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17-11 The End of the Bretton Woods International Monetary System

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Abstract

This paper examines two episodes of international economic policy coordination: the efforts to modify the Bretton Woods international monetary system in the 1960s and early 1970s and to reform the system after the closing of the US official gold window on August 15, 1971. The paper examines the diagnoses of the problem in each episode, the treatments applied, and the results in the short run and longer run. In the short run, both episodes were failures. The international monetary system that emerged in the mid-1970s, while less systemic than some would like, has nevertheless stood the test of time, although proposals for its reform continue to be discussed.

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I have directed Secretary Connally to suspend temporarily the convertibility of the dollar into gold or other reserve assets, except in amounts and conditions determined to be in the interest of monetary stability and in the best interests of the United States.

—Richard M. Nixon, August 15, 1971

With those 42 words, President Nixon announced the death of the exchange rate element in the Bretton Woods international monetary system (IMS). That was not the intention or expectation of the US officials who had gathered at Camp David the weekend of August 13–15, 1971, to put the finishing touches on Nixon's New Economic Program, which was designed to help him win reelection in 1972. The program included a 90-day freeze on wages and prices, with a voluntary restraint program to follow, and tax measures to stimulate the US economy. It also included two measures not intended to be permanent: the suspension of the convertibility of official US dollar holdings into gold and a 10 percent surcharge on dutiable imports from all countries. Nixon declared "[This program] isn't directed against any other country. It is an action to make certain that American products will not be at a disadvantage because of unfair exchange rates. When the unfair treatment is ended, the import tax will end as well" (Nixon 1971).

Import surcharges have largely gone out of policy fashion, but they were a not-uncommon tool of balance of payments management in the 1960s. [1] The president's fighting words in making the announcement should sound familiar to a reader more than 45 years later. The import surcharge, also referred to as a "border tax," a term heard again in 2017, was wildly popular in the United States. In the months before the announcement, the US trade balance had been deteriorating. In fact, the US trade and current account balances turned negative in the second quarter of 1971. They remained negative until the end of the first quarter of 1973 and the fourth quarter of 1974 respectively.[2] In the preceding six months, a number of pieces of protectionist legislation had been introduced in the Congress, and one had passed the House of Representatives. In operation, the surcharge had limited economic impact because it covered only 52 percent of US imports, it could not be fully applied to some imports, and goods that were in transit on August 1971 were exempted. In particular, the impact on US imports from other Group of Ten (G-10) countries,[3] whose currencies were the focus of the desired depreciation of the dollar, was small relative to their total trade. One exception was Canada, but its currency was already floating. Another was Japan (Douglas Irwin 2012a).

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1. Douglas Irwin (2011) reports that in the 1950s and 1960s import surcharges were used by many countries to delay or avoid devaluations of their currencies. Between 1955 and 1971, nine advanced countries imposed import surcharges. What was novel about the US surcharge was that it was designed to force other countries to revalue their currencies vis-à-vis the US dollar and permit the devaluation of the US dollar. The US surcharge lasted only four months, and during that period its country application, which initially included all countries, was scaled back.

2. These are the current US data retrieved from Haver Analytics. However, the Greenbook summarizing current economic financial conditions and prospects that was prepared for the Federal Open Market Committee meeting on July 24, 1971 (Board of Governors of the Federal Reserve System 1971) stated that the trade balance most likely was in deficit in the second quarter of 1971.

3. Includes Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States.

The president's explanation of the timing of his announcement also read as if it could have been delivered by any finance minister or head of state today in announcing a currency devaluation:

> In recent weeks, the speculators have been waging an all-out war on the American dollar. The strength of a nation's currency is based on the strength of that nation's economy—and the American economy is by far the strongest in the world. Accordingly, I have directed the Secretary of the Treasury to take the action necessary to defend the dollar against the speculators. (Nixon 1971)

This was a curious statement given that the US government wanted the dollar to depreciate and the "speculators" were assisting in that effort. Any unwanted speculation was by foreign official holders of US dollar assets that they wanted to convert into gold, speculating that the dollar would have to be devalued against gold.

The first half of 1971 already had witnessed considerable turbulence in the foreign exchange markets. In early May, West Germany floated the deutsche mark, joining the Canadian dollar that had been floated a year earlier, the Dutch guilder, small revaluations of the Austrian schilling and the Swiss franc, and Belgium's adoption of a two-tier exchange rate system.[4] The "Nixon shock" sent foreign exchange markets into further turmoil as some countries, such as Japan and France, resisted appreciations of their currencies. The unease lasted until December 18, when the G-10 finance ministers and central bank governors reached the Smithsonian Agreement on a new set of parities and resolved to "consider" a longer-run reform of the international monetary system (Solomon 1982, 204–09). President Nixon, sounding like leaders today who favor hyperbole, declared the Smithsonian meeting had concluded "the most significant monetary agreement in the history of the world" (Solomon 1982, 208). Fifteen months later the agreement was in shambles.

This working paper reviews two episodes in international economic coordination surrounding the events of August–December 1971: first, the slow-motion collapse of the Bretton Woods international monetary system (IMS) and, second, the failure of the effort to reform and replace the Bretton Woods system of fixed exchange rates with an exchange rate regime similarly based on par values and with a structure that had a link to settlement of official holdings of currencies in primary reserve assets such as gold or special drawing rights (SDR).

The United States was not forced to close access to the US Treasury's gold window on August 15. The closure was a defensive measure in support of a program that was intended to stimulate the US economy, which was likely to weaken the US trade position further and place increased pressure on the US gold stock. In addition, the US administration wanted to respond to protectionist pressures in the Congress. The end of the Bretton Woods IMS, however, was not dictated by trends in the slow-moving US trade and current accounts. It was dictated by short-term international capital flows that could force foreign monetary authorities defending their exchange rates to buy billions of US dollars a day.

When foreign authorities woke up on August 16, 1971, few could foresee that the Nixon announcement marked the de facto end of the Bretton Woods IMS. It had lasted only 26 years; its successor, sometimes referred to as a nonsystem, has lasted almost twice that long.

4. The exchange rate for capital flows was floated.

After reviewing the principal facts associated with these two episodes of international economic policy coordination, I assess their success or failure using a three-part framework: (1) Did policymakers identify the problem(s) promptly and establish a shared diagnosis? (2) What was the associated treatment of the problem? (3) What were the short-run and longer-run results from that treatment?

Officials generally agreed on the problems of the Bretton Woods IMS. The treatment that was applied included augmenting the supply of primary reserve assets with special drawing rights to maintain the link to gold in the system through the US dollar and increasing the supply of temporary, conditional official financing, but the problems of the asymmetric adjustment process and of the increasing impact of capital movements on the system were not adequately addressed. In the short run, the identification of the problems with the Bretton Woods system, the extent of the shared diagnosis of those problems, and the actions that flowed from that diagnosis did not prevent the collapse of the Bretton Woods IMS. In the longer run, modifications in the IMS in the 1960s and developments prior to August 15, 1971 laid the groundwork for the effort to reform the IMS after the Smithsonian Agreement in December 1971.

The subsequent effort to reform the IMS in the Committee of Twenty (C-20) focused on three old problems: the balance of payments adjustment process, settlement of payments imbalances in primary reserve assets, and the volume and composition of international reserves. A new fourth item was added: the special problems of developing countries. The treatment by the C-20 of the agenda for reform of the Bretton Woods system stopped substantially short of modifying the balance of payments adjustment process to make it more symmetrical, establishing procedures for the settlement of imbalances, or creating mechanisms to govern the volume and composition of international reserves. Arguably, the special problems of developing countries received more substantive attention than the other elements on the post-Smithsonian agenda, but the developing countries did not get their SDR-aid link. The treatment, therefore, was incomplete and failed to produce the intended results. On the other hand, 40 years after the adoption of the second amendment to the IMF Articles of Agreement, the limited changes in the organization and operation of the international monetary system have endured and in that sense were positive.

THE COLLAPSE OF THE BRETTON WOODS SYSTEM

In July 1944, after three weeks of debate at the Mount Washington Hotel in Bretton Woods, New Hampshire, delegates from 44 countries adopted the Bretton Woods Agreements to establish the International Monetary Fund (IMF) and the World Bank (formally the International Bank for Reconstruction and Development [IBRD]). World War II was still raging in both Europe and the Pacific; the delegates met less than two months after the Normandy invasion. Leaders of the Allied powers were determined to establish a framework of postwar international economic and financial cooperation that addressed the perceived weaknesses of the ad hoc monetary arrangements in the interwar period. Those weaknesses were viewed as having contributed to the depth of

the Great Depression and indirectly to World War II: beggar-thy-neighbor trade and exchange rate policies and national monetary policies that paid little attention to the needs of the global economy and financial system.[5]

The resulting Bretton Woods IMS was less than fully international because the Soviet Union and most of its satellites declined ultimately to participate, though they did attend the Bretton Woods conference. The agreement that came out of it was broader than a monetary system because it potentially encompassed economic and financial policies other than monetary policies, but it did not include the authority to create an international money. It also was less than a fully coherent system, in part because it was the result of a compromise between the principal negotiators: John Maynard Keynes from the United Kingdom and Harry Dexter White from the United States (Robert Solomon 1982, 5).

The Bretton Woods IMS had three principal novel features.

First, exchange rates became a matter of multinational concern. Exchange rates were to be fixed, and they were not to be changed beyond a cumulative, net 10-percent postwar adjustment without the approval of the IMF. In the case of cumulative net changes of less than 10 percent, the Fund was required to deliver its concurrence or objection within 72 hours. For changes beyond that amount, it could take longer to decide.

Second, the IMF could extend credit to a member country facing external financial difficulties by drawing on the quotas (currency subscriptions) of other members. The members were committed in advance to provide such financing out of their own reserves. Countries no longer had to rely on ad hoc mutual support arrangements among central banks that might or might not be put into place in a timely manner, as had been the case during the interwar period.

Third, the Bretton Woods IMS not only sanctioned the use of controls on capital flows but also envisaged the IMF requiring a country to use such controls. However, controls and restrictions on the settlement of current account transactions that had been imposed during the Great Depression and World War II were to be phased out.

The Bretton Woods IMS had one familiar feature: It relied on gold as the primary international reserve asset. The role of gold at the center of the system, in turn, was based de facto upon the US commitment to maintain the dollar's par value in terms of gold—in effect, to peg the dollar price of gold. As was permitted by the IMF Articles of Agreement, the par values of the currencies of other member countries, which were free to express their par values in terms of gold, in fact were expressed in terms of a currency convertible into gold, by default the US dollar. Foreign exchange transactions within the territories of IMF members were limited to 1-percent margins around those parities.

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5. Douglas Irwin (2011 and 2012b) argues that the post–World War II solution to the trade and exchange rate turmoil of the Great Depression drew the wrong lessons in pursuing greater fixity of exchange rates combined with trade liberalization. According to Irwin, it is erroneous to conclude that countries engaged in competitive depreciations. They tended first to impose trade restrictions and only devalued when those restrictions proved to be inadequate to protect pressures on their currencies. Countries such as France that held on to their gold parities longer tended to impose more trade restrictions.

Bretton Woods and International Economic Policy Coordination

The Bretton Woods system replicated the gold exchange standard of the interwar period, except for the fact that it was centered even more than during that earlier period on a single currency convertible into gold: the US dollar. During the interwar period, a significant number of countries returned, at least briefly, to par values declared in terms of gold. Most of the major currencies—the key currencies—were therefore tied to gold, and countries were free to accumulate foreign exchange reserves in those currencies, hence the term gold exchange standard. In practice, most foreign exchange holdings during the interwar period were in either UK pound sterling or US dollars.

The interwar gold exchange standard also was essentially a de facto IMS, not a treaty-based de jure IMS. Efforts were made in the period immediately after World War I, for example at the Genoa Conference in 1922, to institutionalize and codify the gold exchange standard, but those efforts failed largely because the United States was unwilling to participate (Eichengreen 1996, 61–63). Responsibility for maintaining the stability of the system was shared, but the actual mechanisms for doing so were ad hoc. Consequently, the system, such as it was, broke down when it came under stress during the Great Depression.

The management of the interwar IMS fell largely to the central bankers of the major countries generally acting bilaterally (Richard Cooper 2006). As detailed by Liaquat Ahamed (2009), those central bankers in the end were unable to deliver global economic and financial stability.[6]

The interwar gold exchange standard suffered from three weaknesses.

First, participation in the system was optional. A country could adopt the gold standard or withdraw from participation in the system at its sole discretion.

Second, the system lacked mechanisms to enforce the implicit rules of the gold-standard system, which were that a country receiving gold flows (or accumulating reserves) should expand its money supply, lower its interest rates, stimulate its economy, and raise its inflation rate—and vice versa for a country that was losing gold. There

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6. The failure of the central bankers to maintain global economic and financial stability in the interwar period did not prevent them from opposing the establishment of the IMF. John H. Williams, a Harvard economist who was at the time vice president and chief economist at the Federal Reserve Bank of New York, testified in the US Congress against the Bretton Woods Agreements Act and US participation in the IMF. He favored continuing the key-currency approach that had characterized the interwar period with the central bankers running the system with their regular meetings at the Bank for International Settlements (BIS). The Bretton Woods conference, after a substantial amount of discussion, recommended the "liquidation of the BIS at the earliest possible moment." In the period immediately following the conference, there were extensive discussions, largely between the United States and the United Kingdom, about whether and how to implement this recommendation. In the end, the matter was dropped because it would have required another treaty to liquidate the BIS, since it had been established by treaty, and the central banks, in particular European central banks, pressured their governments not to dissolve their club. See Gianni Toniolo (2005, chapter 8). The US government in 1930 and after World War II did not favor Federal Reserve membership in the BIS. Consequently, the Federal Reserve did not formally join the BIS, by taking up its seats on the BIS board, until 1994, although both the Federal Reserve Board and Federal Reserve Bank of New York participated in meetings at the BIS (Charles Siegman 1994). Allan C. Sproul, president of the Federal Reserve Bank of New York, favored at least postponing the approval of the IMF for a transitional period (US Senate 1945). Harold James (1996) argues that Williams's key-currency view of the international monetary system de facto dominated the immediate post–World War II period and was later perpetuated via the use of mechanisms like the Group of Seven (G-7), which operated outside of the IMF structure.

was no organized bilateral or multilateral surveillance of participating countries' economic and financial policies in support of external adjustment.

Third, when a country found itself in international economic and financial difficulties, it had no assured source of external financial support. The country's central bank and government had to rely on whatever ad hoc arrangements other central bankers might put together. Consequently, a country was forced generally to rely on its own devices: go off gold, devalue its currency, or erect barriers to trade and financial flows if it did not want to adopt corrective macroeconomic policies. Those choices affected other countries and undermined the stability of the system as a whole.

In contrast, under the Bretton Woods system, member countries undertook obligations that restricted their discretion; there was a modicum of surveillance over member countries' economic and financial policies, in particular with respect to exchange rates; and a country in external financial difficulty could count on some amount of financial support from the IMF, as long as it adopted policies to correct its underlying economic problems and those policies minimized the adverse economic effects on other countries. On the other hand, the United States was solely responsible for maintaining the system's link to gold, which potentially and ultimately exerted a limited amount of discipline on US economic policies.

In addition, the Bretton Woods IMS provided a framework for international economic policy coordination in several respects. There were written and unwritten rules of the game, and the strongest rules applied to countries' exchange rate policies. The IMF was in charge of monitoring compliance with the rules of the game. When a country got into external financial difficulties, the IMF could be called upon to provide a degree of financial support as well as to encourage the country to adopt policies that were efficient and effective while adhering to the rules of the game. There were essentially no rules that applied to countries with current account surpluses or that were accumulating foreign exchange reserves. Finally, the primary purpose of the IMF, enshrined in Article I, was "to promote international monetary cooperation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems."

The Bretton Woods IMS on paper was a treaty-based international monetary system that required cooperation and collective action to function successfully. In the words of Robert Solomon (1982, 6), any IMS "involves the management, in one way or another, of three processes: (1) the adjustment of balance of payments positions; (2) the financing of payments imbalances among countries by the use of credit or reserves; and (3) the provision of international money (reserves)." However, the system is made up of countries that are politically independent but economically and financially interdependent: "This discrepancy defines the functions of the international monetary system at its best, the system acts to reconcile the conflicting economic policies of its politically independent members."

The Bretton Woods System in Practice

Barry Eichengreen (1996) sketches out nicely the two views of the Bretton Woods IMS: (1) as the major catalyst producing a period of sustained global growth and stability and (2) a framework that contained within it the seeds of its own destruction. Both views were correct.

> For some, Bretton Woods was a critical component of the postwar golden age of growth. It delivered a degree of exchange rate stability that was admirable when compared with the volatility of the preceding and subsequent periods. It dispatched payments problems, permitting the unprecedented expansion of international trade and investment that fueled the postwar boom.
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> Other perspectives on Bretton Woods are less rosy. Ease of adjustment, it is argued, was a consequence rather than a cause of buoyant growth. And the notion that Bretton Woods reconciled exchange rate stability with open markets was largely an illusion. Governments restricted international capital movements throughout the Bretton Woods years. Foreign investment occurred despite, not because of, the implications of Bretton Woods for international capital mobility (Eichengreen 1996, 93).

Although the IMF Articles of Agreement entered into force on December 27, 1945, in many respects the Bretton Woods system did not become fully operational until the end of 1958 when 10 European countries restored the current account convertibility of their currencies for nonresidents. They were followed by another five European countries, but formal current account convertibility for many of these European countries did not happen until February 15, 1961, when they accepted the obligations of Article VIII not to impose restrictions on current account transactions, to have multiple exchange rates, or to engage in other discriminatory currency practices.[7] West Germany was the only European country with a fully convertible currency in 1958. The United Kingdom did not embrace full convertibility and abolish its capital controls until 1979. Convertibility of European currencies on capital, or financial, account transactions was not formally implemented within Europe or with the rest of the world until the Single European Act entered into force on July 1, 1987, which called for the free movement of capital within the European Community.

Meanwhile, the postwar recovery was guided, financed, and facilitated by institutions and arrangements unconnected with the IMF: the Marshall Plan, the European Payments Union, and the Organization for European Economic Cooperation. The IMF's financial role from 1948 to 1956 was minimal, and, largely as a consequence, its capacity to influence global policy developments was limited. Total IMF disbursements from its fiscal year 1948 to fiscal year 1956 were only $1,236 million. Repayments were $958 million, and IMF credit outstanding on April 30, 1956, the end of the Fund's fiscal year, was only $72 million (IMF 1997).[8] The mechanism of standby arrangements only started in the 1953 fiscal year, but they averaged only two per year through fiscal year 1956. Over the next 15 years, through fiscal year-end 1971, IMF disbursements averaged $1.4 billion a year, and the number of standby arrangements was almost 19 per year. Total credit outstanding

7. Japan adhered to Article VIII in 1964.

8. The difference between total disbursements and repayments, $278 million, and credit outstanding at the end of the fiscal year, $206 million, reflects drawings on reserve tranche positions that do not have to be repaid.

peaked at $4.0 billion at the end of the 1970 fiscal year. Thus, in the period prior to the closing of the US gold window, the IMF became much more active in the center of the Bretton Woods system.

A major flaw in the Bretton Woods system was that annual gold production in excess of commercial demand was insufficient to meet countries' demand for increases in their international reserve assets. For this reason, as well as because international reserve assets denominated in foreign currencies yielded higher returns than gold, countries increased their holdings of US dollar assets, and, to a much lesser extent, assets in UK pound sterling. The United Kingdom limited the conversion of a portion of private and official sterling balances into dollars. But a run on sterling was a persistent risk to the United Kingdom. The United States had a keen interest in the economic and financial health of the United Kingdom and sterling. Sterling was a reserve currency in decline, but US officials did not want its decline to adversely impact the dollar and its role in the international monetary and financial system.

As official (and to a lesser extent) private holdings of (primarily) short-term US dollar assets abroad increased, a run on the US dollar was a major risk to the Bretton Woods IMS, where either official holders of dollar assets or, directly or indirectly, private foreign holders of dollar assets would exchange their dollar-denominated assets into gold.[9]

Problem Identification and Diagnosis

By the time the IMF became fully operational and relevant in the late 1950s, it was clear to some that the international monetary system faced a dilemma. On the one hand, the demand for international reserves was increasing in line with the growth of world trade and the global economy. On the other hand, that demand was being met largely by the accumulation of short-term claims on the United States. Some, but not most, of those countries were choosing to convert those dollars into gold, thereby reducing US gold holdings. But most of the countries were merely building up their potential claims on the US gold stock. More ominously, the foreign official and private holdings of short-term dollar assets (bank deposits and US treasury obligations) had reached $17.4 billion by the end of 1960, an increase of $5.5 billion over two years, and those holdings were approximately equal to US gold holdings of $17.8 billion (BIS 1961, 134). By the end of 1961, US gold reserves had dropped $5.9 billion from the end of 1957, and they were to drop a further $6.0 billion by the end of 1968 to $10.9 billion.

The international monetary system faced a confidence problem in terms of the ability and willingness of the United States to meet all the claims on its gold stock—to maintain the convertibility of the US dollar into gold for official foreign holders. At the same time, the IMS faced a dilemma: If the United States and other countries adopted policies that had the effect of limiting or reducing the accumulation of short-term dollar claims on the United States, the IMS would be deprived of increases in international reserves; international liquidity in

9. From April 5, 1933, to December 31, 1974, US citizens were not permitted to hold gold coin, bullion, or certificates within the United States. However, citizens of many other countries could and did hold gold.

official hands would stagnate or contract. Moreover, efforts by countries to increase their international reserves by currency devaluation, deflation, or economic retrenchment would be mutually offsetting and could induce contraction and a deflationary spiral in the world economy. This was known as the Triffin dilemma after Robert Triffin who wrote two articles on the topic in the spring of 1959 that were published in the *Banca Nationale del Lavoro Quarterly Review* and shortly thereafter were combined and expanded in *Gold and the Dollar Crisis: The Future of Convertibility* (Triffin 1960).[10]

When the administration of John F. Kennedy took office in January 1961, officials were greeted by substantial concerns about the US balance of payments, the US dollar's role in the IMS, and the constraints the system placed on the United States. On February 6, 1961, President Kennedy sent a special message to the US Congress on the US balance of payments. In it he characterized the United States as "the principal banker of the free world" and concluded that "[t]he United States must in the decades ahead, much more than at any time in the past, take its balance of payments into account when formulating its economic policies and conducting its economic affairs." Despite these fine words, US economic and financial policymakers chafed under these constraints and sought to avoid their becoming binding. US officials for much of the next decade engaged in "lively and confused debates, sometimes acrimonious, [primarily with European counterparts] . . . on international monetary matters," seeking agreement to "institutional innovations designed to protect the dollar and to bolster international cooperation" while at the same time loosening somewhat the external constraints on US economic policies to stimulate and otherwise manage the US economy (Solomon 1982, 34).

The basic problems of the Bretton Woods system in advance of August 1971 were: (1) the need to augment the supply of primary reserve assets in order to maintain the link to gold in the system through the US dollar (the confidence problem); (2) the demand for temporary, conditional, and official financing; (3) the problems associated with the working of the adjustment process; and (4) the increasing impact of capital movements on the system. The first and second of these problems were more clearly identified than the third and fourth.

Although the problems of the Bretton Woods system were reasonably well identified in the 1960s, the diagnosis of those problems, in particular their relative importance, was less than fully shared.

The authorities eventually came to a shared diagnosis with respect to reserve assets and the need to address the confidence problem associated with a buildup of potential claims against a dwindling US gold stock. The diagnosis focused on the liquidity problem: how to augment the availability of liquidity sufficiently to sustain the dollar's link to gold, but not so much as to provide too much official liquidity to the system. The associated need to increase the potential availability of official financing through the IMF in support of adjustment and stability

10. Triffin (1947) had already noted this potential flaw in the Bretton Woods system if in practice the new system mimicked the workings of the classical gold standard system. The dilemma about which he wrote in 1959–60 concerned primarily the international financial accounts of the United States, not the US trade or current account positions, which were generally in surplus between 1946 and 1970, albeit perhaps not in sufficiently large surplus. The US balance on goods and services was in surplus throughout this period. If the United States had had larger trade and current account surpluses during this period in order to underpin the dollar's role in the system and limit the buildup of liquid claims on the United States, this would have exacerbated the potential for global contraction, and potentially deflation, about which Triffin was concerned.

in the overall Bretton Woods system was also broadly shared. The important point about this second aspect was that liquidity through the IMF was conditional and temporary.

On the other hand, the diagnosis of the link between the liquidity issues and the adjustment process was not shared. It came to be recognized that greater exchange rate flexibility might contribute to a better working of the adjustment process, and upward adjustments of exchange rates became more frequent, but that was about as far as the diagnosis got.

It is also difficult to conclude that the authorities had a shared diagnosis of the potential threats to the system from the growing scope and scale of private, cross-border capital movements.

In retrospect, the authorities at the time did not have a shared diagnosis of how these four problems fit together.

The shortfalls from the lack of a shared diagnosis were to a considerable extent due to the lack of a common framework for thinking about the problems. Differences were at the philosophical level. Oversimplifying somewhat, the authorities were convinced that the IMS should be based on fixed exchange rates. The fixed rate system, along with the limited supply of reserves and conditional credit, exerted discipline on countries' policies and importantly forced countries to cooperate on, if not coordinate, their policies. On the other hand, one country, the United States, was not directly subject to these disciplines, only via foreign official purchases of US gold that in turn might have adverse systemic consequences.

Philosophical differences, such as about the role of reserve currencies in the system, tended to obscure national objectives. Some of those national objectives derived from differences with respect to political issues or the balance of power in global economic and financial relations. The French, for example, were concerned about the exorbitant privilege that the dollar's role gave to US investors, because the United States was able to attract short-term capital inflows and at the same time make longer-term investments in Europe, outbidding local interests.[11]

The relevant authorities were not working with the same macroeconomic model of the global economy. At the time, macroeconomic models were not well developed at the national level, much less models with complete external sectors and international linkages. The role of exchange rate flexibility was an area of some disagreement among officials, though most favored fixed exchange rates.[12] Similarly, the authorities differed on the role of demand management policies and the effects and effectiveness of both monetary and fiscal policies in this area.

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11. This was the nature of the "exorbitant privilege" to which French finance minister Valéry Giscard d'Estaing referred in February 1965. The United States, borrowing short and lending long, was acting as banker to the world. The term has, however, been applied with different meanings, such as the absence of an external financing constraint on the United States.

12. This was not the case among academics. Milton Friedman (1953) early on made the case for flexible rates. By 1970, exchange rate flexibility had many more academic advocates. Fifty-two papers were combined by the Bürgenstock group in a volume entitled *Approaches to Greater Flexibility of Exchange Rates* (1970) edited by George N. Halm. The group included 38 "experts" from academia and the private sector. The papers did not favor a particular approach to exchange rate flexibility, and some did not favor any significant change to the Bretton Woods system. The group as a whole recognized the need for more frequent exchange rate changes, sooner and smaller, and that innovations in exchange rate arrangements should "facilitate continued international economic

With the benefit of hindsight, officials did not make the correct diagnosis of the problems of the Bretton Woods system in the period leading up to August 15, 1971. While they were on the right track in the sense that they identified and talked about most of the relevant issues, the overall diagnosis did not lead them to satisfactory solutions.

Treatment: Repairing the Bretton Woods System

It is useful to consider the treatment that was applied largely via agreement to each of the issue areas listed above: (1) the need to augment the supply of primary reserve assets in order to maintain the link to gold in the system through the US dollar (the confidence problem); (2) the demand for temporary, conditional, and official financing; (3) the problems associated with the working of the adjustment process; and (4) the increasing impact of capital movements on the system.

Gold, the US Dollar, and Confidence

The confidence side of the Triffin dilemma received the lion's share of attention between 1960 and 1971. Even before President Kennedy was inaugurated, the major gold holding countries banded together to prevent a significant increase in the international price of gold through collective sales of gold in the London market, which had been reopened in 1954. The United States directly supplied about half the gold sold to the market via the gold pool established in late 1960 and early 1961—and indirectly largely supplied 100 percent because other participating countries generally replenished their gold holdings by cashing in the dollars they received from their share of the gold sales to purchase gold from the US Treasury. Nevertheless, the establishment of the gold pool signaled a willingness to cooperate in addressing this issue.

The resumption of foreign exchange sales by the US Treasury in March 1961 and subsequently by the Federal Reserve in February 1962 played a similar role. The United States did not hold any foreign exchange, so first the US Treasury and later the Federal Reserve had to borrow any foreign exchange they needed through a network of reciprocal currency (swap) arrangements that ultimately included 14 central banks and the BIS for a total of $32.4 billion before the network was largely dismantled at the end of 1998.[13] Under the Bretton Woods fixed exchange rate system, if the US monetary authorities borrowed foreign currency to buy dollars, the foreign monetary authorities would be relieved of the obligation to buy the dollars. Sometimes the foreign monetary

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cooperation" (Halm 1970, vii). Increased flexibility, if any, should be rules based. For example, Bergsten (1970, 74) writing from the US perspective concluded "The interest of the United States would be maximized if the rules or presumptions that governed any increase in flexibility were to eliminate or even reduce the current 'quadruple bias' against the dollar, which makes adjustment extremely difficult for the United States." The four biases he identified as: favoring depreciation, small appreciations, large depreciations, and other countries' following a country's depreciation.

13. It was resurrected principally as a liquidity mechanism and put on alert during the millennium changeover in 2000, and it was used briefly following the September 11, 2001 terrorist attack in the United States. During the global financial crisis, the network was again resurrected and expanded. Following the crisis, the network was continued with membership limited to the central banks of Canada, the euro area, Japan, Switzerland, the United Kingdom, and the United States.

authority would buy the dollars first, and the US monetary authorities (principally the Federal Reserve) would draw on a swap line and use the foreign currency to buy the dollars from the foreign monetary authority. This sequence of operations provided short-term exchange rate cover to the foreign monetary authority and, at the same time, protected the US gold stock at least in the short run. The hope—sometimes justified—was that the US monetary authorities could buy the foreign exchange in the market before the swap matured or before the swap no longer could be rolled over.[14]

In 1961, what came to be known as the Group of Ten (G-10) countries negotiated the General Arrangements to Borrow (GAB) through which those countries could lend the IMF financial resources to support lending by the IMF to one of the participating GAB countries.[15] The principal concern was that the IMF did not have enough liquidity to finance a large drawing by the United States should that country request one. The relevance of the GAB to the gold-dollar-confidence problem was that it would facilitate the United States borrowing foreign currencies from the IMF to buy dollars from other countries, to intervene in the foreign exchange market, or to pay off short-term swap drawings.

The relevance of the G-10 to economic policy coordination was that it became the principal forum for G-10 finance ministers and central bank governors, as well as their deputies, to discuss IMS issues. The existence of the G-10 as a separate decision-making body outside of the principal governing institution of the IMS, the IMF itself, was controversial, as was the self-selected composition of the group. It is noteworthy that most of the discussions about repairing the IMS not only did not include countries other than members of the G-10 in the deliberations but often did not involve other countries in proposed solutions, such as augmenting the global supply of reserve assets.

The further relevance of the GAB and the G-10 agreement was that it established a mechanism for decision making with respect to the actual use of IMF financial resources that was also outside the regular decision-making framework of the IMF. That mechanism was designed to ensure appropriate economic policy conditionality associated, in particular, with any future IMF lending to the United States. In addition, because the European G-10 countries perceived that the IMF was dominated by the United States (despite the fact that the managing director until May 1963 was Per Jacobsson from Sweden who was followed by Pierre-Paul Schweitzer from France), the implementing arrangements for reaching decisions replicated the membership of the Working Party Three (WP-3) of the Economic Policy Committee of the Organization for Economic Cooperation and Development (OECD) and explicitly involved the WP-3 in judging the adequacy of economic policies of the country, expected to be the United States, requesting a drawing on the IMF that necessitated activating the

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14. Normally, under Federal Reserve guidelines, a swap drawing could not be outstanding for more than a year.

15. The members of the original G-10 were Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, the United Kingdom, and the United States. Switzerland was not yet a member of the IMF, but in 1964 it became associated with the GAB via a parallel, bilateral lending arrangement with the IMF, and as a result Switzerland participated in G-10 meetings. Why was Sweden a member? The answer is that in 1961, Sweden had substantial international reserves and was in a position to lend some of them to the IMF. The GAB provided resources for the IMF to lend in addition to its quota resources.

GAB. The OECD was not only led by a European, but its staff was dominated by Europeans. The secretary general of the OECD during this period was Emile van Lennep of the Netherlands.

Meanwhile, as these measures were being put in place, the authorities conducted a number of studies during the years 1963–65 focused on the international monetary system, the need for global liquidity, and the reserve assets of the system.[16] One immediate byproduct of one of these studies, the 1964 report of the G-10 deputies, was an agreement to exchange statistical information through the BIS on the composition of each country's reserves and the financing of its overall surplus or deficit. The multilateral surveillance tables, as they were called, were circulated to finance ministries, central banks, and the OECD's WP-3. The intention, in part, was to provide advance warning of the possible need to activate the GAB.[17] The United States was not particularly happy with the nature of the exercise but went along and benefitted from the information that otherwise would not have been available (BIS 1965, 160–61; Solomon 1982, 68; Toniolo 2005, 402).

With respect to connections between gold, the dollar, and confidence, the central issues were whether there was a need to manage the growth of global liquidity, how best to implement such management, and how or whether to link any actions taken to impose greater economic and financial discipline on the United States and, to a much lesser extent, those countries in external surplus that were accumulating foreign exchange reserves. For example, on the issue of how to increase global liquidity, the French proposed the creation of a collective reserve unit (CRU) whose distribution would be in proportion to existing holdings of gold. French finance minister Giscard d'Estaing articulated the French position circa October 1963 at the IMF annual meetings that the international monetary system (1) lacked the automatic machinery to bring about balance of payments equilibrium promptly and to curb the inflationary consequences of failing to do so, (2) lacked reciprocity between the issuers of reserve currencies and other countries, and (3) contained an inequity associated with the differing composition of countries' reserves between gold and currencies.[18] Thus, a number of G-10 countries tightly linked the issue of the increases in reserve assets to support for reducing the dollar's role in the Bretton Woods IMS and implicitly to the issue of external adjustment. However, there was no consensus on how those issues should be addressed.

Nevertheless, G-10 discussions on supplementing the growth of primary reserve assets did progress. By September 1967, the G-10 had agreed on an outline for what were to become special drawing rights (SDR)

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16. Two of these studies were conducted by the G-10 and its deputies. One was conducted within the IMF and was released as two chapters of the 1964 annual report of the executive directors.

17. These exchanges of confidential information may have continued at least into the early part of this millennium, reportedly with at least a few non-G-10 countries participating. However, to the author's knowledge the major reserve holders of today, such as China, Russia, and India, do not participate. (China only in 2015 agreed to share data on the currency composition of its international reserves with the IMF on a confidential basis.) Thus, there was a much tighter commitment to preserving the system and to monetary cooperation than appears to be the case today.

18. See Solomon (1982, 66). Note that throughout the decade under review, the French position changed frequently—as did the positions of other countries participating in the discussions and decisions—based at least in part on perceptions of the urgency of the situation and the circumstances of the country, for example, when France devalued the franc in August 1969.

issued by the IMF and reached a full agreement in March 1968. The necessary amendment to the IMF Articles of Agreement became effective at the end of July 1969, and the first issue of SDR 3.5 billion[19] was on January 1, 1970. The first issue was part of a three-year total of SDR 9.5 billion. That figure was a compromise between the US proposal that SDR 4 billion per year be issued over the following five years (SDR 20 billion total) and the European proposal of SDR 2.5 billion per year for three years (SDR 7.5 billion total) (Solomon 1982, 150).

The decision to establish the SDR mechanism was taken in the context of increasing pressure on the gold price and the declining willingness of the participants in the gold pool, including most importantly the United States, to continue to support the international price of gold. In 1967, the United States had already obtained a promise from Karl Blessing, president of the Deutsche Bundesbank, to refrain from converting the US dollars that the Bundesbank had accumulated into gold held by the US Treasury (Solomon 1982, 111). Pressures on the price of gold came to a head in March 1968 and resulted in the establishment of the two-tier gold market: Gold stocks would be exchanged among official holders at $35 per ounce, but the official holders would no longer support the private price of gold in the London or other markets. In their agreement, the G-10 countries also committed not to take advantage of the resulting arbitrage opportunities to buy gold from the United States at $35 per ounce and sell gold in the London market for a higher price. The agreement was hammered out in a meeting of the G-10 central bank governors accompanied by some finance ministry officials at the Federal Reserve Board in Washington on March 16–17. Solomon (1982 120) reports that in forcing agreement on the two-tier gold market, the United States held the trump card of suspending the convertibility of official holdings of dollars into gold. He implies that other participants were aware of US thinking on this option.

Solomon (1982, 170–71), who was an active participant in the discussions of the IMS during this decade, reports:

> Officials in a number of European countries, with the exception of Germany [sic], believed that it was only the "discipline" of the balance of payments that made it possible for them to make restrictive fiscal and monetary policies palatable to their own citizens. They tended to impute a similar state of mind to the United States. It is true that the international financial situation was a significant influence on the willingness of Congress to adopt a restrictive policy in 1968. But there have been numerous other occasions when inflation was an important political issue in its own right in the United States.

Meanwhile, at the end of the 1960s, the level and composition of international liquidity was about to change dramatically. Although as of the end of 1960, US direct liabilities to foreign official holders equaled the US gold stock, for the world as a whole, gold was still the principal reserve asset. Countries' holdings of gold had increased less than 3 percent from the end of 1960 to $39.1 billion at the end of 1969, but total international reserves were almost twice as large ($75.5 billion). Non-gold reserves consisted of $29.1 billion in foreign exchange and $6.7 billion in IMF reserve positions. The foreign exchange component of international reserves had increased substantially more rapidly than gold since the end of 1960 (47 percent), but direct official claims

19. $3.5 billion because the value of the SDR was pegged to the dollar, which was in turn pegged to gold; hence, the term "paper gold."

on the United States had risen on balance less than 30 percent over that period, and about 10 percent since the end of 1963 to $16.0 billion. In three of the previous six years such claims had actually declined, which helped to support the case for the initial allocation of SDR (IMF 1973, 35). However, by the end 1970, direct official claims on the United States increased almost 50 percent to $23.8 billion. Moreover, by the end of 1971, foreign exchange reserves had increased to $73.1 billion, and gold's share had shrunk to 30 percent of total international reserves of $121.5 billion[20] (IMF 1973 and 1978). In effect, once the US gold window was closed, the buildup of potential official claims on the US gold stock skyrocketed. In retrospect, it was naïve for anyone to think that it would be easy to return to a regime in which official US dollar holdings would be converted into primary reserve assets.[21]

Temporary Financing

For a country facing external financing difficulties, the alternative to adopting a draconian adjustment program is to receive external financial assistance. Indeed, the logic of the Bretton Woods IMS was that external financial assistance from the IMF would be accompanied, where necessary, by policy changes to correct the underlying source or sources of the external economic or financial difficulties. The associated public good was the adoption of policies that minimized the negative economic and financial effects on other countries, for example, avoiding trade restrictions; large, abrupt currency devaluations; or unnecessarily large contractions in domestic economic activity. However, for this framework to be effective, financial resources on an adequate scale had to be prepositioned in the IMF to respond to countries' needs. More generally, international liquidity had to be sufficient in various forms—international reserves as well as potential sources of short-term and medium-term borrowing—to support the effective working of the system as a whole. Thus, the issue of the provision of financing was bound up with the issue of the growth and composition of international reserves—gold, the role of the dollar, and confidence—as well as with the working of the adjustment process and the role of the IMF.

As noted earlier, the IMF did not play much of a role in the international monetary system as it evolved and matured from the mid-1940s to the late 1950s. The Fund's role changed significantly during the 1960s, and the adequacy of the IMF's financial resources became an issue. In 1962, the GAB was established with the capacity to lend $6 billion to the IMF. The US share was $2 billion, and the UK share was $1 billion, leaving $3 billion to be supplied by other G-10 members, potentially to support IMF lending to the United States and the United Kingdom. The United Kingdom did draw on the IMF in 1964, and the GAB was activated to finance its

20. Direct official reserve claims on the United States were 62 percent of total foreign exchange holdings, but that figure understated the share of the dollar in foreign exchange reserves because countries had begun to hold a portion of the foreign exchange reserves in the eurodollar market. The IMF (1978, 53) estimated that eurodollar holdings boosted official dollar holdings to 76 percent of total foreign exchange holdings by the end of 1971. I am using IMF estimates of these data on reserves and changes in reserves. The IMF data sometimes vary from year to year, and data found in BIS annual reports are not precisely the same. What are important are the trends, not the specific numbers.

21. This was one reason why the C-20 discussions reviewed below included examination of various schemes to consolidate such holdings in an account in the IMF.

drawing. Cumulative UK drawings on the IMF from 1961 to 1970 were $4.9 billion.[22] Some of those drawings and British use of the central banks' swap network were designed to help address the problem of the unwinding and diversification of official holdings of reserves in sterling. Those issues were more formally addressed in the first sterling balances (group) arrangement in 1966 and a second broader one in 1968. The basic objective was to provide a safety net under the phasing out of the reserve role of sterling to protect both the British economy and the stability of the international monetary system.[23]

Cumulative US drawings on the IMF were $2 billion. The first was in 1964 based on a standby arrangement agreed in 1963. None of the US drawings, however, involved a formal program of policy adjustments. In some cases, the United States drew on the IMF to repay Federal Reserve drawings on the central banks' swap network. (Swap drawings, not only by the United States but also by other countries, were often a first line of defense before a country drew on the IMF.) In other cases, the United States drew on the IMF to obtain foreign currencies to buy dollars from other countries and protect the US gold stock.[24]

Meanwhile, the 70 IMF members in 1959 agreed to increase IMF quotas by 60.7 percent, bringing the total to $14.3 billion. Another agreement was reached among the 102 members in 1965 to increase IMF quotas by 30.7 percent to $21.0 billion. Finally, in 1970, 115 members agreed to a 35.4 percent increase to $28.9 billion. The increases in IMF quotas expanded the IMF's capacity to lend. During the period up to 1970, the Fund's capacity to lend was further expanded by the addition of new members and by decisions by countries to make their currencies convertible under the IMF's Article VIII and therefore potentially eligible for lending through the IMF to other members. In fact, countries lent their reserves of other currencies, primarily dollars, through the IMF and received in return a claim on the IMF.

Exchange Rates and the Adjustment Process

The Bretton Woods IMS was founded on the principle that a country should not devalue its currency to obtain a competitive advantage when it is experiencing deficient domestic demand. On the other hand, the IMF Articles of Agreement permitted exchange rate (technically par value) adjustments, with the approval of the Fund, only when necessary to "correct a fundamental disequilibrium." The term fundamental disequilibrium was never defined, and the language of the Articles of Agreement did not even qualify it by referring to the balance of payments of the member. A further complication was that the only explicit provision in the Articles that pointed

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22. Not only the United Kingdom but also other countries drew on swap arrangements among central banks before turning to the IMF; see Cooper (2006, 7) and Charles Coombs (1996, 37).

23. The third and final arrangement on sterling balances was put in place in 1977 in the context of the United Kingdom's 1976 IMF program. See Catherine Schenk 2010.

24. Once IMF holdings of US dollars reached 75 percent of the US quota, other members could no longer use dollars to repay the IMF. They either had to buy gold from the United States or buy other foreign currencies from other members to repay the IMF, and those countries, in turn, might use the dollars to buy gold from the United States. Thus, many of the operations of the Fund, including with the United States, were linked to the role of the dollar and the confidence problem discussed above. See BIS (1964, 199–221) for a nice description of the 1963–64 operations and their motivation. See also J. Keith Horsefield (1969, 530–31 and 567).

toward a devaluation of the dollar was one that permitted uniform proportionate changes in the par values of the currencies of all members, but only via an 85 percent majority vote. This provision severely inhibited the United States from adjusting the par value of the dollar.

In the 1950s, changes in par values were rare. After the general devaluation initiated by the British in 1949, the only major currency adjustments were the maverick floating of the Canadian dollar in 1950 and two-step devaluation of the French franc in 1957–58. This inertia tended to reinforce the fixity of exchange rates in the overall regime. However, with the advent of current account convertibility of European currencies after 1958, the increasing degree of de facto liberalization of capital movements, and the structural changes in the world economy—in particular the recovery and the relative success of the economies of West Germany and later Japan—pressures on exchange rates began to intensify.

The currencies of West Germany and the Netherlands appreciated 5 percent against the dollar and other currencies in March 1961. The Canadian dollar was repegged in May 1962. The Italian lira came under pressure in 1963, but with a financial assist from the US authorities, who wanted to avoid the depreciation of a major currency, its peg was maintained.

During 1963–64, US and European authorities engaged in a dialogue about the international monetary system and the adjustment process. The European view was that loose US macroeconomic policies were contributing to a deficit in the overall US balance of payments in the form of an increase in liabilities to the monetary authorities of other countries and that short-term capital outflows from the United States were contributing to European inflation, which one might have thought would have helped over time to solve any adjustment problem by causing a real appreciation of their currencies. The US view was that the outflow of long-term capital from the United States was a necessary counterpart to the underdeveloped nature of European capital markets. US markets were substituting for European markets, attracting inflows of short-term capital and generating outflows of long-term capital.[25]

A group of private-sector economists met in 1963–64 under the leadership of Fritz Machlup (founder of the Bellagio Group, which today still meets with officials from G-10 and other finance ministries and central banks) to consider alternative international monetary arrangements: a semi-automatic gold standard; centralized reserves, presumptively located in the IMF; a multi-currency reserve system; and flexible but managed exchange rates. This group was more sympathetic toward prompt exchange-rate adjustment than the prevailing official thinking, but they were also concerned about the potential for destabilizing the system due to an overhang of foreign exchange reserves (Solomon 1982, 71). A contemporary report by the G-10 deputies in 1964 and a discussion in the IMF *Annual Report* in the same year made clear that exchange rate adjustments should be

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25. Echoes of this latter view can be heard 50 years later with respect to China and other emerging-market economies (Michael P. Dooley, David Folkerts-Landau, and Peter M. Garber 2004, 2009). One difference was that in the early 1960s the United States had a small current account surplus on the order of ¾ to 1 percent of GDP, and the transformation was from a short-term financial inflow into a longer-term financial outflow. More recently the United States has had substantial current account deficits, and the inflows generally more than financed those deficits and contributed to dollar appreciation.

the last resort tool to address sustained balance of payments deficits or surpluses following some combination of fiscal policy, monetary policy, incomes policy (addressed at wage restraint), controls on capital movements, adjustments in tariffs (for countries in surplus), and structural policies.

James Tobin (1966), having returned to Yale from his stint on the US Council of Economic Advisers, explored the adjustment responsibilities of surplus and deficit countries in a volume of papers presented at a conference organized by Machlup (Fellner, Machlup, and Triffin 1966). He did so under the presumption of exchange rate fixity, significant availability of compensatory financing, and limited scope for altering the monetary-fiscal policy mix. The rationale for the last limitation was to minimize the scope for destabilizing capital movements. Tobin stressed throughout the need for compatible objectives, institutions, and circumstances to make such a system operable, for example, shared objectives with respect to full employment and price stability. He explored a number of different combinations of circumstances for countries in deficit and surplus in terms of unemployment and (wage) inflation. He concluded that a country with a current account deficit with a high rate of unemployment should devalue if the situation persists, even if its inflation rate is high, but if the rate of unemployment is low, the country should take restrictive monetary and fiscal measures. He reached a symmetrical conclusion for a country in surplus with a low rate of unemployment and low inflation, but added that such a country has a strong obligation to participate in the provision of compensatory financing. Of course, the lack of symmetry in adjustment pressures and presumptions was a feature of the Bretton Woods IMS, and that feature of the IMS persists to this day.

By the second half of the 1960s, exchange rate adjustments by the major countries in fact had become more frequent and implicitly more accepted. The British pound sterling finally was devalued in 1967. The French and West Germans failed in 1968 to reach agreement about which country should adjust its exchange rate (down and up, respectively, and by how much), but in 1969 both countries acted independently as they had declined to act in concert the previous year.

Attitudes toward exchange rate adjustments were gradually changing, but the shift was toward only limited exchange rate flexibility: wider margins, crawling pegs (depreciation in the face of above, or appreciation in the face of below, average inflation), some combination of wider margins and crawling pegs, smaller and prompter adjustments in exchange rates if necessary, and transitional floating. In May 1970, the Canadian authorities refloated their currency in the context of a current account surplus and large capital inflows.

However, when it came to the United States, differences of views were sharper and technical issues were more difficult to surmount. On the technical side, the issues included: How could countries in surplus bring about even a small adjustment in their exchange rates relative to the dollar? Should the United States threaten to use the "nuclear deterrent" of the suspension of dollar convertibility? What would be the consequences? On the broader policy issues, the Japanese and the European governments were concerned that if they acquiesced to the upward revaluation of their currencies, doing so would take the United States off the hook with respect to using macroeconomic policies to address the buildup of liquid official claims on the United States and, in effect, encourage benign neglect on the part of the US authorities (Solomon 1982, chapter 10).

Meanwhile, the US economy was expanding relatively weakly, recording a growth rate of real GDP of 3.0 percent in 1969 and 0.2 percent in 1970, after an average of 5.2 percent in the previous seven years. Unemployment averaged 4.9 percent in 1970 compared with less than 4 percent in the previous four years. The rate of consumer price inflation had crept up to 5.7 percent in 1970 from less than 2 percent each year during 1960–65. And, somewhat ominously as viewed at the time, the US current account surplus in 1969 was only 0.03 percent of GDP and 0.2 percent in 1970, compared with close to 1 percent of GDP several years earlier. As noted in the discussion of the reserve asset and confidence issue, in 1970 the accumulation of reserve claims on the United States also picked up sharply. The issues surrounding exchange rates and external adjustment were reasonably clearly understood, but not agreed. In particular, there was no agreement on which countries should act, using what policy instruments, and to what extent.

Capital Movements

The IMF Articles of Agreement did not contemplate the free movement of capital and indeed permitted, and still permits, the Fund to request that a country impose controls to prevent a sustained outflow of capital. The only limitation on what the Fund could request was on controls that affected the financing of current account transactions.

Nevertheless, the liberalization of international capital movements more generally crept up on the international monetary system as it evolved in the post–World War II era. First, the United States had no restrictions on capital movements. Second, once countries began to liberalize controls on payments for current transactions and accept the obligations of Article VIII not to impose restrictions on payments and transfers for those transactions, indirect and de facto increases in the scale of capital movements followed. For example, importers and exporters could choose the timing of their payments for imports and conversion of receipts from exports, which affected capital flows through leads and lags.

Moreover, many countries did not have restrictions on capital inflows to domestic banks and financial markets, only on capital outflows. Capital inflows were regarded as beneficial to capital starved reconstruction and development efforts. However, at times such flows put unwanted upward pressures on exchange rates, and unsterilized intervention operations tended to fuel inflation. Moreover, under the Bretton Woods IMS, even if a country was in current account surplus, which the United States was for most of the period before 1971, capital outflows that led to intervention by other countries purchasing the first country's currency could lead to requests for redemption of the country's currency with gold.

Through much of the 1960s, officials in the United States and elsewhere thought that the United States had a capital (or financial) account problem, in other words excessive capital outflows. In response, the United States imposed a sequence of restrictions of increased severity on capital outflows, starting in July 1963 with an interest equalization tax on interest US residents received on purchases of normally higher-yielding bonds

issued abroad.[26] This measure was followed in 1965 by a broader set of voluntary controls on capital outflows and in early 1968 by a mandatory set of capital controls. In 1969, with US nominal interest rates higher than rates abroad, the Federal Reserve imposed a reserve requirement on increases in US banks' borrowing abroad. Each of these measures was intended to be temporary, but some lasted until the mid-1970s.[27] The panoply of US controls had at least temporary effects on the structure of US balance of payments flows, but they did not cure the underlying problem. Their most significant lasting effect was the promotion of the eurodollar and related eurobond markets, which remain with us today. The eurodollar market was fueled in part by investments of reserves in those markets by foreign monetary authorities attracted by the higher yields, and the eurobond market was fueled by the expansion of the eurodollar market. In the spring of 1971, the G-10 central banks agreed to halt placements of reserves in the eurodollar market and put in place a reporting system as part of the mutual surveillance of reserves and balance of payments financing referred to earlier.

On the other side, in May 1969, the Bundesbank was authorized to impose reserve requirements on foreign-owned bank deposits. West German controls on capital inflows ultimately included bans on interest payments to foreigners, cash deposits associated with borrowing abroad, restrictions on the purchase of domestic bonds by nonresidents, restrictions on borrowing abroad by West German residents, and the political risk associated with the possibility of changes in controls.[28]

Even if the various controls and related understandings and arrangements had the intended short-run effects, the lasting, long-run effect of the various controls at most was to slow the process of international financial integration. Moreover, in the end, the Bretton Woods exchange rate system was overwhelmed by capital flows. The first example was in the context of tensions between the West German mark and the French franc in 1968–69. Less than two years later, on May 4, 1971, the Bundesbank purchased $1 billion in one day, and the next day it purchased $1 billion in the first hour of trading. This led West Germany to suspend operations in the foreign exchange market. It was joined by Austria, Belgium, the Netherlands, and Switzerland. When West Germany's European Economic Community partners rejected a joint float against the dollar, the German authorities chose to continue to let their currency float, and they were joined by the Dutch.[29] The Canadian dollar was already floating.

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26. This measure was accompanied by an increase in the amount of US development aid that was tied to the purchase of US goods and a reduction in military expenditures abroad, both of which were intended to improve the US current account position, and the above-mentioned request for a standby arrangement with the IMF. This standby arrangement was designed to facilitate the use of US dollars in repayments to the IMF and did not involve any policy conditions.

27. Reserve requirements remained in place on dollar deposits at US banks but not on dollar deposits at the branches abroad. Periodically, the Federal Reserve imposed or re-imposed reserve requirements on US banks' borrowing from their foreign branches. In the late 1970s, consideration was given to imposing a reserve requirement on deposits in the eurodollar market, but that effort did not reach fruition.

28. See Dooley and Isard (1980) for a complete description.

29. The Belgians adopted a dual exchange market for current and capital transactions—a form of capital controls. Some European countries expanded their exchange rate margins and others adopted measures to discourage capital inflows.

The fixed exchange rate element of the Bretton Woods IMS was slowly unwinding. It only remained for President Richard M. Nixon on August 15, 1971 to pull the plug with the US suspension of its commitment to redeem dollars held by foreign monetary authorities with gold—a commitment that was never reintroduced. It may be, as is argued by James and Martinez Oliva (2007), that the timing of President Nixon's announcement was driven by a combination of domestic economic considerations, associated with the new economic policy of price controls and economic stimulus that he announced at the same time with the intention of supporting his reelection in 1972, and geopolitical developments, associated with the perception of less need for Europe to rely on the US security umbrella, an increased willingness of the United States to engage with the Soviet Union and China, and a reduced US appetite for shouldering the burdens of global leadership and continuing to supply gold to the rest of the world. Perhaps, as James and Martinez Oliva argue, the West German and Japanese current account surpluses were not inherently unsustainable or uncorrectable. However, there can be little doubt that the failure to address those problems fully at the time hastened the demise of the Bretton Woods IMS, and that process was aided by large capital movements. Consequently, when the next chapter came to be written in the form of an effort to put the Bretton Woods IMS back together, the issue of disequilibrating capital flows, in the terminology of the day, was on the reform agenda.

During the 1960s, the extent of policy coordination—starting with the development of the swap network and establishment of the GAB, and ending with agreement not only on the SDR but to allocate SDR—was substantial. In addition, IMF resources were augmented, the two-tier gold market began the process of dethroning gold, and exchange rate policies became more flexible. Actions with respect to capital flows were less clearly advanced. Along the way, analyses and discussions were held in multiple forums, though the principal, driving decision-making forum was the G-10 finance ministers and central bank governors. Moreover, they kept working on the problems right up until the US authorities suspended gold conversion as well as after August 1971.

Evaluation

The policy coordination efforts to repair the Bretton Woods system did not succeed in preventing the systemic crisis that broke in August 1971 and the collapse of the Bretton Woods IMS. The US dollar's peg to gold was permanently broken, and many currencies were on their way to permanently floating, even though that would not be recognized for several years. The reserve asset features of the Bretton Woods system proved to be incom-patible with the processes of external adjustment within the system. Increased amounts of official financing were made available within the system, but they were not sufficient to prevent the crisis. The system proved unable to cope with the increased, though still limited, volume of cross-border capital movements.

Because of the less developed status of both theoretical and empirical research at the time, technical differences tended not to be a major source of disagreement. However, the discussions leading up to the re-pegging of exchange rates in the Smithsonian Agreement in December 1971 revealed considerable disagreement about how much adjustment in the US international accounts, in particular the US current account, and in the

exchange rates of other G-10 countries on average was necessary to support a return to the Bretton Woods system.[30] Indeed, the very notion of an average or effective exchange rate was not part of the thinking of most policymakers. For most countries in the Bretton Woods system "the exchange rate" was the exchange rate of their currencies against the US dollar. This was not true for the United States, for which the average level of or change in the foreign exchange value of the dollar against the currencies of major trading partners was and is more relevant.[31] Moreover, in the discussions leading up to the Smithsonian Agreement, many countries did begin to look over their shoulders at what changes in their bilateral rates would be with third currencies if they appreciated more against the dollar than other G-10 currencies did. In the short run, the identification of problems with the Bretton Woods system, the extent of the shared diagnosis of those problems, and the actions that flowed from that diagnosis did not prevent the systemic crisis. International economic policy coordination failed to prevent the collapse of the Bretton Woods IMS.

However, neither the US authorities, nor the authorities in G-10 or other countries, nor officials in the international institutions—principally the IMF, but also the BIS and OECD—saw August 15, 1971 as an abandonment of the Bretton Woods fixed exchange rate system. Their declared intent was to build on their decade of cooperation, learn the lessons of the crisis of 1971, and reform the Bretton Woods system. [32] In the second part of this paper, I examine this second episode of international economic policy coordination—the effort to

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30. The US objective was for sufficient adjustments in exchange rates to achieve a swing in the US current account position of $13 billion, which was a mere 1.2 percent of US GDP at the time, in order to achieve a small surplus in the overall balance of payments of the United States (official settlements basis) for several years to help restore confidence in the dollar. Other members of the G-10 reportedly were shocked by the size of the US request. See Solomon (1982, 188–209).

31. Solomon (1982, 209) reports that although the Smithsonian Agreement produced an average depreciation of the dollar against the other G-10 currencies of about 10 percent, the depreciation against all currencies was estimated at the time by the Federal Reserve Board staff to be between 6.5 and 7.75 percent. If one were to apply a common rule of thumb that a 10 percent real depreciation of the US dollar is associated with an improvement in the US current account position of 1 percent, the expected improvement in the US current account was between $7.3 billion and $8.7 billion. (This calculation ignores feedback effects on inflation, which would somewhat reduce this estimate.) In fact, the US current account position increased by $8.6 billion between a small deficit in 1971 and a much larger surplus in 1973. The swing was less than the US target for a $13 billion improvement and in the context of many other developments in the world economy.

32. Robert Solomon (1982, 211–15) identifies three principal lessons of the 1971 crisis for the Bretton Woods system. First, the Triffin dilemma did not lead to a breakdown of the system. The dilemma had been fixed in time, at least in principal, with the establishment of SDRs as a supplementary primary reserve asset. The breakdown was caused by the failure of the adjustment process, which had become more asymmetrical under the US-centric Bretton Woods system. The growing economic and political strength of Europe and Japan made the Bretton Woods system obsolete. Second, when markets reach the conclusion that a fixed exchange rate is untenable, markets can move massive amounts of funds to back up their beliefs. (Even a wise economist like Solomon refers to "speculative" flows.) The existing controls on capital flows were insufficiently stringent to blunt those flows, and controls that would have been adequate to the task would have been politically unacceptable. Third and related to the second lesson, foreign exchange market intervention on a large scale to prevent a currency from appreciating had the potential to undermine the monetary policies of the central bank, in particular the Bundesbank. At a technical level, the capacity of central banks to sterilize the effects of their intervention operations on their balance sheets was limited by the underdeveloped nature of domestic financial markets and an absence of tools.

Solomon does note some positive lessons from the 1971 crisis. There was no massive run on the dollar. Financial markets proved to be resilient to the instability and uncertainty; they apparently tolerated a closing of foreign exchange markets in many countries for most of the week after August 15, 1971, which would be difficult to imagine today. Aside from the 10 percent surcharge on all dutiable imports that the United States imposed to prod other countries to adjust their exchange rates and a defensive import surcharge imposed by Denmark, countries did not respond to the US surcharge or to the closing of the gold window by increasing trade restrictions.

put the Bretton Woods IMS back together—to see whether the longer-term results from the pre-1971 policy coordination produced positive results.

REFORM AND REPLACEMENT OF THE BRETTON WOODS INTERNATIONAL MONETARY SYSTEM

Actions by policymakers in advance of August 1971 were not sufficient to preserve the Bretton Woods IMS. More forceful actions or a different approach would have been needed to convince the US authorities not to choose to close the official gold window and impose an import surcharge to escape from the perceived straight-jacket of the Bretton Woods IMS, as it was structured, and allow them to address what they viewed as more pressing domestic economic needs. Against this background, and also experience gained from reform discussions that had been ongoing for a decade, the Smithsonian Agreement committed the participants to try to reform the international monetary system—in effect to reform and replace the Bretton Woods IMS.

Problem Identification and Diagnosis

The Smithsonian Agreement laid out what the G-10 ministers and governors identified as the problems that should be addressed to reform the IMS, by implication the Bretton Woods IMS:

> Ministers and Governors agreed that discussions should be promptly undertaken, particularly in the framework of the IMF, to consider reform of the international monetary system in the longer run. It was agreed that attention should be directed at the appropriate monetary means and division of responsibilities for [1] defending stable exchange rates and for [2] insuring a proper degree of convertibility of the system; [3] to the proper role of gold, reserve currencies, and of the Special Drawing Rights in the operation of the system: [4] to the appropriate volume of liquidity; [5] to the reexamination of the permissible margins of fluctuation around established exchange rates and other means of establishing a suitable degree of flexibility; and [6] other measures dealing with movements of liquid capital. It is recognized that decisions in each of these areas are closely linked (Solomon 1982, 209, numbering added).

The "discussions" about the reform topics outlined in the Smithsonian Agreement did not start right away. As often is the case, the pre-discussion was about who would be invited to the real discussions. In this connection, the key phrase in the statement accompanying the Smithsonian Agreement was "in the framework of the IMF." It was key because the IMF institutionally had been largely cut out of the discussions in the 1960s, which principally involved the G-10 countries, and the Fund was cut out of the negotiation of the Smithsonian Agreement itself.[33]

The management of the Fund and the non-G-10 members of its executive board wanted to have a role in the post-Smithsonian reform discussions. The United States agreed on the need to involve a broader group of

33. The US secretary of the Treasury John Connolly, in particular, took offense at IMF managing director Pierre-Paul Schweitzer's interventions in the pre-Smithsonian negotiations, tipping them toward US agreement to raise the dollar's par value in terms of gold. In 1972 Connolly passed the word that the United States would not support Schweitzer's reelection in the fall of 1973.

countries than the G-10 because of its unhappy experience with the G-10 after August 1971. The G-10 discussions were often 10 against one, or at least eight European countries against the United States with little support from Canada or Japan.

The US experience with the G-10 had an important institutional consequence after the Smithsonian Agreement: the establishment in 1972 by the Governors of the IMF of the Committee of the Board of Governors of the Fund on Reform of the International Monetary System and Related Issues—or Committee of Twenty (C-20) for short. The C-20's representation was based on the IMF's then 20-member executive board. As at the Bretton Woods conference itself, all members of the Fund were allowed to participate in the discussions. This innovation was a milestone of inclusion in international economic policy coordination; see box 1. On the other hand, this move toward broader inclusion did not prevent smaller groups of countries from making consequential decisions with respect to the international monetary system and related issues during the following almost 50 years—an example of what one might call the realpolitick of international economics and finance.

Once the "shape of the table" had been established for the C-20, the six topics on the reform agenda sketched out in the Smithsonian Agreement were essentially reduced to three: (1) balance of payments adjustment, (2) settlement of payments imbalances, and (3) the volume and composition of international reserves. Because of the broader composition of the C-20, item (4) was added: the special problems of developing countries (Solomon 1982, 238).

The work of the C-20, which was essentially an exercise designed to reach agreement on diagnosis, broadly followed this agenda. The C-20 established six technical groups on the four topics: (1) one on indicators (of the need for adjustment) and a second on adjustment, (2) intervention and settlement, (3) global liquidity and consolidation (of excess balances of reserve currencies), and (4) one on the proposed linking of SDR allocations with aid and a follow-up group on related proposals on the transfer of real resources to developing countries. A seventh working group examined how to deal with disequilibrating capital flows, a topic that cut across the substance of the first three topics.

The C-20 in July 1974 produced a report containing an "Outline of Reform" covering these topics (IMF 1974). A generous interpretation of the shared diagnosis contained in the report is that the C-20 agreed that the exchange rate regime should be based upon par values but with greater scope for exchange rate adjustment than under the Bretton Woods regime and tolerance of floating with the approval of the IMF. In addition, the committee agreed the balance of payments adjustment process should be more symmetrical with settlement responsibilities for all countries. In other words, countries running current account surpluses should be subject to graduated pressures to reduce those surpluses, and the United States should not be allowed to finance its international transactions via the unlimited issuance of liquid liabilities. Finally, an increasing flow of real resources to developing countries, and their capacity to obtain goods and services from abroad, should be promoted.

Box 1 From the C-20 to the G-20

The Committee of Twenty (C-20) was an innovation arising out of the Smithsonian Agreement of 1971. Paul Volcker, Treasury undersecretary at the time, rather harshly calls this innovation the "only part of the reform effort that left a concrete legacy." The United States was motivated to support this initiative by two considerations. First was the view that in something as important as reform of the monetary system, a more representative group than the G-10 was appropriate and it should be at a higher level than the IMF executive directors (Volcker and Gyohten 1992, 116). Second and more strategic, the representatives of the emerging-market and developing economies (EMDE), as they are now called, also would be more likely to side with the United States on IMS reform issues. This was generally the case, but the EMDE brought their own issues to the table, such as proposals to establish a link between SDR allocations and development assistance.

A feature of the C-20 was that it operated at the level of deputies and the deputies established working groups to study several topics. When the C-20 had run its two-year course, the member countries decided to institutionalize the C-20 as the Interim Committee, so named because it was intended as a placeholder for the formal establishment of a ministerial level council. The potential establishment of the such a council was included in the reform of the IMF Articles of Agreement that ultimately was agreed. However, that provision has not been implemented. Members of the IMF executive board tend not to favor the establishment of a body that would dictate to it. Therefore, the Interim Committee has continued as a body that de facto makes major decisions for the Fund even though it has no de jure authority to do so.

When the Interim Committee was established, it did not include a deputy-level structure. This was unfortunate because the meetings of deputies and working parties enhance the scope for international economic cooperation, which was one of the strengths of the C-20 process.

In 1999, in part in response to the establishment of the Group of Twenty (G-20) in the wake of the Asian financial crises, IMF governors renamed the Interim Committee as the International Monetary and Financial Committee (IMFC) and reestablished a deputy-level supporting structure (James M. Boughton 2012, 869–73).

Once established, the G-20 met normally twice a year at the level of finance ministers and central bank governors. The G-20 structure also included meetings of deputies and on occasion special working groups. The members did not represent "constituencies" or groups of countries, as in the IMF executive board and the IMFC, so that they would feel freer to speak about their individual views rather than deliver a position negotiated among a group of countries.

With the G-20 established, the question was what would or should happen to the G-7, which existed at both the level of finance ministers and central bank governors and leaders and dated back to the 1970s as the G-5; see table B.1.[1] The G-8 included Russia at the leaders' level but not at the ministerial level.[2] The G-10 continued to exist at the level of finance ministers and central bank governors, often producing useful studies on topics of current concern. Since 2007, the G-10 no longer meets unless there is a request to activate the IMF's General Arrangements to Borrow, which itself has been subsumed under the much larger New Arrangements to Borrow.

(box continues)

1. Prior to and after the establishment of the G-20, the G-7 countries discussed whether and how to expand its membership.

2. Currently Russia is excluded from G-8 meetings.

Box 1 From the C-20 to the G-20 *(continued)*

Table B.1 Membership in international financial groups

Country	Group of 5	Group of 7	Group of 8	Group of 10	Group of 20
Argentina					X
Australia					X
Belgium				X	
Brazil					X
Canada		X	X		X
China					X
European Union					X
France	X	X	X	X	X
Germany	X	X	X	X	X
India					X
Indonesia					X
Italy		X	X	X	X
Japan	X	X	X	X	X
Mexico					X
Netherlands				X	
Russia			X		X
Saudi Arabia					X
South Africa					X
South Korea					X
Sweden				X	
Switzerland				X	
Turkey					X
United Kingdom	X	X	X	X	X
United States	X	X	X	X	X

When the global financial crisis hit in the fall of 2008, it became clear that a group of countries broader than the G-7/G-8 should coordinate their policies in response. The United States under President George W. Bush successfully advocated a meeting of G-20 leaders, which first met at the leaders' level in November 2008. The initial strength of the G-20 derived from the fact that there was already a structure in the G-20 for finance ministers and central bank governors. Once institutionalized at the leaders' level, the G-20 has spawned an array of ministerial groupings, at last count seven.[3] The G-20 has addressed, in part, the criticism that it does not have universal membership by inviting a specified number of other countries to participate in the annual processes of meetings, always including the chairs of the African Union and the Association of Southeast Asian Nations, a representative of the New Partnership for Africa's Development, and two more countries of the host's choice.

3. See G-20 Information Centre at http://www.G-20.utoronto.ca/.

Treatment

The July 1974 report of the C-20 sketched out what a reformed international monetary system might look like, but it stopped short of recommending immediate comprehensive action. The final report stepped back from the promise of an outline of reform contained in a 1973 *Interim Report and First Outline of Reform of the Committee of Twenty* (de Vries 1985, vol. III: 155ff). The reason given was:

> [T]he uncertainties affecting the world economic outlook, related to inflation, the energy situation, and other unsettled conditions, have increased. Major changes are occurring in the world balance of payments structure, and it is not yet clear to what extent the positions of individual countries will be altered or how adjustment will be achieved. (IMF 1974, 3)

The principal change to the world balance of payments structure was the impact of the first oil shock, which occurred when the Organization of the Petroleum Exporting Countries (OPEC) raised oil prices by 70 percent during October 10–17, 1973. The *Interim Report* was dated September 23, 1973, when the C-20 met at the IMF–World Bank annual meetings in Nairobi, Kenya. This sequence of events leads some observers to conclude that the C-20 reform effort failed because the oil shock caused countries to pull back from implementing any substantive changes. This is not the view of Williamson (1977), nor is it my view; see below.

Even before the C-20 was established, the Smithsonian exchange rate agreement began to disintegrate. In June 1972, the British abandoned the European agreement to retain narrow margins against each partner country, and sterling was floated independently. In late January 1973, Italy established a two-tier exchange market. This caused the Swiss authorities to float the franc. Meanwhile, the US authorities concluded that the devaluation of the dollar allowed by the Smithsonian Agreement was inadequate to stabilize US international accounts. Treasury Undersecretary Paul A. Volcker set off on a secret, round-the-world mission to discuss with other authorities a second devaluation of the dollar. On his return on February 12, the United States announced a 10 percent devaluation of the dollar against the SDR, pointedly not mentioning gold, even though their values were tied together at the time. The Japanese decided to float the yen. Consequently, the yen, the Swiss franc, the Italian lira, as well as sterling and the Canadian dollar were floating.[34] Nevertheless, this second devaluation of the dollar did not hold for long. In the face of additional upward pressure on their currencies, European exchange markets were closed on March 1 and did not reopen until March 19.

In the interim, first the European countries met among themselves and then with US officials in Paris on March 9 without reaching an agreement on exchange rates. The finance ministry deputies were tasked with drafting a new one, and a week later, March 16, the G-10 ministers and governors met with the other members of what was then the European Economic Community. Their communique (de Vries 1985, Vol. III: 630) effectively acknowledged that at least for an interim period the major currencies would float. The continental European currencies that were already floating, including those of Norway and Sweden but excluding Italy,

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34. The Canadian dollar continued to float after the Smithsonian Agreement.

agreed to float together. The Canadian dollar, Japanese yen, sterling, Irish pound, and Swiss franc remained floating independently. It was "agreed in principle that official intervention in exchange markets may be useful at appropriate times to facilitate the maintenance of orderly conditions." Note that intervention was encouraged but not required.[35]

Although many academic observers, and a few officials in private, cheered the apparent move to generalized floating exchange rates, that was not the predominant official reaction. The C-20 met on March 27, 1973, in Washington in the aftermath of the foreign exchange market turbulence earlier in the month. The C-20's communique summarizing its progress on reform of the international monetary system stated: "Members of the Committee recognized that exchange rates must be a matter for international concern and consultation and that in the reformed system the exchange rate regime should remain based on stable but adjustable par values. It was also recognized that floating exchange rates could provide a useful technique in particular situations" (IMF 1974, 215). But by the time of the Nairobi meeting, all major currencies had been floating with various degrees of management for at least six months, and few countries were prepared to commit themselves to a return to fixed exchange rates.[36]

Meanwhile, the C-20 deputies and technical groups continued their work. The central issue in the reform discussions was how to combine a more symmetrical adjustment process—which would place increasing pressure on countries in surplus—with a resumption of settlement of payments imbalances in primary reserve assets, in particular SDR. The C-20 generally agreed that the SDR, rather than gold, should be the principal reserve asset in the reformed system. To this end, US Treasury Secretary George Shultz in September 1972 had outlined the US position on monetary reform. He accepted that most countries wanted to maintain a par value for their currencies but that floating should be permitted. He stressed the importance of the SDR. He argued that the adjustment process should be more symmetrical and that "a country permitting its reserves to rise disproportionately could lose its right to demand conversion, unless it undertook at least limited revaluation or other acceptable measures of adjustment." He said that after a transition period "the United States would be prepared to undertake an obligation to convert official dollar holdings into other reserve assets as part of a satisfactory system" (Solomon 1982, 226–27).

Secretary Shultz's speech was followed in November by a concrete proposal for the use of reserves as an indicator of the need to trigger a balance of payments adjustment (US Council of Economic Advisers, 1973). Known as the Volcker plan, the basic idea was to use increases or decreases in reserve holdings relative to an established base level as an objective indicator of the need for adjustment. On the upside, if a country did not

35. After the closing of the US gold window and the Smithsonian Agreement, the US authorities refrained from intervention until July 19, 1972 in the wake of sterling's departure from the European arrangements. The US authorities stopped their intervention operation in March 1973 but were pressured by their foreign partners, concerned about a third devaluation of the dollar, to resume operations starting on July 10, 1973.

36. There is terminological confusion about currencies that are floating or fixed. A currency may be pegged, de facto or de jure, but as long as the currencies of most of its trading and financial partners are floating, that currency is effectively floating also.

adjust, it would lose its right to convert its foreign currency holdings into primary reserve assets, or receive SDR allocations, and potentially be subject to other penalties such as trade restrictions. On the downside, a country would be subject to the normal adjustment pressures.

A technical group was formed under the chairmanship of Robert Solomon, vice chairman of the C-20 deputies, to examine the US and related proposals to use indicators to guide the adjustment process.[37] The group met in April and May 1973, notably after the foreign exchange market events of February and March. The European participants put forth an alternative proposal based on using the basic balance as an indicator of the need for adjustment.[38] The group also suggested that the behavior of prices or costs would be good indicators of disequilibrium (IMF 1974, 52–53). The US proposal was included in the C-20's final *Outline of Reform* issued in July 1974 (IMF 1974) as part of the description of a potentially reformed international monetary system; the other proposals were not. But it had become clear long before the publication of the *Outline of Reform* that comprehensive agreement was essentially dead on arrival.

During the first year of the C-20's operation, two other technical groups met, one on disequilibrating capital flows and one on the SDR-aid link and related proposals. The latter group basically laid out the pro and con arguments with respect to several schemes for linking SDR allocations to development assistance in the context that the SDR was to become the principal reserve asset of the reformed IMS.

The fact that the technical group on disequilibrating capital flows did not consider banning private capital flows or requiring that countries return to tight regulations on such flows was remarkable, given that such flows had undermined the foreign exchange element of the Bretton Woods IMS. The technical group's members considered the possibility of developing a code of conduct of general principles and rules modelled on the Code of Liberalization of Capital Movements of the Organization for Economic Cooperation and Development (OECD), but they concluded it would be difficult to apply such a framework to all countries. They also noted that some countries were using capital controls, now known as measures to "manage" capital flows, but even at that time many in the group expressed skepticism about the sustained effectiveness of such measures (IMF 1974, 78–94). Moreover, the C-20's *Outline of Reform* stated, "Countries will not use controls over capital transactions for the purpose of maintaining inappropriate exchange rates or, more generally, of avoiding appropriate adjustment actions" (IMF 1974, 12). In the subsequent 40 years, net and, in particular, gross capital flows have increased and often swamped a country's exchange rate regime. However, the C-20's formulation is close to the "institutional view" on capital flow management articulated by the IMF in 2012 (IMF 2012):

> Rapid capital inflow surges or disruptive outflows can create policy challenges. Appropriate policy responses comprise a range of measures, and involve both countries that are recipients of capital flows and those from which flows originate. For countries that have to manage the macroeconomic and

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37. Full disclosure: I served as Solomon's assistant.

38. The basic balance for a country is its current account balance plus its balance on long-term capital flows. It was favored for a time, and by some even today, as a more reliable measure of a country's position in international transactions.

financial stability risks associated with inflow surges or disruptive outflows, a key role needs to be played by macroeconomic policies, including monetary, fiscal, and exchange rate management, as well as by sound financial supervision and regulation and strong institutions. In certain circumstances, capital flow management measures can be useful. They should not, however, substitute for warranted macroeconomic adjustment.

The key to fundamental reform of the IMS was agreement between the United States and France on the basic issues of adjustment and reserve asset settlement, but the representatives of the two countries could not agree on very much. The US offer of an eventual return to dollar convertibility into primary reserve assets was insufficient to satisfy the French authorities. On the other hand, the French and their European colleagues were unwilling to commit to an adjustment process that had sufficient symmetry to satisfy the US authorities. The impasse was reached before the Nairobi meeting.

In retrospect, the clue to the impasse occurred at the meeting of the C-20 deputies in Paris September 5–7. Volcker (Volcker and Gyohten 1992, 123) reports that, on behalf of the United States, he was prepared to accept the framework for agreement that had been drafted by the C-20 secretariat as the basis for negotiation. However, when Volcker began his major intervention, his French counterpart, Claude Pierre-Brossolette, ostentatiously opened his *Financial Times* rather than listen to a pitch that he had already heard and was not prepared to accept. In other words, international economic policy coordination to reform the IMS was doomed to fail. Countries were not willing to give up the flexibility offered by the ad hoc system that was currently operating. Indeed, at the ministerial meeting held later in September, French finance minister Giscard d'Estaing called for a one-year suspension of all negotiations.

Consequently, the C-20's *Outline of Reform* issued in June 1974 was just that, an outline of what might be done with respect to the balance of payments adjustment process, the settlement of payments imbalances, control over the volume and composition of reserves, and the special problems of the developing countries. It was not an action agenda. Moreover, the implicit C-20 agenda was to *reform* the Bretton Woods IMS, when in fact the C-20 was a transition mechanism that ended up *replacing* that system with a much looser one in terms of foreign exchange regimes, which allowed many flowers to bloom, and settlement obligations, of which there were none.

The *Outline* did propose several "immediate steps" (IMF 1974, 18–23). Some of those steps were exhortations to continue to cooperate under the aegis of the Fund. But they also included some practical steps, such as (1) the establishment of the Interim Committee, (2) the endorsement of guidelines for floating that had been adopted by the IMF executive board, (3) the recommendation of a basket of currencies approach to the valuation of the SDR (replacing its link to gold and the dollar), (4) the early establishment of the extended fund facility for longer-term borrowing from the Fund, and (5) the recommended establishment of a joint Fund and World Bank ministerial committee, which became the Development Committee.

The guidelines for floating were the most consequential component of the package in terms of the evolution of exchange rate regimes in the post–Bretton Woods system. The executive board's guidelines agreed in July

1974 were more normative than those later adopted by the board in the context of the amendment to the IMF's Article IV on exchange arrangements. The former guidelines incorporated the idea of a norm for a country's exchange rate and that intervention should be encouraged when it was directed at moving the rate toward that norm and discouraged when moving the rate away from it (IMF 1974, 35). The successor guidelines merely stated, "A member should intervene in the exchange market if necessary to counter disorderly conditions, which may be characterized inter alia by disruptive short-term movements in the exchange rate of its currency" (IMF 2016a, 34-35). The idea of a prescriptive norm was championed at the time by John Williamson, building on the proposals of Wilfred Ethier and Arthur Bloomfield (1975) and in his later work (Williamson 2016). The concept was contained in proposals for reference rates for exchange rates or target zones. I incorporated this approach in my reform proposals in 2006 and 2011 (Truman 2006, 12–14, and 2011).

In addition, the immediate steps included an appendix on trade measures stating that some, but not all, members of the C-20 advocated the adoption by members of the IMF of a declaration on trade, committing them not to "introduce or intensify trade or other current account restrictions for balance of payments purposes…without a prior finding by the Fund that there is balance of payments justification" for them.[39] Such a measure was particularly relevant during the economically unsettled conditions at the time due to the increase in oil prices and recessionary conditions.

Finally, the *Outline* called for an amendment of the IMF Articles of Agreement to give effect to the immediate steps contained in the *Outline* and deal with a few leftover matters, such as legalizing floating and provisions regarding gold. The amendment was to be completed by February 1975 at the latest.

Agreement on the second amendment of the Articles of Agreement was delayed until March 1976 after the Interim Committee met in Jamaica in January of that year.[40] The principal stumbling blocks were the exchange rate provisions and dealing with gold. On both issues, the US and French authorities were the principal protagonists in discussions that lasted many months.

On gold, it was finally agreed that each member should collaborate and follow policies "promoting better international surveillance of international liquidity and making the special drawing right the principal reserve asset in the international monetary system" (Article VIII, section 7). Neither commitment has been met, but the intent of the second was to replace gold at the center of the international monetary system, which has been largely accomplished not by increasing members' holdings of SDR but via their accumulations of foreign currencies, principally the US dollar.[41] The final agreement on the IMF's gold was not reached until the summer of

39. The voluntary declaration was not adopted by the necessary 65 percent of the total voting power, in part because of jurisdictional concerns vis-à-vis the OECD and the General Agreement on Tariffs and Trade (GATT); de Vries (1985, 349–50).

40. The first amendment in 1969 established the SDR.

41. In 1979, the US dollar's share of currency holdings reported to the IMF was 65 percent (Truman and Wong 2006). The dollar's share at the end of the first quarter of 2017 was 64.5 percent (IMF, Currency Composition of Official Foreign Exchange Reserves, http://data.imf.org/?sk=E6A5F467-C14B-4AA8-9F6D-5A09EC4E62A4 [accessed on September 20, 2017]).

1975. It included returning a portion of the IMF's gold holdings to members (known as restitution) and selling a portion in the market. The proceeds were placed in a trust fund and used for the benefit of developing countries in the form of direct distributions and low-interest loans.[42]

With respect to exchange rates, the French and US authorities finally hammered out an agreement on a new IMF Article IV on obligations regarding exchange arrangements. The agreement was welcomed at the first G-6 summit at Rambouillet, France in November 1975.[43] This allowed final agreement on the second amendment of the Articles of Agreement at the meeting of the Interim Committee in Jamaica in January 1976.[44] The French-US agreement on exchange rates was basically an agreement to disagree. The new Article IV committed IMF members "to assure orderly exchange arrangements and a stable system of exchange rates"—not a system of stable exchange rates. However, while effectively legalizing floating exchange rates and authorizing Fund surveillance over the exchange arrangements of members, Article IV also provided that the IMF could, by an 85 percent majority vote, return to a system of stable but adjustable par values.[45]

Thus, the treatment by the C-20 and the IMF of the agenda for reform of the Bretton Woods system stopped substantially short of modifying the balance of payments adjustment process to make it more symmetrical, establishing procedures for the settlement of imbalances, or creating mechanisms to govern the volume and composition of international reserves. Arguably, the special problems of developing countries received more substantive attention than the other elements on the post-Smithsonian agenda, but the developing countries did not get their SDR-aid link.

Evaluation

In the short run, the effort to reform and replace the Bretton Woods system failed on all three of its principal agenda items. The adjustment process remained ad hoc and asymmetric. Countries had no settlement obligations other than financing their international transactions. The expansion and contraction of global liquidity was largely left to the market and actions by individual countries.

On the other hand, 40 years after the adoption of the second amendment to the IMF Articles of Agreement, the limited changes in the organization and operation of the international monetary system that were introduced in the 1970s were positive and have persisted.

The IMF remains at the center of a broadly cooperative international economic system. Markets for international goods and services and capital are freer than they were in 1974. Edward M. Bernstein (1976, 8), who had

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42. See de Vries (1985, chapter 34). At the time, the trust fund was a novel idea that had not been previously used by the IMF. Today, the IMF has a plethora of trust funds. They are mechanisms used to collect contributions to the Fund to finance special programs and to get around the requirement in the articles that members receive equal treatment or not favored treatment by the Fund, for example because they are developing countries.

43. The G-7 country not included was Canada, which was invited to the 1976 summit in the United States.

44. The amendment became effective in April 1978, almost seven years after the closing of the US gold window.

45. Subsequently, after the turn of the 21st century, IMF management and staff were criticized for not following through on the surveillance called for in Article IV (IEO-IMF 2007).

been present at Bretton Woods and was the first director of research at the Fund, delivered a sober assessment of the Jamaica agreement, based principally on what he saw as the enhanced role of the IMF:

> The amendment [to the IMF Articles of Agreement] says that "the Fund shall oversee the international monetary system." Taken by itself, this is a broader statement of the authority of the Fund than is contained in the Bretton Woods Agreement. The Fund will have less rigid statues on the exchange rate system, but it will have wider powers to adapt and supervise guiding principles on exchange policy. As a financial institution providing reserve credit, the Fund will become more important than ever. This may enhance its influence over members that come to the Fund for assistance. Ultimately, the role of the Fund will depend on what its members want it to be.

Since the 1970s, businesses cycles have not been abolished nor have financial crises. The 2008–09 global financial crisis and recession were horrendous, but in general cyclical fluctuations have been minimized. The IMF has been available to help address crises after they occur.[46] However, the adjustment process remains asymmetrical with its greater pressures on countries with current account deficits and few pressures on countries with surpluses.[47] Some countries have manipulated their exchange rates to obtain or maintain competitive advantage. There is no international influence over the accumulation or composition of reserves. The glass is either half full or half empty.[48]

EPILOGUE

Collective efforts to reform elements of the post-C-20 IMS did not stop in 1976. As Bernstein wisely predicted, the IMF and the IMS of 2017 are very different from what they were in 1976. The SDR is not at the center of the system,[49] but countries are more comfortable with floating exchange rates, which effectively includes all countries because even countries that peg their currencies to another currency float with respect to all currencies that are not similarly pegged. The members of the IMF have used the institution to respond to financial crises, meet the needs of countries in transition, and increase attention to financial stability.

However, these changes have been ad hoc responses to emerging needs, not comprehensive reforms of the international monetary system per se. The most recent collective effort to reform the system, unsurprisingly, was during the French presidency of the G-20 in 2011. That initiative foundered when the French did not put forward a comprehensive proposal, and the Greek and associated euro area crises overwhelmed the Cannes summit. As a result, the summit communique (G-20 2011) was left to comment on modest steps forward that were already underway. They covered IMF surveillance, the management of capital flows (see above), coopera-

46. Some attribute the global recession at least in part to a failure of the adjustment process and of IMF surveillance in advance of the crisis.

47. Arguably, pressures on the United States when in current account deficit are less than they were in the Bretton Woods system in which pressures could be brought via purchases of the US gold stock.

48. On the side of half full, see Truman (2012). On the side of half empty, see Bergsten and Gagnon (2017) and Williamson (2016).

49. The fourth amendment of the IMF articles, finally adopted in 2009, provided for an equalization of holdings of SDR among members through a special allocation, and in the same year the IMF did allocate $250 billion in SDR in the context of the global economic and financial crisis.

tion between the IMF and regional financial arrangements (such as the European Stability Mechanism, which had been established to organize euro area financial support for euro area countries dealing with financial crises), modification of the SDR basket in 2015 (when the Chinese currency was added to the basket), promotion of exchange rate flexibility, the extent of the global financial safety net, and adequate resources for the IMF (see Truman 2011 for an assessment).

In advance of the French presidency of the G-20 and the Cannes summit, Michel Camdessus, former managing director of the IMF, Alexandre Lamfalussy, former general manager of the Bank for International Settlements and president of the European Monetary Institute (forerunner of the European Central Bank), and Tommaso Padoa-Schioppa, who had a distinguished career in public service—including on the executive board of the European Central Bank—that culminated in being Italy's minister of economy and finance (2006–08) and chair of the IMF's international monetary and financial committee (2007–08), assembled an international group to take a fresh look at the international monetary system as a whole. The resulting Palais Royal Initiative was comprehensive, but it was essentially ignored by policymakers (Jack T. Boorman and André Icard 2011).[50]

More recently, the IMF staff has been tasked with reexamining the IMS (IMF 2016b). No doubt disappointing some members of the executive board, the staff were remarkably unconcerned about the current system:

> Today's IMS has displayed great strength. It has evolved over the past four decades to become much less prescriptive than its predecessors that had more rigid rules. Indeed, many of the characteristics of today's IMS—freedom in the choice of exchange rate regime, a de facto central role for the US dollar in the global financial system, the increased openness of trade and capital flows—provided more flexibility in responding to shocks and crises. Throughout this period, the Fund, as the central institution responsible for overseeing the system, adapted to support the post-Bretton Woods system. At the same time, this evolution coincided with a period of greater international trade and financial globalization, broad-based income growth and poverty reduction, but also increasing inequality. (IMF 2016b, 1)

The paper did identify three areas where reforms might focus: (1) mechanisms for crisis prevention and adjustment, (2) a large enough and more coherent global financial safety net (GFSN), and (3) enhanced global cooperation on issues and policies affecting global stability.

The first area harkens back to the C-20 discussions. It involves in the first instance better economic policies, but the adjustment component focuses on the perennial challenge of the asymmetry in adjustment pressures, skewed against countries that are in current account deficit or that may be the recipients of excessive capital inflows. In the 21st century, this asymmetry has been closely identified with some countries' intervention policies that have led them to build up excessive foreign exchange reserves to prevent their currencies from appreciating. Under the Bretton Woods IMS these buildups were unwelcome to countries with surpluses because they disrupted their monetary and other macroeconomic policies. Today, for example, countries find it much easier to sterilize their intervention operations.

50. Full disclosure, I was a member of the group.

But the increased scale of intervention has affected exchange rates, in particular US dollar exchange rates, and short-circuited the natural workings of the adjustment process in a regime of generalized floating exchange rates. Thus, the issues of asymmetric adjustment and the demand for and composition of global liquidity that brought down the Bretton Woods IMS, if anything, have become more tightly linked; see Bergsten and Gagnon (2017). Bergsten (1975) wrote about these issues more than 40 years ago. He argued that the asymmetrical adjustment process placed burdens on the dollar and the United States that were not in its economic, financial, or political interest, nor in the interest of the system as a whole. In effect, he saw then and sees now the international role of the dollar as a net negative for the United States. The asymmetry of the adjustment process that continues today harkens back to the C-20's consideration of international reserves and/or basic balances as triggers for adjustment pressures on countries, except that the focus today is on current account balances. The size and composition of global liquidity in the form of currency holdings is not today a focus of concern about inflation but rather the handmaiden of the asymmetric adjustment process.

The second area, the global financial safety net, is both old and new. The old component involves the size of the financial resources the IMF has, or can call upon, to help its members weather temporary shortages of international liquidity. The new component involves the potential for countries to need access to international liquidity, even though their policies have been fully or largely exemplary, because of sudden stops or reversals of short-term capital inflows.

The third area, links to global financial stability, is newer. The international economy and financial system are more globalized and integrated than was the case 40 years ago. Consequently, the buzzwords are "policy spillovers" and "synchronized financial cycles." To address the problems that potentially arise today, intensified international economic cooperation and policy coordination are required.

Reform of the IMS has been an "evolutionary process," as was envisioned by the C-20 in 1974 (IMF 1974, 4). That evolution is continuing much longer than most of the participants in the C-20 anticipated. Some elements are new, but the fundamental concerns about asymmetrical adjustment, the failure of exchange rates to adjust appropriately, and disequilibrating capital flows are very familiar.

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