Kennedy rejected the advice of the majority of his advisors to request legislation to repeal the gold cover requirement of the Federal Reserve Act, which required the Fed to hold gold certificates in an amount equal to at least a quarter of its deposit and note liabilities, a requirement which immobilized a gold deal of the U.S. monetary gold stock. He was apparently convinced that repeal would frighten domestic and foreign markets, who were still suspicious of his commitment to a strong dollar.

from 3 to 3.25 per cent and to increase the interest rate payable on time deposits payable in 90 days to one year to enable U.S. banks to better compete with foreign banks for funds. Even within the Fed, there were fears over the domestic economic impact; a “healthy minority” of FOMC members worried that the rise in the discount rate could “set off a reaction that...might possibly choke off business expansion.”⁵³ As the FOMC papered over the dispute in its Record of Policy Actions, “There was extensive discussion...about the proper course of monetary policy in the light of the serious and persistent balance of payments deficit and the urgent need for additional measures to deal with it. At the same time it was recognized that the domestic economic was not expanding at a rate sufficient to bring about full employment soon and that a more rapid rate of growth was highly to be desired.”⁵⁴ One dissenting governor, George W. Mitchell, went public, arguing that tighter monetary policy was likely to damage the domestic expansion and suggesting greater reliance on taxes on capital outflows to address the balance-of-payments deficit. The President’s advisors reportedly were furious that the Fed had raised short-term interest rates without at the same time telegraphing its commitment to somehow keep long-term rates from rising, as required for the effectiveness of Operation Twist. Walter Heller wondered in a memo to Kennedy “whether we’re getting the twist or the screw.”⁵⁵ Heller convened further meetings of the Quadriad (made up of the chairman of the CEA, secretary of the Treasury, chairman of the Board of Governors, and director of the budget) to intensify the pressure on the Fed. Leaks to the press suggesting that the Administration was upset with its

⁵³*Business Week* (July 20, 1963), p.25.

⁵⁴Federal Reserve Board (1964), p.91.

⁵⁵Kettl (1986), p.100.

action further ratcheted up the pressure on the central bank.

Concern mounted over the course of 1965 about the U.S. balance of payments. From continually took gold from the United States in order to reduce their dollar balances. Responding to alarmingly large gold losses, in December the Federal Reserve Board raised the discount rate from 4.0 to 4.5 per cent. (An earlier increase to 4.0 per cent, in November 1964, had also responded to balance-of-payments considerations, namely an increase in Bank Rate by the Bank of England designed to attract financial flows from the U.S. and other countries.) This tightening elicited an angered response from the Administration, which argued that the Fed should have waited on the release of the budget for 1966 in January and on evidence that fiscal measures had succeeded in redressing the balance-of-payments and inflation problems.⁵⁶ The President himself was said to be furious.⁵⁷ The financial press portrayed the Fed as “defying” the Johnson Administration.⁵⁸ This was the famous episode when Chairman Martin was called to the LBJ ranch and bounced around in a jeep in an attempt to coax him toward a more accommodating policy.⁵⁹

The third such instance was November 1967, when the Fed raised the discount rate from 4 to 4.5 per cent in response to Britain’s devaluation of the pound and the resulting pressure on the

⁵⁶In addition, the Fed’s move occurred against the backdrop of criticism by Wright Patman, chairman of the House Banking and Currency Committee, who proposed to radically scale back the independence and autonomy of the Federal Reserve Board.

⁵⁷Kettl (1986), p.104.

⁵⁸See for example *Wall Street Journal* (December 6, 1965, p.1).

⁵⁹Kettl (1986) tabulates the number of meetings between Chairman Martin and the president each year from 1953 through 1968 (Quadriad meetings plus private meetings, excluding social occasions and official events), and finds that these peaked in 1965.

dollar. U.S. gold reserves fell by \$1 billion, to just \$1.3 billion above the 25 per cent cover ratio required by the Federal Reserve Act. This was the one of the three episodes when resistance to the measure was not severe; signs of domestic overheating were rampant, and business investment initially resisted the damping effects of the tax surcharge. Thus, this episode offers confirmation that the only times when monetary policy could be used to address payments problems in a sustained way was when the imperatives of internal and external balance coincided.

The Brookings Report. In 1962 the Council of Economic Advisors commissioned a team of Brookings experts (led by Walter Salant, and with the participation of Emile Despres, Lawrence Krause, Alice Rivlin, William Salant and Lorie Tarshis) to analyze the prospects for the U.S. balance of payments. Its report (Salant et al. 1963), transmitted to the Council in January 1963, projected the disappearance of the country's external problem by 1968 (specifically, it forecast that the basic balance -- current account plus government payments plus long-term capital flows -- would have moved into a \$1-2 billion surplus). It thus provided some justification for the policies of benign neglect pursued in this period.

The assumptions underlying the Salant Committee's forecasts are shown in Table 3. The key assumptions were that U.S. GNP would grow faster than Western European GNP over the period 1960-1968 and that unit labor costs would rise only half as rapidly in the United States.⁶⁰ Moreover, not only was aggregate supply projected to increase more rapidly in the U.S. than in Europe, but with the European economy continuing to be run under high pressure of demand and higher European incomes finally translating into an increased demand for nontraded goods, an

⁶⁰Thus, real GNP was projected to grow by 4.6 per cent per annum in the United States but by only 4.3 per cent in the U.K., West Germany, France and Italy.

increasing share of European investment would be devoted to sectors producing personal and housing services. The implication for Europe was that the supply of exports would grow slower than GNP, while the opposite would be true in the United States. The other side of the same coin was that unit labor costs would grow by 1.5 per cent per annum in the U.S. but by 3.2 per cent in Western Europe. Higher unit labor costs would be passed through to higher prices, implying a shift in the relative prices of U.S. and European goods that would create the requisite demand for the additional U.S. output of traded goods.⁶¹ This is how the committee saw the relatively rapid increase in U.S. exports being absorbed by international markets. The bottom line was a stronger U.S. trade balance. Indeed, the U.S. balance of payments would strengthen even more dramatically than the trade accounts, since slower growth, lower profits and a higher labor share in Europe would make U.S. direct foreign investment less attractive.

In the event, the forecasts of the Salant Committee did not obtain. Actually, its forecast of U.S. economic growth (adopted from the Council of Economic Advisors) was dead on: where it had forecast that U.S. GDP would be 45.5 per cent higher in 1968 than 1960, it actually rose by 44.9 per cent. But it severely underestimated the rate of European growth: industrial Western Europe continued to grow over the period at 4.7 per cent a year, even faster than the United States. GDP was 81 per cent higher in 1968 than 1960 in West Germany, 67 per cent higher in

⁶¹To some extent, reductions in capital's share of national income could limit the pass-through from higher unit labor costs to higher prices, but the Salant Committee saw limits on how radically capital's share could be compressed. At the same time, a somewhat higher labor's share nonetheless would mean lower profits and lower investment, validating the expectation of slower European growth.

Italy, and 55 per cent higher in France.⁶² The phenomenon was general; in Belgium, Denmark and Norway, all relatively poor performers in the 1950s, there was a sharp acceleration in the 1960s. Only with respect to the UK, the “sick man” of Europe, was the committee’s pessimism justified; there output rose by only 28 per cent (almost exactly as forecast), contributing to that country’s own notorious balance-of-payments problems.

This surprisingly good performance was driven by a combination of wage moderation and high investment, to whose delivery Europe’s corporatist institutions were ideally suited. The growth of labor supplies was sustained by the movement of workers to the industrial regions from Mediterranean Europe and North Africa. Wage growth remained considerably more subdued than the eight per cent per annum forecast for France, Germany and Italy and the six per cent forecast for the UK. Investment rates rose further from the levels of the 1950s in every European country (except in Norway, where overall investment remains stable -- although investment rates netting of residential construction rose even there), and the countries of Western Europe remained net importers of capital. Much U.S. foreign investment in Europe was associated with technology transfer in chemicals, computers and transport equipment. And Europe’s patient bank-based financial system and low-turnover labor market were ideally suited for adapting these known technologies.⁶³

⁶²It forecast increases in GNP over the intervening eight years of 38 55, and 48 per cent. These forecasts were arithmetic averages of the high and low target figures submitted by the four countries to the OECD. In the event, the high target figures turned out to provide better forecasts.

⁶³As opposed to developing the kind of radical innovations pioneered by the United States in earlier (and subsequent) decades. The argument that the U.S. constellation of flexible labor markets and securitized finance is ideally suited for an environment with opportunities for radical innovation, while Europe’s bank-based finance and low-turnover labor markets have a

Where the Salant Committee projected a decelerating rate of growth of U.S. foreign direct investment abroad and growing FDI inflows into the United States, gross long-term capital outflows (the vast majority of which were accounted for by FDI) actually ran at double the rate forecast for 1968.⁶⁴ Here again the Committee's overestimate of the improvement in the U.S. balance of payments resulted from underestimating the rate of European economic growth. And the Committee failed to appreciate the importance of other trends making for continued FDI, namely the role of U.S. multinationals as technological leaders, and of improvements in information and communications technologies in diminishing problems of corporate control of foreign branch plant operations.

8. Conclusion

U.S. balance-of-payments problems in the 1960s, I have argued, had two aspects and must be understood using a framework encompassing both. On the one hand, there was a growing problem of real overvaluation, evident in the erosion of the current account and aggravated by the reluctance of U.S. policy makers to adjust monetary and fiscal policies. Occasional half-hearted responses to balance-of-payments pressures there were by the Fed, the Executive and Congress, but there was no systematic willingness assign monetary and fiscal policies to external targets or to subordinate domestic political and economic objectives to balance-of-payments goals. The markets were aware of this fact, and the level of international capital mobility was high enough for

comparative advantage in environments dominated by incremental innovation is developed with benefit of hindsight by Soskice (1996).

⁶⁴Where the Committee had projected \$2.1 billion, the actual long-term outflow in 1968 was \$4.3 billion, of which \$2.3 billion was FDI.

them to act upon it. This was the crux of the U.S. balance of payments problem in the 1960s.

Elsewhere I have argued that the conjuncture of these two facts — high capital mobility together with political democracy that makes it unrealistic to ask governments to assign priority to exchange-rate targets over and above all other goals — is what is distinctive about the late-20th century monetary environment.⁶⁵ It is what has compelled a growing number of countries to accept greater exchange rate flexibility. From this point of view, U.S. balance-of-payments policy in the 1960s and the floating of the dollar in 1971-73 can be seen as harbingers of future trends.

The U.S. payments problem was further aggravated by its systemic aspect, that the main source of international liquidity for the expanding world economy was dollar balances, which created the potential for instability. Depres, Kindleberger and Salant rightly emphasized that the role of the United States in this system was to act as banker to the world, borrowing short and lending long. But they were not right that this situation rendered the U.S. deficit on net liquidity balance benign. Just like a bank providing liquidity transformation services to its customers, the U.S. was vulnerable to a “depositor run.” So long as foreign central banks, concerned to preserve the Bretton Woods System of pegged budget adjustable exchange rates, stood ready to support the dollar, they provided the equivalent of deposit insurance. But unlike a classic lender of last resort, their willingness to do so was limited, collective interest in the maintenance of the Bretton Woods regime or not. And when that limit was reached in 1971, the system collapsed in a heap.

This ancient history may not be irrelevant to our day. Today, the apostles of the “new economy” reassure us that foreign direct investment inflows will continue to painlessly finance the U.S. current account deficit, now running at more than \$300 billion and projected to rise further,

⁶⁵This is the theme of Eichengreen (1996).

because productivity growth in the U.S. will continue to outstrip productivity growth abroad. Given U.S. dominance of the burgeoning field of information technology, foreigners, it is said, will continue to find such investment irresistible. In 1963 the Salant Report similarly predicted that our external deficit was not a problem — that the deficit would shrink and the direction of foreign direct investment would reverse (or at least that U.S. FDI would decline significantly) as U.S. productivity surged relative to European productivity. In the event, U.S. productivity did not surge relative to foreign productivity, and the balance-of-payments problem, rather than gradually disappearing, brought the dollar down with a crash. This is a cautionary tale for those who invoke the mantra of the new economy whenever the fact of the U.S. current account deficit is raised.

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Table 1
Balance on Capital Flows*
 (Billions of dollars)

Year	Net outflow U.S. capital		Net inflow foreign capital**	Surplus (+) or deficit (-)
	Govt.	Private		
1946	5.3	0.4	-0.6	-6.3
1947	6.1	1.0	-0.4	-7.5
1948	4.9	0.9	-0.4	-6.2
1949	5.6	0.6	0.0	-6.2
1950	3.6	1.3	0.2	-4.7
1951	3.2	1.0	0.5	-3.7
1952	2.4	1.2	0.1	-3.5
1953	2.1	0.4	0.1	-2.4
1954	1.6	1.6	0.2	-3.0
1955	2.2	1.3	0.3	-3.2
1956	2.4	3.1	0.6	-4.9
1957	2.6	3.6	0.5	-5.7
1958	2.6	2.9	0.2	-5.3
1959	2.0	2.4	0.7	-3.7
1960	2.8	3.9	0.4	-6.3
1961	2.8	4.2	0.7	-6.3
1962	3.0	3.4	1.0	-5.4
1963	3.6	4.5	0.7	-7.4
1964	3.6	6.6	0.7	-9.5
1965	3.4	3.8	0.3	-6.9
1966	3.4	4.3	2.5	-5.2
1967	4.2	5.7	3.4	-6.5
1968	4.0	5.2	8.6	-0.6

* Includes short-term capital.

** Includes certain special Government transactions.

Source: Survey of Current Business, June 1969, pp.26-27.

Table 2
Convergence Speed, 1960-1971
 Dependent Variable is Change in Excess Over US Interest Rate

Independent Variable	Canada	Germany	UK
Constant	0.04 (1.11)	0.069 (1.31)	0.245 (2.90)
Excess over US interest rate	-0.139 (2.44)	-0.075 (2.32)	-0.168 (3.38)
Dependent variable (-1)	0.279 (2.98)	0.155 (1.78)	0.161 (1.82)
Dependent variable (-2)	-0.162 (1.763)	0.072 (0.86)	0.104 (1.16)
Dependent variable (-3)	0.002 (0.02)	-0.237 (2.87)	0.054 (0.61)
Dependent variable (-4)	0.052 (0.60)	0.266 (3.02)	0.045 (0.49)
S.E. of regression	0.34	0.52	0.46

Notes: t-statistics in parentheses

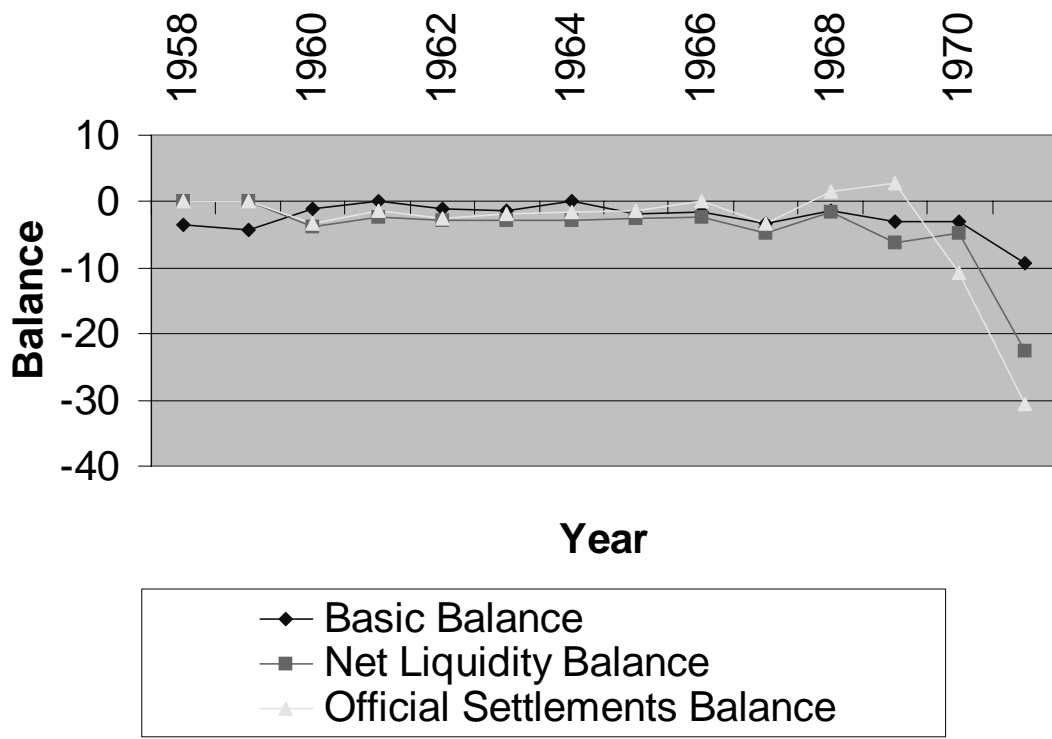
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Table 3. Evolution of Selected Variables on Salant Committee Assumptions, 1960-68

Component	United States	United Kingdom	France	West Germany	Italy	France, West Germany, Italy	U.K., West Germany, France, Italy
GNP in constant prices							
Average % change	4.8	3.3	5.0	4.1	5.6	4.75	4.3
Cumulative % change	45.5	29.7	47.75	37.9	54.6	45.0	40.2
Labor Force							
Average % change	1.71	0.48	0.70	0.35	0.64	0.54	0.52
Cumulative % change	14.5	3.9	5.7	2.8	5.2	4.4	4.2
Employment in man-years							
Average % change	1.87	0.48	0.83	0.35	0.91	0.64	0.60
Cumulative % change	15.9	3.9	6.8	2.8	7.5	5.2	4.9
Hours worked per week							
Average % change	0	-0.93	-1.0	-1.02	0	-0.80	-0.84
Cumulative % change	0	-7.2	-7.7	-7.9	0	-6.2	-6.5
Employment in man-hours							
Average % change	1.87	-0.45	-0.18	-0.67	0.91	-0.17	-0.25
Cumulative % change	15.9	-3.6	-1.4	-5.5	7.5	-1.3	-1.9
Output per man-hour							
Average % change	2.9	3.8	5.2	4.8	4.6	4.9	4.6
Cumulative % change	25.5	34.5	49.8	45.9	43.8	46.9	42.9
Labor cost per man-hour							
Average % change	4.4	6.0	9.0	9.0	7.6	8.7	7.9
Cumulative % change	41.3	59.4	99.3	99.3	79.7	94.9	83.7
Labor cost per unit of output							
Average % change	1.5	2.1	3.6	4.0	2.8	3.6	3.2
Cumulative % change	12.6	18.5	33.0	36.6	25.0	32.7	28.6
Labor cost as a percentage of price							
In 1960	68.9	71.3	60.7	62.0	59.0	60.9	64.1
In 1968	68.9	71.3	63.2	65.3	62.0	63.8	66.4
Price of output							
Average % change	1.5	2.1	3.1	3.3	2.2	3.0	2.75
Cumulative % change	12.6	18.5	27.7	29.7	19.0	26.7	24.1

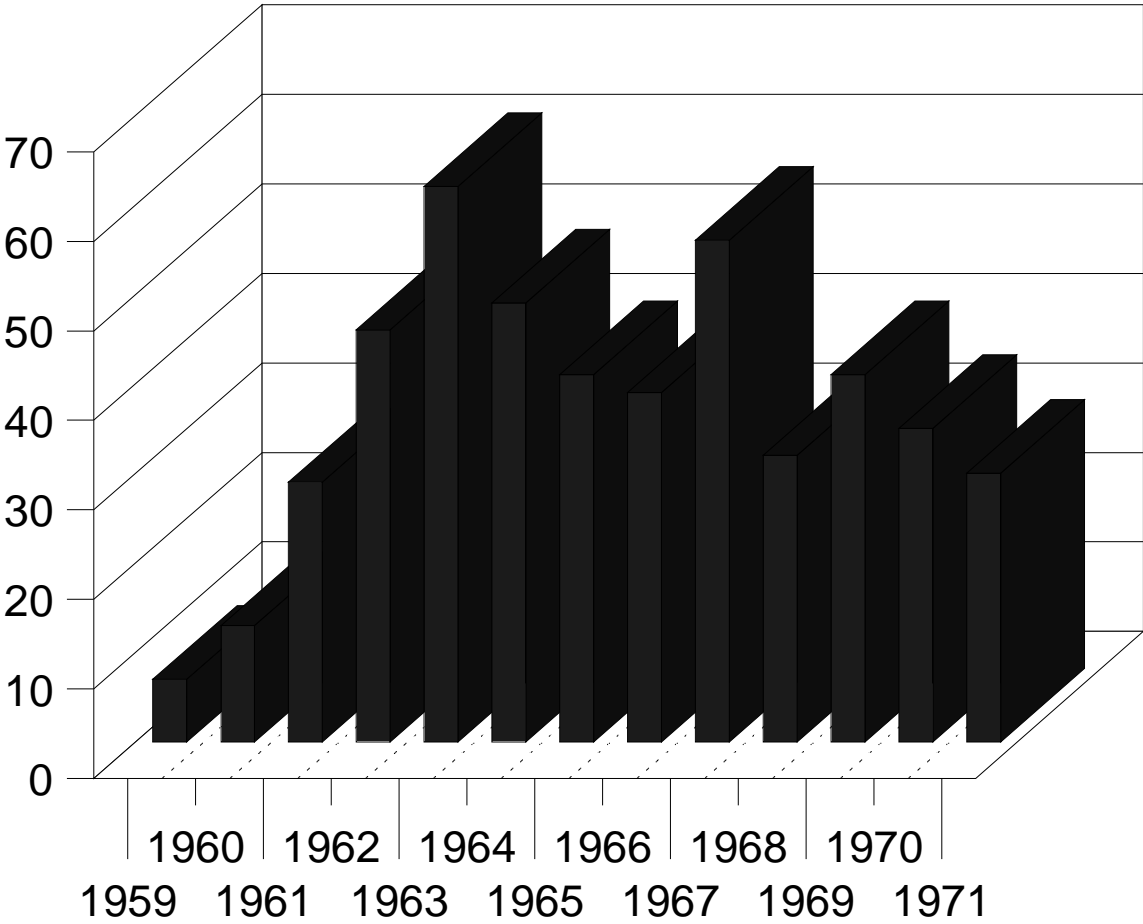
Source: Salant et al. (1963), p.263.

Figure 1. Three Measures of the U.S. Balance of Payments



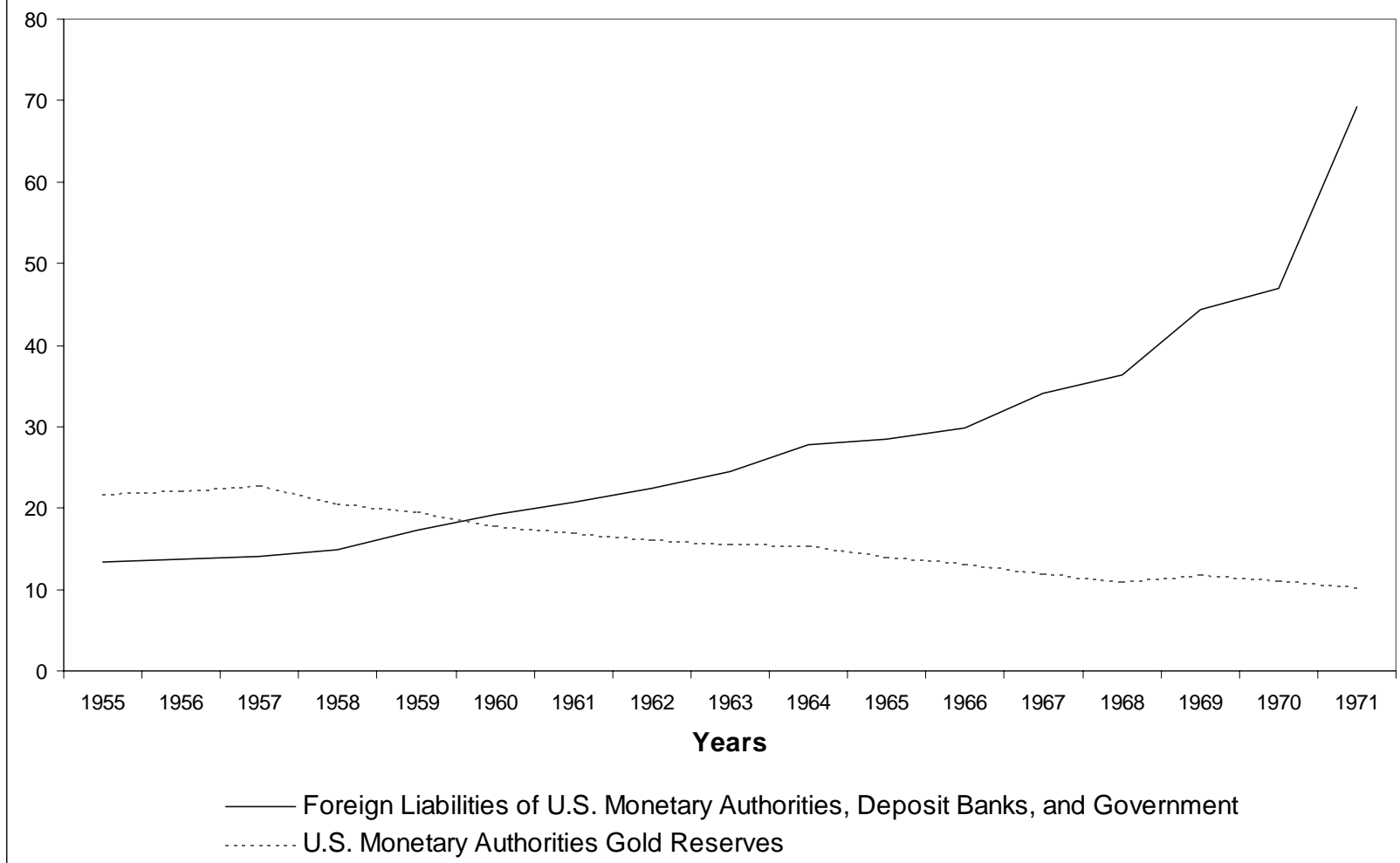
Source: U.S. Survey of Current Business (various issues).

Figure 2
References to Balance-of-Payments Considerations in Fed's Statement of Policy
Actions



Source: see text.

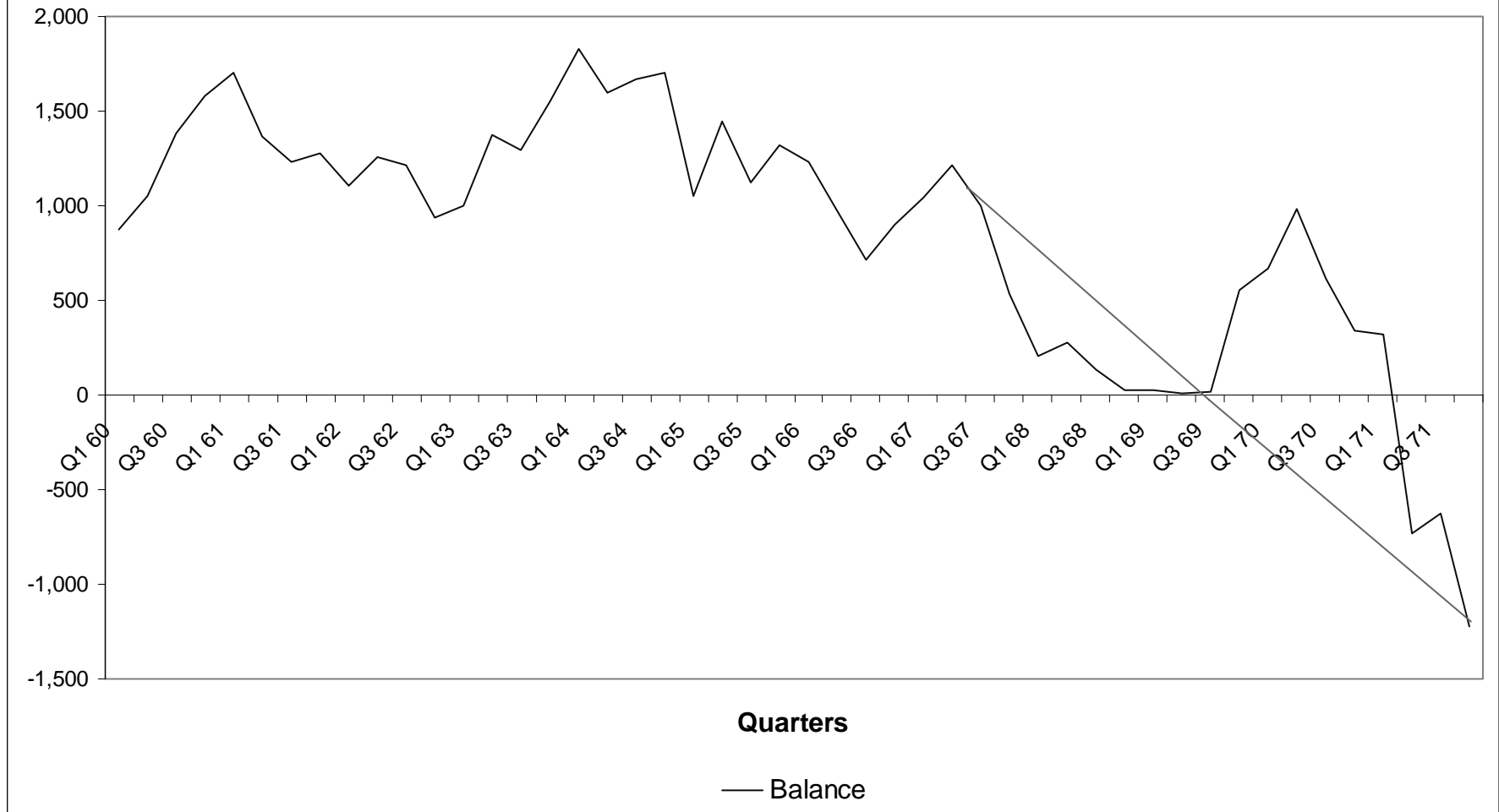
**Figure 3:
International Liquidity Position of the United States (US\$ Billions)**



Note: U.S. Monetary Authorities Foreign Liabilities is line 16c of IFS; U.S. Deposit Money Banks Foreign Liabilities is line 26c of IFS; U.S. Government Foreign Liabilities is line 88ca of IFS. U.S. Monetary Authorities Gold Reserves is line 1and of IFS.

Source: International Financial Statistics, International Monetary Fund

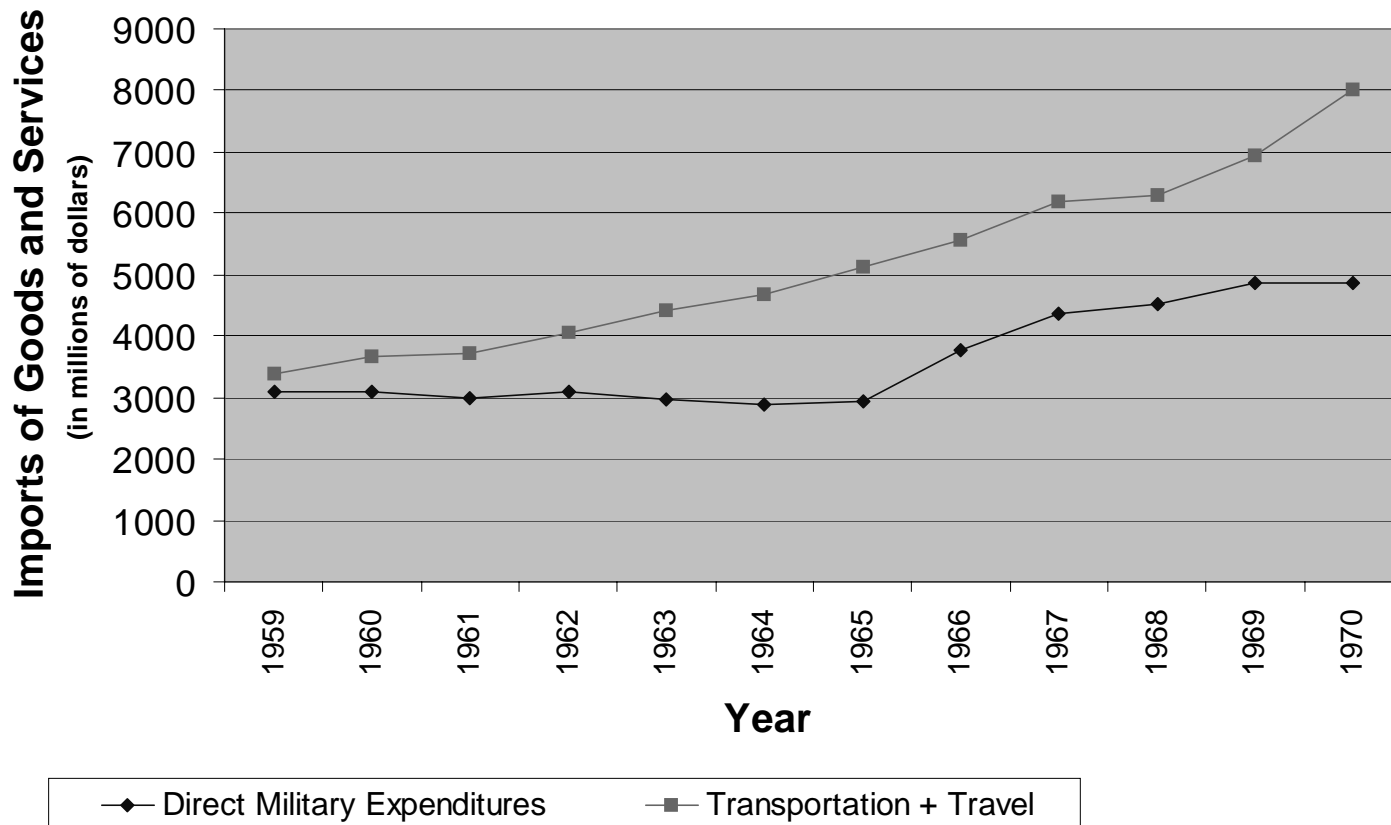
**Figure 4:
Merchandise Balance of the United States (US\$ Millions)**



Note: U.S. Merchandise Balance is series "USVSMERCB" of Datastream.

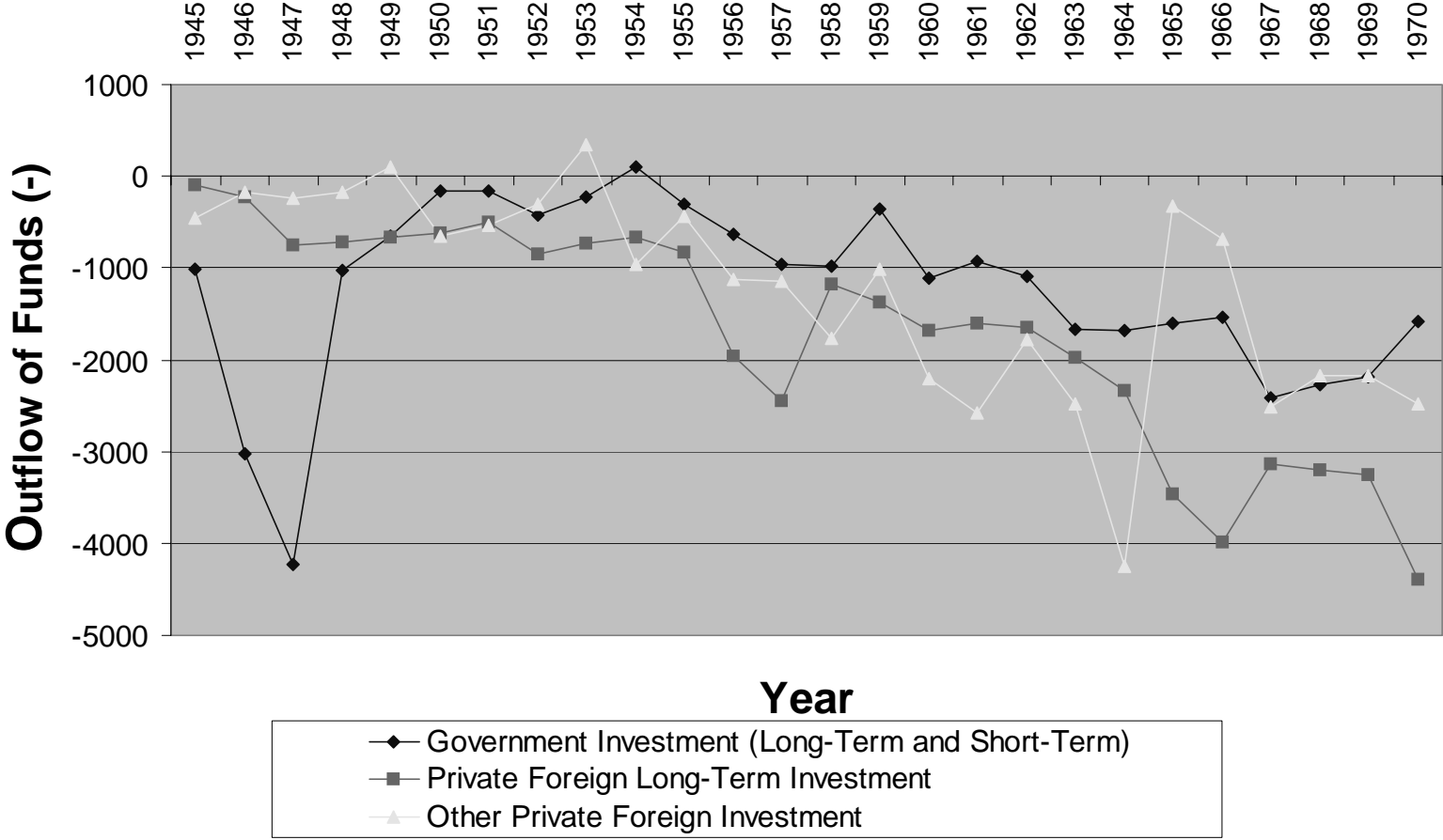
Source: Datastream National Government Series

Figure 5. U.S. Direct Military Expenditures Abroad and Imports of Travel and Transportation Services, 1959-1970



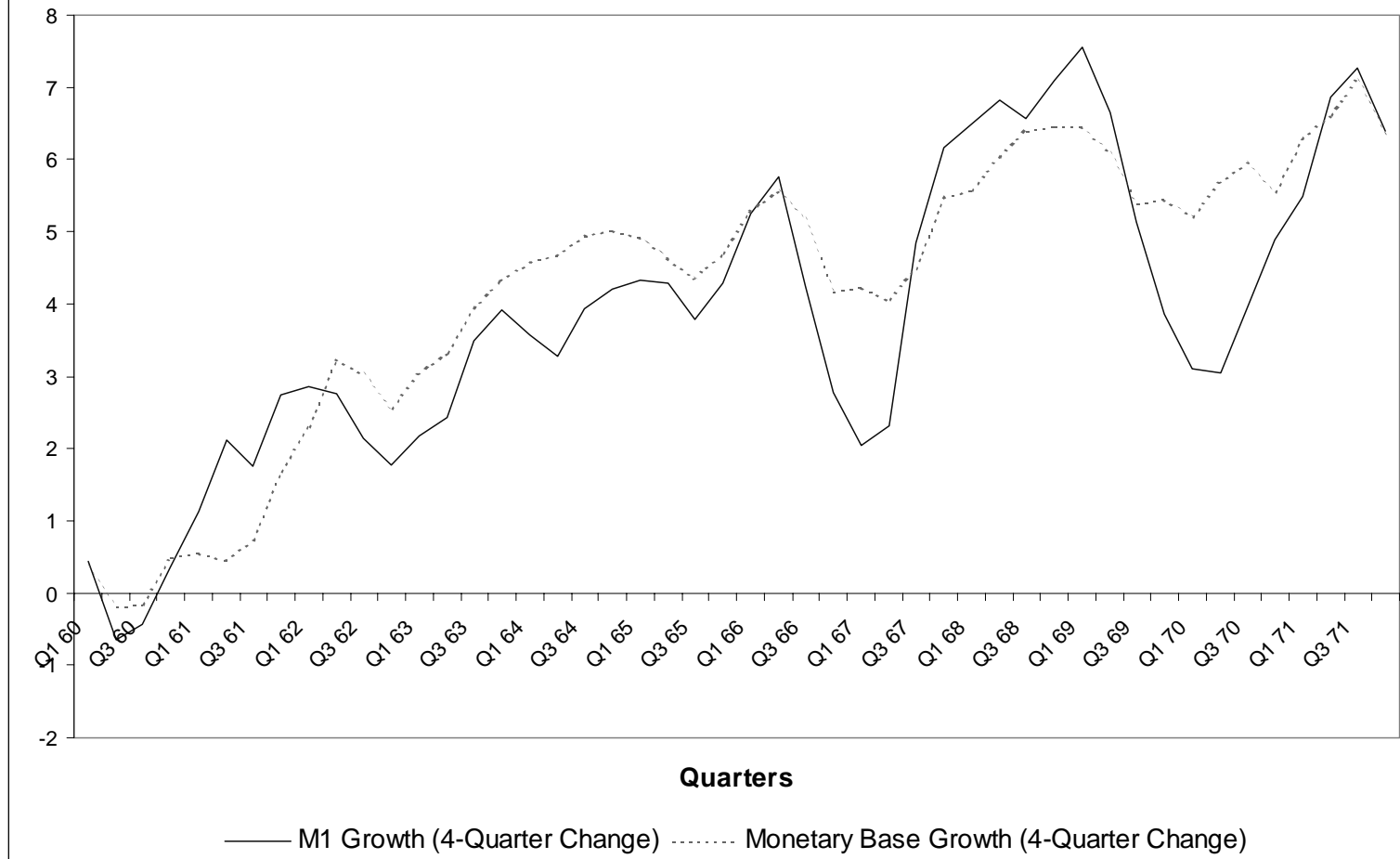
Source: Historical Statistics of the United States.

Figure 6. U.S. Capital Flows, Net, 1945-1970



Source: Historical Statistics of the United States.

**Figure 7:
United States M1 and Monetary Base Growth (Percentage)**



Note: M1 Growth calculated from series "USM1....B" of Datastream; Monetary Base Growth calculated from series "USMONBASB" of Datastream.

Source: Datastream National Government Series

Figure 8
Interest Differentials: Canada, Germany and UK vis-a-vis the U.S., 1960-1971

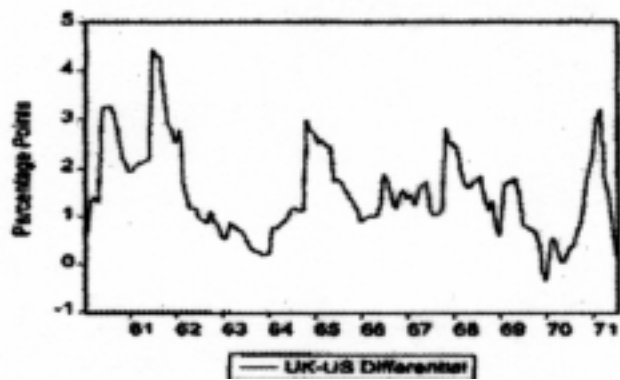
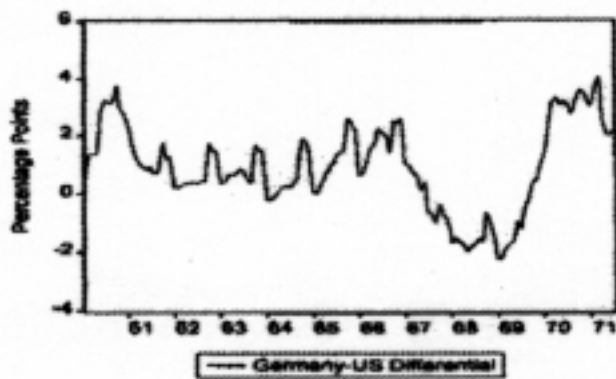
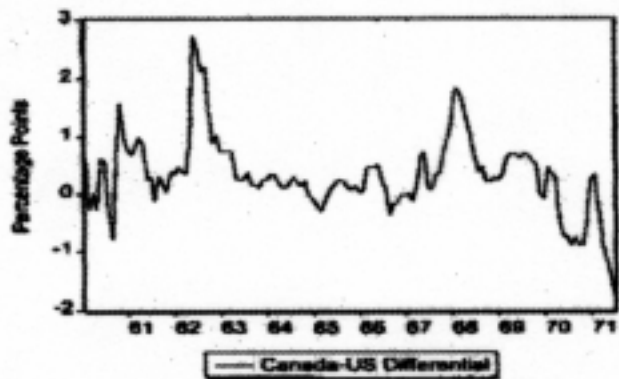


Figure 9

Recursive Coefficient Estimates of Speed of Convergence

