Factors to be Considered in Assessing a Country's Readiness for Dollarization

by

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As many emerging market economies are considering whether they should formally dollarize, it is worth reconsidering the various criteria to assess a country's readiness to dollarization.

Monetary, financial and fiscal factors

- **Policy credibility**

Countries where policy makers have historically suffered from a lack of policy credibility, especially in the monetary area, may benefit from the discipline imposed by a rule-based monetary regime such as a currency board or dollarization. The inability of discretionary policy makers to credibly commit to monetary stability and discipline has been suggested as one of the strongest arguments in favor of the rigid monetary discipline imposed by dollarization. There are sometimes partial exceptions: monetary unions such as EMU resulted more from the desire to create stronger economic and political ties than just the need to provide monetary and inflation stability. But emerging market economies that desire to import the credibility of a low inflation anchor country may consider dollarization as a strong discipline device.

The lack of policy credibility can be measured by looking at a number of variables such as: the country's experience with inflation; a past history of exchange rate instability and crises; the existence of previous financial and banking crises; the degree of unofficial dollarization; the country's inability to borrow long-term in domestic currency; the country's fiscal record; the spread between local dollar-denominated and local currency denominated interest rates.

- **Inflation experience**

The role of recent inflation history is ambiguous. On one side, countries that need the most rules (such a currency board or dollarization) are those that have had a history of monetary instability; and indeed, countries such as Argentina and others switched to a currency board as a way to break out of a cycle of high inflation. On the other side, a recent low inflation performance signals that the country is credibly able to commit to the monetary discipline required to pursue price stability. Most likely, dollarization is most appropriate for countries that have sinned in the past (have had high monetary instability) but now have competent and stable governments with deep popular support that are determined to commit to rigid monetary rules to maintain long-run policy stability. In this dimension Argentina appears to fare better than Brazil and other Central American countries.

- **Current exchange rate regime**

While a country could dollarize starting from any exchange rate regime, a successful experience with currency boards or credibly fixed exchange rates signals that the country has already shown its commitment to a stable currency, has proven its willingness to pay any costs associated with fixed exchange rates and is thus unlikely to experience further large costs from giving up altogether a national currency. Also, the additional transitional cost of moving to dollarization from fixed rates or currency boards are lower than when starting from more flexible exchange rate regimes. A transitional currency board stage should not, however, be a necessary criterion for dollarization. As currency boards may imply some costs (the risk of eventual devaluation) without the full credibility benefits of dollarization, it may make sense for a country considering dollarization to avoid a transitional stage of currency board and move directly to the elimination of the national currency. Experiences such as EMU suggest that the path to monetary union and dollarization does not necessarily go through a linear transition involving greater exchange fixity: EMU was implemented even as the 1992-93 ERM crisis led to a significant formal widening of the ERM exchange rate bands.

- **Reserve coverage of monetary base**

A minimum criterion for dollarization is that the foreign exchange reserves of the dollarizing country should at least cover the monetary base (or the currency in circulation). However, some countries that may otherwise be good candidates for dollarization may not satisfy this requirement in which case they may consider borrowing the necessary reserves from official or private creditors. While this solution to the need to convert the money base into dollars is technically possible, the increased foreign currency liabilities of the central bank may undermine the credibility of the dollarization. In estimating whether foreign currency reserves are sufficient to cover base money, one should look at usable reserves. For example, Costa Rica includes among its forex reserves over $300m credits to Nicaragua and Honduras that have not been serviced in a long time and are unlikely to be serviced ever. In addition to monetary base, one may want to include other (domestic and foreign currency) liabilities of the central bank in the aggregate that needs to be covered by foreign reserves. By these criteria, a number of Central American countries do not appear to have sufficient forex reserves to be able to dollarize without further foreign currency borrowings. For example, the Dominican Republic does not even have enough foreign reserves to cover the currency outside the deposit money banks; Belize and Costa Rica have reserves below the monetary base; Guatemala has reserves below the sum of the monetary base and central bank bonds (issued for the purpose of open market operations). Such reserve coverage looks even worse if we include the foreign liabilities of the central bank. Conversely, Argentina, El Salvador, Honduras and Nicaragua have enough reserves to cover monetary base and the bonds of the central bank. Obviously, if the reserve coverage goes beyond the monetary base and the other liabilities of the central bank, the country will have resources to provide partial coverage of the liabilities of the banking system, i.e. to provide some lender of last resort services. This issue is discussed in more detail below.

- **Soundness of the banking system**

The existence of a sound, competitive, well supervised and well regulated banking system is an important condition for a successful dollarization. Weak banking system may experience systemic crises that are fiscally costly and may, in the absence of a strong lender of last resort facility, lead to financial panic and serious economic distress. Such fiscal costs of systemic banking crises are larger the larger is the financial sector relative to the size of the economy. A

large presence of foreign banks in a dollarizing economy may help as it will: (a) reduce the risk of banking crises; (b) provide implicit lender of last resort support through home country head offices. Some have argued that a weak banking system should not be an excuse for delaying dollarization as poor financial systems pose serious problems regardless of the exchange rate regime and banking fragility may be used as an excuse to delay reforms and monetary stability. However, the credibility of dollarization may be undermined if a systemically fragile banking system implies large fiscal costs of a bailout of the banking sector, especially given the more limited lender of last resort resources available in a dollarized economy.

- **Extent of informal dollarization**

The greater is the degree of current unofficial dollarization, the smaller the benefits of exchange rate devaluation and the greater are the potential benefits of formal dollarization. If the dollar is already used as a unit of account, means of payment and store of value, the costs of a transition to formal dollarization will be minimized. Moreover, in an economy where a large part of the liabilities of the financial, corporate and household sector are already in foreign currency, a currency devaluation will have contractionary effects and may lead to severe financial distress for foreign currency borrowers. Thus, liability dollarization increases the benefits of full dollarization. In particular, countries that are not able to borrow long-term in their own currency ("original sin" countries in the Hausmann terminology) may also gain from the financial deepening (such as development of capital market for long term finance) associated with formal dollarization. Such financial deepening has been argued to potentially be an important benefit of dollarization.

- **Ability to provide lender of last resort functions after dollarization**

While a dollarized country is generally more restricted in its ability to provide lender of last resort services to its banking system, such a function can be performed even in a dollarized economy through a variety of channels. First, if the foreign reserves are in excess of what is required to cover the monetary base, such excess reserves can be used to cover part of wider monetary aggregates such as demand deposits and other longer term liquid liabilities of the banking system. Second, the dollarized country could build-up liquid reserves via borrowing from the private sector (private contingent credit lines) or international financial institutions. Third, changes in reserve requirement ratios may provide further liquidity to a banking system under pressure. Fourth, under a seigniorage revenue-sharing arrangement, the discounted value of the stream of future seigniorage payments could be used as a collateral for lines of credit with private and/or official creditors. Conceptually, other revenue streams or assets could also be used as a collateral for such credit lines even if one would need to consider the implications of such collateralization for the overall sustainability of the public debt of the country.

Some have argued that the actual ability to provide lender of last resort functions under a flexible exchange rate regime may also be effectively limited by the availability of foreign exchange reserves when the banking system has large foreign currency liabilities. Attempts to systematically rescue a banking system under distress via massive liquidity injections (as opposed to limited liquidity support to selected banks under pressure) may cause inflation, currency devaluations and/or a run on the reserves of the country as banks face a significant rollover risk for their foreign liabilities. Thus some have argued that experiences such as those of Indonesia suggest that, under conditions of limited fiscal resources for a banking system bailout, lender of last resort support through excessive liquidity creation under a depreciating currency

may actually be destabilizing, especially in an environment in which there is weak credibility of the monetary regime. While the argument on the limits of lending of last resort under flexible exchange rates may have some validity with countries with low reserves, high foreign liabilities of the banking system and a fiscal inability to address a systemic banking crisis, the argument has less validity for monetary stable economies with significant amounts of foreign reserves and relatively low foreign currency denominated debt.

Moreover, in discussing lenders of last resort one should conceptually separate the provision of liquidity to specific banks when they are under distress and there is risk of contagion to sound banks from the fiscal problem for the country deriving from systemic distress of a large fraction of the banking system. The latter problem is essentially a fiscal one and a credible lender of last resort means that the fiscal authority has enough resources to cover, over time, the fiscal cost of the bailout of the financial system. Provision of short-term liquidity may plug the panic deriving from systemic distress but cannot solve the fiscal problem of a large banking system bailout. On the other hand, when banking distress is not systemic but the problem of individual banks can lead to panic, bank runs and contagion to sound banks, provision of short term liquidity can avoid runs without necessarily implying large and long-term fiscal costs. In this latter case, it is of fundamental importance for a central bank to have enough resources to plug any liquidity shock, guarantee depositors that liquidity is available and prevent a destabilizing run. While such liquidity support is feasible when a country has its own currency, this stabilizing lending of last resort is limited by the available foreign exchange reserves in a dollarized economy. Thus, the ability to prevent self-fulfilling bank runs may be compromised in a dollarized economy if central bank foreign currency liquidity is not available in sufficient amounts.

- **Revenue cost of seigniorage loss**

Dollarization that occurs without seigniorage-sharing with the United States would imply a revenue cost in the form of seigniorage revenue loss. For countries in which seigniorage accounts for a significant fraction of government revenues, such loss has serious fiscal consequences and needs to be compensated by an increase in non-seigniorage revenues. If seigniorage revenues are significant, this switch in sources of revenue may require tax reforms to reduce a structural reliance on seigniorage. In the absence of revenue-sharing, the seigniorage loss is partly reduced if the dollarized country imposes non-remunerated reserve requirements on its banking system (essentially another form of taxation of banks) and thus the central bank can earn the interest rate on the non-currency component of the monetary base. For countries such as Costa Rica, Dominican Republic, Guatemala, Nicaragua and Belize seigniorage revenues have averaged around 1% of GDP (and a much larger fraction of central government revenues) in the 1990s; for Argentina, the corresponding figure is smaller and close to 0.6% of GDP.

- **Central bank solvency in the absence of seigniorage sharing**

Another aspect of the loss of seigniorage to be considered is how such a loss affects the solvency of the central bank of a dollarizing economy. The discounted value of future seigniorage is an asset for the central banks that does not appear in the current balance sheets of central banks. This implies that central banks officially have often negative net worth; this may not be a problem when a country has its own currency since the discounted value of the stream of seigniorage revenues is a substantial asset that is not shown in such balance sheets. For example, the balance sheet of the central banks of Costa Rica and the Dominican Republic shows negative net worth while it is barely positive in Guatemala and Honduras. However, all these balance

sheets would show solvency if the asset value of future seigniorage revenues was properly accounted for. This apparent insolvency of central banks becomes a more serious issue when a country dollarizes and seigniorage is not shared with the anchor country: in that case a negative net worth of a central bank may be a real form of insolvency. The ability of a central bank to provide credible lender of last resort services may thus be further undermined. Strategies to make a central bank solvent under dollarization could include: implicit seigniorage from non-remunerated reserve requirements of the banking system; explicit seigniorage revenue sharing with the anchor country used to recapitalize the central bank; or other forms of recapitalization of the central bank.

One radical solution to this problem would be not to have a central bank as a dollarized country may not need one; the experience of Panama is consistent with this view. The Panamanian approach is, however, very radical as the country does not have reserve requirements, lender of last resort, discount window liquidity or deposit insurance. While Panamanian authorities praise the totally hands-off market discipline approach to banking regulation and supervision, it is not obvious that this approach may work for other countries considering dollarization. In fact, Panama is a major financial center with a significant foreign bank presence; thus, Panama is effectively free riding on the lender of last resort, liquidity access, supervision and regulation that its foreign banks receive from home bank authorities and head offices. It is thus highly likely that central banking functions (such as supervision/regulation, deposit insurance, lender of last resort and required reserve setting) will need to be provided even in a dollarized economy, especially if such functions are not provided by the central bank of the anchor country. Thus, if a central bank is to operate even after dollarization and provide the above services, the solvency of such an institution in a dollarized economy is an issue that needs to be addressed.

- **State of public finances**

The smaller is the budget deficit and the stock of public debt, the smaller is the risk that dollarization might fail. In fact, unsustainable fiscal conditions may eventually tempt policy makers to reverse dollarization, return to a domestic currency so as to be able to run again the printing presses (regain access to the inflation tax). Severe fiscal problems may also undermine the confidence of the public in the fiscal authorities and lead to a foreign debt-related financial crisis (a point elaborated in more detail in the next section). Fiscal soundness may also limit the risk that the United States may be seen implicitly or explicitly as prepared bail out the dollarized country. In the process that led to EMU, the Maastricht fiscal criteria (on deficits and debt) as well as explicit rules (in the EMU Treaty) against bail-out of member countries were requested by Germany to ensure that a fiscal crisis in a member country would not lead to bail-outs or negatively affect interest rates and currency values of the monetary union. Two recent episodes suggest that the anchor country should be concerned about the fiscal soundness of a dollarizing economy. First, the external value of the Euro fell following the recent news that the EU would allow Italy to breach its fiscal targets for the year 2000; fiscal problems in one member country affected the external value of the common currency. Second, in the first half of 1995 the US dollar sharply fell following the fiscal and debt refinancing problem faced by Mexico after the devaluation of its currency. While financial problems in a dollarized economy should only affect the country risk spreads for the country experiencing difficulties, the possibility of contagion to the anchor country cannot be altogether excluded, especially if the dollarized country is relatively large. Fiscal problems in a small open economy (such as those in Central America) are

unlikely to affect US asset prices (as Panama's experience in the 1980s suggest). However, fiscal and financial problems in a relatively larger economy such as Argentina and Mexico could have negative spillovers for U.S. asset markets. Such negative externality is minimized if fiscal soundness is pursued by a dollarizing economy.

- **External debt and financing requirements**

The stock of the external debt of a dollarizing country's and its external debt servicing requirements will affect the success of dollarization. While it is correct that phenomena such as "sudden stops" of capital inflows and sharp reversals of capital flows (that have contributed to some recent financial crises) may be reduced if a country gives up its domestic currency, the possibility of financial crises associated with excessive external debt positions cannot be ruled out. Just as cities and counties in a monetary area like the US can go bankrupt and experience a financial crisis, so can dollarized economies. For example, Panama had relatively large fiscal deficits that contributed to the build up of foreign debt up to the onset of the LDC debt crisis in 1982; it had reschedule its debt in the mid-1980s and eventually restructured/reduced the debt through a Brady deal following the late 1980s financial crisis (caused in part by U.S. financial sanctions). The possibility that excessive, short-term external debt may trigger a rollover/liquidity crisis or even lead to a country insolvency cannot be ruled out in a dollarized economy. "Sudden stops" may be dampened if the country follows prudent and disciplined fiscal policies but such financial crises cannot be ruled out altogether if external debt accumulation is excessive and public debt poorly managed. While a financial crisis may not significantly affect the anchor country if the dollarizing economy is small (and indeed the financial crisis in Panama had little effect on the U.S.), the anchor country should be concerned about the effects of such a crisis in a larger dollarizing economy (such as Argentina and Brazil). As the 1995 Mexican peso crisis episode suggests, financial crises in systemically significant emerging market economies can affect asset markets in the anchor country. Thus, the external debt and external financing requirements of a dollarizing economy are relevant factors in assessing whether the country is ready for a successful dollarization.

Real and Trade Related Factors

- **Ability to successfully pursue counter-cyclical monetary policy**

Some studies have suggested that some small open economies with a history of high inflation and high exchange rate volatility are effectively unable to use monetary policy for counter-cyclical purposes. A combination of unofficial dollarization, lack of policy credibility and wage indexation may render monetary policy ineffective to counter cyclical shocks. Worse, it has been argued that in some countries monetary policy may be pro-cyclical rather than counter-cyclical as negative external financial shocks may force monetary authorities to tighten monetary policy when a recession occurs to prevent excessive devaluation of the currency. Considering whether monetary policy has been able or unable to provide counter-cyclical output stabilization is thus a relevant criterion to assess whether dollarization will reduce the ability to smooth output fluctuations. It is thus a relevant criterion to assess the desirability of (if not country's readiness to) dollarization. This ability will depend on a number of factors: how unofficially dollarized is the economy, what is the credibility of policy makers, what is the degree of indexation of wages, what is the degree of pass-through of exchange rates to domestic prices.

- **Correlation of the business cycle with the US business cycle**

The need for exchange rate adjustment is reduced if a dollarized country's business cycle is highly correlated with the one of the anchor country. If shocks hitting a common currency area are common to all the economies in the area, rather than being idiosyncratic national shocks, the need for currency adjustment is reduced and the monetary policy of the anchor country is more likely to be appropriate for the dollarized economy. The degree of synchronization of the business cycle, in turn depends on structural factors, such as the degree of trade integration and the similarity in production structure. Two caveats: 1. Synchronization is endogenous and can increase as dollarization leads to greater trade and capital integration; 2. The degree of structural synchronization should be estimated separately from the role played by the exchange rate regime in driving a common business cycle. For example, under fixed rates, the business cycle of a follower country would be highly correlated to that of the leader regardless of structural interdependencies, just because the follower is forced to share the monetary policy of the leader.

- **Trade integration with the US**

The greater is the share of a country's exports and imports that is accounted for by trade with the United States, the better candidate is the country for dollarization. Greater trade integration implies greater synchronization of the business cycle of a dollarized economy with the anchor country. Also, trade integration is usually associated with greater financial and capital integration. By this criterion, Mexico, Canada and Central American countries are better candidates for dollarization than Argentina, Brazil and other Latin American economies.

- **Vulnerability to terms of trade shocks**

The vulnerability to terms of trade shocks plays an ambiguous role. Such vulnerability is greater in countries whose exports are concentrated in a narrow range of, often primary commodity, exports. If the country is small and a price taker in the market for its export and import goods, it cannot modify its terms of trade (and negative shocks to the relative price of its exports) via currency devaluation. Thus, the benefits of dollarization are potentially larger for such small open economies that are price takers in international markets. On the other side, large shocks to the terms of trade may be need to (and will be successfully) absorbed via a nominal currency adjustment if the country has some export market power (and/or if the pass-through of depreciation to domestic prices is not full) so that a devaluation dampens the impact of terms of trade shocks on domestic relative prices. Diversified economies that are also large commodity exporters such as Canada and Australia have successfully used the currency tool to adjust to external terms of trade shocks. Instead, smaller open economies with lesser capacity to insulate domestic relative prices from terms of trade shocks may not gain from the option to devalue the currency following such external disturbances.

Another way of interpreting this point is to note that, in countries that have some market power, a nominal depreciation can lead (at least temporarily) to a real depreciation while in countries with strictly exogenous terms of trade, a nominal depreciation does not lead to a real depreciation and thus is not beneficial. Note also that while a change in the real exchange rate can be obtained both via a change in the nominal exchange rate or through a change in the domestic price level, the adjustment costs of a real depreciation via price adjustment are usually considered to be larger than those implied by an exchange rate adjustment. Thus, the benefits of

an adjustment of relative prices via exchange rate flexibility when a country has the ability to affect its real exchange rate.

A caveat has to be kept in mind in considering whether a small country with no power over its terms of trade may benefit from exchange rate flexibility. While monetary policy may not affect its terms of trade, the country may still be able to partly use monetary policy to absorb external shocks, especially if non-tradable prices are sticky in the short run: the real exchange rate (as measured by the relative price of traded versus non traded goods) may be affected by monetary policy in the short-run. In this case, exchange rate flexibility will also affect the domestic profitability of different sectors even if it does not affect the terms of trade of the country.

Another factor to consider when discussing the role of terms of trade shocks is that fiscal revenues in many countries are significantly correlated with terms of trades: for example, oil and other commodity exports are a significant source of revenue for countries such as Mexico, Ecuador, Venezuela and Colombia. A real devaluation will thus tend to improve the fiscal balance of such a government as revenues are more related to the price of tradable goods while expenditure may be mostly on non-tradable goods; such fiscal adjustment is ruled out in a dollarized regime.

- **Openness to trade**

Greater openness to trade, as measured by the ratio of exports and imports to GDP, may (with some caveats) strengthen the case for dollarization for a number of reasons. First, economies with large shares of international trade are usually small open economies that have little ability to affect their terms of trade. Second, the more open an economy, the greater the pass-through of nominal depreciation to domestic prices and thus the smaller the benefits of currency adjustment. Third, the larger is the share of the traded sector and the more diversified the export sector, the smaller is the change in the real exchange rate required to adjust to external shocks. On the other hand, one can argue that the benefits of currency adjustment may not be smaller for more open economies; while a given exchange rate depreciation will cause more inflation, it is also the case that less of a depreciation is required for the same counter-cyclical impact. The experience of Canada, Australia and other very open economies suggests that counter-cyclical policy may be quite effective in very open economies without causing more inflation. At the margin, greater openness will tip the balance in favor of dollarization if (given characteristics such as credibility, indexation and exchange rate pass-through), the effects of devaluation tend to be more inflationary than expansionary on output. Note that Mexico, Canada and Central American economies fare well on the openness scale while Argentina and Brazil are relatively more closed economies.

Other Factors

- **Flexibility of labor markets**

In the absence of the exchange rate mechanism, external shocks that require a change in real wages and/or mobility of labor across sectors will not have lasting effects on the rate of unemployment if there is enough flexibility in labor markets. This flexibility may need to take the form of downward flexibility of nominal wages (to induce a reduction in real wage if that is required), labor mobility across sectors and regions if changes in relative prices require a

reallocation of factors of production, low hiring and firing costs to ensure labor market flexibility. In the absence of such labor market flexibility, negative external shocks may lead to protracted increases in the rate of unemployment and a permanent fall in the level of economic activity.

- **Degree of labor migration**

Within a common currency area like the United States, adjustment to regional shocks (both transitory and permanent ones) is supported by inter-regional labor mobility. Labor will move from regions negatively affected by economic disturbances to regions where economic activity is rising. In the case of countries considering dollarization, such free mobility of labor is ruled out as there are restrictions on cross-national labor migration. Still, in practice the degree of labor mobility may be significant as a number of countries in the America have a significant number of legal (and illegal) temporary and permanent migrant workers who can move between the United States and their country of origin. Examples are Mexico, El Salvador, other Central American countries and the Dominican Republic. The only important caveat is that, in the presence of significant labor rigidities (see bullet above), negative real shocks may lead to a significant increase in illegal immigration into the United States from a dollarized economy.

- **Degree of capital mobility**

International mobility of real capital can, in part, substitute for the lack of labor mobility across countries. Shocks that require a movement across border of labor can be partly adjusted through movements of real capital. However, since the adjustment process working through the accumulation or decumulation of capital is slow, this adjustment mechanisms works only in the long run and is unable to shelter an economy from sudden external disturbances requiring a change in the relative returns to labor and capital. However, a higher degree of capital mobility in a dollarizing economy, as measured by flows of inward foreign direct investment (FDI), increases the likelihood that dollarization will be successful.

- **Implicit or explicit fiscal federalism and income insurance schemes**

In a domestic currency union, idiosyncratic regional shock to output are partly compensated by a federal system of tax and transfers: a region hit by a negative shock will received federal transfers and pay less in taxes. Such an insurance mechanism partly shelters the regional income from shocks to regional output. Such an automatic insurance scheme cannot be at work in the case of a country that is dollarizing as monetary integration is not associated with fiscal integration. However, there are implicit forms of income insurance that may still be at work. If a dollarizing country has a large number of migrant workers in the anchor country, worker remittances may be an importance source of income for the dollarizing economy. For example, in El Salvador, remittances from citizens who work in the United States amount to over 10% of GDP per year. Also, a large stock of inward FDI and international equity portfolio diversification reduce the impact on the dollarizing country's national income of negative output shocks as profit remittances to the anchor country automatically fall during recessions.

- **Political factors**

To be successful dollarization requires a high level of public support; a broad and open political debate that shows a large popular and political support for dollarization will reduce the risk that political issues will derail dollarization. Countries that have deep political divisions, that

have significant political minorities opposed to dollarization, that lack stable democratic institutions, that have a history of political turmoil may not be good candidates for dollarization. In fact, political support for dollarization would not be broad and there would be a greater probability that groups opposed to dollarization may at some point come to power and reverse the dollarization.