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**The Exchange Rate Regime  
and Canada's Monetary Order**

by

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**Bank of Canada**



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The views expressed in this paper are those of the author. No responsibility for them should be attributed to the Bank of Canada.



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## Abstract

It is a mistake to debate the merits of alternative exchange rate regimes for Canada independently of other features of the monetary order. A coherent order requires a well-defined goal for monetary policy, one that the authorities are capable of achieving, and that anchors private sector expectations. For it to be liberal, the relevant authorities should be accountable to the electorate for their performance. These criteria are applied in comparing the merits of: (i) Canada's current monetary order, based on inflation targets and a flexible exchange rate; (ii) a North American monetary union; (iii) a Canadian currency board; (iv) a legislatively fixed exchange rate; and (v) an adjustably pegged exchange rate. The paper concludes that the current order is well-conceived because cross-border labour mobility is limited, Canadian money wages and prices are sticky, and the real exchange rate between Canada and the United States is subject to real shocks. Among the fixed exchange rate options, all of which are inferior to current arrangements, a full monetary union is judged the most economically viable, though politically illiberal, while a pegged rate seems to provide an untrustworthy basis for a coherent monetary order.

## Résumé

On aurait tort d'examiner les mérites respectifs, pour le Canada, de différents régimes de change sans égard aux autres aspects du régime monétaire. Pour qu'un régime monétaire soit cohérent, il doit répondre à trois critères : i) la banque centrale doit avoir un objectif bien défini en matière de politique monétaire; ii) elle doit être en mesure de le réaliser; iii) cet objectif doit servir de point d'ancrage aux attentes du secteur privé. En outre, pour que ce régime soit « libéral », un dernier critère doit être respecté : les autorités compétentes doivent répondre devant l'électorat de la façon dont elles s'acquittent de leurs fonctions. L'auteur se fonde sur ces quatre critères pour évaluer les mérites respectifs des régimes monétaires suivants : i) le régime actuellement en place au Canada, qui repose sur la poursuite de cibles en matière d'inflation et un taux de change flottant; ii) une union monétaire à l'échelle de l'Amérique du Nord; iii) l'établissement au Canada d'une caisse d'émission; iv) un taux de change fixé par voie législative; v) un taux de change fixe mais ajustable. Il conclut que le régime actuel est bien adapté au contexte canadien, en raison de la faible mobilité de la main-d'oeuvre entre notre pays et les États-Unis, de la rigidité des prix et des salaires nominaux au Canada et du fait que le taux de change réel Canada-États-Unis est soumis à des chocs réels. Parmi les régimes de changes fixes possibles, tous jugés inférieurs au régime actuel, l'union monétaire intégrale est considérée comme la plus viable du point de vue économique, mais moins « libérale » sur le plan politique; quant au taux de change fixe mais ajustable, il ne semble pas à même de fournir une assise solide à un régime monétaire cohérent.





## 1. Introduction

Canada has had a flexible exchange rate continuously in place for the better part of three decades. That is a long time for any monetary arrangement to last, and it is small wonder that questions about its desirability are being raised with increasing frequency. The key policy implications of Robert Mundell's pioneering analysis of "optimum currency areas" (Mundell 1961) were: there was no universally preferable exchange rate arrangement; for some countries at some times a flexible rate might be best; but for other countries, or indeed the same countries at different times, some sort of fixed exchange rate arrangement might be more appropriate. Even if a flexible exchange rate was the right choice for Canada in 1970, therefore, it does not follow that it remains so in 1999. A great deal has changed in the interim, including our understanding of the economics of monetary policy, and a new debate about the relevant issues is surely welcome.

It is vital to place this new debate in its appropriate context. The exchange rate is a price, and simple economic theory tells us both that prices are determined within the economic system and that their significance and behaviour cannot be understood without paying attention to the factors elsewhere in that system that influence them. Specifically, the exchange rate is the price of one (usually national) currency in terms of another, and its behaviour is the outcome of the same factors that also affect the values of goods, services, and assets in terms of those currencies. Particularly important among those factors is monetary policy, and, at a deeper level, the framework of institutions, goals, and beliefs in terms of which it is conducted. From the point of view of an individual country, the exchange rate and the exchange rate regime are but particular elements in a broader set of arrangements that we may call the *monetary order*. Policy towards them can only be discussed coherently in this broader context.

In this essay, I shall use the phrase *coherent* monetary order to refer to a set of arrangements whereby: (i) monetary policy has a well-defined goal; (ii) the authorities charged with achieving that goal have the powers needed to achieve it; and, too often overlooked, but crucial, (iii) private sector agents, or at least a representative majority of them, understand that

goal, expect it to be pursued, and base their own actions on that expectation.<sup>1</sup> In a democracy, we should add a further characteristic to the above specifications, in order to define a *liberal* monetary order: (iv) that the relevant policy-making authorities are accountable to the electorate both for their choice of policy goals and for their performance in pursuing them.

It will be immediately apparent from the above specifications that countries can have, and often have had, less-than-coherent monetary orders. It is possible: to burden monetary policy with a goal that it cannot achieve, or multiple mutually incompatible goals; to give policy-makers fewer powers than they require to attain even achievable goals; and to have private sector agents operating with expectations that are inconsistent with the actual outcome of policy. There is no need here to go into an elaborate analysis of the consequences of monetary incoherence. The economic history of the Western world since the destruction of the gold standard by the First World War is packed with examples of the adverse consequences for the real economy of attempts to use monetary policy to achieve goals it is not capable of achieving, and/or trying to achieve its goals by creating systematic discrepancies between public expectations about key variables and those variables' actual outcome.

Canada's not-so-distant history provides illustrations of these adverse consequences. This is worth noting when we discuss the question of exchange rate arrangements *per se*, because a flexible exchange rate is compatible with many monetary orders, including some that have been very badly configured. Though Canada has had a flexible exchange rate since 1970, a coherent Canadian monetary order is of much more recent vintage. It was put in place piecemeal starting in the late 1980s, and did not become well established until some time in the mid-1990s, when inflation expectations finally stabilized at a level compatible with the inflation targets introduced in 1991.<sup>2</sup> In arguing about exchange rate arrangements for Canada, it is inappropriate to

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1. It is customary to discuss monetary policy regimes solely in terms of their goals and the tools used to attain them. I have done so in the past. However, Heymann and Leijonhufvud (1994) are surely right to stress the congruence of private agents' expectations with the conduct of policy as a key feature of a sustainable monetary order. Their work dealt specifically with high-inflation problems, particularly as they have arisen in Latin America, and hence they paid particular attention to the influence of fiscal factors on the coherence of the monetary order. Again, they were right to do so, given that particular context, and I neglect these factors here because I am dealing with these issues as they arise in contemporary Canada. Currently in Canada, the prospect of fiscal difficulties being manageable only by money creation are extremely remote. In saying this, I do not, however, mean to suggest that the current public debt-to-GDP ratio neither constrains macroeconomic policy nor influences the financial-markets climate in whose context monetary policy is implemented. I am grateful to Larry Schembri for helpful discussions of this matter.
  2. Between 1970 and 1991, it is possible to identify three separate monetary orders in Canada. The first, from 1970 until 1975, seemed to have no well-defined anchor. The second, from 1975 until about 1981, tried to make good this deficiency with a target growth rate for M1. The third, from 1981 until 1991, when explicit inflation targets were introduced, saw increasing emphasis placed on "price stability" as the appropriate target of monetary policy.

generalize from evidence generated in the 1970s and 1980s and to conclude that the exchange rate regime itself, rather than an altogether deeper-seated set of problems with the monetary order, contributed to the economic difficulties of those decades.

## **2. The role of the exchange rate in the current monetary order**

The broad characteristics of Canada's current monetary order are well known. The goal of policy is defined by *inflation-control targets*, which, though they have no explicit legislative basis, are jointly agreed on by the Minister of Finance and the Bank of Canada. The Bank, or more specifically its Governing Council, is then left free to choose the appropriate policies to achieve those targets, subject to a variety of more or less formal accountability mechanisms, including: the semi-annual publication of the *Monetary Policy Report*; public appearances by the Governor and other members of the Governing Council before Parliamentary committees; regular private discussions between the Governor and the Minister of Finance; and the oversight exercised by the Bank's directors on behalf of the federal government (the Bank's shareholder) over the competence of its management.

Though explicit inflation control—initially *inflation reduction*—targets were not introduced until 1991, the Bank of Canada had been placing increasing emphasis on achieving “price stability” from the mid-1980s onwards, particularly after Governor Crow's 1988 Eric J. Hanson Memorial Lecture. Moreover, the mere announcement of targets did not ensure the new regime's credibility. It was not until the mid-1990s that empirical evidence began to confirm that private sector expectations about the outcome of monetary policy for inflation were becoming anchored within the authorities' target range of one to three per cent per annum.<sup>3</sup> As for the flexible exchange rate regime—a completely necessary component of the monetary order of any open economy that decides to pursue domestically formulated inflation targets—that had been in place since 1970.

Canada's foreign trade is overwhelmingly with the United States, so it is natural to put the bilateral Canadian–U.S. dollar exchange rate at the centre of any discussion of exchange rate issues in general. Here, however, it is important to recall that the composition of output differs significantly between Canada and the United States; primary commodities, and other products heavily dependent on them, play a much greater role in Canada. This fact opens up the possibility, indeed the near certainty, that from time to time the real Canada–U.S. exchange rate, the relative value of a representative Canadian-produced bundle of goods and services in terms of its U.S. counterpart, must change, regardless of the regime governing the behaviour of the nominal

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3. See Johnson (1997) for a recent and representative study of this issue.

exchange rate. Even if we ignore secular changes that might arise from differentials in productivity growth rates among the tradables and non-tradables sectors in the two economies, Canada's relative dependence on commodity production can and does lead to pronounced cyclical swings in the equilibrium real exchange rate.

Given Canada's current monetary order, these swings are naturally and properly accommodated by variations in the nominal exchange rate because monetary policy is geared to holding domestic inflation on track. That is exactly what happened during 1998. And it is a mystery why some commentators have argued that the exchange rate's recent decline in the face of a major terms-of-trade deterioration is evidence of some systemic malfunction. On the contrary, a monetary order that combines domestically chosen inflation targets with a flexible exchange rate is supposed to deal with just this kind of shock in just this way. Indeed, its ability to do so is usually considered one of the advantages of such an order.

The argument here needs little rehearsal: When an open economy is hit by an adverse external real shock such as a fall in the world price of some key export, and its real exchange rate, not to mention its real income, must fall, then, if the currency is not permitted to depreciate, domestic money wages and prices must decline instead. If these are sticky, the adjustment process will be drawn-out and difficult. There will be losses in real output and employment which, even if formally speaking temporary, may be neither short-lived nor trivial. However, they can be avoided by allowing the nominal exchange rate to depreciate.<sup>4</sup>

It must nevertheless be admitted that the differential in flexibility between labour and goods prices on the one hand, and the exchange rate on the other, can cut both ways, particularly for an economy such as Canada that trades heavily with one, bigger partner. If the monetary policy of that partner is unstable, a stable-domestic-inflation monetary order, though viable, may be costly to maintain. With sticky money wages and prices in both economies, the first-round effects of fluctuations in the partner's monetary policy will be concentrated on the exchange rate, which will temporarily overadjust to them.<sup>5</sup> The fact is that no exchange rate regime can insulate

4. This brief statement of the argument ignores certain complications that ought not to be overlooked. In particular, in response to most real shocks, the structure of domestic relative prices must also change. For example, a fall in world commodity prices also implies a fall in their price relative to that of domestically manufactured goods, of services, and of imports too, not to mention changes in the structure of relative prices among the latter. An exchange rate depreciation alone will not bring these changes about in the required magnitudes. Even so, by increasing the profitability of manufactured exports and import substitutes, it will help those sectors to absorb factors released from others, including the resource and import sectors, with less downward pressure being put on the nominal rewards of factors already employed there. Note that the relative price changes involved here would have to take place regardless of the exchange rate regime. Thus, Courchene's recent (1998, 21–22) argument that disturbances to commodity markets would leave Canadian manufacturers unaffected were it not for the nominal exchange rate changes that they induce under current arrangements is incorrect.

an economy from monetary instability in a major trading partner. A constant exchange rate will distribute the costs of that monetary instability economy-wide as the domestic inflation rate varies with that of the partner, while a flexible rate will permit domestic inflation to be stabilized but will concentrate adjustment costs on tradable-goods sectors.

### 3. Criticisms of Canada's flexible exchange rate

At the beginning of the 1990s, concerns that unstable monetary policy in the United States might lead to undue fluctuations in the Canadian–U.S. dollar exchange rate as Canada pursued its own inflation targets were sometimes broached as a reason for abandoning the existing monetary order and adopting a fixed exchange rate; but, then as now, that was not the main argument advanced for doing so.<sup>6</sup> Rather it was argued that the foreign exchange market can spontaneously generate instability on its own account. A flexible exchange rate, so this argument goes, is prone to fluctuations, brought about by speculators' behaviour, that are significantly in excess of anything justifiable as a result of shifts in "fundamentals." Therefore, any monetary order with a flexible exchange rate imposes serious long-term real costs on the economy. This is not a new argument; it formed the centrepiece of Ragnar Nurkse's (1944) critique of the performance of flexible rates in the interwar years.

The observation per se that a flexible exchange rate moves, sometimes by significant amounts, is not necessarily evidence that those movements are inappropriate. We have seen above that, even under a stable-inflation monetary order, and even when the main trading partner is also generating stable inflation, changes to fundamentals can occur to which the real exchange rate must adjust. And if the nominal exchange rate is prevented from adjusting, other things, in particular money wages and prices, must move instead; the stickiness of the latter might prevent them from moving to an adequate extent. Furthermore, a flexible exchange rate may be in place at times of domestic monetary instability, which its behaviour will then reflect. Indeed, a flexible exchange rate is the only arrangement that is compatible with an otherwise incoherent monetary order. As Friedman (1953) argued, it is in all probability this fact that largely accounts for the historical association between flexible exchange rates and poor economic performance of which Nurkse made so much.<sup>7</sup> The question to ask about a flexible exchange rate, therefore, is whether it can misbehave even when the rest of the monetary order is well configured, whether its operations in and of themselves cause gratuitous and excessive variations in the *real* exchange rate.

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5. The *locus classicus* for this exchange-rate-overshooting argument in the modern literature is Dornbusch (1976).

6. For a powerful statement of this line of argument, see Harris (1993).

7. Harris (1993) cites Nurkse, with evident approval, in support of his own position but does not discuss Friedman's critique.

An affirmative answer to the above question would imply a severe criticism of Canada's current monetary order. The first step to coming to grips with it must be to construct a model of the fundamental determinants of the real exchange rate, and the second must be to analyze those exchange rate fluctuations that the model leaves unexplained.<sup>8</sup> Canada's real exchange rate vis-à-vis the United States has been shown to be systematically related to certain important relative prices. An equation that makes it a function of world commodity prices excluding energy, and of the price of energy, has proved remarkably stable over the last three decades, and the shorter-term performance of the equation is enhanced by allowing the interest rate differential between the two countries also to have an influence. Questions about whether the foreign exchange market is itself the source of non-fundamental-driven fluctuations in the real exchange rate have been investigated by Murray, van Norden, and Vigfusson (1996), who studied the residuals from the predictions of this equation.<sup>9</sup> Their work suggests that apparently excessive exchange rate variations have arisen from time to time, but that, crucially, market forces themselves seem to work systematically harder to eliminate them as they become large.

Widely held suspicions that Canada's flexible exchange rate has itself been the source of serious and potentially destabilizing fluctuations thus seem to be greatly exaggerated. By far and away the bulk of variation in the nominal exchange rate since 1970 has been a manifestation of the real exchange rate responding to fundamentals. This in turn implies that, had measures been taken to hold the nominal exchange rate constant over this period, the real exchange rate would often have had to change instead by way of variations in money wages and prices.

The evidence discussed so far does not, however, quite come to grips with another criticism that has recently been levelled at the flexible exchange rate, and which has attracted a good deal of public attention. This criticism is that the operations of the flexible exchange rate

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8. Perhaps it should be noted explicitly that purchasing power parity theory, which is widely deployed nowadays to calculate the "fundamental" value of the Canadian exchange rate, (Harris 1993; Courchene 1998) has long been known to be utterly inadequate for this purpose. The definitive critique of it remains that of Keynes (1923, 70–86). Among its flaws is that this theory, as a basic premise, postulates that the equilibrium real exchange rate is a constant.
  9. I am here referring to an equation largely developed by Bank of Canada researchers. See Murray et al. (1996) for references to this work. Note that energy prices enter this equation with a negative sign, implying that, for example, a fall in the price of oil strengthens the Canadian dollar, and vice-versa; this result can be rationalized by noting that Canadian manufacturing exports are particularly energy intensive. Note also that McCallum (1998b) has suggested that the level of Canada's public debt may usefully be added to such an equation, and that Orr (1999) also puts much emphasis on this variable. Bank of Canada research suggests that its explanatory power is sensitive to the time period chosen for the study. Courchene (1998) makes much of the possible role of debt in depressing Canada's real exchange rate while criticizing Bank of Canada policy. However, elsewhere in his paper he treats purchasing power parity as an appropriate explanation of the nominal exchange rate's fundamental value, hence implicitly assuming that the equilibrium real exchange rate is constant. This apparent inconsistency in his analysis is puzzling.

have, in and of themselves, have hurt one of the economic fundamentals that conventional analysis considers to be an exogenous cause of exchange rate variations—the rate of productivity growth in the Canadian economy. The OECD has argued that total-factor-productivity growth in Canadian manufacturing has been very low, and McCallum (1998a) found that fluctuations in the labour-productivity-growth differential between the United States and Canada in that sector, which then-available data showed to have been consistently in the United States' favour over the past two decades, were correlated with earlier fluctuations in Canada's nominal exchange rate. He suggested, albeit much more tentatively than Courchene (1998) would later do, that this correlation might be interpreted as showing that a falling exchange rate had provided a shelter behind which “lazy” manufacturers had been able to hide rather than take measures to improve their productivity.

Correlation is, of course, never proof of causation, and a number of factors raise doubts about this hypothesis. First, the postulate of non-profit-maximizing behaviour that underlies it is theoretically odd, and does not follow from any standard textbook model of firm behaviour.<sup>10</sup> Second, and much more important, recent work by Sharpe (1999) has shown that the data which McCallum used in (1998a) were perhaps misleading. His work suggests that, though labour productivity lagged, total-factor productivity in Canadian manufacturing probably kept pace with that of the United States in the 1980s, and outstripped it in the 1990s. Third, there are significant differences among the performances of various sub-sectors of manufacturing in each country. Sharpe (1999), for example, suggests that machinery and electronics manufacturers are doing particularly well in the U.S., to the extent that both labour- and total-factor-productivity growth in these industries account for most of, or even more than, the overall productivity growth of the whole manufacturing sector in the 1990s.<sup>11</sup> Baldwin (1995, 1996) shows that, when it comes to labour-productivity growth, small manufacturers have performed particularly badly in Canada. The majority of these do not export, though it is conceivable that some of them produce import substitutes. Finally, according to Spiro (1999) there have been large differences in labour productivity growth rates in manufacturing among Canadian provinces over the 1987–97 period; Alberta and Ontario performed as well as the United States, Quebec lagged a little, and British Columbia lagged far behind.

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10. Nickell (1996, 726–28) gives a useful account of a number of models of firm behaviour in which productivity performance may be influenced by the extent of the competitive pressures to which the firm is exposed, and concludes that, “Overall . . . there is some theoretical basis for the belief that competition drives productivity improvements forward. But the basis is not, as yet, a strong one” (728).

11. Sharpe's evidence on total-factor-productivity growth differs from that recently published by Statistics Canada (1999) for manufacturing. It is based on value-added rather than gross output, and is for the periods 1981–89 and 1989–97, rather than 1973–86 and 1986–96.

None of this to deny that Canada's productivity performance could be improved, or that competitive pressures, not least those emanating from foreign trade, are probably good for productivity growth. It is, however, to argue that empirical evidence, particularly at the microeconomic level, suggests that the factors driving Canada's productivity performance are many and various, and often industry- and province-specific. It is hard to reconcile that evidence with the proposition that a single macroeconomic factor, such as the behaviour of the exchange rate, has played a crucial role in undermining productivity growth. It might have played a role in protecting some small import-competing manufacturers from foreign competition, though not by enough to produce any problems with the economy's overall performance. And even this hypothesis is based on purely circumstantial evidence, and needs careful investigation before it is accepted.<sup>12</sup> The alacrity with which McCallum's original, carefully hedged and tentative suggestion, based on one regression equation fitted to data of dubious quality, has been transformed by the critics of Canada's monetary order into a damning indictment suggests that careful weighing of evidence does not stand high among their priorities.

We must, nevertheless, be careful about the conclusions we draw from all this. The foregoing arguments do suggest that a flexible exchange rate works more or less as its supporters have advertised, and, on the evidence to date, it is hard to argue that it has been, in and of itself, the wantonly destructive force that some would have it. Canada's current monetary order appears to be both viable and defensible against attacks that are based on the fact that exchange rate flexibility is necessarily a component of it.<sup>13</sup> Those who favour a monetary order based on domestically chosen inflation targets and a flexible exchange rate are, therefore, entitled to an "if it ain't broke, don't fix it" defence of their preferred regime. But it doesn't always work to a textbook level of perfection, and they should, therefore, be willing to entertain the possibility that it would pay to trade it in on a newer model that might function better.

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12. Baldwin (1995) suggests that this force might have been at work in the mid-1980s, while Baldwin and Caves (1997) suggest that the balance of a thin body of empirical evidence points to a positive effect of foreign competition on productivity growth. Among the studies they cite is that of Nickell (1996), of U.K. manufacturing, which establishes a presumption that the overall competitiveness of the environment enhances productivity performance. However, a variable measuring the degree of import penetration in the markets in which firms operate is the only one in Nickell's equations directly appertaining to foreign competition; it is, at best, barely statistically significant at conventional levels, and in fact changes signs between the two samples of data he analyzes.
  13. The emphasis here is, of course, on Canada's current monetary order. I have already noted above (in footnote 2) that a flexible exchange rate was associated with at least three other less-coherent orders between 1970 and about 1990, and the fact that its presence permitted them to have all manner of adverse consequences for the economy is not relevant to a critique of the current situation. As has been noted earlier, a flexible exchange rate is a permissive arrangement that cannot, by its nature, define a monetary order in and of itself.



There can be no denying that the United States' economic performance over the last decade has been extremely good. Nor can we deny that, over that same period, U.S. monetary authorities have chosen an inflation rate sufficiently close to Canadian preferences that it can plausibly be argued that Canada's ability to choose its own inflation rate has been of mainly symbolic significance. From here, it is a short step to arguing that Canadians could enjoy an acceptable inflation performance under some alternative monetary order that would incorporate a fixed exchange rate of some sort on the United States dollar.<sup>14</sup> This argument, of course, does not take real shocks into account, and perhaps it ought not to be taken for granted that the United States economy will always perform as well as it has recently. Indeed, their monetary authorities have sometimes seemed as surprised as anyone at the economy's capacity to sustain rapid growth and low inflation for so long.

It is however, intellectually too easy to rely on speculation that the U.S. monetary environment might deteriorate in the future as an argument against proposals for some sort of fixed Canada–U.S. exchange rate. Below, I will assume, for the sake of argument, that the United States does in fact have in place a coherent monetary order of its own that is likely to be durable, and that it is feasible for Canada to “borrow” its credibility through the “right” kind of fixed exchange rate on the U.S. dollar. A number of specific arrangements have been suggested as being suitable for this purpose.

#### **4. North American Monetary Union as a monetary order**

A monetary system exists to facilitate trade in goods, services, and capital. From a purely economic point of view, therefore, there is a lot to be said for the geographical boundaries of any market in which such trade takes place coinciding with those of a monetary system that uses a single means of exchange and unit of account. The slogan “one market, one money” was often heard during the debates that preceded the creation of European Monetary Union (EMU). Some commentators, notably Courchene (1998), have suggested that Canada might take as a long-run policy goal the creation of a North American Monetary Union (NAMU) involving itself, the United States and perhaps Mexico. Just as the growing integration of their real economies as a result of a common-market arrangement has led European countries towards monetary integration, so does NAFTA offer the starting point for a similar process of integration in North America, or so it is argued.<sup>15</sup>

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14. As will soon become apparent, the merits of the arguments here are heavily dependent on just what sort of fixed rate regime is envisaged.

15. I discussed the very different degrees of relevance of the “one market one money” slogan to Europe and North America in Laidler (1991).

Such an arrangement would, of course, be a monetary order radically different from the one now in place. However, from a technical-economic viewpoint (setting aside the question of how Mexico might fit into such an arrangement, which would require a separate paper to give it the care it deserves), it would be coherent, provided that the assumption is accepted that the United States currently has its own stable monetary order in place. About one-third of everything produced in Canada is sold in the United States, a higher proportion than that ruling with respect to trade between most individual members and the rest of the EMU, and capital already flows freely between the two countries. Were the two countries to adopt a single money, presumably by way of Canada joining the U.S. monetary system, transactions costs for all concerned would be significantly reduced.<sup>16</sup> Furthermore, the costs to Canadian firms and households of adapting to a new domestic unit of account would be minimal, since they are already familiar with the United States dollar. As to the all-important matter of the compatibility of private sector expectations with the outcome of the monetary authorities' activities, the fact that such a monetary union would involve extending the geographic boundaries of an existing monetary order, rather than establishing a new one, should make Canadian adaptation to it relatively straightforward.

The only economic drawback to NAMU, albeit a potentially serious one, arises from two facts: first, within its boundaries, existing legal barriers to inter-country labour mobility would presumably remain; and, second, Canada is still relatively heavily concentrated in commodity-based exports. These facts imply that real exchange rate changes coming from shocks to world prices for these products, acting in combination with wage and price stickiness, would continue to pose a problem, and that their effects on labour markets would have to be absorbed, as they are now, within Canada's borders.

It can be argued that the degree of wage–price flexibility characterizing any market is not some exogenous given, but that it arises from institutional arrangements that participants in that market have themselves developed; further, these are not, in the long run, independent of the monetary order. If this is so, then agents, who cannot rely on exchange rate movements to help adjust relative prices for them when such changes are needed, are likely to develop other means of making those changes. Under NAMU, therefore, the degree of wage–price stickiness in Canada might eventually diminish. It is difficult to know how much credence to give to this argument, but my own inclination is to treat it with some skepticism.<sup>17</sup> Even so, it is a basic property of the Mundell–Fleming model of the macroeconomics of an open economy that fiscal policy comes into its own as a stabilization device under a fixed exchange rate, of which a monetary union is, in

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16. I do not believe that a common currency arrangement under which the United States gives up its dollar is viable. Germany gave up the mark in exchange for crucial French support for reunification. I can think of no parallel inducement that might be available in the U.S. case.

this context, a relevant limiting case. To the extent that wage–price flexibility remains insufficient to shelter the Canadian economy from real consequences of terms-of-trade changes for aggregate output and employment, fiscal tools would be available to mitigate some of their macroeconomic effects.

These matters would be much easier to manage in the presence of a high degree of cross-border labour mobility, and there is room for disagreement about just how serious are the barriers between the Canadian and U.S. labour markets. Linguistic and cultural inhibitions to labour mobility between Canada and the United States are probably less than they are among the countries of the European Union which, from a legal point of view, make up a single labour market. Furthermore, current worries about a brain drain from Canada are based on a presupposition that, in practice, cross-border migration is now rather easy, and shows every sign of becoming easier. However, questions about how large a fraction of the Canadian labour force really does have ready access to the United States, and about whether that fraction includes a significant number of Canadian workers who are vulnerable to unemployment associated with terms-of-trade shocks, really must be examined before we jump to any conclusions about the extent to which the establishment of NAMU would complete the creation of a single North American economic space, whose existence would negate any concerns about labour market rigidities within Canada.<sup>18</sup>

Though the economic case that it would be preferable to the status quo is anything but clear, it is hard to deny that a monetary order based on NAMU would be coherent and hence feasible. But such an arrangement would also raise problems of fundamental political importance, because, though economically viable, the monetary order in question would not, from a Canadian standpoint, be a liberal one.

First, there is the serious question of the accountability of the monetary authorities of such a union to the Canadian electorate for the conduct of monetary policy. It is hard to see Canada being any more important in such an arrangement than a 13th district of the Federal Reserve system, represented by what had been the Bank of Canada; the Governor of the Bank—who would presumably be a “President” of the 13th district bank—might even be given the privilege of

17. Thiessen (1998–1999b) argues that nominal wage and price stickiness would continue to be a problem for Canada under a monetary union. It is worth noting that many commentators on European Monetary Union, both for and against, agree that its success will hinge on the extent to which its creation leads to a loosening of market rigidities in Europe. It is also worth noting that a happy outcome here cannot be taken for granted.
18. Nevertheless, it is worth noting that, as John Crow (1998) pointed out, one important reason for the United States supporting the inclusion of Mexico in NAFTA was to reduce the incentives for Mexican workers to migrate illegally to the United States. Hence the foregoing arguments apply to Canada–U.S. labour mobility, not to NAFTA as a whole, and are relevant to a Canada–U.S. monetary union rather than one involving the whole of North America.

a permanent place on the Federal Open Market Committee. But even that, surely the very best that could be expected, and by no means to be taken for granted, would provide no mechanism whereby those in charge of monetary policy could be made specifically accountable to the Canadian electorate. One cannot imagine any President of the United States giving up his authority to appoint the Governors of the Federal Reserve system, or the United States Congress sharing its powers under the Humphrey-Hawkins Act with the Canadian Parliament.<sup>19</sup>

Second, there is a more to a monetary union than monetary policy. In order fully to realize the savings in cross-border transactions costs—one of the chief attractions of such an arrangement—the Canadian banking system would have to be to some degree integrated into the American. As well, a union-wide payments system, underpinned by a common element to the regulatory framework, would also be highly desirable. Quite how the details here would work out is hard to foresee. No doubt a common element to the regulatory framework could be negotiated, but it is hard to believe that its features would not mainly reflect American political priorities. None of this would matter much to the conduct of monetary policy or to the functioning of the financial system as it affected the day-to-day conduct of business in Canada. In any case, it is hard to raise technical objections to anything that the Federal Reserve system or other American regulators have done over the last 10 years, but the broader political implications of such an arrangement would surely be a different matter.

Even if the creation of NAMU did not give rise to pressures to harmonize fiscal and social policies, as the movement towards EMU certainly helped to do in Europe, such an arrangement would require a good deal of de facto political integration between Canada and the United States, as far as monetary policy and associated regulatory issues were concerned. In Western Europe, where political integration has been a serious item in its own right on the agenda from the very beginnings of the Common Market, there are questions about whether there has yet developed a sufficiently strong set of EU-wide political institutions to support EMU, about whether establishing the latter will hasten their development, or whether their absence will instead undermine the smooth functioning of monetary arrangements. NAFTA, on the other hand, was and remains much more an economic than a political arrangement, and provides a flimsier political base from which to launch a monetary union. All this may change in due course, but the institutional developments needed to support monetary union in the relevant future—Courchene (1998) suggested a time horizon of a decade—would seem to require the Canadian electorate to

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19. Courchene (1998) suggested that the Bank of Canada would have a degree of influence within NAMU similar to that likely to be exercised by the Bank of France within EMU. Since the Bank of France represents the second-largest of 11 national economies within EMU, and the Bank of Canada would represent one very small economy out of two (or three were Mexico a member) within NAMU, I do not understand the basis of this argument.

delegate important decisions to the United States without gaining any effective representation there. To raise this issue is not to embrace economic nationalism as a defence of Canada's current monetary order, but simply to note that this order is compatible with basic liberal democratic principles in a way that NAMU would not be.

## 5. A currency board

Another monetary arrangement that has attracted attention recently, a little less politically radical than NAMU, would involve the transformation of the Bank of Canada into a currency board. Under the generic form of such an arrangement, the Bank would be left with no discretion over either the size or composition of its balance sheet.<sup>20</sup> Its liabilities would consist of a currency denominated in Canadian dollars, and its assets would consist of U.S. dollars, presumably in some mixture of U.S. Treasury Bills and other instruments readily convertible into Federal Reserve Notes at short notice. Its sole power would be to exchange its Canadian dollar liabilities for U.S. dollars at a fixed price and, since its reserves would be equal to 100 per cent of its liabilities, its ability to do so would never be in doubt.

The first question that comes to mind here is why any jurisdiction would bother with a currency board based on the U.S. dollar, when it would be possible unilaterally to "dollarize" the economy by making domestic taxes payable in that currency, declare it legal tender in domestic transactions, and be done with it. Quite apart from the greater simplicity of such an arrangement, it would eliminate any interest rate premiums that might arise in domestic capital markets as a result of the risk that a currency board arrangement might break down. In Argentina, during September 1998, a spread of almost 400 basis points opened up between peso- and dollar-denominated loans. Clearly, this is not a trivial consideration.<sup>21</sup>

The answers here are straightforward. Currency is non-interest-bearing debt of its issuer. An economy using another's currency by unilateral decision is, in effect, paying seigniorage to that other at a rate given by some representative rate of interest times the amount of currency circulating locally. Furthermore, any loss or destruction of that currency represents a one-time gain to its issuer. A local currency board, however, can hold reserves in interest-bearing assets, capturing seigniorage revenue for itself, while, with its foreign assets safely under lock and key

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20. The reader's attention is drawn to the adjective "generic" here. A number of existing monetary arrangements that are commonly called "currency boards," for example those in Hong Kong or Argentina, deviate sharply from the typical colonial currency board in the direction of the legislatively fixed exchange rate system discussed in the following section. See Hanke and Walters (1992) for a useful and succinct account of the basic characteristics of currency boards and the historical origins of the arrangement.

21. Though, as already noted, Argentina's monetary regime does deviate in several respects from a generic currency board arrangement. See also the previous footnote.

and local paper in circulation, the board rather than a foreign central bank is the beneficiary of any loss or destruction of currency. The only advantage, in addition to these two, is that a currency board can also issue currency decorated with local symbols, thus reaffirming whatever sense of national identity might be current within its jurisdiction.<sup>22</sup>

A second question worth asking is how banking fits into a currency board arrangement; the short answer is, with difficulty. In British colonies in Africa, Asia and the Caribbean, where the currency board arrangement originated, banking business was typically carried on by branches of British-based institutions. Their stability and solvency were therefore matters of concern for the British owners and ultimately the Bank of England, not the local administration. That was just as well, because a generic currency board by its nature is precluded from being a source of liquidity to the banking system. Not only does this mean that it is unable to act as a lender of last resort; it also means that it cannot even provide the kind of automatic overdraft facilities, secured by collateral denominated in domestic currency, that might be required by a modern real-time clearing and settlement system.

This does indeed imply that, were it to be converted into a generic currency board, the Bank of Canada's overnight lending rate would no longer be the key interest rate for the domestic monetary system, for the simple reason that the Bank would no longer be able to play any special role in the overnight market. It also means that the Large Value Transfer System (LVTS), recently introduced in order to ensure real-time clearing and settlement among Canadian financial institutions, would have to be seriously modified. Unlike NAMU, a Canadian currency board would not bring with it potential access for the banking system to the liquidity or clearing services provided by the Federal Reserve system. No doubt banks and other institutions could arrange lines of credit for themselves with foreign banks, and no doubt a Canadian clearing system based on U.S. dollar collateral could be devised, but to bring about such changes to the Canadian financial system would be anything but trivial.

In the light of all this, it is, at first sight, hard to see why any sovereign government, as opposed to a colonial regime, would adopt such a monetary order. Three sometimes-overlapping sets of circumstances seem to account for its attractiveness. First, some former colonies have opted for continuity in monetary arrangements when their political status has changed. Second, some new countries with no history of an independent money, no willing partners for a new

22. Courchene (1998, 44) attaches some importance to this feature of a currency board, but suggests that it could also be addressed under a monetary union by having local symbols on one side of currency. This works with one-pound coins in the United Kingdom, but Scottish bank notes, which are completely distinct in appearance from Bank of England notes are essentially non-negotiable more than 60 miles south of the Scotland-England border. It seems to be important not to have too many distinguishing local characteristics on currency that is supposed to circulate throughout a monetary union.

monetary union, and poorly developed domestic banking systems, have opted for a currency board as a means of establishing the credibility of a newly established national money among their own populations. Finally, and closely related, countries with a history of serious inflation, which more orthodox currency reforms have failed to bring to an end, have also sometimes resorted to currency board arrangements to re-establish the credibility of the domestic monetary order in general, and to insulate domestic monetary policy from domestic fiscal pressures in particular. These are all excellent reasons for creating a currency board.<sup>23</sup>

However, the Canadian dollar has existed for over a century, and, as Powell's (1998) history of the currency shows, its peacetime inflation rate has seldom seen double digits. More recently, its purchasing power has been close to stable since the introduction of inflation targets in 1991, whose goal is to establish just such a state of affairs. Furthermore, the public sector is in surplus and looks like it will remain so. Finally, Canada's financial system is self-evidently among the most efficient, sophisticated and stable ever to have existed. None of the preconditions that would make a currency board the basis of a desirable monetary order are in place in Canada today.

## **6. A legislatively fixed exchange rate**

A currency board has a legislative basis, one of whose key features is a specific value for the exchange rate between domestic and foreign currency. Though currency board legislation does not provide absolute certainty about the future value of the exchange rate, since amendment is always a possibility, it does make changing the exchange rate very difficult for the authorities. A legislatively fixed exchange rate thus can provide a firm anchor for private sector expectations, and that is one reason why a currency board provides a viable basis for a coherent monetary order. But, as Fortin (1999) noted, a country can legislate an exchange rate without adopting all the other features of a currency board. The late-19th-century example of the gold standard clearly demonstrates this. Its key feature was the legal definition of the unit of any national currency as representing a certain weight of gold, but the system provided enough flexibility to individual central banks to permit them to act as lenders of last resort to the domestic banking system. Indeed, it was under the gold standard that this role was first systematically played by central banks, particularly the Bank of England.

A legislatively fixed exchange rate for the Canadian dollar would then, in principle, provide a relatively secure basis for private sector expectations and hence for a coherent monetary order. Moreover, if extra credibility were sought, there is no reason why the exchange rate law

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23. These reasons explain why such diverse economies as Hong Kong, Singapore, Argentina, Estonia, and Bulgaria have instituted arrangements that approximate, to some degree, a generic currency board.

could not be supplemented by others restricting the behaviour of the central bank in such matters as its capacity to insulate the volume of its domestic liabilities from fluctuations in foreign exchange reserves.<sup>24</sup> It would also be easy enough to design the rules so that the Bank of Canada would retain limited freedom to back a varying volume of its liabilities with domestic debt rather than with foreign exchange reserves. Hence, the Bank would act as a lender of last resort to domestic financial institutions in emergencies and extend overdrafts in the clearing system secured by domestically denominated collateral. The Bank would, however, have to hold or have access to a level of foreign exchange reserves sufficiently large to enable it credibly to meet its legal obligation to support the exchange rate. Crucially, it would also be required to impose any degree of contractionary pressure on the economy needed to preserve its capacity to do this in the face of capital market skepticism about the rate's durability.

Technically speaking, the relevant legislation about the exchange rate would be easy to draft. The Bank of Canada Act currently enjoins the Bank to "control and protect the external value of the national monetary unit." The first thing needed would be to add to this phrase, "at a value lying between x.x and y.y (the reader is invited to fill in the blanks) dollars to the United States dollar." The Act also urges the Bank to do as much to promote certain other ends "as may be possible within the scope of monetary action." The second required addition would be, "and subject to the overriding aim of maintaining the external value of the monetary unit." Finally, the Bank's mandate would have to be entrenched in the body of the Act, rather than its preamble, to ensure that there was no question about it being binding.

These simple amendments would give Canada as genuinely fixed an exchange rate as it is possible to have in the presence of a sophisticated financial system and under a parliamentary democracy. A monetary order based on such an exchange rate regime would surely be coherent, though it should be noted explicitly that its smooth working would be subject to the same threats from real exchange rate shocks in the presence of nominal stickiness as would exist under NAMU. Indeed, to the extent that a legislatively fixed exchange rate is a less-credible arrangement than a monetary union, the chances are lower that its introduction would in and of itself help to lessen the degree of nominal rigidity in the economy.

Furthermore, it might be politically difficult to get the relevant legislation enacted. It was only in 1992 that the Manley Committee rejected proposals to amend the preamble to the Bank of

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24. The more such extra provisions were introduced, and the more restrictive they were, the closer would the Bank of Canada come to approximate a generic currency board. The Central Bank of Argentina retains powers to vary its fiduciary issue, and to vary reserve requirements in the domestic banking system, while the Hong Kong Monetary Authority can provide liquidity to the clearing system. In these respects, both differ from the generic currency board model.



Canada Act so as to replace the Bank of Canada's current mandate with an unquantified price-stability goal (House of Commons 1992). The committee did so on the grounds that such a change might be unduly restrictive on future policy-makers should opinion on the appropriate role of monetary policy evolve in unexpected directions. To embed a specific value for the exchange rate in the body of the Act would be far more restrictive than the change rejected by the Manley Committee, so there must be some doubt about Parliament's willingness to enact such a measure.

## 7. A pegged exchange rate

Proposals for monetary union with the United States or a Canadian currency board play ambiguous roles in current Canadian discussions. Courchene (1998) proposed the former, but only as a long-term possibility. He has also raised the currency board option, not so much as a feasible alternative for Canada but so as to provide evidence that it is possible to devise a system under which the constancy of the exchange rate is extremely credible. As yet, to the best of my knowledge, only Fortin (1999) has proposed a legislatively fixed exchange rate. Be that as it may, the rhetorical role all too often played by these options is to create "confidence by association" in the less-radical alternative system that Courchene actually advocates for the immediate future, namely a traditional pegged—sometimes called "fixed"—exchange rate.<sup>25</sup>

Two closely related points need to be made here. First, the use of the adjective "fixed" in this context gives the impression that such a regime brings with it a strong guarantee of exchange-rate constancy, but this is not the case. A pegged exchange rate will only remain constant if those administering it can be relied on to do some things and to refrain from doing others. Second, as a corollary, it is a mistake to treat a pegged rate regime as merely a milder form of a monetary union, a currency board, or even a legislatively fixed exchange rate arrangement. All of these arrangements legally force the relevant authorities to do the "right" things and refrain from doing the "wrong" things, so these arrangements in and of themselves define rules on which private sector expectations can be anchored to create a coherent monetary order.<sup>26</sup> Under a pegged rate,

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25. Harris (1993) has also advocated such an arrangement. It is interesting to note that both Courchene and Harris believe that an appropriate value for the pegged exchange rate would be in the region of 80 U.S. cents to the Canadian dollar. This is consistent with their view that purchasing power parity provides an appropriate benchmark for the exchange rate. Fortin, on the other hand, would peg the Canadian dollar at around its current value of 66 cents; this is consistent with his view that Canada's inflation rate should be a higher than it now is. It is also interesting to speculate that Fortin's advocacy of a fixed exchange rate on the U.S. dollar stems from a belief that this currency's inflation rate will in future be higher than it now is.

26. No monetary arrangement is completely durable, of course. Even a monetary union can break up in the face of political pressures. Thus, a common currency outlasted the breakup of Czechoslovakia by a matter of weeks, even though, *ex ante* the maintenance of a currency union had been envisaged. Some commentators have also speculated that the Canadian monetary union would not long outlast Quebec's secession from the federation. See Robson (1994) and Laidler and Robson (1997).

the relevant choices are at policy-makers' continuous discretion, and it is questionable whether a pegged exchange rate is compatible with stable expectations and hence with any viable monetary order at all.

No legislation would be required to put Canada on a pegged exchange rate. The Minister of Finance need only instruct the Bank of Canada henceforth to exchange, on his behalf, Canadian for United States dollars in unlimited amounts, and within a fixed, narrow price range. No other formal changes to the monetary system would be needed. Overdraft facilities could be made available to guarantee the working of the clearing and settlement system, lender of last resort facilities could stay in place, and day-to-day monetary policy could still be carried out in the market for overnight funds. The only operational difference from the current regime would be the extent of the Bank of Canada's intervention in the foreign exchange market. At present this is infrequent, and has become much more so with the passage of time. However, with a pegged rate intervention would be as frequent as was necessary to keep the exchange rate in line, and it would have to persist for as long as that line remained drawn in the same place.

Adopting a pegged rate would require abandoning the inflation targets that now anchor Canada's monetary order and replacing them with a commitment to stabilize the exchange rate. Even though inflation targets in Canada, unlike those in New Zealand, rest only on an administrative agreement between the Minister of Finance and the Bank of Canada and have no legislative basis, they are subject to the dual responsibility doctrine that has, since 1961, underlain the formulation and conduct of monetary policy in Canada. A dispute about inflation targets between the minister and the Bank of Canada, could therefore, in the extreme case, trigger a directive and the resignation of the Governor.<sup>27</sup> This arrangement imposes an important constraint on the minister's exercise of discretion over monetary policy goals, contributes to their credibility, and hence underpins the coherence of the current monetary order. In contrast, under the Bank of Canada Act, the Bank acts as the minister's agent in the foreign exchange market. It would not, therefore, have the same room to resist a decision about exchange rate policy that it thought unwise. So, adoption of a pegged rate, once accomplished, would shift authority over monetary policy decisions to the minister, and hence increase the role of political discretion in the monetary order.

Pressure on a pegged exchange rate to appreciate can always be resisted, of course, because Canadian dollars can be printed and sold to hold the rate down. However, it should be noted that if such pressure were the result of an onset of inflation in the United States, rather than

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27. On this matter, see Thiessen (1998–1999a).

of some other temporary disturbance, perhaps one that may likely be reversed, such resistance would ensure that inflation would soon affect Canada too.<sup>28</sup>

Downward pressure on the currency, regardless of its source, would always produce extra difficulties stemming from the fact that foreign exchange reserves are necessarily finite. To resist such pressure when it originates in some shock to fundamentals that lowers the economy's equilibrium real exchange rate would, assuming that price inflation in the United States remains negligible, require the Canadian price level to move downward, and perhaps the money-wage level too. These adjustments might be exacerbated by higher interest rates needed to attract an extra capital inflow sufficient to offset the trade account deterioration that would persist until the real exchange rate was back in equilibrium. As well, in the presence of nominal stickiness higher unemployment and lower output would be integral components of this adjustment. Furthermore, and perhaps most important, any doubts about the authorities', more specifically the Minister of Finance's, ability to withstand the political pressures implicit in letting this adjustment mechanism take its course would lead to movements out of, rather than into, Canadian dollar assets, and to further upward pressure on interest rates as the monetary authorities continued to offer one-way bets to speculators.

To put it simply, the kind of change in fundamentals that produces a depreciation under a flexible exchange rate while permitting the inflation-target anchor of the monetary order to remain firmly in place can, under a pegged rate, lead to a foreign exchange crisis. Such crises produce downward pressure on the domestic economy, in addition to that needed to adjust the real exchange rate to fundamentals, and are all too often resolved by devaluation or the re-establishment of a floating rate. This sequence of events is all the more likely because a pegged exchange rate regime grants the authorities the discretion to set it in motion. This argument is quite general, but in Canada's case the difficulties to which it points could only be made more acute by a legal framework that places firmly in political hands the power to devalue or float the currency. In light of all this, it is hard to see how a particular value for a pegged exchange rate could ever gain the same degree of credibility as a target inflation rate, and hence to see how a monetary order centred around such an arrangement could ever be as coherent as the one that Canada now has in place.

As with the earlier discussion of adjustment mechanisms under a floating exchange rate, there is nothing here that has not already been discussed ad nauseam in the academic literature. However, though there exists in Canada a well-developed collective memory of how flexible rates

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28. To put it in technical language, the intervention here envisaged would be unsterilized, but that is the only kind of intervention that can be systematically effective under fixed exchange rates.

operate, there exists no equally well-developed memory of the characteristics of a pegged-rate regime. Though the years between the end of the Second World War and 1950, when Canada decided to float, were troubled, the fixed-rate years between 1962 and 1970 were less so. In 1962, a pegged exchange rate was adopted after a sharp depreciation of the flexible rate associated with the Coyne affair. There were initial difficulties associated with some unfortunate remarks about the need to lower the exchange rate made by members of the government in the course of an election campaign. Thereafter, though Canadian economic policy in the 1960s was by no means all smooth sailing, there were no immediate or serious threats to the Bank's ability to maintain the exchange rate until, in 1970, a decision was taken to float upwards rather than accept the inflationary pressures that even then were beginning to affect the international monetary system.<sup>29</sup>

That Canada's 1960s experience with a pegged exchange rate was unusual is attested to by Osakwe and Schembri (1998), who recorded no fewer than 21 foreign exchange crises under fixed exchange rates during the 1990s alone, of which 17 ended in devaluation, adoption of a floating rate, or both. Of the four remaining, moreover, two occurred in the context of exchange rate regimes more akin to a currency board than to an adjustable peg—Argentina in 1995 and Hong Kong in 1998. This fact nevertheless did not protect them from severe domestic monetary tightness and real contraction, the price of defending their exchange rates. Similar difficulties were also encountered by the other two exceptions to the general rule, France and Denmark during the EMS crisis of 1992–1993.<sup>30</sup>

All in all, the following well-known conclusion about a pegged exchange rate are worth repeating in the context of current Canadian debates. Such a regime does not guarantee exchange rate stability. Rather it ensures that, when exchange rates change, they do so discretely, and usually in conditions of crisis too. A pegged exchange rate tries to blend the main advantage of a flexible rate—the ability to deploy monetary policy in pursuit of domestic goals within a coherent monetary order—with those of a monetary union—protecting tradeable-goods markets from unnecessary relative-price uncertainty and removing foreign exchange risk from cross-border capital transactions within an alternative but also coherent monetary order. It ends up combining and amplifying their worst features: exchange-rate uncertainty that periodically takes on crisis proportions, and an inability to allow monetary policy smoothly to accommodate domestic adjustment to real shocks exactly when such accommodation is most desirable. And it does so

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29. For a recent and succinct account of this period in a broader historical context, see James Powell (1998), pp. 36–39. See also Muirhead (1999) Part Three, particularly Chapter 9.

30. It is interesting to note that, in 1998, Finland, a major commodity producer, and Italy, a frequent target of past speculative attacks in times of international financial turmoil, encountered no difficulties. This was presumably due to their imminent membership of the European Monetary Union, and is strong testimony to just how different such an arrangement is from a traditional fixed exchange rate.

because it makes creating any kind of coherent monetary order, within which private agents' expectations can find a firm anchor, next to impossible.

## **8. Concluding comment**

It would be technically feasible to replace Canada's current monetary order with one involving a fixed exchange rate, or even to integrate the Canadian monetary system with that of the United States. However, it is questionable whether any monetary order of this sort would serve Canadians as well as current arrangements. The composition of Canada's output differs from that of the United States, and that exposes Canada to changes in the real exchange rate. Labour mobility across the U.S. border is restricted, and domestic wages and prices are sticky. So long as these facts remain important, a flexible exchange rate will also remain important as a component of the monetary order.

Even so, if some sort of fixed rate regime is to be instituted, it should not be controversial that the more difficult the chosen regime makes the process of altering the exchange rate, the greater would be its chances of achieving the degree of public credibility that a monetary order requires to be coherent. Nor should it be controversial that, on this score, NAMU would be the preferable option. The trouble is that NAMU has some distinctly illiberal political implications. When it comes to making their proposals politically palatable, therefore, it is understandable that many Canadian advocates of a "fixed" exchange rate, even those who, like Courchene (1998), regard NAMU as a desirable long-term arrangement, recommend an adjustable-peg arrangement as a short-term goal. Were they to succeed, however, they would make considerable economic mischief by replacing a coherent, if perhaps still fragile, monetary order, one which was established only recently and with great difficulty, with something inherently much less viable.

None of this means, however, that Canada's monetary order should not be debated. Rather it means, as I remarked at the outset, that the debate should deal with the configuration of the monetary order as a whole, and not merely its exchange rate component. When matters are put this way, moreover, the overall shape of the debate takes on a familiar appearance. Its central issue is whether the monetary order should be so designed that, when a conflict between the two arises in the formulation of monetary policy, priority ought to be given to the maintenance of internal monetary stability, or the constancy of the exchange rate.

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It is a mistake to debate the merits of alternative exchange rate regimes for Canada independently of other features of the monetary order. A coherent order requires a well-defined goal for monetary policy, one that the authorities are capable of achieving, and that anchors private sector expectations. For it to be liberal, the relevant authorities should be accountable to the electorate for their performance. Among the fixed exchange rate options, all of which are inferior to current arrangements, a full monetary union is judged the most economically viable, though politically illiberal, while a pegged rate seems to provide an untrustworthy basis for a coherent monetary order. Content Type(s): Staff research, Staff working papers. The system presents members' exchange rate regimes against alternative monetary policy frameworks in order to highlight the role of the exchange rate in broad economic policy and to illustrate that different exchange rate arrangements can be consistent with similar monetary frameworks. The following explains the categories.

**Exchange rate anchor.** The monetary authority stands ready to buy or sell foreign exchange at given quoted rates to maintain the exchange rate at its predetermined level or within a range (the exchange rate serves as the nominal anchor or intermediate target of monetary policy).

1999. "The Exchange Rate Regime and Canada's Monetary Order." Bank of Canada Working Paper 99-7. Ottawa. 2000. Leaving Well Enough Alone: Canada's Monetary Order in a Changing International Environment. C. D. Howe Institute Commentary 142. May. Google Scholar.

Laidler, David E. W., and William B.P. Robson. 1994. "The One to Three Percent Solution: Canadian Monetary Policy under the New Regime." C. D. Howe Institute Commentary 59. March. Google Scholar.

Laidler, David E. W., and William B. P. Robson. 1998. Walking the Tightrope: Canada's Financial System between a "Yes" Vote and Quebec Secession. C. D. Howe Institute Commentary 102. March. Google Scholar.

An exchange rate regime is the way a monetary authority of a country or currency union manages the currency in relation to other currencies and the foreign exchange market. It is closely related to monetary policy and the two are generally dependent on many of the same factors, such as economic scale and openness, inflation rate, elasticity of the labor market, financial market development, capital mobility etc. There are two major regime types