

## Currency Options for Emerging Economies: Concepts and Arguments

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### Abstract

*This paper frames policy debates around the appropriate choice of currency regimes for developing and transition economies, by clarifying and articulating arguments drawn from the scientific and applied economics literatures. In particular, arguments for, and against, „fixed“ vs. „flexible“ exchange rate regimes are elaborated and evaluated, including the celebrated „insulation“ hypothesis of Friedman and „optimum currency area“ concept of Mundell. Political economy arguments are also considered, including in the context of (actual) European and (putative) North American currency unions. The paper concludes with some policy-relevant reflections on currency options for emerging economies, and alternative visions for the future of the international monetary architecture.*

**Keywords:** *currency regime; dollarization; Euroization; fixed vs. flexible exchange rates; impossible trinity; monetary/exchange rate policy*

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The beginning of the 21<sup>st</sup> century has witnessed important, perhaps epochal, developments in the organization of the monetary and exchange rate systems of the world's economies. Perhaps most significant for the long run is the creation of the European monetary system, with its common currency, the Euro, at present shared by 12 of the 15 current members of the European Union. While there is little immediate prospect that any of the current hold-outs, the United Kingdom, Denmark, or Sweden, will join anytime soon, of equal consequence is the road to accession of the transition economies of Central and Eastern Europe and the former Soviet Union. While the first wave of new members, ten in all, including the Republic of Slovakia, will accede to the EU on May 1, 2004, the road to joining the monetary union is longer and more arduous, and raises important and difficult questions relating to managing the transition, in the Slovak case for instance, from a managed floating exchange rate regime to the narrow fluctuation bands permitted under the Exchange Rate Mechanism II which Slovakia and the other new members will be expected to adhere to in the run up to eventual Euroization. Of equal policy salience is the appropriate choice of exchange rate regime for putative future members of the EU, including, for instance, Bulgaria, which at present operates a currency board regime pegged to the euro and expects, or hopes, to be in the next accession round. Studying alternative exchange rate regimes, and determining the optimal choice of regime, including the transition between regimes, has never been more relevant.<sup>1</sup>

In this paper I do not profess to deal with the enormously difficult questions involved in steering the transformation of the monetary and exchange rate system of, say, Slovakia as it proceeds on the ramp towards Euroization. But rather what I hope to do is to cast some light on the theoretical and conceptual questions involved, and to expose and articulate some of the principal arguments that have been put forward in the literature. Thus I see the objective as one of fixing our intuition, of building a sound analytical compass, before proceeding with the further arduous challenges of empirical investigation and policy analysis and formulation. At the very least if I am able to spark an interest in the highly interesting, and topical, questions that I shall touch upon, amongst academics, students, and policy analysts in Slovakia and elsewhere, I shall consider the venture a success.

To put it most simply, the age old question in international monetary economics that still animates much of the debate, is: Which is best, „fixed“ or „flexible“ exchange rates? As I have argued elsewhere, with Nicholas Rowe (Dehejia and Rowe, 2004), this is a bad question, because it is poorly formulated. „Fixed“

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<sup>1</sup> A useful survey is Fischer (2001). A brilliant recent survey and synthesis may be found in Dean (2003).

exchange rate at least has the virtue that it is a well defined policy, that is, a monetary policy rule which ensures that the value of the nominal exchange rate remains pegged against some other currency at a particular level.<sup>2</sup> But a „flexible“ exchange rate is consistent with a huge variety of different monetary policies, some good, some bad. An example of an obviously bad monetary policy consistent with flexible exchange rates is a policy of monetizing government budget deficits. Examples of sensible monetary policies include: monetary targeting (i.e., monetarism); price level targeting; inflation targeting; or a Taylor rule. But each operates very differently and will obviously have different macroeconomic effects. Even fixed exchange rates come in different varieties. Does one fix to the US dollar, the Euro, another currency, or some basket? Does one use a fixed peg, a crawling peg, or a snake? Does one fix simply through a policy of the central bank, or is it supported through a currency board? Does one fix unilaterally, bilaterally, or multilaterally? Or does one fully „dollarize“ or „Euroize“? So the choice between „fixed“ vs. „flexible“ is not well defined. What one should compare is a fixed exchange rate of a specific type against a particular alternative, such as inflation targeting or monetary targeting. That is then a sensible question.<sup>3</sup>

So, if we are to reformulate this old question in a way that is analytically more acceptable, we should ask: Which type of monetary/exchange rate policy is best amongst those available? While it may seem pedantic, and the phraseology is awkward, it is important to insist on referring to „monetary/exchange rate policy“, since, as we shall see, in a vast array of situations, monetary policy and exchange rate policy cannot sensibly be disentangled, so that it is misleading to refer to monetary policy without referring to exchange rate policy or vice versa.<sup>4</sup> In a similar vein, the proper functioning of monetary/exchange rate policy depends as much upon the set of supporting institutions, legal and otherwise, and on the public's perceptions of central bank policy, as it does on the central bank's actual policy rule. David Laidler has referred to this construct as a „monetary order“, a turn of phrase that I find particularly felicitous.<sup>5</sup>

<sup>2</sup> Even this is not strictly true, as we shall see below.

<sup>3</sup> Although, interestingly, many undergraduate textbooks still formulate the question in the old, misleading way, and what they actually compare usually amounts to a fixed exchange rate vs. a fixed money supply.

<sup>4</sup> I shall, however, follow conventional practice, and use „currency regime“ as shorthand for monetary/exchange rate policy, as „currency“ conveniently captures both money and exchange rates.

<sup>5</sup> See, e. g., Laidler (1999). Although, as Robert Mundell has reminded me, this concept goes as far back as the 19<sup>th</sup> century and did not originate with Laidler. He has, however, championed and popularized it in recent literature, so that it seems reasonable to attribute it to him in this more limited sense.

Now if we look at monetary/exchange rate policies that are actually being advocated and seem like viable contenders, we see that quite a few of the policies that dominate discourse in the textbooks and scientific literature are in fact irrelevant. I have in mind in particular „monetarism“ in its strict sense, that is, targeting the money supply, or more precisely one or a combination of particular monetary aggregates (or the rate of growth of such a monetary index). While popular in the 1970s and 1980s, monetarism in this sense has now been abandoned by almost all central banks, and many of those which used to pursue monetary targeting now in fact pursue inflation targeting: Canada, my adopted country, being a case in point.<sup>6</sup>

Likewise, and we shall return to this later, the use of a currency board to manage a fixed exchange rate system has been largely discredited, rightly or wrongly, by the fact that it apparently came a cropper in the case of Argentina – but more on this below. This relates to the hypothesis of the „disappearing middle“ or „hollowing out“, which proposes that examples such as those of Argentina demonstrate that intermediate exchange rate regimes are highly unstable and prone to failure: and that, therefore, the choice has been polarized between a very hard fix on the one hand, preferably full dollarization or Euroization, or a fully flexible exchange rate regime, combined with a monetary policy such as inflation targeting, on the other. Indeed, there is some evidence of this phenomenon, with countries such as Ecuador and El Salvador adopting dollarization, joining Panama which has done so for many years, and countries such as Canada, Chile, the UK, Australia, New Zealand, Norway, etc., adopting more or less explicit inflation targeting. When one adds to this picture the economies of Eastern Europe who are on track for Euroization, and those which have already unilaterally Euroized, such as Kosovo and Montenegro, it does lend some credence, at least *prima facie*, to this hypothesis.

Having thus framed the questions, I turn next to a discussion of what economic theory has to say on this question of „fixed“ vs. „flexible“ exchange rates, now understood in this reformulated sense.

A central construct in this discussion is what has come to be called the „incompatible trinity“ or the „impossible trinity“, which postulates that it is impossible simultaneously to achieve the following three goals: (i) maintain open capital markets; (ii) achieve a domestic target, such as controlling the price level or inflation rate; and (iii) achieve an external target, such as controlling the exchange rate. The argumentation behind this comes directly from the pathbreaking analysis of monetary/exchange rate policy in the short and long run, undertaken by Robert Mundell in the 1960s, which is one of the key contributions

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<sup>6</sup> Freedman (2003) has an excellent discussion of the history and relevant policy debates.



cited by the Nobel committee when it awarded him the Nobel Prize in 1999.<sup>7</sup> This reveals immediately why it is necessary to refer to monetary/exchange rate policy: for, in a world of open capital markets, the two are necessarily intertwined. For instance, in a country such as Canada, which is committed to open capital markets and also to a policy of inflation targeting, the central bank must perforce accept fluctuations in the exchange rate, which it cannot control, as a necessary corollary. Or, on the flip side, a country with a fixed exchange rate, such as Austria during its long period of pegging to the Deutschmark, which was also integrated with the German (and world) capital market, had to accept fluctuations in its domestic inflation rate, over which it had no control, as a necessary corollary. To put it even more starkly, if a country is committed to open capital markets, it is illogical to discuss monetary policy and exchange rate policy separately: for it is possible to fix the exchange rate, or the price level, but not both.

It should be noted that while the concept (albeit not the turn of phrase) of the impossible trinity is often attributed to Mundell,<sup>8</sup> and would seem to flow naturally from his analysis, he himself repudiates this formulation, viewing the assumption of open capital markets as a red herring. As he prefers to put it, a central bank can either fix the quantity of money, and hence the price level (or, equivalently, fix the rate of money growth, and hence the inflation rate), in which case its price, i. e., the exchange rate, must be allowed to fluctuate: or it can fix the price of money, i. e., the exchange rate, and then must allow the quantity of money (or its growth rate) and hence the price level (or the inflation rate) to fluctuate.<sup>9</sup> On this view, then, the presence or absence of open capital markets is irrelevant. While this formulation is extremely controversial, it is in fact not particularly important for current policy debates whether one uses the impossible trinity formulation or the Mundellian alternative, as none of the serious proposals currently debated advocate closing the capital market: so in either case the choice is between controlling the price level or the exchange rate. Having thus established that one must effectively choose between allowing monetary policy to pursue either a domestic or an external goal, or, loosely, choose between a flexible or a fixed exchange rate, we turn next to arguments that have been put forward on both sides of the divide.

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<sup>7</sup> See Royal Swedish Academy of Sciences (1999), the background paper to the prize, also available on the Nobel website <<http://www.nobel.se>>

<sup>8</sup> Including by the Nobel committee in its background paper explaining the rationale for the award of the Nobel Prize, cited in the previous footnote.

<sup>9</sup> Mundell most recently put forward this view at the Western Washington University symposium at which an earlier version of this paper was presented, indeed in response to my discussion of the „impossible trinity“.

The classic argument in favour of flexible exchange rates is that due to the Nobel laureate Milton Friedman.<sup>10</sup> His argument, sometimes called the „insulation“ hypothesis, asserts that, by freeing monetary policy to pursue domestic policy goals, such as targeting the money supply or stabilizing the price level, a flexible exchange rate „insulates“ or „buffers“ the economy from external shocks, by allowing the nominal exchange rate to appreciate or depreciate as necessary, when nominal prices and/or wages are sticky. Under a fixed exchange rate, by contrast, adjustment perforce occurs through an adjustment in domestic output, so that external shocks are transmitted, rather than insulated. It is striking that this argument for flexible exchange rates now defines the conventional wisdom of central bankers, at least of the developed market economies. It is the standard defence used, for instance, by the Bank of Canada, most recently by Governor David Dodge at the G7 Finance Ministers summit in Boca Raton, Florida, where he was reported as saying that „flexible exchange rates are key to a country’s ability to adapt to the global economy“.<sup>11</sup>

When Friedman first expounded this, in the 1950s, the type of policy he evidently had in mind was monetarism, i. e., monetary targeting. As I have previously noted, that type of policy is now unfashionable, having been supplanted by inflation targeting as the flexible exchange rate policy of choice of central banks.<sup>12</sup>

In fact, it is relatively straightforward to recast the Friedman insulation hypothesis in the more modern garb of a comparison between a fixed exchange rate and inflation targeting: exactly this has been done by Nicholas Rowe and myself, in the context of a textbook Mundell-Fleming model, with the addition of a „new Keynesian“ expectations-augmented supply curve, and, equally importantly, with the addition of a carefully articulated lag structure, which models the outside lag of monetary policy on the inflation rate (the monetary transmission mechanism), and the lag in nominal price adjustment by private agents (along the lines of, say, Fischer-type staggered contracts).<sup>13</sup> We find in the model that price level (or inflation) targeting is the best policy, when compared to a fixed exchange rate, in the sense that it does best in minimizing the variance of output

<sup>10</sup> The classic reference is Friedman (1953). A classic early empirical study, finding support for the insulation hypothesis, is Choudhri and Kochin (1980).

<sup>11</sup> SCOFFIELD, H.: G7 Members Bury Currency Hatchet. *Globe and Mail*. Toronto: February 9, 2004, B5.

<sup>12</sup> Freedman (2003) argues this is not merely a „short term fad“ but instead a major policy shift.

<sup>13</sup> As an aside, we find it odd that several recent models of monetary policy make the assumption of no lags in the conduct of monetary policy, so that it is possible, indeed trivially easy, to conduct perfect monetary policy, a possibility only prevented by the assumption of random disturbances to monetary policy, which seems even more bizarre.

around its natural rate.<sup>14</sup> Intuitively, targeting the price level (or the inflation rate), by validating expectations built into the supply curve (or Phillips curve if you prefer), eliminates undesirable deviations of the price level from its expected level, and hence, in expected value terms, keeps the economy at its natural rate of output.<sup>15</sup>

In an interesting recent contribution, Devereux (2004) considers the welfare implications of the „insulation“ role for flexible exchange rates, and concludes that, while the exchange rate may perfectly stabilize output around the natural rate, by eliminating the effect of nominal rigidities (exactly as in Dehejia and Rowe, 2004), this is undesirable from a welfare perspective, because, in his model, the natural rate is inefficient, in that it responds insufficiently to demand shocks. By contrast, a fixed exchange rate, under which monetary policy is procyclical, makes output more volatile, but induces a more efficient mix of consumption between home and foreign goods, and hence may emerge as a second best optimum. He shows, further, that an optimal monetary policy rule dampens exchange rate volatility relative to a free float, and, under certain parameter configurations, requires a fixed exchange rate.<sup>16</sup> Note that the Devereux argument, unlike Dehejia-Rowe, assumes that monetary policy can perfectly stabilize the economy, as it functions without lags. It remains an open question whether the argument survives in a model with a more realistic lag structure, in which monetary policy is necessarily imperfect, *a la* Dehejia-Rowe.

As against this Friedman hypothesis, in its original or more modern versions, there is the equally classic concept of „optimum currency areas“, as propounded by Robert Mundell, another of the pathbreaking contributions for which he was awarded the Nobel Prize.<sup>17</sup> Mundell's argument is essentially that a flexible exchange rate can only do the job that Friedman and others suggest it can do, i. e., insulate the economy, if a currency area coincides with an economic region, that is a region within which factors of production are mobile but between which and the outside world they are not. To best see the intuition behind Mundell's argument, consider, as he did himself, the case of North America, which consists of a political divide which is North-South, but an economic divide which is

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<sup>14</sup> Deviations in the natural rate of output due, say, to supply side shocks, are presumably efficient, and hence output should be allowed to adjust one for one to such shocks, unlike unforeseen shocks, such as demand shocks, whose effects should be minimized by policy.

<sup>15</sup> This statement of our results is a bit loose, as the paper further differentiates between price level and inflation targeting. For details, please see Dehejia and Rowe (2001).

<sup>16</sup> This has the flavour of, but is distinct from, Mundell's risk-sharing argument, discussed below.

<sup>17</sup> Mundell's important writings on international economics in the 1960s are collected in Mundell (1968). The classic reference is Mundell (1961). A thorough and up-to-date treatment of the issues is in De Grauwe (2003).

East-West. Thus, the United States and Canada are each currency areas, but they consist of two economic regions which cut across this national divide. Suppose, for instance, there is a terms of trade shock favourable to manufacturing, located in the East, and detrimental to primary commodities, located in the West. In a world of sticky prices, this would cause an incipient boom in the East and an incipient recession in the West: but there is absolutely no way that an adjustment of the Canada – US exchange rate can insulate against this problem, because each country (currency area) contains two different economic regions that have been asymmetrically affected by the shock.

Flexible rates could only do the job, in such a case, if each country split into two currency areas, Western or Eastern, or better yet if the Western US and Canada had its own currency and the Eastern US and Canada another. But then to the extent that shocks are always to some extent asymmetric and idiosyncratic, by extension one could suggest that every province, or city, or even individual should have its own exchange rate! This obviously leads to a *reductio ad absurdum*, as the argument entirely misses, *inter alia*, the transactions costs of maintaining a separate exchange rate for smaller and smaller economic units. The upshot is that the Friedman insulation argument, or indeed its modern counterparts, can only work perfectly for a country consisting of a single economic region, or a country in whose regions shocks are somehow always synchronized. Otherwise, any insulation that the flexible exchange rate may provide has to be weighed against the potentially destabilizing effects occurring at the regional level and which may be masked in the aggregate data. How important such asymmetric, regional shocks are, in practice, is, of course, an empirical question, and thus the limits of Samuelsonian, qualitative economics have evidently been circumscribed. It is worth noting that Mundell's optimum currency areas concept does not, necessarily, argue in favour of a fixed as against a flexible exchange rate: it all depends on the situation at hand. For instance, in the Canada – US example, with two currencies intersecting two regions, it is an empirical question whether a flexible or fixed exchange rate does best for macroeconomic stabilization in either country. Likewise, it is an empirical question whether future entrants to the Eurozone will do better as a consequence,<sup>18</sup> or, indeed, whether the current members have gained from membership.<sup>19</sup> I shall return to this theme of the intrinsically second best nature of the problem at the end of this paper.

But nonetheless several observations can still be made. The Friedman insulation argument makes most sense for small countries that are heavily specialized

<sup>18</sup> An excellent recent empirical analysis is Crespo-Cuaresma, Fidrmuc, and MacDonald (2003).

<sup>19</sup> The latter question is the subject of a special volume of *Economic Policy*, October 2003.

on one type of economic activity: Norway, with its reliance on oil, comes to mind. And, indeed, this is one of the considerations that weighs on the Norwegians in deciding to remain outside the European monetary union: since if they were to fix to the Euro, or indeed Euroize,<sup>20</sup> the exchange rate could not adjust in response to shocks to the price of oil, which may have destabilizing effects on the economy.

Secondly, fiscal federalism can mitigate, or at least ameliorate, the potentially destabilizing effects on various regions of a large federal state. Thus, in the example of Canada or the US, a terms of trade shock favourable to the East and detrimental to the West, could be partly offset by fiscal transfers from East to West. I shall return to this later as it helps to illuminate the important difference between Europe and the Americas.

An entirely different argument in favour of fixed exchange rates, also due to Robert Mundell (1973a), is that, in the absence of complete financial markets, a fixed exchange rate may permit international risk sharing. This works through reserve pooling and the possibility for more efficient forward contracting, in short, better portfolio diversification. Currency risk, by inhibiting such activity, implies that the destabilizing effects of asymmetric shocks are excessively borne at the national level. What is striking about this argument is that it turns on its head Friedman's „insulation“ hypothesis, by arguing that it is in fact a fixed exchange rate which is the best insulator! Equally striking is that this much more „modern“, forward-looking argument for a common currency, has been almost entirely overshadowed by the more static analysis of the legendary 1961 paper which introduced the concept of the optimum currency area.<sup>21</sup> Cast in terms of the European capital market, Mundell's concern was that excessive volatility of exchange rates would prevent a truly intra-European capital market from emerging. Indeed, in the same volume, Mundell presented a second paper in which he articulated the first blueprint for a European common currency, which is why he has been dubbed the father of the Euro.<sup>22</sup> It is noteworthy that, in the Eurozone, the advent of the single currency has led to the creation of a unified capital market, with its concomitant risk sharing possibilities, exactly as prophetically foreseen, and argued, by Mundell.<sup>23</sup>

<sup>20</sup> Of course, to join the Eurozone formally, Norway would first need to join the European Union, of which it is not a member.

<sup>21</sup> McKinnon (2001) presents an illuminating intellectual history of Mundell's views on common currencies and on the differences between the 1961 and 1973 papers.

<sup>22</sup> See Mundell (1973b).

<sup>23</sup> Hans-Werner Sinn provides the telling example that there now exists a long term capital market in, for instance, Spain, which, presumably due to currency risk, did not exist before the creation of the euro.

I turn next to another, microeconomic, argument in favour of fixed exchange rates, which has been put forward, most recently and forcefully, in the case of Canada, by economists such as Richard Harris, Thomas Courchene, and Herbert Grubel.<sup>24</sup> This can be called the „transactions cost“ argument. It argues that a fixed exchange rate, by eliminating uncertainty about exchange rate differentials, reduces transactions costs faced by firms engaging in international trade and foreign investment. Put another way, in the presence of a fluctuating exchange rate, firms need to „hedge“ against the possibly damaging effects of unforeseen fluctuations in the exchange rate, by taking out forward foreign exchange contracts and the like: but this is costly and uses up real resources. On this view, fixing the exchange rate, and thereby eliminating this particular source of uncertainty, may serve to stimulate trade and investment, and hence the growth rate of output itself, to the extent that these are two of its chief engines. A further refinement of this argument, put forward by Herbert Grubel, argues that fixing the exchange rate, by reducing risk premia (which cause deviations between domestic and world interest rates via the uncovered interest parity relationship), can provide a further stimulus to investment and growth, by bringing domestic interest rates more in line with (presumably efficient) world interest rates.<sup>25</sup> While the microeconomic foundation of the argument is theoretically sound,<sup>26</sup> what remains highly contested is its empirical relevance. Despite a plethora of empirical analysis, including some highly noted work by Andrew Rose (e. g., Rose, 2000), it is fair to say that the jury is out on how important the transactions cost effect is in practice.

A related argument is what may be called the „endogenous productivity“ argument, very prevalent in popular and media discussions in Canada. On this view, an artificially devalued currency, by boosting competitiveness, allows domestic firms to remain inefficient, the low value of the currency masking low productivity. Fixing the currency at its equilibrium level, or better yet dollarizing, by eliminating this artificial advantage, will force firms to become more efficient à la Schumpeter „creative destruction“ or Leibenstein „X-efficiency“ lines, and hence raise real incomes in the long run. While superficially appealing, and consistent with the observed productivity gap between US and Canadian workers (on the order of 15 – 20 percent), the argument is very difficult to place on a sound scientific footing, both in terms of theory and empirics.

<sup>24</sup> See, e. g., Courchene and Harris (1999) and Grubel (2003).

<sup>25</sup> This additional refinement to the argument was put forward by Herbert Grubel during the Western Washington University symposium previously mentioned.

<sup>26</sup> Even this is not completely clear, as in certain models increased uncertainty can paradoxically raise the rate of return and hence be good for investment and growth.



Reference to the work of Harris, Courchene, and Grubel naturally gives rise to yet another argument, which is the comparison of a potential North American Monetary Union (NAMU) to the European monetary union of the Eurozone. Harris et al have argued that a NAMU is needed as a complement to the already existing North America Free Trade Agreement (NAFTA), and they point to the European Union, which is both a customs union and a monetary union, as an exemplar. But the example of the EU is fraught and problematic as a point of reference for the Americas: in particular, it is obvious but essential to note that the EU is far more than a customs or monetary union, although those are two of its most important and visible components. Apart from these, it is as much, or even moreso, an exercise in political integration of the European continent, of which the economic elements are only a constituent part. Indeed, some of the staunchest advocates of European integration view the economic elements as merely a necessary and logical stepping stone to an eventual political unification of the continent. On this view, then, the merits of (say) the European common currency lie as much in its political impact as its potential economic effects: or, to put it even more strongly, the truly committed „Europhile“ would support the common currency even if it could be shown convincingly (which it has not) that it has proved economically harmful, in much the same way that no committed American patriot would support the breakup of the US dollar zone if it could be shown that it would be better to have (say) Western and Eastern US currencies.

From this perspective, it is evident how huge is the gulf between the preconditions for politico-economic integration in Europe as against the Americas. Europe has in the European Union a set of transnational institutions that span economic, political, and judicial spheres amongst others, and include a common market, common currency, (arguably) a fledgling fiscal federalism, and (in the case of the Schengen countries, a subset of the EU) borderless travel. NAFTA, by contrast, is not even a customs union: its members maintain independent external tariffs, which necessitate the complex, non-transparent, and costly rules of origin required to prevent transshipping through the lowest tariff country. The NAFTA region in addition is characterized by countries of very widely differing income levels and institutional development, if one compares the US and Canada against Mexico, or other potential joiners in Latin America.<sup>27</sup> All of this is merely to suggest that one must exercise great caution in looking to the EU as an exemplar for monetary integration, or indeed economic integration of any form, in the Americas or any other region of the world.

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<sup>27</sup> It is certainly true that such gaps exist in the EU itself, but of not nearly comparable magnitude: the gulf between the richest and poorest EU state is a fraction of that between the US and Mexico, and will remain so, even after the upcoming accession round.

I turn next from strictly economic, to what may be called political economy, arguments for and against fixing the exchange rate. The basic political economy argument, a version of which has been put forward by Mundell,<sup>28</sup> runs as follows: In economies with poor monetary management, the outcome under flexible exchange rates may be much worse than under a credibly fixed exchange rate. Such poor outcomes can include disastrous situations such as hyperinflations. Consider the typical Latin American hyperinflation story. Governments need money, and can only raise it in three ways: raise taxes, issue debt, or print money. For a country in which no one particularly likes to pay taxes, and which is not creditworthy, seigniorage, that is, revenue from the „inflation tax“, is often the only substantial source of government revenue. But governments quickly reach the peak of the Laffer Curve of seigniorage revenue, and, as they slip past the peak, real revenue drops as money creation accelerates: the result is hyperinflation. This basic scenario fits (say) Bolivia as well as it does any other Latin American hyperinflation.

The argument then runs that, in such a country, fixing the exchange rate is a politico-economic mechanism for generating credibility and commitment to good monetary policy. This presupposes as well that fiscal policy is consistent with monetary policy, which can be equally problematic. But, if successful, and if the central bank can achieve a sufficient degree of autonomy so that it is not forced to monetize government deficits, fixing the exchange rate may be a route towards macroeconomic stability, as much for its political as its directly economic effects. Thus Panama, for instance, which has been dollarized for most of the 20<sup>th</sup> century, has had more or less the same inflation rate as the United States during the entire period:<sup>29</sup> which gives it the best inflation record in the Americas, after the United States itself.

But political economy arguments are not necessarily all in favour of a fixed exchange rate. It is worth noting the mere fact that, as Mundell puts it, „All money is political.“<sup>30</sup> Fixing one's exchange rate is often perceived by the public as a loss of economic, and even of political, sovereignty. This is true *a fortiori* in the hardest form of a fixed exchange rate, currency adoption, e. g., dollarization, in which one gives up one's national currency and replaces it with the currency of the country one is fixing to. So, rather than a picture of Queen Elizabeth II on

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<sup>28</sup> See Mundell (2002).

<sup>29</sup> As a matter of economic theory, inflation rates can diverge between a country that fixes to another currency and the country it fixes to due to differences in the constituents of the basket used to construct the price index, and the presence of nontraded goods, the latter through the so-called Balassa-Samuelson effect. But, in the long run, more or less, a country will get the inflation rate of the country it is fixing to.

<sup>30</sup> See Mundell (2002).

the currency (as in the Canadian \$20 bill), there will be a picture of Andrew Jackson (as in the US \$20 bill). How significant is this likely to be? Probably not very, as the European case proves: Italians, despite some pangs, were quite willing to give up portraits of Vincenzo Bellini and Maria Montessori for the greater stability of the euro as compared to the *lira*.

But there is a real issue here, of sovereignty and the related concept of accountability, that lies behind the political symbolism. If Canada, for example, were to adopt the US dollar, Canadian monetary policy, and the Canadian inflation rate, would effectively be set by the Federal Reserve Board in Washington, DC. Apart from any economic arguments for or against this situation, it grates against the instincts of a people inhabiting a system founded upon the accountability of elected officials in a democratic polity. It is true that the Governing Council of the Bank of Canada is not directly accountable to the Canadian people, but they are indirectly, through the government of the day, which exists due to a popular mandate. But the Canadian electorate does not, and could not, directly or indirectly, affect the policies of the Fed, which is in no way accountable to it. This is a point that has been stressed in some of the recent writings of David Laidler (e. g., Laidler, 2002).

It is applicable much more to the case of currency adoption than of currency union: because, in the latter case, each constituent of the union does have representation and there is accountability, albeit less so than in the case of a national currency. Thus, for instance, Italians do have a say in the functioning of the European Central Bank, through the Italian representation on its governing body: which Canada almost certainly will never have, on the Fed, if it unilaterally adopts the US dollar, or even if it enters into a currency union with the United States.

I turn now from discussions of fixed vs. flexible exchange rates in general terms towards a more nuanced look at the advantages and disadvantages of specific varieties of fixing. Prior to the financial meltdown in Argentina, it had been thought that a currency board was a far superior mechanism for fixing the exchange rate than merely a peg by the central bank. A pegged exchange rate, particularly one which allowed for a fluctuation band, was prone to speculative attack, and consequent financial crisis, as evidenced by the breakdown of the original European Exchange Rate Mechanism in the early 1990s. By contrast, a currency board, with its more stringent constitutional status, and the fixed ratio of foreign reserves to the domestic monetary base, was thought proof to such speculation. But as the case of Argentina in 2000 showed, or apparently showed, a currency board system is still prone to a bank run, with the added dilemma of the loss of the lender of last resort function of the central bank.

It would appear, then, that this particular argument has lost much of its bite, with the „disappearing middle“ hypothesis instead suggesting that true credibility and commitment can be „bought“ only by an even harder fix such as currency adoption. We turn to this option next. But it is important to note that the claim of failure for the currency board option, and hence its relegation from the realm of possible alternatives, rests almost entirely on its apparent failure in Argentina. This, indeed, is the conventional wisdom. However, as Steve Hanke has persuasively argued,<sup>31</sup> it is unfair to dismiss the currency board option based on the Argentine episode, essentially because Argentina was not, in reality, running a currency board, and this was particularly true in the year before its collapse. They did not adhere to the required ratio of foreign reserves to domestic high-powered money, and even some Argentine assets, which were US dollar denominated, were counted as part of the stock of foreign reserves, which is highly problematic. The real story in Argentina was the fiscal imbalance, which led to an unsustainable debt to GDP ratio, that markets eventually detected and penalized, with the result that the system collapsed.

One question that does remain, though, concerns the the appropriate exit from a currency board to an alternative regime.<sup>32</sup> When the Argentine currency board was established, the *peso* was deliberately undervalued, to allow for 2 – 3 years of excess inflation, via Balassa-Samuelson-type effects, so that an equilibrium could be reached in, say, year 4. Beyond that, the built-up excess inflation implies that the pegged exchange rate will be overvalued, and, unless a credible exit strategy is found, markets will react to the overvaluation, and the system will collapse. Argentina had no such exit, and, in tandem with the fiscal imbalance, a crisis was inevitable. However, as Hanke argues, it is unfair to blame this crisis on the currency board regime per se.

I turn now to the hardest of the fixed exchange rate regimes, currency adoption. Wholesale adoption of a foreign currency, such as the US dollar or Euro, is costly to implement and thereby automatically gains credibility: it is also costly to reverse, which generates commitment. But these very costs, which are possibly beneficial politically, pose potential economic problems. In particular, there is the seigniorage cost of currency adoption: it uses up real resources to replace the entire stock of domestic currency with the currency that one is adopting, and one foregoes any additional flow of seigniorage into the indefinite future – unless the country that one is fixing to is willing to share seigniorage, which the

<sup>31</sup> See, for instance, Hanke (2003), and references cited therein.

<sup>32</sup> This paragraph draws upon a monograph on currency boards, still in preparation, by Helge Berger and Holger Wolff, to be published by MIT Press, as discussed at a CESifo workshop in Munich in February 2004.

US Fed or European Central Bank are most unlikely to do vis-à-vis external unilateral adopters. This again reveals the superiority of a common currency over a currency adoption, as in the former case, such as with the European Central Bank, there is a mechanism for the distribution of seigniorage amongst members. While seigniorage may not be especially important for developed market economies, it remains so for many developing countries, and losing it poses a problem for the option of currency adoption.

Reviewing the various arguments that I have examined in this paper, the reader will have been struck by the evident lack of consensus in the theoretical literature. Is this simply because I have been insufficiently thorough in looking at all possible arguments, or insufficiently critical of one or the other set? This, of course, is possible, but I do not think can explain the lack of consensus. Rather I would like to suggest a much deeper reason for the lack of a ringing affirmation of one particular policy regime: that being the intrinsically second best nature of the problem at hand. In a world with three big currency zones, the US dollar, the Euro, and the Japanese yen, if a country decides to fix against one, it will necessarily float against the others. This is true even if it decides to fix against a basket, as does, for example, Singapore, because no basket can eliminate the transmission of disturbances caused by fluctuations amongst the exchange rates of constituent elements of the basket. The policy choice involved for a country in such a situation is necessarily second best in nature, since no policy can eliminate all fluctuations mediated through exchange rates. As the celebrated theorem of the second best, promulgated by Richard Lipsey and the late Kelvin Lancaster, attests, there is no general presumption on the structure of the second best solution when the first best is, for whatever reason, unavailable. I should hasten to add that this second best theorem should not be (although it has often been by ill-informed analysts) used as a bludgeon, silencing discourse and generating a nihilistic and pessimistic sense of the impossibility of qualitative economic statements. Rather, it should be an admonition to the careful empirical scrutiny and sound policy judgement that are necessary if one is to bridge the gap from theoretical possibility to real world relevance.

In this vein, I would venture that the foregoing survey of the literature does suggest a few lessons which are likely to be „second best proof“. The first is that a common currency, for both economic and political reasons, is likely to work better than outright currency adoption: but some of its very advantages, such as the sharing of seigniorage and common control, make it difficult to realize in practice: the European monetary union being the signal exception to date. Second, for small countries, with histories of poor monetary management and which are heavily dependent on trade, investment, and tourism flows with another, larger

country, and which may also be in the geopolitical orbit of that larger country, currency adoption may well be a sensible policy. Panama has done well by remaining dollarized, and its prospects are highly unlikely to improve if the Panamanians decide to run their own monetary policy. The same is probably true for the other small Latin American countries that are dollarizing, and for the Caribbean countries, such as the Bahamas and Bermuda, which maintain strong pegs at parity against the US dollar, as well as for several of the smaller, macro-economically weaker Eastern European economies which are not in the first wave acceding to the European Union, and which may well be better off by Euroizing anyway, and if necessary, unilaterally at some point. Indeed, Kosovo and Montenegro have done so already, without the support, but presumably with the tacit consent, of Brussels and Frankfurt. Finally, for larger, relatively diversified, developed market economies with a good inflation record and a recent history of sound monetary management, maintaining an independent monetary policy which pursues inflation targeting as the nominal anchor is likely to be the best amongst available options. This group of countries probably includes Canada, Australia, and Norway, and possibly the United Kingdom, but does not include the small economies of Central and Eastern Europe currently in the process of accession to the European Union. For these smaller economies, such as Slovakia, the salient policy challenge is how best to manage the transition to eventual, *de jure* Euroization, not on how to stay out.

Reflecting specifically on the case of the new accession countries to the EU, which join May 1, 2004, and putative new members, such as Bulgaria, Romania, Croatia, etc., some additional observations are in order. What makes the policy problem unique for these countries is that there is a precise and well-defined exit from the transitional regime, namely, eventual full Euroization and membership of the EMU. What remains uncertain is the choice of intermediate regime and the exact timing of EMU entry. These features of the problem make currency boards a potentially very appealing transitional regime, since they avoid the difficulty of finding a credible exit strategy (which bedeviled, for example, Argentina). The exit strategy is credible by construction, and all that remains is to determine the optimal timing. Amongst the first wave of accession countries, Estonia, which has a currency board, should have a relatively smooth transition to EMU membership, assuming that overall macroeconomic management remains sounds. Slovakia, which has chosen instead the path of a managed float under ERM II, will have the tricky issue of minimizing the potentially destabilizing effects of exchange rate volatility in the run-up to membership. Amongst putative future members, the case of Bulgaria comes naturally to mind. Following monetary mismanagement, and hyperinflation, the Bulgarians set up a currency



board in July 1997, pegging the *lev* to the Deutschemark, at parity. This was transformed into a peg to the Euro, when the latter came into being, which accounts for the present exchange rate of approximately 2 *levas* to the Euro. This currency board has worked remarkably well, and will surely factor positively into Bulgaria's accession negotiations with the European Commission. Similar arguments may be made for countries yet further away from EU membership, but who aspire to join eventually. Ukraine, for example, which has suffered hyperinflations and macroeconomic instability, due in large part to poor monetary management under various floating regimes, may find a currency board pegged to the euro an attractive entrée to eventual accession. My student, Katerina Tarasova, has made just such an argument, based on a careful case study analysis of current and putative future accession countries in Eastern Europe.<sup>33</sup>

Having looked at second best considerations and their practical policy relevance, I will, perhaps, surprise the reader by turning as I conclude to Utopian considerations: not so surprising, after all, for an economic theorist. There are two very different, indeed polar, visions of monetary/exchange rate policy Utopia that I would like to leave you with. The first comes from the visionary Robert Mundell: „A global economy requires a global currency.“<sup>34</sup> Unpacking all of the content of this lapidary expression would require a second essay. Suffice it to say that, on this Mundellian view, the creation of a global unit of account is necessary if the world is to enjoy the full fruits, and ameliorate the blights, of globalization, which would restore to the world the type of monetary order and high level of economic stability it enjoyed under the Bretton Woods system, or during the gold standard, or perhaps even, reaching back almost atavistically, to Roman times.

The second, perhaps more prosaic but nonetheless potent, vision is that of a world of individual currencies, each pursuing its own monetary policy, such as inflation targeting, linked through a series of flexible exchange rates, and perhaps characterized by fiscal policy coordination amongst countries, mediated by the G7 and the IMF.<sup>35</sup> On this view, it is such a global policy regime that will be most conducive to long run prosperity. While I am not aware that he has articulated the view in this way, I would attribute such a vision to, say, David Laidler, or, more hesitatingly, Stanley Fischer, who professes to eschew the grand or architectonic view of the international monetary system, but if pressed, would presumably sign on to this rather than the other Utopia.

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<sup>33</sup> See Tarasova (2003).

<sup>34</sup> See Mundell (2002), in which he attributes this statement originally to Paul Volcker.

<sup>35</sup> Cohen (2004), in a fascinating recent contribution, emphasizes the importance of fiscal policy, both at the national level, and internationally coordinated, in a world of globalized currencies.

I leave it to the reader to decide which vision he finds the more attractive. One thing is certain: the study of international monetary economics, and in particular the choice of an appropriate currency rate regime, will remain a central fascination of economics for years to come.

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