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Canada and the IMF: Trailblazer or Prodigal Son?

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1. Introduction

Despite playing a critical role in establishing the IMF, Canada was the first major member country to challenge the orthodoxy of the Bretton Woods par-value system by abandoning the system in September 1950 in favour of a floating market-determined exchange rate. Its trail-blazing experience, which was later widely documented and studied, demonstrated that a flexible exchange rate can operate in stable and effective manner under high degree of capital mobility, as foreseen by Milton Friedman (1953). [1] [2] Equally important, the Canadian experience also showed that monetary policy needs to be conducted differently under a flexible exchange rate and capital mobility.[3]

Canada returned to the Bretton Woods system in May of 1962 as a "prodigal son", when the Canadian floating exchange rate came under severe downward market pressure, as the government's efforts to depreciate the exchange rate gradually failed. This exchange rate instability and resultant change in regime, were, however, not caused by an inherent flaw in the flexible rate regime, per se, but by monetary policy that had not taken into account its impact on the real economy via the exchange rate channel and thus was not sufficiently countercyclical. Notably, this monetary policy failure and the conflict with fiscal policy during this period served as an inspiration for Mundell's contribution to the Mundell-Fleming model. The Canadian experience also influenced the work of J. Marcus Fleming and Rudolf Rhomberg at the IMF. Thus, the Canadian experience had important implications not only for the IMF and the Bretton Woods system, but also for the development of open economy macroeconomic theory and policy in open economies.

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[1] The 1953 article "The Case for Flexible Exchange Rates" is normally viewed as Friedman's main contribution to the debate on exchange rate regimes. Friedman also contributed, however, to the discussion within Canada by participating in a 1948 radio debate with the Deputy Governor of the Bank of Canada Donald Gordon. (Friedman, Gordon and Mackintosh, 1948)

[2] After the United States, Canada was the next major Western industrialized country to remove all war-time capital and exchange controls in December 1951.

[3] See Bordo, Dib and Schembri (2007) for a counterfactual analysis of the conduct of monetary policy in Canada during the 1950-62 floating rate period.

The main purpose of this paper is to consider the impact on the IMF of the Canadian experience with floating exchange rate over the period 1950 to 1962. The paper critically analyzes the interaction between Canadian and IMF officials regarding Canada's exchange rate policy in view of the economic circumstances and the state of economic thought at the time and also examines the impact on IMF research and policy.

Our analysis finds that Canada's unique characteristics, in particular, its dependence on commodity production and exports, and its trade and financial openness, especially relative to the United States, made it well suited as the trial case for a flexible exchange rate. Therefore, Canada's decision to float in 1950 was appropriate, given the economic circumstances of large relative (commodity) price shocks, concerns about domestic inflation, and the high mobility of capital. Indeed, although the IMF viewed the Canadian floating rate as a special case and were reluctant to recommend it as an example to other countries. Despite the fact that Canada's experiment with a flexible exchange rate was abandoned in 1962 as a consequence of inappropriate monetary and fiscal policies, which reflected a misunderstanding of the conduct of macroeconomic policies under a floating rate, Canada's experience sparked numerous studies and a rapid development of economic thought that raised the viability and visibility of flexible exchange rates as an alternative to the Bretton Woods System. Canada's experience foreshadowed the Bretton Woods system's eventual collapse in the early 1970s.[4]

The paper is organized chronologically around the two changes in Canada's exchange rate regime in 1950 and 1962. The next section provides the historical narrative until 1949 that briefly reviews Canada's important contribution to the founding of the IMF and also examines Canada's experience with exchange rate policy in the years leading up to 1949. The third section investigates the economic circumstances surrounding Canada's decision to float in 1950, the rationale given for it, and the IMF's

[4] In June 1970 Canada again was the first major industrialized country to abandon the Bretton Woods system under virturally the same set of economic circumstances, higher commodity prices and inflationary pressure, as in September 1950. Despite sustained efforts to keep the system together it collapsed for good in March 1973.

reaction of reluctant acquiescence. The floating rate was partly motivated as a temporary solution to the problem of finding the appropriate par value. Initially there was a flurry of interaction between the Canadian authorities and IMF officials, but then subsided as the flexible exchange rate quietly did its job of sheltering Canada from imported inflationary pressure. In the fourth section, we examine the period 1952-56, which was the heyday of Canada's floating rate as it continued to be relatively stable, perhaps too stable, and the Canadian economy performed reasonably well. Consequently, the Canadian political authorities saw no reason to return to the Bretton Woods system and the IMF essentially suspended judgment and ignored Canada's flexible rate. Nonetheless, other countries, none as prominent as Canada, also started experimenting with a floating rate and the IMF began to do research on the issue. The fifth section covers the period 1957-62, which was characterised by the controversial monetary policy of Bank of Canada. Because the monetary policy was insufficiently countercyclical it was subject to widespread criticism and it set off a chain of events which led to the collapse of the flexible rate regime. This section examines these events, focusing on Canadian monetary policy, the interaction with fiscal policy and the IMF-assisted return to the Bretton-Woods regime. The next to last section focuses on the impact of the Canadian experience on IMF research on exchange rate regimes and stabilization policy. This research began in earnest in the late 1950s and focused on exchange rate policy, capital mobility and the assignment problem and led to the birth of the Mundell-Fleming model. The final section provides some concluding remarks.

2. Historical Background Till 1949

Canada's decision to float in 1950 and the IMF's reaction to it can be explained in part by Canada's experience with exchange rate policy to that point and Canada's prominence as a founding member of the IMF. Canada was a strong proponent of the IMF and had actively participated in the two years of negotiations leading up to the signing of the Bretton Woods agreement in July 1944. In particular, Louis Rasminsky of the Bank of Canada, the first Canadian IMF executive director (1946-1962), played a key role in these negotiations. According to Plumptre (1977) and Muirhead (1999), Rasminsky acted as a mediator between Keynes and Harry Dexter White in the deliberations before the Bretton Woods conference. Most notably, the Canadian plan,

drafted in June 1943 by Rasminsky and others, was a variant of White's plan for a United Nations Stabilization Fund. It led to several key changes in the White plan (an increase in the Fund from $ 5 billion to $ 10 billion, the right of the IMF to borrow from particular members; and more flexibility in exchange rate arrangements (Horsefield 1969 and Plumptre 1977, p. 39). Moreover, at the Bretton Woods conference, Rasminsky served as chairman of the Committee to Draft the Articles of Agreement and as official rapporteur to the Planning Conference on matters related to the IMF. (Plumptre 1977, p. 42). In summary, Canada's key contribution to the founding of the IMF was its service as the "honest broker" between the competing views of the United States and United Kingdom with the founding of the IMF came the establishment of the Bretton Woods system of par value or pegged exchange rates. This system of pegged, but adjustable exchange rates was a reaction to the instability of exchange rates during the interwar period.

Canada's decision to adopt a floating rate in 1950 was, therefore, a notable event for the IMF given Canada's stature as a prominent founding member. For Canadian officials, however, it was not a complete leap of faith as Canada had had some experience with a flexible exchange rate in the 1930s. Canada left the gold standard de jure in 1929 and de facto in October 1931, when gold exports were banned. The Canadian dollar immediately depreciated to the range of US$0.85 to US$0.90 in 1932, but then recovered to about parity after the United States left gold in 1933. Subsequently, the Canadian dollar floated, in a fairly tight range close to parity with the U.S. dollar until it was fixed with the advent of war in September 1939 (Bordo and Redish 1990, Powell 2005). Although Canada's earliest experience with a floating exchange rate came at time of great economic tumult across the world, there is little evidence that it made the economic depression worse and a case could be made that it helped accelerate the recovery as it had done in the United Kingdom and in other countries that had left the Gold Standard during this period (Choudhri and Kochin 1980).

During World War II, Canada had a fixed exchange rate at U.S.$0.909. However, in late 1944 there was strong sentiment that the peg was unsustainable because of increasing capital inflows (Powell 2005, p.56) increasing reserves and inflationary pressure. Consequently, speculation of an impending revaluation mounted, despite

authorities' attempts to quell the rumours. In July 1946, the dollar was revalued to parity with the U.S. dollar, just two months after the IMF began operations (see Figure 1). The Canadian balance of payment was deemed to be in fundamental disequilibrium and the IMF's Executive Board approved the resolution of the pegged rate.

Prior to World War II, Canadian imports from the United States had been largely financed by Canadian exports to the United Kingdom. As reconstruction of Europe dragged on, however, Europe, including the United Kingdom, soon lacked the means to pay for its imports. In addition, European countries lumped Canada into the "dollar area" group and imposed import restrictions against them.[5] Consequently, soon after the revaluation, Canadian official reserves started declining as imports from the United States increased sharply causing deflationary pressure.

In an effort to staunch the outflow of U.S. dollars, Canada imposed import restrictions and controls.[6] Despite these measures, pressure on the peg continued to mount. This pressure surfaced in the unofficial market for Canadian dollars which had established in New York to avoid wartime exchange controls. In 1946, the Canadian dollar was trading at a discount of between 3.5 and 4 percent; by 1948, the discount reached 9 percent. Although the authorities appeared unconcerned by the growing discount, it only fuelled speculation that the dollar was overvalued.

By 1949, the idea of freeing the dollar was viewed as a viable solution to Canada's dilemma of selecting a pegged nominal rate consistent with external balance. While it was argued that making Canadian dollars freely convertible would cause a large inflow of capital, other officials at the Bank were concerned this would lead to capital flight. It was initially suggested that the Bank use open market operations instead (Lawson 1949) to sterilize the impact of the reserve loss on the Canadian money supply and stem the deflationary pressure.

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[5] See, for example, (Skadden 1947)

[6] Friedman, Gordon and Mackintosh (1948) discusses this problem.

Recognizing that freeing the exchange rate would be a serious breach of IMF protocol, efforts were made to incorporate a fluctuating exchange rate into an exchange control system where the Bank would only intervene to prevent large fluctuations. (Coyne 1949).

In 1949, the British pound was devalued by over 30 percent. Other sterling area countries as well as many Western European countries also devalued their currencies by sizable amounts at approximately the same time (Powell 2005). Canada was one of them and on September 20, the dollar was devalued back to U.S.$0.909, its war-time level. Although this was a substantive devaluation, it was largely anticipated and generally considered necessary to avoid severe contractionary pressure on the Canadian economy. As with the revaluation in 1946, this devaluation was approved by the IMF's Executive Board after consultation between Canadian officials and IMF staff.

3. Canada's Decision to Float and the IMF's Reaction

Canada's second experiment with a flexible exchange rate beginning in 1950 was more significant not only because it went alone,[7] but because floating meant departing from the rules of the Bretton Woods par value system. Thus, Canada's 1950 float was seen as a case of breaking or at least flaunting the rules by an important IMF member. Consequently, serious concerns were expressed that other member countries might follow suit and, jeopardize the existence of newly founded system and possibly the IMF.

The Canadian government decided to allow its currency to float in October 1950 after two unsuccessful attempts to establish a sustainable Bretton Woods par value. As noted, in July 1946, the Canadian dollar was revalued from a wartime discount at U.S. $0.909 to parity and subsequently, in September 1949, Canada devalued its currency back to the pre-July 1946 level. After this devaluation, international economic

[7] Belguim's proposal to float its exchange rate was approved by the IMF's Executive Board on September 19, but two days later, Belgian officials decided to devalue instead, which was readily approved by the Board (Horsefield 1969).

conditions, however, improved and the beginning of the Korean War in June 1950 contributed to a strong economic expansion in the United States and Canada. Demand for commodities and other Canadian exports increased and the wartime discounted level proved to be too low. Foreign direct investment into the Canadian resource sector increased. The increase in capital inflows began in 1949 and accelerated in 1950 and these led to a significant increase in international reserves and the money supply, especially in the third quarter of 1950 when reserves increased by 43 percent. These accelerating inflows were likely speculative, driven by the expectation that the Canadian dollar would again be revalued as in 1946. The Canadian authorities were very concerned about the inflationary pressure and had few options available to manage it. Moreover, they did not want to pick another par value, only to find out as in 1946 and 1949 that it could not easily be sustained. The decision to float was presented as a temporary move, presumably with a return to the par value system once a new "fundamental equilibrium" had been reached.

By the time Canada had decided to adopt a flexible exchange rate in September 1950, the IMF had already faced proposals for floating rates from Belgium and Peru, but the Canadian proposal was the first from a major trading country and IMF officials feared that this would disrupt the international economy and possibly unsettle the newly founded Bretton Woods par value system. IMF policy up until this point was to permit the adoption of a flexible rate, as a temporary measure, but the staff usually advocated instead the use of exchange or capital controls and other restrictions as well as reserve sterilization to maintain the fixed par value. Although the elimination of controls was seen to be one of the goals of the IMF, fluctuating exchange rates were considered to be highly unstable. Controls were viewed as the lesser of the two evils and would limit negative spillover effects on other members. Canadian officials, however, were reluctant to impose capital controls on the inflows or issue more debt to sterilize their impact on the domestic money supply.

Furthermore, given Canada's and Louis Rasminsky's intimate involvement in the establishment of the IMF, Canada's proposed exit from the par value system was seen as a sign that the IMF was incapable of achieving exchange rate stability, one of its primary

goals. While some academic economists, most notably James Meade (1951) and Milton Friedman (1953), advocated the use of fluctuating rates, officials at the IMF would only accept their temporary use. Given that the par values had been established in 1944 in some haste and that the post-war macroeconomic conditions were generally much more stable than those of the interwar period, the IMF permitted, without penalty, the use of a market-determined flexible rate as a means of helping to determine a sustainable par value. In addition, the IMF had left the wording of the Articles deliberately vague: fluctuating rates were permitted to correct "fundamental disequilibria" in balance of payments accounts, a term that was never explicitly defined, leaving the door open for individual interpretation by the member countries.

On September 9th 1950, Rasminsky and Bank of Canada Governor Graham Towers met with IMF Managing Director Camille Gutt to discuss the increase in capital inflows. In light of the recent difficulties that Canadian officials had encountered in finding a sustainable level for the Canadian dollor, they put Gutt "on notice" that the Canadian Government was considering freeing the dollar. When Gutt reminded them of their opposition to the Belgian proposal to free their exchange rate in the previous year. The Canadians noted that their opposition had been to an explicit approval by the IMF and that Canada, accordingly, would not seek formal IMF approval for its action.

On September 27th, Rasminsky ask Gutt to summon a meeting of the Executive Board for September 30th to discuss the Canadian government's plans to free the exchange rate. The staff were upset with the proposal, stating that it threatened "a general breakdown of discipline." In discussions with the Americans, Rasminsky found a more sympathetic audience. Indeed the American Executive Director (ED), Frank Southard, even went so far as to say that, from an exclusively American point of view, a floating rate "was preferable to parity" (Rasminsky 1950).

On September 29th, Rasminsky also attended a meeting with the senior staff of the IMF. He felt that while the staff were hostile to the decision, they did not put forward a viable alternative. Rasminsky noted that senior members of the staff were "deeply

resentful of what they regarded as the cavalier treatment by Canada of the IMF in giving it so little notice and presenting the decision as a fait accompli, rather than as a request, although he maintained that key officials knew that the Managing Director had been given three weeks warning" (Rasminisky 1950).

An IMF staff study concluded that Canada clearly needed to take action so as to curb inflationary pressures arising from the massive capital inflow. Three possible courses of action were cited: sterilization; capital controls and/or; revaluation. While neither of the first two options would be easy, it was concluded that these risks pose less of a threat to "both to Canada and to the IMF in general" than a fluctuating exchange rate (IMF European and North American Department 1950).

At the IMF's Executive Board Meeting on September 30th, Rasminsky informed the EDs of Canada's decision. He stated that the Minister of Finance had considered the measures proposed by the IMF Staff and had rejected them as inadequate for the Canadian economy. Since allowing the exchange rate to fluctuate would entail non-compliance with the IMF's Articles of Agreement, Canada was not seeking the formal approval of the IMF (IMF Executive Board 1950).

IMF Research Director Edward Bernstein felt that the exchange rate was being used as an instrument of monetary policy. He believed that the problem was persistent and that the temporary solution of freeing the exchange rate would not address the underlying fundamental disequilibrium and particularly advocated the use of capital controls.

One of the main objections to the Canadian proposal was the impact it would have on the IMF as a whole. The Canadian proposal could lead to a slippery slope and that other countries might soon follow suit. Rasminsky pointed out that the paramount objective of the IMF was the external stability of its members and that freeing the exchange rate would help the Canadian economy achieve this objective.

Many EDs found Rasminsky's argument to be persuasive and the Southard stated that he thought there was "little to be lost and much to be gained" by the proposal. George Bolton, the U.K. ED stated that although he feared the difficulties that a fluctuating rate would entail, he supported the Canadian proposal because he knew that the decision had been reached after much consideration of the alternatives and accordingly would raise no objections.

Gutt did not agree with the positions taken by these EDs as it essentially amounted to a negation of the principles of the IMF and believed that Canada was acting irresponsibly towards other members. Careful attention was paid to the wording of the decision, although Rasminsky feld that the staff's proposed language that was less favourable than that used in the case of Belgium mentioned earlier.

On September 30, 1950, the Minister of Finance, Douglas Abbott, announced that, due to the "growing tide" of capital inflows into Canada and the difficulty in determining a new par value, the Canadian government would free the exchange rate and that all remaining import and quota restrictions would be removed as of January 2, 1951 (Canadian Ministry of Finance 1950). He stressed that the decision was a temporary measure to permit the exchange rate to find its equilibrium level and that the government would remain in consultation with the IMF and ultimately establish a new par value. The IMF's press release simply recognized the "exigencies of the situation" and noted that it would remain in consultation with the hopes of re-establishing a par value "as soon as circumstances warrant[ed]" (Horsefield 1969).[8]

[8] Following the announcement, an article quoting "a number of experts" at the IMF as saying that the Canadian float "involved such great disadvantages [sic] that it should be avoided." (Hamilton Spectator 1950) It further maintained that not only had the Canadian government given insufficient warning, but that Abbott had only informed the U.S. Treasury of the proposed action on the day the government abandoned the par value. Rasminsky sent a copy of this article to Gutt, expressing his concern that the article gave the impression that the IMF only reluctantly acquiesced to the decision. Suspecting that the (incorrect) information came from sources within the IMF, he urged Gutt to deal with this matter internally.

Two IMF officials came to Ottawa in October 1950 in order to receive a stronger commitment from the Canadian government to return to a par value exchange rate. They returned to Washington, according to A.F.W. Plumptre of the Canadian External Affairs Department "wondering whether Canada will ever again be a member of the Fund in good standing. They regard this [Canada's decision to float] as a severe blow – perhaps even a mortal blow to the Fund" (Muirhead 1999, p.143)

Governor Towers and Rasminsky advised Abbott that the Canadian dollar should not return to a fixed parity until there was further liberalization of controls to achieve convertibility and nondiscrimination with a large number of countries (Muirhead, 1999, p. 143). Canada's unusually open position with the United States made the Canadian economy vulnerable to U.S. economic shocks and those could be most easily transmitted via a fixed exchange rate.

Goforth (1950) noted a divergence of opinion between the U.S. and U.K. Treasuries. The Sterling Bloc representatives "strongly opposed" floating rates while the U.S. Treasury favoured the decision and found the actions legitimate within the spirit of the Articles . It was "hoped and believed" that other IMF members would not follow Canada's example "causing chaos on the exchanges."

Canada's decision ignited debate not only among the EDs, but also in the IMF Research Department. A Department memorandum maintained that reserve adjustment was the ideal instrument to correct temporary balance of payments deficits or surpluses. The only solution to a sustained external imbalance, however, was a devaluation of the exchange rate. In contrast, fluctuating rates could provide stabilizing effects by serving as an automatic adjustor to economic conditions (IMF Research Department 1951).

The memo also noted that while the use of fixed rates was adopted in order to avoid the unstable economic conditions that prevailed after World War I, the pegged rates often hampered the performance of many economies, notably Canada and the U.K. It also suggested that the IMF should perhaps consider whether fluctuating rates were

more effective in resolving external imbalances. Furthermore, if the exchange rate was not fixed at a rate appropriate to the underlying fundamentals of an economy, it had no value. Nonetheless, it is important to emphasize that IMF Research Department viewed a flexible rate as a promising temporary solution to balance of payments difficulties; that is, once stability had been achieved, a country should return to a fixed rate.

As one of the chief architects and proponents of the IMF, Rasminsky faced a difficult task in responding to the ongoing criticisms from the EDs and IMF Staff. He argued that the adoption of a flexible rate allowed Canada to fulfill some of the IMF's primary objectives, such as the removal of import restrictions and the stabilization of capital flows (IMF Executive Board 1951a). In addition, he argued that due to "general world uncertainties" Canada would not seek to establish a new par value at this time (IMF Executive Board 1951b).

Most EDs continued to be supportive of the decision. Jean de Largentaye, the ED from France, concluded that for a major trading economy an improper fixed rate represented a continuously misaligned rate and that "the rules of the IMF should not be a further obstacle preventing members from adopting fluctuating rates, if they wish to do so." He was met with opposition from several other EDs, who drew the distinction between fluctuating rates in theory, which may be justified, and in practice, which could prove too volatile. The temporary nature of the fluctuating rate was made explicit and seen, by some, to be a privilege; it was further suggested that perhaps the IMF had not been "tough enough" with those members seen to be abusing it (Rasminsky 1951). The Belgian ED, Ernest de Selliers, stated that the only test the IMF should apply in the case of fluctuating rates is whether or not it was harming other members. It was suggested that if a country did not eventually fix a new par value, the IMF should pursue the case but the IMF's case should be "based on both substance and principle" (Rasminsky 1951). George Bolton, the U.K. ED, took a harder line, concluding that the issue came down to the survival of the IMF. Ultimately, although Canada was found to be, technically, in violation of the Articles, Executive Board recommended that the IMF refrain from imposing penalties.

As 1951 progressed, the IMF became increasingly concerned that Canada showed no signs of returning to the Bretton Woods system. It feared that other small countries could follow Canada's lead and that the IMF would be forced to offer "no objection" as it had to Canada, thereby, threatening the stability of the international monetary system, and effectively spelling out the beginning of the end of the IMF. Consequently, IMF officials initiated discussions with the Canadian officials, and in September 1951, Ivar Rooth (as new Managing Director of the IMF) met with Finance Minister Abbott to discuss informally the situation at the IMF Governors' Meeting. Abbott later indicated that Canada was unable to return to a fixed par while other countries continued their uncertain exchange control policies.

Perhaps the most comprehensive statement of the IMF's position can be found in the 1951 Annual Report. The Report first noted that allowing market forces to determine the equilibrium exchange rate was "a simple solution for a very complex problem" and the appropriate rate would depend upon policies followed by the country concerned and by other countries with which it had important economic ties.

The Annual Report also stated that the par value system was "one of stability of rates rather than rigidity" and that the Articles were sufficiently broad to permit any necessary and justifiable changes in par values. Moreover, any assessment of the use of fluctuating rates should be on the interests of the IMF members as a whole. The Report concluded that while fluctuating exchange rates were not a "satisfactory alternative" to the par-value system, their temporary use may be desirable when "important uncertainties" existed. In such a situation, if the IMF found that the arguments were persuasive it could accept them although it could not give explicit approval to the action. The desired temporary nature of a floating regime was again stressed once again, noting that the members in question would be required to remain in consultation with the IMF, with a goal of re-establishing a new par value as soon as circumstances permit. It was also noted that if the IMF found that the justification for the action of the member no longer existed, the IMF must state this explicitly and then decide whether any action under the Agreement would be necessary or desirable.

The discussion in the Annual Report on fluctuating rates was summarized as follows: “The par value system is based on lessons learned from experience. There is ample evidence that it continues to be supported by the members of the IMF. Exceptions to it can be justified only under special circumstances and for temporary periods. The economic and financial judgment of the IMF in such cases must be tempered by recognition of its responsibilities in the wider field of international relations.” With respect to Canada’s decision, the Report noted that the objective of the Canadian action differed from previous exchange rate adjustments taken by most other countries, as Canada’s action was taken to address an excessive capital inflow, rather than to address a current account deficit.

Figure 1 shows that over the next 18 months the Canadian dollar appreciated markedly from 90.9c to $1.02, a 12 % increase. This rapid appreciation was largely due to the increased U.S. demand for Canadian exports during the Korean War expansion and substantial capital inflows, largely in the form of FDI, from the United States to develop Canada’s natural resources (Yeager 1976, p.544) as shown in Figure 2. Consequently, Canada experienced rapid real growth over the duration of the war, June 1950 to July 1953, which put upward pressure on Canadian interest rates and provided further support for the appreciating currency.

4. 1952 – 56: The Stability of the Canadian Float - The IMF suspends judgment

The IMF’s fears of the repercussions of Canada’s departure from the par value system would seem unfounded in the next few years to come. The Canadian exchange rate proved remarkably stable, fluctuating in a range of 1 roughly 5 cents (U.S.) over the years 1952-56. This stability flew in the face of much conventional wisdom and served to fuel the debate on fluctuating rates, both from a theoretical and a policy perspective, both inside and outside the IMF.

By September 1952, the Canadian dollar had peaked at US$1.04, largely supported by a substantial net inflow of long-term capital. The 1952 IMF Annual Report contained a brief description of the performance of the Canadian dollar, noting that all

remaining exchange controls were eliminated and that the stability of the Canadian dollar required minimal intervention by the authorities. In a statement in the Budget Speech of 1953, the Minister of Finance responded to rumours that official intervention was responsible for this unanticipated stability, maintaining that the Government intervened only to prevent "excessive short-run fluctuations" (Porter Commission 1962).

Discussion of fluctuating rates was not limited to North America; many Europeans were also engaged in the fixed-versus-flexible debate. It was noted specifically that favourable views of fluctuating rates were growing in the U.K. In 1953, Rooth arranged for an informal discussion with officials from most Western European countries, the U.S. and Canada. The opinions expressed were consistent with the IMF's 1952 Report of the Executive Directors, which recognized the potential value of a fluctuating rate as a transitional device, but remained in favour of fixed rates. However, when the discussion turned to dealing with countries who were contravening the Articles in this respect, the U.S. ED noted that "he had no illusions about the extent to which the Canadians would be influenced by IMF views," stating that they would only return to a fixed rate when they deemed it being in their interest. With regards to the legal status of countries such as Canada, he stated that it was "probably an error" that the Articles did not allow the IMF to officially approve the use of fluctuating rates for special cases. When asked to speak to Canada's experience thus far, Rasminsky noted that Canada was a special case and he could not "safely generalize" this experience to other countries. As noted earlier, Rasminsky likely felt Canada was special because of its open trade and financial channels to the United States in a world in which current and capital account convertibility was not in place for most countries.

By 1953, enough member countries were using flexible exchange rate rates that the IMF drew up rules for transactions in floating rates (van Campenhout 1953). These rules were introduced with some degree of flexibility, allowing for changes "in the light of experience." The IMF's treatment of countries with flexible rates was extended further in 1954, when draft proposals for rules to establish methods of computing the rates of fluctuating currencies were developed (van Campenhout 1954).

In reviewing Canada's experience with the float, the IMF's 1953 Annual Report highlighted that the Canadian dollar had remained relatively stable despite large fluctuations in capital flows, conceding that movements in Canada's floating rate had been "equilibrating rather than disturbing."

The Canadian and U.S. economies experienced a recession over the second half of 1953 and the first half of 1954. The spillover to Canada from the United States was, however, mitigated by some weakness in the Canadian dollar. There were, however, suggestions from the press that the decline of the exchange rate over the past year had resulted from official intervention. When the IMF sent a technical mission to Canada in late 1955 to investigate these rumours of official intervention, Rasminsky denied these. He maintained that the decline was due to three factors: the narrowing of the spread between long-term interest rates in Canada and the United States had led to a decline in long-term capital inflow; smaller foreign purchases of Canadian stocks; and a worsening of the current account due to lower exports to the U.S (Dirks 1955).

Over this period, the Bank of Canada responded somewhat sluggishly to spillovers from the U.S. recession with looser monetary policy, but began to tighten soon thereafter. During this time, Canada was also taking steps to develop an active money market, making monetary policy easier to implement via a short term interest rate.

In 1956, the IMF began openly supporting programs of fluctuating rates (when coupled with exchange reforms and stabilization plans) in countries such as Bolivia, Chile, Paraguay, and Argentina (de Vries and Horsefield 1969). In 1958, Managing Director Per Jacobsson stated that when the IMF supported a fluctuating rate, it had chosen the "lesser evil" versus systems of multiple rates or stringent restrictions in order to stabilize a fixed exchange rate (Jacobsson 1964a).

Although the 1952-56 was a period of economic growth and stability, including exchange rate stability, the following years would witness monetary and fiscal policy errors that reflected a lack of understanding of how macroeconomic policy should be

conducted under a flexible rate that would undermine the stability of the exchange rate and lead to a breakdown of this regime.

5. 1957 – 62: The Prodigal Son Returns

The Canadian economic cycle that began with the post-Korean war recession followed by the investment-lead boom of the years 1955-56 demonstrated that the Canadian monetary policy was insufficiently countercyclical over both phases of the cycles. Consequently, the ability of the exchange rate to play a stabilizing role was hindered. This misunderstanding of the role of a flexible exchange rate as an adjustment mechanism in an open economy had important consequences for the 1957-62 period.

The 1958 IMF Annual Report noted that short-term capital movements produced fairly wide fluctuations in the rate during the year, in part due to changes in differential money rates between Canada and the U.S., as well as to changes in the exchange rate and in the timing of payments.

In 1959 economic activity expanded, accompanied by a 25 percent rise in the current account deficit. The Bank of Canada sought to contain inflation, leading to a further increase in interest rates. The IMF attributed the strength of the exchange rate during 1959 to strong demand for Canadian dollars for both long- and short-term investment purposes, offsetting the deterioration in Canada's current account balance. There was growing concern, however, about the strength of the dollar, which continued to float at a premium to the U.S. dollar, and was eroding Canada's competitiveness. Interest rates and unemployment rates moved above U.S. levels (see Figures 7, 9 and 10). Under increasing pressure, the government expanded fiscal policy and was hoping for easier monetary policy as well.

James Coyne, the Governor of the Bank of Canada, however, was opposed to any such easing. He believed that Canadians desired an excessive and unsustainable rate of growth (Granatstein 1986). Coyne maintained that his primary concern arising out of this situation was inflation and the only solution was tighter monetary policy (Thiessen 2000).

On 20 December 1960, while introducing a supplementary budget, Finance Minister Fleming openly declared the government's intention to moderate the capital inflow and thus lower the value of the dollar (Plumptre 1977). With an upcoming election, reducing unemployment was a priority and some action that would affect the value of the dollar was essential. The new budget introduced on 20 June 1961 embarked on an expansionary monetary and fiscal policy. More importantly, it marked the use of the exchange fund to "neutralize" the continuing capital inflows.

The high unemployment rate caused political pressure on the Government to mount. This pressure in conjunction with other policy differences caused the Government to declare the position of Governor vacant. Mr. Coyne subsequently decided to resign.

Rasminsky succeeded Coyne as Governor on 24 July 1961. As a condition of his appointment, Rasminsky had stressed that the government's powers regarding monetary policy be clearly defined (the Bank of Canada Act was amended in 1967), and underlined the need for cooperation between the Government and the Bank (IMF Western Hemisphere Department et al 1961).

IMF Staff assessment of Canada's experience with fluctuating exchange rates regarded the first half of Canada's experience with the fluctuating rate as largely successful, but the latter half as disappointing. They held misguided policies responsible for the exchange rate's recent poor performance. They noted that the Canadian Government had not considered the exchange rate in formulating domestic policies. According to the staff, this exclusion of the external sector in shaping Canadian policies was fostered by the nature of the fluctuating rate (IMF Western Hemisphere Department 1961). They urged close consultation between Canada and the IMF and the re-establishment of an effective par value "as soon as circumstances warrant."

At an IMF Executive Board meeting, Rasminsky stated that he regarded the Staff paper as a "highly competent and imaginative piece of work," but nevertheless held some reservations. He conceded that the fluctuating exchange rate arrangement had not worked well for Canada in the last few years but argued that the capital movements, not misguided policies, were the real source of difficulty (IMF Executive Board 1961). Rasminsky argued that efforts directed toward managing capital inflows were not only in Canada's own interests but in the interest of the world community generally.

Rasminsky outlined two alternatives considered by the Canadian authorities: firstly, to adopt restrictive policies and controls to relieve current and capital account pressures, perhaps combined with a fixed exchange rate. Secondly, which Canada had chosen, was to relieve difficulties through fiscal expansion by running a budget deficit. Moreover, he stated that the Government might seek some immediate relief through direct intervention in the exchange market.

Several EDs expressed uneasiness about this policy and warned of the dangers of competitive depreciation. Rasminsky emphasized that the dual focus was capital inflows and the current account deficit. With respect to establishing a new par value, Rasminsky pointed out that the real difficulty lay in determining a rate that would be appropriate to both the current account and capital account at the same time.

The EDs asked that Canada consider the interests of other members in formulating its policies. Here, some EDs were more critical than others. The U.S. ED expressed American concerns about the Canadian tendency to consider the current and capital accounts independently as exchange rate determinants. The U.S. authorities believed that the par value system was an essential element in the world monetary system, and was not convinced that Canada presented a unique case. Several EDs stressed that it should be one of the pressing aims of the Canadian authorities to arrive at a stable exchange rate.

During 1961 Article VIII consultations, the IMF team was generally critical in their appraisal of Canada's economic situation. They argued that, in hindsight, it might have been preferable for Canada to have established a lower par value during the 1951-57 period rather than have let the rate float. The Canadian authorities did not counter criticism of the fluctuating rate, but emphasized Canada's uniqueness and the difficulty in choosing an appropriate rate. In particular, the Canadian authorities retained the view that the fluctuating rate was useful during prosperous periods (IMF 1962a). Plumptre (now Assistant Deputy Minister of Finance) remarked that he had been surprised at the degree of short run success (Schwartz 1961).

IMF staff noted that the Canadians seemed "no longer enamored" of the fluctuating rate. The report noted that hey were reluctant to re-peg the dollar but would prefer to peg the dollar within wider bands of fluctuation than currently permitted the IMF.

While IMF staff suggested that policy mistakes partly caused Canada's weak performance, Rasminsky maintained that the economy had been influenced by "factors not amenable to control through policy action" (IMF 1962b). Due to large budget deficit, the staff did not recommend the immediate establishment of a new par value, but suggested using the Exchange Fund to engage in market experimentation in order to decide upon a rate appropriate for long-run equilibrium (IMF 1962a).

During the IMF's EB meeting in February 1962, many EDs questioned whether Canada still had a case for continued noncompliance with the IMF Articles (de Vries and Horsefield 1969). The EDs concluded that Canada's monetary policy had been difficult to implement successfully under a floating rate. Moreover, the experience revealed another danger of flexible rates: authorities tended to ignore the external effects of their domestic policies because, unlike the fixed rate, the flexible rate gave them a false sense of security by depriving them of the symptoms of movements in reserves (Economist 1962).

In early April 1962, the Government re-affirmed its intention not to set a fixed rate through any action which might prove premature or impossible to sustain. By the end of the month, there was a run on the Canadian dollar and on 2 May 1962, the Government announced it had decided to re-peg the exchange rate at U.S. 92.5 cents to halt the free fall. The Minister of Finance noted that the move had been precipitated by the speculative pressures and by the IMF's urging Canada to re-establish a par value. He stated that while fluctuating rates had certain advantages, the Government was more concerned with giving "firm assurance of [the] stability" of the exchange rate (Office of the Minister of Finance 1962).

Although there had been extensive telephone conversations between Rasminsky and the MD during the last week of April, the relevant decision was not taken by the Minister of Finance until May 1 and discussed by the EDs on the afternoon of May 2. Rasminsky explained that the circumstances over the last few days had made it apparent that a continued attempt to stabilize the floating rate would result in very large depletions of Canada's reserves, and that the new pegged rate was necessary to correct a fundamental disequilibrium.

In selecting the new rate, Rasminsky said there was consensus that a par value of 95 cents was too high, whereas the rate of 90 cents was lower than the Canadian economy required and Canada could not count on its international acceptance. Consequently, the new rate of 92.5 was proposed ("Canada – Change in Par Value" 1962). He noted that ideally, the Canadian authorities would have desired a longer period of experimentation before proposing a fixed par value, but current events influenced the timing of their decision. Although some EDs complained about the short notice, they all warmly welcomed Canada's return to the Bretton Woods system.

Downward pressure on the dollar continued even after it was repegged, and defense of the new par value demanded emergency action. An application to the IMF for a drawing of $300 million was made June 24, 1962. The EB agreed to the drawing without difficulty and granted the necessary waiver to the Articles. The support

operation proved successful. During the December 1962 Article VIII Consultations the Canadian authorities outlined their objectives to move towards a balanced fiscal budget and reduce the current account deficit. The IMF staff agreed that the proposed policies were the correct ones ("Minutes of IMF Article VIII Consultations with Canada, Fifith Meeting" 1962).

Nevertheless, after a short period of stability, doubts about the prospects for maintenance of the rate soon reappeared, leading to an accelerating drain of on reserves during June 1962. On 24 June 1962, the Prime Minister announced a major economic and financial program to restore confidence in the Canadian dollar. Fiscal and monetary policy was tightened and temporary import surcharges were imposed. The measures were successful and the MD stated that the experience was proof of the effectiveness of the IMF and international co-operation in a time of crisis (Jacobsson 1964b).

The IMF's 1962 Annual Report restated, almost verbatim, the IMF's policy on fluctuating exchange rates from the 1951 Annual Report, and added that experience since then has confirmed the views expressed at the time. In particular, the Report stated that in specific cases, a short period of fluctuation may be a means of identifying a rate that can achieve external balance and then be maintained. It noted that many IMF's stabilization programs included a fluctuating exchange rate as an instrument to be used to help attain monetary equilibrium. A fluctuating rate may have an upward tendency only in exceptional circumstances, such as the large capital inflow into Canada in the early 1950's [and into Peru]. However, general postwar experience suggested that these cases were unusual and flexible exchange rates usually depreciated, often aggravating inflationary pressures.[9]

[9] The 1962 Annual Report cited movements in exchange rates and prices in small open economies such as Argentina, Brazil, Chile, Indonesia, Peru and Uruguay as evicence.

By November 1962, Canadian disenchantment with the fixed rate system reappeared. Although the Bank of Canada's staff still felt that there were strong theoretical arguments in favour of a floating rate, their analysis showed the "impossibility of the alternative as a practical measure" at this time (Watts 1962). They reiterated that any return to a floating rate system would incur "international hostility" and would make it impossible to maintain Canada's "international influence" (Handfield-Jones 1962). Canada remained on a pegged rate until June 1970 when inflationary pressure from the United States once again forced the adoption of a flexible rate. This second exit from the Brettons Woods system foreshadowed the system's eventual collapse in 1973.

6. Canada's Experience and IMF Research

The Canadian experience with floating exchange rates from 1950 to 1962 had an important impact on research at the IMF and elsewhere. It was a significant influence in the creation of the Mundell-Fleming model which became the workhorse of the IMF for three decades and which was a fundamental building block of the new field of open economy macroeconomics. The IMF research connection with Canada in the 1950s and 1960s was though the work of Robert Mundell, J. Marcus Fleming, and Rudolf Rhomberg. We document the influence of the Canadian experience on these three economists.

Robert Mundell

The Canadian experience in the 1950s and 60s had an impact on the thinking of Robert Mundell, a Canadian who decades later received the Nobel Prize in economics in part for his work done in this period. Mundell spent a year, 1961 to 1962, in the Research Department at the IMF but his work on issues inspired by the Canadian experience complemented and influenced that of two senior IMF researchers: J. Marcus Fleming and Rudolf Rhomberg.

In two recent retrospectives on his work Mundell discusses the influence of the Canadian experience on the development of his part at the Mundell-Fleming model. "It was around this time [1956-1957] that I shifted research topics from working about and further refining the pure classical model to thinking about the way to write down the

general equilibrium equations for an open economy taking into account monetary variables, exchange rate and capital movement. The fact that Canada had a flexible exchange rates and capital flows between Canada and the United States were significant background influence but there was absolutely no model in the literature that was capable of dealing with the subject." (Mundell 2002 p.4)

In describing the model in his QJE 1960 article he states:
"One implication of the model was that a domestic boom (shift up and right of the xx curve) would raise interest rates, attract capital inflows, appreciate the real exchange rate, and worsen the balance of trade. A conclusion that would hold under either fixed or flexible exchange rates. This was very relevant to an understanding of the economy of Canada, which was the only major country with a flexible exchange rate in the 1950s" (Mundell 2000, p.221)

In two articles describing Mundell's Nobel achievements by leading international economists the Canada connection is emphasized:

According to Rudiger Dornbusch (2001 p. 20)
"By 1960… Mundell was fully caught up in the work on the implications of international capital mobility. The Canadian experience of shifting back and forth from floating to fixed rates may have been the impetus…"

and Andrew Rose (2001 p. 207) writes:
"… taking floating exchange rates seriously would have seemed a matter of only academic (ie. trivial) interest when the work was done in the early 1960s.The same could be said of capital mobility in an era when virtually all OECD countries placed severe restrictions on the ability to trade assets or foreign exchange freely across international borders. In this context

Mundell took full advantage of some of the many advantages to being Canadian. Canada had removed all exchange and capital controls in 1951, the first country to give up "the transition period" excuse after controls were imposed during World War II. The Canadian dollar had also floated with minimal intervention since 1950."

Mundell's key papers that represented his main contribution to the open economy macro model were Mundell (1961), (1962) and (1963). The articles that dealt directly with the Canadian experience with floating and capital mobility were his two Canadian Journal articles in 1961 and 1963 and the one most often-cited for the Mundell Fleming model is Mundell (1963). In this analysis, based on an IS-LM framework with rigid wages and prices and with perfect capital mobility Mundell compares the use of monetary and fiscal policy under fixed and flexible exchange rates. In particular, in this paper, Mundell obtains the well known results that under fixed rates fiscal policy is an effective macroeconomic stabilization tool while monetary policy is impotent, whereas the reverse is true under a flexible exchange rate regime.

This analysis is extremely insightful because it explains very well the Canadian experience of the late 1950s. At that time, the Bank of Canada was conducting a monetary policy that was not sufficiently countercyclical. Consequently, Canadian interest rates rose about the U.S. level and the Canadian dollar appreciated. Growth in Canada slowed and the unemployment rate increased well above that in the United States. Political pressure, however, forced the Canadian government to adopt expansionary fiscal policy in an attempt to boost demand and reduce unemployment. These policies largely offset each other and served only to raise domestic interest rates and appreciate the Canadian dollar, exactly as Mundell's model would predict.

J. Marcus Fleming

J. Marcus Fleming was in the Research Department at the IMF from 1954 to 1976. He eventually became Deputy Research Director. His contributions to the development of the open economy macro model, covered much of the same ground as

that of Mundell. Although Fleming was much less prolific than Mundell, Boughton (2003) argues that he should be viewed as an equal contributor to the model.

Although Fleming did not cite the Canadian example in his 1962 paper, he clearly was aware that Canada was on a flexible rate, as were a few other countries including Peru. He was also aware of Mundell's work and that of his colleague Rhomberg (Mundell 2002). In his 1971 collection of essays he wrote:

"However as shown in a paper by Mr. Rudolf Rhomberg, expounding an econometric model of the Canadian economy (Rhomberg 1964), the responsiveness of individual capital movements to change in interest rates, and the responsiveness of interest rates to changes in money income, have probably been sufficiently great in that country over a large part of the postwar period relative to the marginal propensity to imports, for a rise in government expenditure at a constant money stock to have tended to produce such a result (Fleming 1971, p. 240)".

Fleming (1962) also cites Mundell (1961). Mundell (2002), however, questions this choice of citation, as other papers were more relevant. In Fleming (1962), Fleming produces results similar to Mundell's analysis. He uses a standard IS-LM fixed price (money wages) model with the addition of the current account as a positive function of real income and a negative function of the exchange rate and the capital account as a negative function of the domestic (nominal) interest rate. Under fixed exchange rates, expansionary fiscal policy (increased government expenditure holding taxes constant) stimulates real output and leads to a current account deficit. Mundell (2002) criticizes Fleming for the assumption that the money stock is held constant when there is a fiscal expansion. Mundell's criticism is correct because the central bank must allow the money supply to increase to maintain the fixed exchange rate when money demand and interest rates rise due to the fiscal expansion. Under a flexible rate, the increase in government expenditure (in the case where the capital account is interest elastic as he argues, citing Rhomberg, was the situation in Canada in the 1950s), appreciates the currency which deteriorates the trade balance. In this case, fiscal policy is more potent under a fixed than a flexible rate.

Similar to Mundell he shows that expansionary monetary policy (an increase in money supply) reduces the interest rate and stimulates the real economy and the decline in interest rates is supplemented by a depreciating exchange rate which improves the capital account. Thus like Mundell, fiscal policy is more effective than monetary policy under fixed rates while the opposite prevails under floating. Mundell (2002) is correct in arguing that his innovative work was done independently of Fleming, but Fleming had read some, but not all of Mundell's research. Therefore, the Mundell-Fleming ordering is chronologically, if not alphabetically correct.

Rudolf Rhomberg

Canadian experience influenced also Rudolf Rhomberg, who joined the IMF Research Department in 1959. His doctoral research at Yale was on Canada's experience with capital mobility in the 1950s.

In his work, Rhomberg models the short-run balance of payments adjustment process in an open economy and uses it to empirically test for the determinants of the remarkable stability of the Canadian floating exchange regime. Like subsequent IMF staff reports found, he found that speculative movements were, on the whole, equilibrating and contributed to the remarkable exchange rate in stability of the Canadian dollar during the floating rate period. He also noted that the floating rate was more effective in insulating Canada against foreign inflation than as serving as a countercyclical adjustment mechanism. The reason for the latter observation is that monetary policy during the 1950s was on the whole relatively unresponsive to changes in economic activity and thus not effectively countercyclical. In his thesis (Rhomberg 1969), he briefly reviews the IMF's attitude towards floating rates and notes that, although the Fund was initially critical of the Canadian policy, the "conviction of the Fund officials as to the correctness of their earlier position on fluctuating exchange rates [had] weakened." Rhomberg's work refuted earlier propositions on the stability of flexible rates, such as Machlup (1949), Harberger (1950) and Laursen and Metzler (1950), who stated that flexible exchange rates systems would be unstable unless strict capital controls were in place (Canada removed all capital controls in 1951). Rhomberg incorporated forward exchange rate market into traditional balance of payments theory,

allowing short-term capital movements to play a role in the adjustment process. He pointed out that earlier theory was based on incorrect assumption that exchange rates were determined by short-term capital movements which could be highly volatile because they were largely driven by expectations of future exchange rate movements. The Canadian experience demonstrated that a flexible exchange rate is not inherently fragile. Expectations were stable because the macroeconomic policies in the United States and Canada were primarily aimed at achieved stable inflation and output. In addition, shocks within the two economies were similar and relatively small, by historical standards.

Rhomberg's work on Canada led to two important publications. The first in IMF Staff Studies (1960) was an econometric analysis of the foreign exchange market in Canada under floating rates from 1950 – 57. In particular, he examined the impact of large capital inflows from the United States to finance the resource investment boom in Canada in the 1950s and considered the question whether the floating exchange rate regime accommodated these capital flows in a stable fashion. The key relationship he focussed on was between short term capital flows and the exchange rate. His analysis finds that short term capital flows responded quickly and strongly to Canada – U.S. interest differentials and that the exchange rate responded in a stabilizing manner to these flows.

Rhomberg's second article in the Journal of Political Economy (1964) had a significant impact in the 1960s because it was one of the first studies to develop a fairly complete econometric model of an open economy. The model was estimated with Canadian data over the period, 1950 – 62, and its originality stems from the fact in addition to including the usual macroeconomic aggregates, it also incorporated several open economy variables to capture external adjustment. These included the current account, short and long term capital flows, the exchange rate and international reserves.

With the model, Rhomberg examines the relative effectiveness of monetary policy under fixed and flexible exchange rates in an environment of capital mobility, as well as the insulation properties of floating rate. He finds, based on calculated multipliers from the model solution and also from model simulations evidence that is largely

consistent with the Mundell-Fleming model's implications that monetary policy is most effective under flexible rates while fiscal policy is most effective under fixed rates. He also finds that under floating rates the domestic real economy is well insulated from foreign output shocks.

In this work, Rhomberg cites Mundell (1961) and Fleming (1962), Mundell (1961) in turn cites Rhomberg's doctoral thesis. Anne Krueger (1965 pp. 195-96) also cites Rhomberg's work and combines his 1964 model with that of Fleming (1962) into the Rhomberg-Fleming view that "the use of fiscal policies under flexible exchange rates may result in a smaller increase in employment and income than under fixed exchange rate."

7. Conclusion

Canada's decision to adopt a flexible exchange rate in September 1950 and to maintain it for over a decade was an important event in the history of the Bretton Woods system and the International Monetary Fund. Canada's exit from the Bretton Woods system was significant because Canada was one of the charter IMF members and key player in the establishment of the IMF in 1944.

The IMF's reaction was initially negative as Canada's decision was perceived as a potential threat to the Bretton Woods system and the IMF itself. Nonetheless, there was an appreciation that Canada's circumstances were unique and that this departure could be justified on a temporary basis as a mean to identify a new equilibrium exchange rate. Thus, the general feeling at the IMF in the 1950s was that Canada's departure from par values represented the actions of a prodigal son who would upon understanding the errors of his ways ultimately return to the fold (private conversation with Jacques Polak 2003). In addition, although the Fund considered the first half of Canada's floating rate period as a reasonable success because the Canadian dollar had remained relatively stable, they attributed the stability to Canada's close integration to the United States. The IMF thus felt that Canada's experience was unique and could not be used as an example for other countries. Outside the IMF, Canada's experience helped crystallize the debate over fixed

versus floating rates which began in earnest after Friedman's seminal article first appeared in 1950 and it encouraged interest in the pursuit of similar actions by other countries, especially the UK as witnessed by the ROBOT plan of 1952 (Bordo 1993).

In addition to the debate at the official level that we document in this paper, Canada's experience with both an open capital account and floating was a catalyst for research at the IMF in the work of Rhomberg, Fleming and Mundell that led to the Mundell-Fleming model and the creation of the field of open economy macroeconomics.

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Chart 1: Exchange Rate

Monthly Average Noon Rates, U.S. Dollars Per Unit

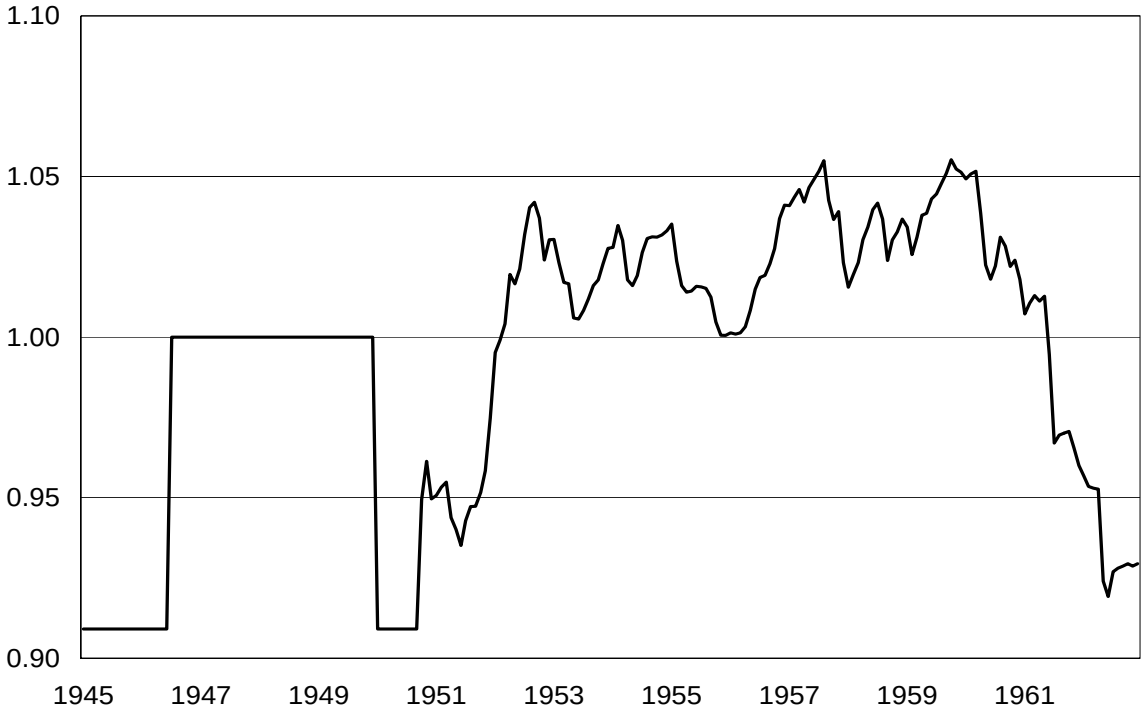
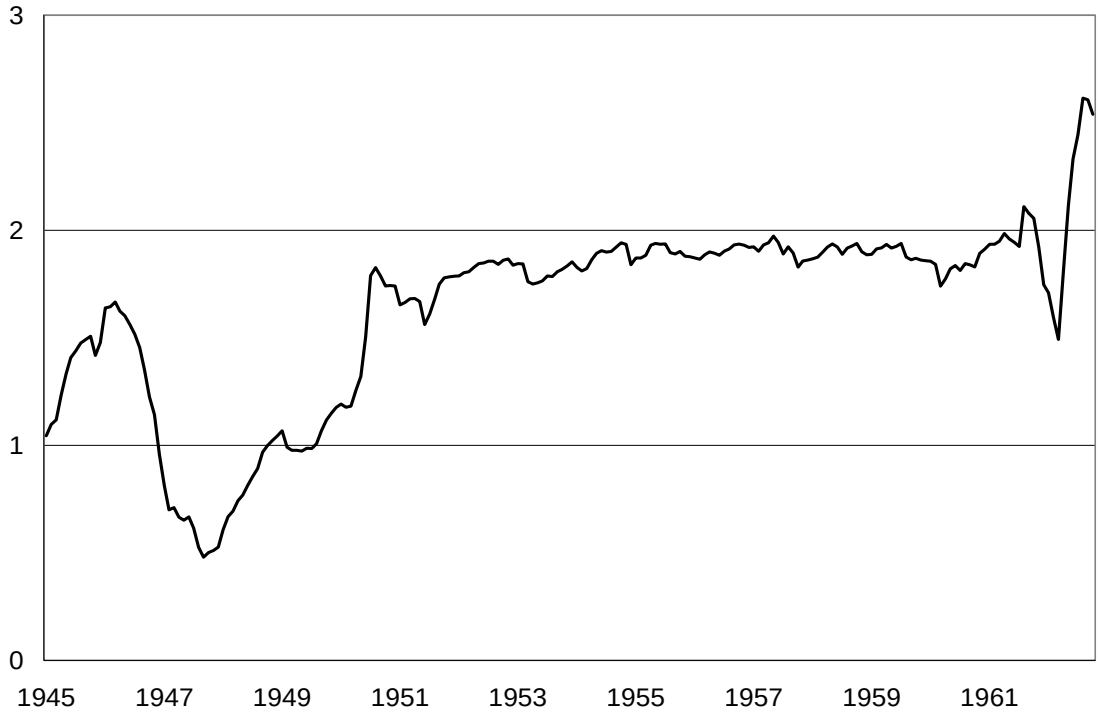


Chart 2: Canadian Official Holdings of Gold and U.S. Dollars

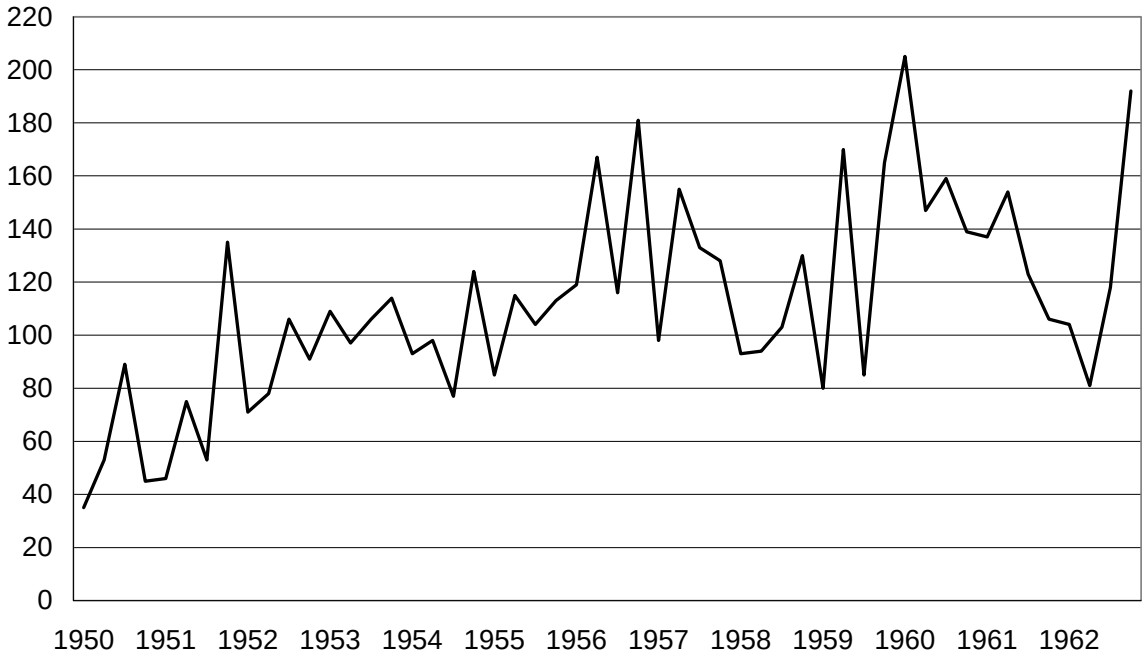
Billions of U.S. Dollars



Source: Bank of Canada, Statistical Summary, Financial Supplement 1954, 1958, Supplement 1960, 1963

Chart 3: Direct Investment in Canada

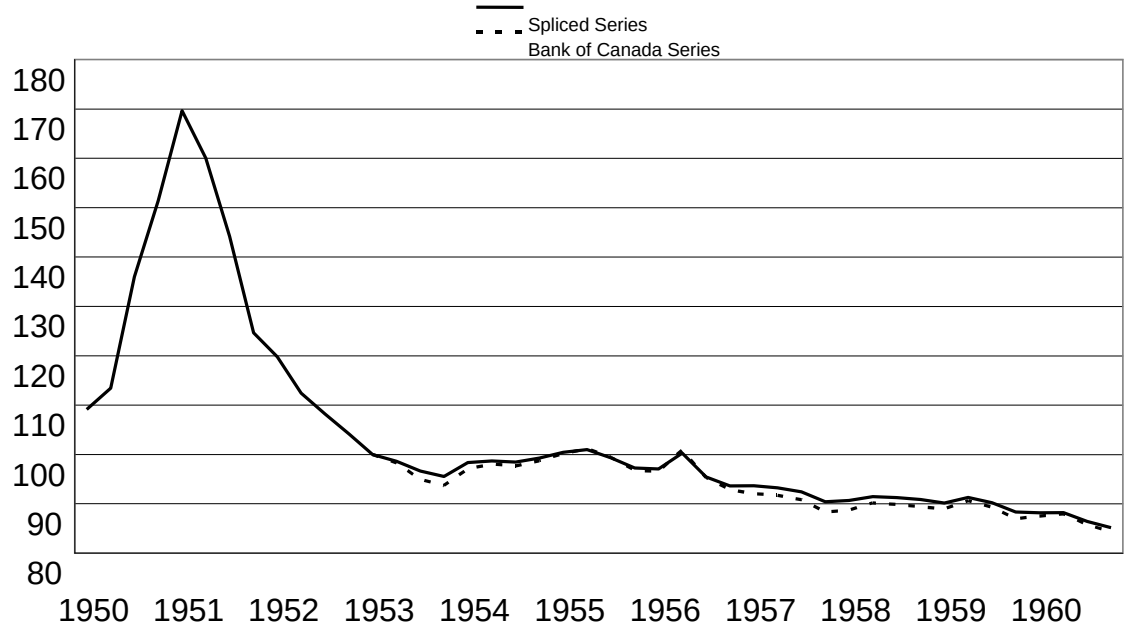
Quarterly, Millions of Canadian Dollars



Source: The Dominion Bureau of Statistics

Chart 4: Measures of Canadian Commodity Prices

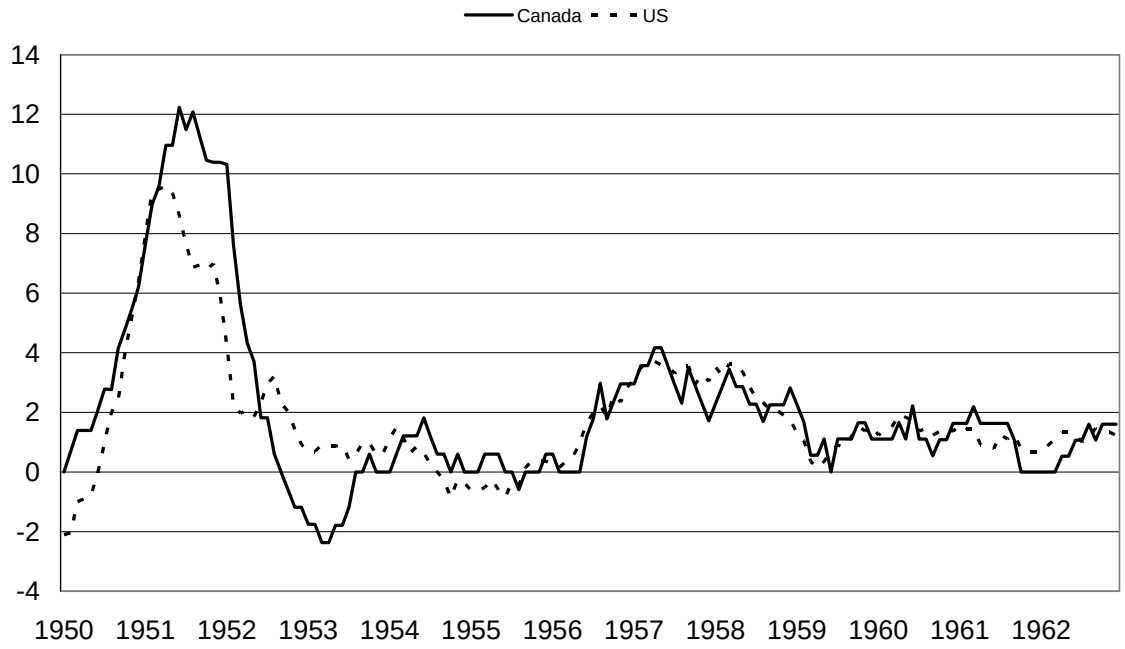
Quarterly (1953Q1=100)



Source: Bank of Canada and IMF International Financial Statistics

Chart 5: Consumer Price Index

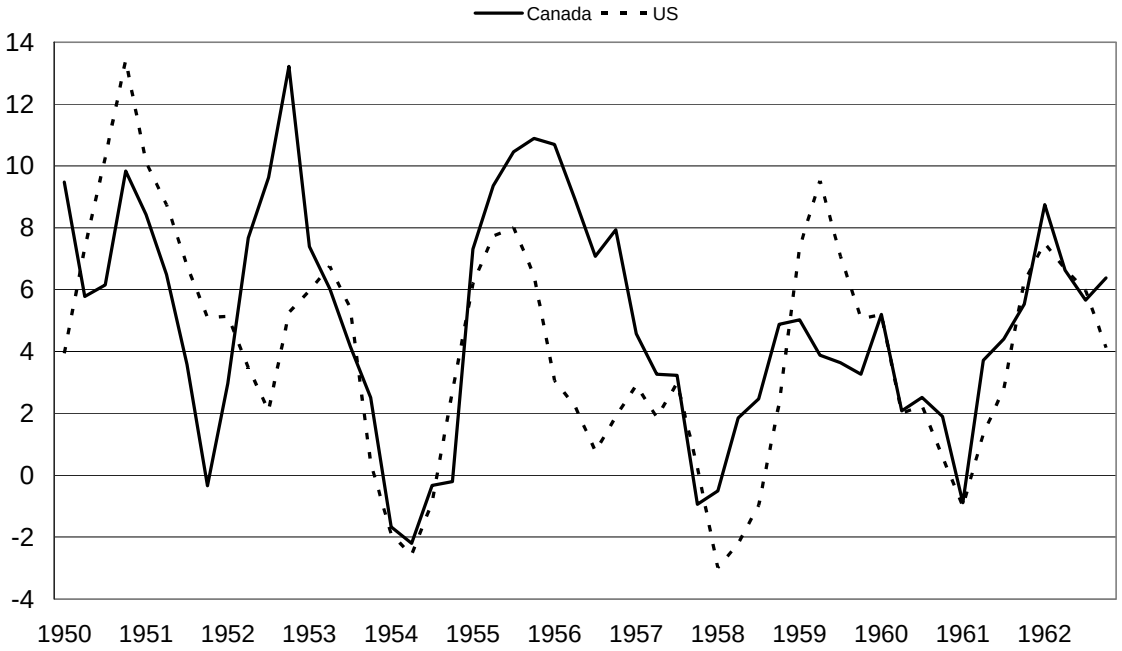
Monthly (1997=100), Year-Over-Year Growth Rate



Source: U.S. Bureau of Labor Statistics and Statistics Canada

Chart 6: Real Gross Domestic Product (1997 Prices)

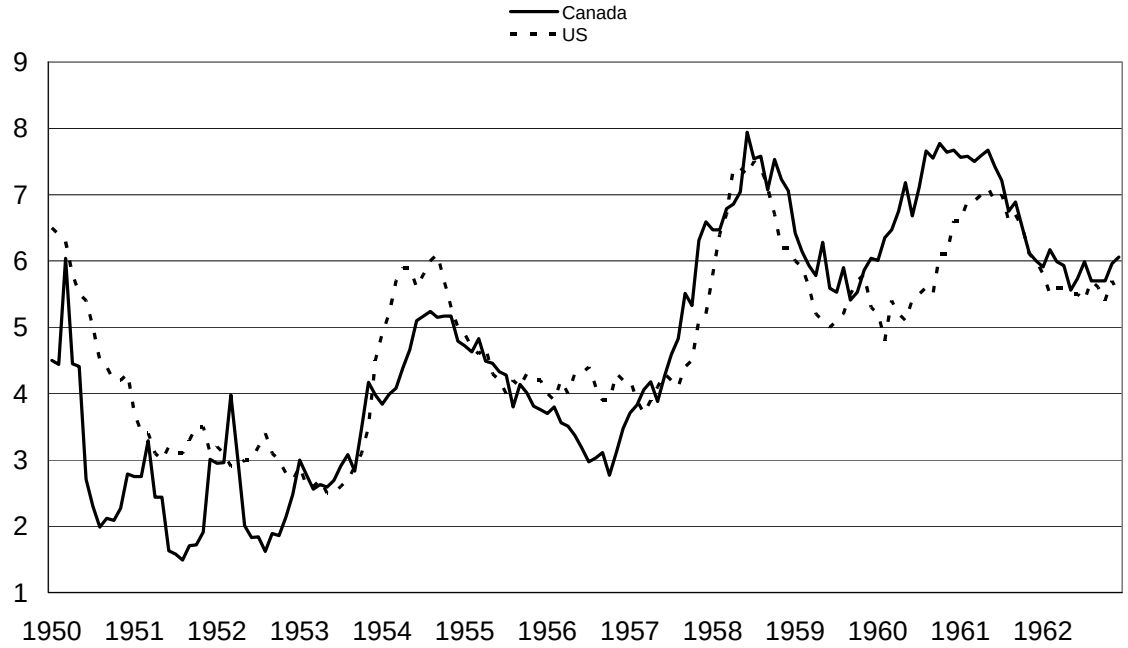
Quarterly, Year-Over-Year Growth Rate



Source: The Dominion Bureau of Statistics

Chart 7: Unemployment Rate

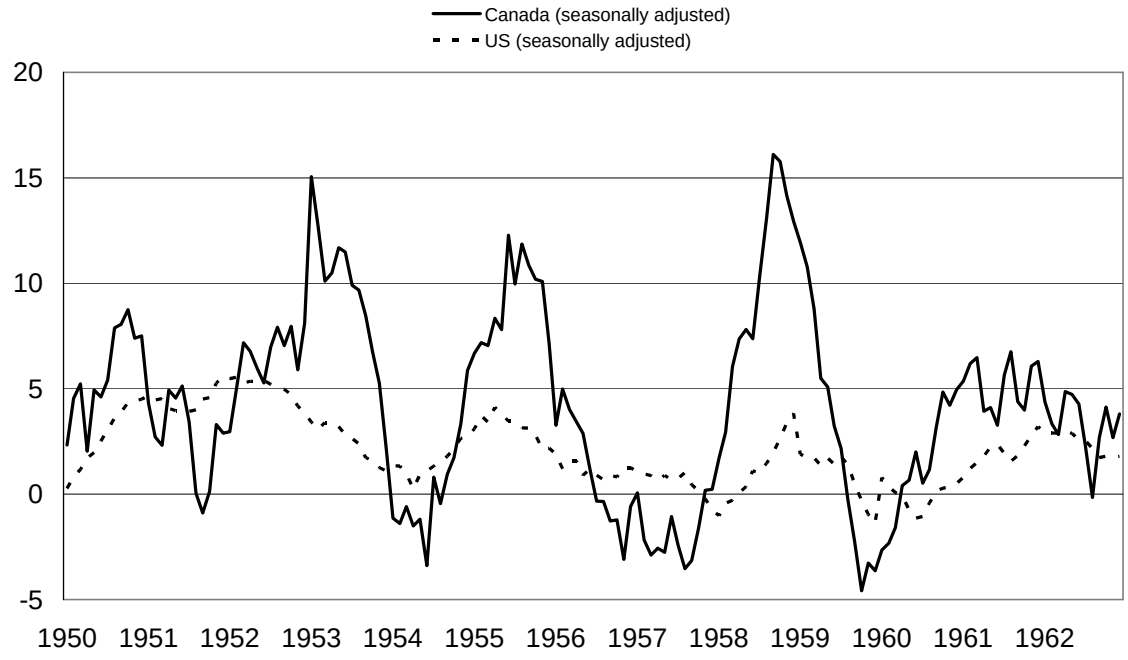
Monthly



Source: Satscan hard copies of Labour Force Survey and U.S. Bureau of Labor Statistics

Chart 8: Money Supply (M1)

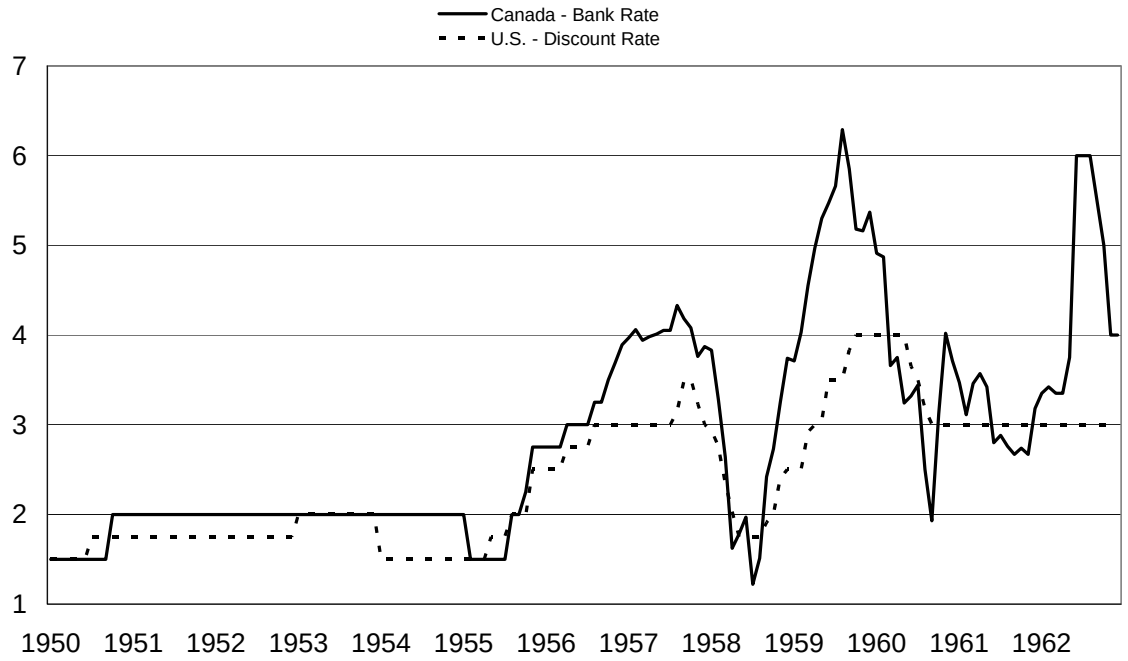
Monthly, Year-Over-Year Growth Rate



Source: UBC Department of Economics website and the National Bureau of Economic Research website

Chart 9: Interest Rates

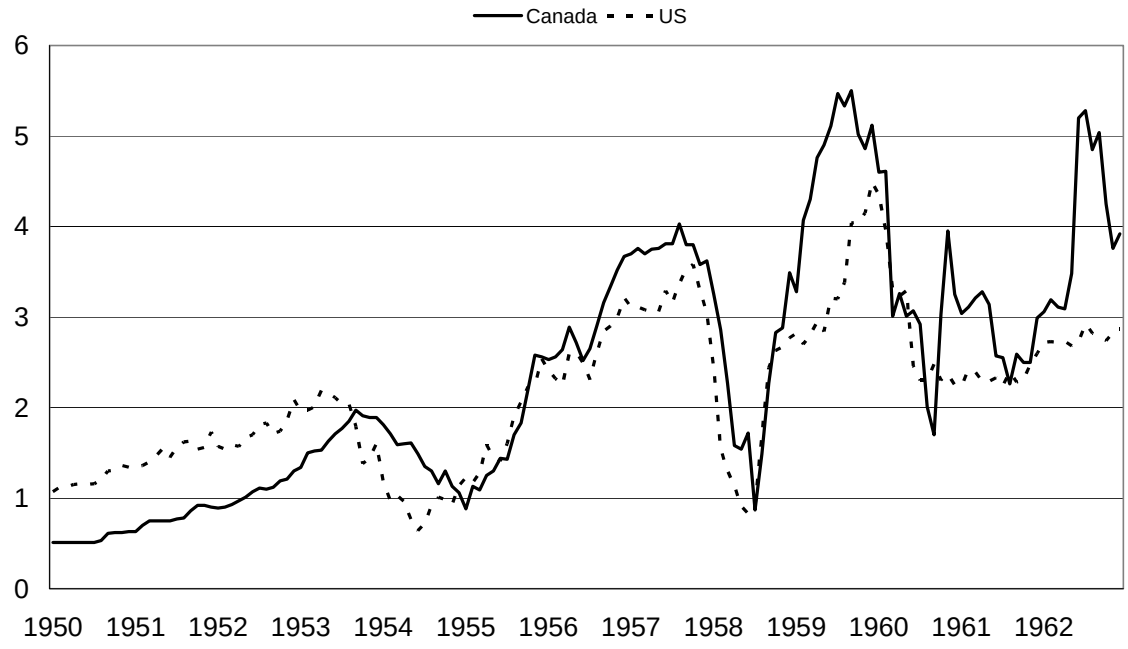
Monthly



Source: Statistics Canada and the Bank for International Settlements

Chart 10: 3-Month Treasury Bill Market Yield

Monthly



Source: Statistics Canada and the Bank for International Settlements