Abstract

Several countries in eastern Europe may accede to the European Union in about two years time, making them candidates to join Europe's single currency from 2006. Some well-known economists have advocated that countries in eastern Europe adopt the euro now either unilaterally or by prior arrangement with the EU. Such official currency substitution is typically termed "dollarisation" or "euroisation", and is the most extreme form of a hard peg currency regime. This paper brings together perspectives from a conference "Dollarisation and Euroisation: Viable Policy Options?" held at the LSE in May 2002. We discuss a number of issues associated with dollarisation or euroisation, including: the credibility of the monetary regime, the implications for domestic inflation, the importance of other macroeconomic policies, the reversibility of hard peg currency regimes, the outlook of the reserve currency issuer, and the broader context in which dollarisation or euroisation is pursued. Finally, we address some particular issues associated with euroisation for EU accession countries. Euroisation prior to EU accession may help to forestall a speculative attack, but it must be implemented in a way that is consistent with the Maastricht Treaty and does not impede progress toward EMU membership.

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Ellen E. Meade is a member of the Centre for Economic Performance, London School of Economics. Nikolas M**h**ller-Plantenberg is a Tutorial Fellow in Economics, Department of Economics, LSE. Massimiliano Pisani is a member of the Centre for Economic Performance, London School of Economics.

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Exchange Rate Arrangements in EU Accession Countries: What Are the Options?

Ellen E. Meade, Nikolas Müller-Plantenberg, and Massimiliano Pisani[*]

Some countries in eastern Europe may accede to the European Union in about two years time, making them candidates to adopt Europe's single currency from 2006. Unlike Great Britain, which must give prior approval to participation in the euro via a public referendum, countries in eastern Europe will not be able to opt out of monetary union. The question facing them is *when*, not *if*.

Several well-known economists - including Willem Buiter of the European Bank for Reconstruction and Development and Jacek Rostowski of Central European University, in remarks at a recent LSE conference - have advocated that countries in eastern Europe should adopt the euro *now* either unilaterally or by prior arrangement with the EU (this second option is often referred to as "consensual euroisation"). In this case, the euro would circulate in parallel to the domestic currency, or perhaps replace it altogether. In any event, this action would require authorities to fix the value of the domestic currency in terms of the euro, rather than participating in the ERM2 target band arrangement for two years before entering EMU.[1]

Euroisation is not particularly new. It is a form of official currency substitution, in which a reserve currency replaces the domestic legal tender. Economists generally regard official currency substitution as the "hardest" form of pegged exchange rate regime, one that is more difficult to reverse than a currency board. Such official currency substitution has become known as "dollarisation," even if the currency chosen to replace the domestic currency is the euro or some reserve currency other than the US dollar.

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[*] This article brings together perspectives from the conference "Dollarisation and Euroisation: Viable Policy Options?" hosted by the LSE on May 24-25, 2002. The conference programme and papers are available on: http://cep.lse.ac.uk/events/conferences/dollarization.

[1] The Maastricht Treaty requires participation in the exchange rate mechanism for two years prior to evaluation for entry into monetary union. However, in the cases of Finland, Italy, and Greece, this requirement was interpreted flexibly. Although these three countries participated in the ERM (or in its successor arrangement, ERM2) for a full two years prior to entry into monetary union, the evaluation of their compliance with the Treaty's convergence criteria took place before the two-year mark.

Andorra, Monaco, San Marino, and Vatican City already use the euro as their domestic currency (the euro replaced the legacy currency that was already in use). In eastern Europe, Kosovo and Montenegro also have euroised. A number of other economies use an external currency for their legal tender (see Table 1). From this table two striking facts emerge: first, most of the economies "dollarised" many decades ago; and second, population in these economies is very small, ranging from 56 inhabitants on Pitcairn Island to 3.5 million in Puerto Rico! Before the adoption of the dollar in Ecuador (population 12.9 million) and El Salvador (population 6.1 million) in 2000 and 2001, respectively, the average population in dollarising countries was 450,000. Dollarising countries have traditionally been miniscule in economic terms, with strong trade ties to the reserve currency country and relatively undeveloped domestic financial markets. In fact, size may an important determinant of success with respect to "dollarisation."[2] If this is the case, the debate in 1997 over dollarisation in Argentina, the recent adoption of the dollar in Ecuador and El Salvador, and the calls for adoption of the euro in transition to EU membership can be seen as fundamentally different in that these countries are all much larger than the traditional dollariser.

A large academic and policy literature was written in the late 1990s motivated by proposals that Argentina should replace its then-successful currency board, which linked the peso one-to-one with the US dollar, with a dollarisation arrangement. A primary focus in this literature was on the appropriate exchange rate arrangement when financial liabilities are denominated in a reserve currency while financial assets are denominated in the domestic currency. Large "liability dollarisation" makes a country vulnerable to adverse balance sheet effects arising from changes in the exchange rate. Liability dollarisation can be seen as reducing the range of values of the exchange rate that domestic authorities can tolerate.[3] Berg and Borensztein (2000) provide a good summary of the pros and cons of official currency substitution in the context of the Argentine debate.

Mendoza (2002) sees the fundamental advantage of dollarisation in terms of "institutions substitution," a process by which dollarising countries "borrow" the monetary policy institutions of the reserve currency country. He regards dollarisation as superior to a currency board largely because, under dollarisation, the domestic central bank is "replaced" with the central bank of the reserve currency issuer.

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[2] Lars Jonung made this point in his discussion of Jeff Frieden's conference presentation.
[3] Eduardo Levy Yeyati made this latter point in his conference presentation.

In the best circumstances, dollarisation eliminates currency risk and possibly reduces default risk. The extent of these gains depends, of course, on how irreversible dollarisation is perceived to be. Ideally, credibility gains from "institutions substitution" will substantially narrow the spread on dollar liabilities issued by the dollarising government relative to those issued by the US Treasury, producing lower domestic interest rates.

The traditional optimal currency area theory of Mundell advocates fixing the nominal exchange rate between countries when there is a high degree of *real* integration as defined by a strong trading relationship, exposure to common shocks, and highly mobile labor and capital. Thus, the focus in the dollarisation literature on financial linkages and the role of credibility and reputation in the choice of a monetary regime provides a different rationale for sharing a common currency. Buiter has suggested this approach sets out a "new" theory of optimal currency areas.

Key to successful dollarisation, however, is that other economic policies must be appropriate. In particular, dollarisation is a commitment by the monetary authority only and does not guarantee a responsible fiscal policy. Over the short-term, a lax fiscal policy will erode the credibility gain from dollarisation by putting upward pressure on domestic interest rates. Over the longer term, excessive deficits may undermine the monetary regime itself, by raising the incentive to monetize government debt. For example, credibility gains from Argentina's currency board were high in the early years following its adoption in 1991, but eroded over time as the government failed to consolidate its fiscal policy. In a recent monograph, Mussa (2002) provides an interesting discussion of Argentina's downfall.

Several econometric studies have shown that hard pegs lead to better inflation performance. Ghosh, Gulde, and Wolf (2002) find that, keeping other factors constant, inflation is 10.5 percentage points per year lower under a hard peg[4] than under a floating exchange rate. Of these 10.5 percentage points, 4.5 percentage points derive from lower money growth in the pegged regime (the "discipline effect"), while the remaining 5.5 percentage points represent the credibility gain associated with the hard peg regime (the "confidence effect"). As the methodology makes no distinction between pegs maintained for a series of years and a series of pegs sustained for a single year, the authors are not able to say anything about whether the discipline or confidence effects associated with the peg diminish over time.[5]

[4] Hard peg regimes include currency boards in addition to dollarisation.
[5] Peter Kenen made this point in his discussion of Holger Wolf's conference presentation.

The literature on dollarisation generally does not distinguish between cases where it is pursued in isolation, or is part of a broader integration agenda with the country that issues the reserve currency. In practice, there is more than one way to dollarise or euroise. During the 1997 debate, Argentina's central bank president Pedro Pou regarded dollarisation not as one single policy choice but as a range of policy options from unilateral to full monetary union.[6] With unilateral dollarisation or euroisation, the country adopting the reserve currency asks nothing of the issuer, whereas broader forms of dollarisation or euroisation involve some set of on-going obligations for the issuer of the reserve currency and thus require mutual agreement by the two countries to a treaty or bilateral arrangement.

Argentina's flirtation with dollarisation in 1997 stood in the context of a monetary treaty with the United States that would have provided for some sharing of seignorage revenue to fund a lender-of-last-resort facility. The most cooperative form of arrangement is a monetary union such as the euro area, in which participating countries share a currency and decision-making power.

Dollarisation and euroisation raise important issues about the degree of responsibility or commitment of the currency issuer towards the adopting country. When the policy is not unilateral, the issuer has some stake in the success (although the degree of this stake depends on the exact requirements of the arrangement). The commitment of the issuer can also serve to "bind in" the dollarising or euroising country, particularly if this commitment involves several steps that will lead ultimately to further integration between the two countries. Thus, dollarisation in Ecuador, which was a unilateral undertaking in response to an economic and financial crisis, differs from dollarisation in El Salvador, which was part of a broader trade and integration strategy with the United States. And euroisation in Andorra, Monaco, San Marino, and Vatican City differs fundamentally from potential euroisation in EU accession countries because the latter countries seek eventually to join monetary union and participate fully in the monetary policy decision making of the European Central Bank.[7]

Caroline Atkinson has stressed that debates over dollarisation often ignore the perspective of the reserve currency issuer. In the Argentine case, US authorities opposed a monetary treaty for fear that it would ultimately impose broader responsibilities, or at least generate a perception that the US was playing a role in the supervision of Argentine banks, acting as lender of last resort, and taking the Argentine economy into account when setting US interest rates. Argentina's proposed monetary treaty, in fact, provided only for the US to

[6] Andrew Powell made this point at the conference.
[7] Christian Thimann made this point at the conference.

share in seignorage revenue and did not involve broader obligations. Despite that, the view of US authorities was that any treaty, no matter how narrow in scope, was a political symbol that could serve to create obligations for the currency issuer in times of crisis. The current opposition of European policy officials to euroisation in EU accession countries could owe to the fear that European authorities would be held accountable in times of financial turmoil, even for the results of unilateral decisions. Both US and European authorities recognize that dollarisation or euroisation is part of a broader set of policies - in the US case, officials implicitly discourage dollarisation because they do not want any policy linkage with the adopting country, whereas in the European case, officials discourage early euroisation because they want only the full linkage that will be provided by monetary union.

If dollarisation is to provide major credibility gains, it must be widely viewed as irreversible, as an irrevocable commitment to replace the domestic legal tender with the reserve currency. However, the reversal of dollarisation is not particularly difficult to implement. For instance, Liberia de-dollarised in 1998 after 54 years using the US dollar as a parallel domestic currency. In Argentina, to take another example, the number of parallel currencies in circulation increased dramatically as its recent crisis deepened and the country abandoned its currency board (see Table 2). Thus, linking the currency decision to a broader integration strategy can help to make dollarisation appear less reversible and enhance its credibility.[8]

Buiter and Grafe (2002) and Bratkowski and Rostowski (2002) have advocated early euroisation in accession countries as an interim exchange rate arrangement during the transition to EMU. A target band system, they argue, is crisis-prone and euroisation would be the best regime to forestall a speculative attack. European officials do not see the ERM2 as crisis-prone, because of the wide bands around the central rate. (However, Truman, 2002, argues that target band arrangements are vulnerable to speculative attack, and that the 1992 crisis in the ERM which led to the ejection of the pound and the eventual widening of the intervention bands was the first of the international financial crises during that decade.) At this point, financial markets are betting that the candidate countries will join the EU, so the credibility gains associated with a move to euroisation would be limited.[9] However, euroisation might be helpful in limiting financial market speculation in the event of a long and unexpected delay in the accession process.

[8] David Stasavage emphasized the reversibility of dollarisation in his discussion of Levy Yeyati's conference presentation.

[9] Michael Marrese made this point in his conference presentation.

According to the Maastricht Treaty, the Council of Ministers must approve the rate of conversion into the euro. That requirement would appear to rule out unilateral euroisation, in which an accession country would select its own conversion rate. However, Buiter and Grafe contend, there are two Treaty-consistent options: (1) joint selection by the Council and the accession country of the rate at which the domestic legal tender is converted into euros (so-called "consensual" euroisation); or (2) a currency board arrangement in which the euro is legalized as a parallel currency for use alongside the domestic currency of the accession country. Either way, such use of the euro in the run-up to accession would appear to make some sense as a transition measure to discourage speculation, so long as it is implemented in the context of sound macroeconomic policies and is not in clear violation of the Maastricht Treaty.

An important aspect of fixing the nominal exchange rate prior to EMU entry is that the Maastricht Treaty inflation criterion will become more difficult to achieve. More rapid productivity growth in the traded goods sector in accession countries (relative to countries in the euro area) will lead to real exchange rate appreciation – the so-called Belassa Samuelson effect. If the nominal exchange rate is fixed through consensual euroisation or a currency board, then real appreciation arises through more rapid inflation in the accession countries relative to the euro area. Studies suggest that annual inflation in accession countries may be boosted by 1 to 3-1/2 percent owing to Belassa-Samuelson effects. Rostowski has commented that, in order to achieve the Treaty's inflation criterion, accession countries will need to experience a brief recession. Others are betting that the Treaty's inflation criterion will be adjusted to take account of Belassa-Samuelson effects. Such an adjustment could be made in the Acquis Communautaire that sets out the terms of accession for each accession country.

Interestingly, a discussion about the pre-designation of conversion rates arises in the context of a UK referendum on the euro. Richard Layard of the CEP and others claim that a referendum would need to specify the rate of the pound's conversion into the euro. This would appear to require the British government to pre-negotiate the pound's conversion rate with the Council of Ministers. In the British case, there is no interest in fixing the pound in a currency board or through euroisation before EMU entry. Rather, specification of an entry rate is intended to allay fears of overvaluation. Obviously, any prior negotiation of a conversion rate - either for accession countries or the UK - would set an important precedent.

Table 1
Economies Using Another Currency as Domestic Legal Tender

Country	Population	Political Status	Currency used	Since
Andorra	63,000	Independent	Euro (Frenc franc and Spanish peseta since 1278)	1999
Channel Islands	140,000	British dependencies	pound sterling	1797
Cocos Islands	600	Australian external territory	Australian dollar	1955
Cyprus, Northern	180,000	de facto independent	Turkish lira	1974
Greenland	56,000	Danish self-governing region	Danish krone	Before 1800
Guam	150,000	U.S. territory	U.S. dollar	1898
Kiribati	80,000	Independent	Australian dollar	1943
Liechtenstein	31,000	Independent	Swiss franc	1921
Marshall Islands	60,000	Independent	U.S. dollar	1944
Micronesia	120,000	Independent	U.S. dollar	1944
Monaco	30,000	Independent	Euro (French franc since 1865)	1999
Nauru	8,000	Independent	Australian dollar	1914
Niue	2,000	New Zealand self-governing Territory	New Zealand dollar	1901
Norfolk Island	2,000	Australian external territory	Australian dollar	Before 1900
Northern Mariana Islands	48,000	U.S. commonwealth	U.S. dollar	1944
Palau	18,000	Independent	U.S. dollar	1944
Panama	2.5 m.	Independent	1 balboa = 1 US $; uses dollar notes	1904
Pitcairn Island	56	British dependency	New Zealand and US. dollars	1800s
Puerto Rico	3.5 m.	U.S. commonwealth	U.S. dollar	1899
Saint Helena	6,000	British colony	pound sterling	1834
Samoa, American	60,000	U.S. territory	U.S. dollar	1899
San Marino	24,000	Independent	Euro (Italian lira since 1897)	1999
Tokelau	1,600	New Zealand territory	New Zealand dollar	1926
Turks and Caicos Islands	14,000	British colony	U.S. dollar	1973
Tuvalu	10,000	Independent	Australian dollar	1892
Vatican City	1,000	Independent	Euro (Italian lira since 1929)	1999
Virgin Islands, British	17,000	British dependency	U.S. dollar	1973
Virgin Islands, U.S.	100,000	U.S. territory	U.S. dollar	1917
Ecuador	12.9 m.	Independent	U.S. dollar	2000
El Salvador	6.1 m.	Independent	U.S. dollar	2001
Kosovo			Euro	
Montenegro			Euro	

Source: Levy Yeyati and Sturzenegger (2002).

Table 2
Argentina's Quasi-Monies in Circulation
(Millions of Argentine pesos)

	Denomination	December 2001	March 2002
Federal government	Lecop	1,039	2,649
Provincial “own” securities		1,627	2,591
1. Buenos Aires	Patacones	822	1,591
2. Buenos Aires, City	Porteno	--	--
3. Catamarca	Ley 4748	26	31
4. Chaco	Quebracho	50	100
5. Cordoba	Lecor	200	300
6. Corrientes	Cecaror	193	185
7. Entre Rios	Bonfe	54	148
8. Formosa	Bocanfor	33	50
9. Jujuy	Patacon	--	6
10. Mendoza	Petrom	--	--
11. La Rioja	Debt Cancelation	8	8
12. Tucuman	Bocade	98	173
Quasi-monies:			
Total		2,666	5,240
As percent of pesos in circulation		23.2	45.6

Source: De la Torre, Levy Yeyati, and Schmukler (2002).

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