

How to Strengthen the International Financial System by Restructuring Sovereign Balance Sheets

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The inability of developing nations to borrow in their own currency leads to currency mismatches on their national balance sheets. These mismatches render these economies vulnerable to external shocks and are a major source of damaging volatility for the entire international financial system. This article argues why these mismatches need to be remedied, and how the multilateral development banks and the Paris Club can take the lead in doing so. © 2006 Peking University Press

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1. INTRODUCTION

Our international financial system is crisis-prone and the costs of international financial crises are severe. The 1980s was a lost decade in Latin America and Africa: spending per capita on health care decreased by 50

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percent in the 37 poorest countries¹ and according to UNICEF, 500,000 young children died in 1988 alone due to the debt crisis. More recently severe crises have afflicted East Asia, Mexico, Russia, Argentina and other countries.

There are inherent weaknesses in the national balance sheets of many sovereign states that predispose these states to financial crisis. These structural flaws revolve around the mismatch between foreign liabilities and assets on national balance sheets that render the international financial system unstable.

This article addresses two central questions:

1. What can be done to alleviate this structural flaw in national balance sheets?
2. What role can the international community play in doing this?

Developing countries face profound difficulties in overcoming this structural flaw by themselves. The international community needs to play a greater role in assisting debtor countries to resolve the problem, in the interests of international financial stability and of meeting the United Nations Millennium Development Goals (MDGs).

This article is in five sections. The next section considers the inherent instability of the international financial system. Section 3 analyses the development of local currency bond markets, which are obviously part of the answer to the currency mismatch problem for many debtor countries. Section 4 considers what the international financial community can do to redress these problems and Section 5 concludes.

2. THE CONTINUED INSTABILITY OF THE INTERNATIONAL FINANCIAL SYSTEM

2.1. The systemic failure to transfer risk to those best able to absorb it

Joseph Stiglitz has taken up this risk transmission theme. In his words, “Something is wrong with the global financial system. One might think the system would shift money from rich countries, where capital is in abundance, to those where it is scarce, while transferring risk from poor countries to rich ones, which are most able to bear it ... The current global financial system does none of these things.”²

¹Jolly, Dr Richard, Deputy Executive Director for Programmes, United Nations Children’s Fund, Jan 4, 1989, Testimony before the House Committee on Banking, Finance and Urban Affairs hearings on the International Economic Issues and Their Impact on the U.S. Financial System. In 101st Congress First Session, 1989, 14, 15.

²Stiglitz, Joseph, 2003, Dealing With Debt: How to Reform the Global Financial System. Harvard International Review 25, 54 at 54.

In his view capital account liberalisation has not worked and private financial markets have destabilised the system.³ For Stiglitz this is a case of market failure as poor countries bear the brunt of exchange rate and interest rate fluctuations,⁴ a failure heightened by capital account liberalisation.

Protection against these interest and exchange rate changes can be brought through accumulating foreign exchange reserves. But this comes at a cost, in the form of the often substantial differential in the tiny return on US government securities and the return that could have been generated by investing these funds at home. Governments could finance more of their development expenditures from their own reserves, with less recourse to foreign borrowing, if they did not need such large foreign exchange reserves to serve as insurance.⁵

2.2. The volatility machine

Michael Pettis has termed our current international financial system, a ‘volatility machine.’ He argues that international financial crises are caused primarily by unstable sovereign balance sheets rather than weaknesses in the international financial architecture.⁶ In his words, “The problem with the current architecture is not that global financial markets are too volatile or free capital markets too dangerous but that sovereign capital structures are not usually designed with this volatility in mind.”⁷

The instability in the balance sheet is caused by a reliance on short-term debt, floating rate debt, and foreign currency debt. This leads to mismatches between foreign currency assets and liabilities, such that adverse interest rate and exchange rate changes arising from an external shock increase debt-servicing costs and debt stocks dramatically in local currency terms.

2.3. Original sin

Most developing countries have little alternative to borrowing in foreign currency. The burden of not being able to borrow externally in their own currencies has been labelled ‘original sin’.⁸

³Eichengreen, Barry, and Hausmann, Ricardo, 2003, *Original Sin: The Road to Redemption*. USA: John F. Kennedy School of Government, <http://kgshome.harvard.edu/rhausma/new/RoadtoredemptionEH.pdf>.

⁴Stiglitz, *supra*, 56.

⁵*Id.*

⁶Pettis, Michael, 2001, *The Volatility Machine: Emerging Economies and the Threat of Financial Collapse*. New York: Oxford University Press. (Michael Pettis is currently a Professor in the Guanghua School of Management, Peking University, Beijing.)

⁷*Id.*, 199.

⁸Eichengreen, Barry, and Hausmann, Ricardo, 1999, *Exchange Rates and Financial Fragility*, in *New Challenges for Monetary Policy*. Kansas: Federal Reserve Bank of Kansas City at 329, 330.

Why are so many developing countries so reliant on external borrowing in a foreign currency?

Part of the answer is to be found in portfolio theory. Each additional currency in an investor's portfolio provides diversification but with decreasing marginal benefit. At some point the benefit of one further currency doesn't offset the transaction cost of investing in it. An optimal portfolio has a limited number of currencies.⁹

Another part of the answer to the difficulty of borrowing in one's own currency is that domestic bond markets are underdeveloped, and the challenges of developing local bond markets are explored in Section 3.

2.4. Currency mismatches

The role played by unhedged aggregate dollar liabilities in the Latin American, Asian and Russian crises is widely acknowledged.¹⁰ This inability to hedge is another manifestation of incomplete financial markets.¹¹ If a country is borrowing in foreign currency because it cannot borrow in local currency, it will also not be able to hedge.¹²

Goldstein and Turner have developed a measure of currency mismatches — the Aggregate Effective Currency Mismatch (AECM) — that captures net foreign reserves, exports and imports of goods and services and the foreign currency share of total debt.¹³

However, Goldstein & Turner attribute currency mismatches to weaknesses in policies and institutions, as opposed to the international financial system.¹⁴ They see as critical the lack of incentives to hedge against currency risk arising from fixed exchange rate regimes and poorly designed official safety nets.¹⁵ They have also identified as contributing factors: weak regulatory structures, lack of information on currency mismatches, poor credit assessment by banks, insufficient efforts to develop domestic bond markets, and unsound public debt management policies.¹⁶ Yet until developing countries can meet their capital raising needs in their own currencies, currency mismatches will remain as a major source of damaging volatility.

⁹Id., 38.

¹⁰Eichengreen and Hausmann, *id.*

¹¹Eichengreen and Hausmann, *supra*, 330-331.

¹²"Assuming that there will be someone on the other side of the market for foreign currency hedges is equivalent to assuming that the country can borrow abroad in its own currency": *Id.*

¹³Goldstein, Morris, and Turner, Philip, 2004, Controlling currency mismatches in emerging market economies: Alternative to the original sin hypothesis. Unpublished manuscript: Institute for International Economics at 42.

¹⁴Id., 2.

¹⁵Id., 3.

¹⁶Id.

Nonetheless, while we disagree with Goldstein and Turner on the fundamental cause of currency mismatches, we agree with their assessment of the severe threat mismatches pose. A Report of the Independent Evaluation Office of the IMF has concluded that the IMF needs to more rigorously assess the balance sheet effects (the volatility machine effects) of economic shocks in its Article IV consultations¹⁷ and in September 2003, the G-7 finance ministers and central bank governors urged the Fund to “identify currency mismatches in emerging economies as a key part of its efforts to improve the effectiveness and persuasiveness of Fund surveillance”.¹⁸

We also agree with Goldstein and Turner’s critique of fixed exchange rate regimes. A nation’s choice, and management, of its exchange rate regime can contribute to mismatches.¹⁹

3. DEVELOPING LOCAL CURRENCY DOMESTIC BOND MARKETS

If a sovereign borrower is to strengthen its balance sheet through less foreign currency exposure, it must develop local currency markets. In Pettis’ words, “[T]he development of ... a fixed-rate local currency market ... is probably the single most important step an LDC can take in reducing its sensitivity to external shocks.”²⁰ Longer term local currency debt reduces refinancing risk and acts as a type of insurance: an exchange rate weakening will increase inflation, which, in turn, reduces the real cost of servicing debt denominated in local currency.²¹

Local currency bond markets are an obvious, although only partial, remedy to the problem of ‘original sin’. The development of these markets has attracted considerable interest ever since their absence was seen as a contributor to the Asian economic crisis. The reality, though, is that development of these markets is notoriously difficult.

3.1. Difficulties in developing local currency bond markets

¹⁷Mansor, Ali M, et al, 2003, The IMF and Recent Capital Account Crises: Indonesia, Korea, Brazil. In Independent Evaluation Office Report. USA: International Monetary Fund at 52-53.

¹⁸Goldstein, Morris, and Turner, Philip, *supra*, 2. See also Pettis, Michael, 2003, Reengineering the Volatility Machine - How the IMF Can Help Prevent Financial Crises. *World Policy Journal*, Fall, 52-58.

¹⁹For an analysis of the weaknesses and risks inherent in fixed exchange rate regimes, see Buckley, Ross, 2001, A Tale of Two Crises: The Search for the Enduring Lessons of International Financial Reform. *UCLA Journal of International Law and Foreign Affairs* 6, 1-43; and Buckley, Ross, 1999, International Capital Flows, Economic Sovereignty and Developing Countries. *Yearbook of International Economic and Financial Law*, 17-46.

²⁰Pettis, *supra*, 168.

²¹Pettis, *Id*, 168 - 169.

In an attempt to explain the slow development of Asia's bond markets, Eichengreen and Luengnaruemitchai analysed a wide range of variables.²² They found there were a number of factors contributing to the slow development of local bond markets.²³ Scale was an issue, with the larger capitalised bond markets, relative to GDP, being associated with larger economies countries with competitive and well-capitalized banking systems.²⁴ Other contributing factors were corruption, a poorly skilled bureaucracy, and the failure to follow international accounting standards.²⁵ Macroeconomic policy settings have also worked to impede market development.²⁶ Strong fiscal positions in Asia mean low government borrowing requirements and the absence of well developed yield curves, which work against market development. In sum, Eichengreen and Luengnaruemitchai's study concluded "that the region's structural characteristics and macroeconomic and financial policies account fully for differences in bond market development between Asia and the rest of the world."²⁷ Asia was not special in any way.

None of this means initiatives to develop domestic bond markets are misguided. More highly developed domestic bond markets will alleviate currency mismatches, and governments are right to work to develop these markets. However, it is essential to understand that building a market takes time as markets are multi-dimensional and require the interaction of a range of factors including, among others, commercial incentives, participants' skills, liquidity conditions, regulatory frameworks, trading and settlement platforms, and instrument characteristics. Unfortunately, many countries do not have the luxury of time. Their foreign currency exposures need to be addressed with some urgency.

There is a top echelon of developing countries emerging with increasingly developed bond markets and associated hedging capabilities. These include Hong Kong, South Africa, Mexico, Korea and Poland, with a second tier that includes Brazil, the Czech Republic, Chile and Taiwan.²⁸ However most developing countries, including virtually all that are most vulnerable to financial volatility, lack this capacity.

The importance of banks to bond market development is often underestimated. Banks fulfil many roles: as issuers, holders, underwriters, guarantors, trustees, custodians and registrars. Bond markets are not a substitute for credit markets. Each complement the other. Well-developed bond markets are unlikely to be found in countries with an underdeveloped or weak

²²Id, 26-27.

²³Id, 26.

²⁴Id.

²⁵Id.

²⁶Id.

²⁷Id, 26-27.

²⁸Goldstein and Turner, *supra*, 62.

banking sector. As the Bank for International Settlements has noted, “it is important to have healthy banks to have a sound bond market. And a bond market may improve the health of banks, by improving market discipline.”²⁹

For this, and the other reasons given above, the developing countries that most need local currency bond markets are decades away from having the prudential and institutional infrastructure in place to support them.

3.2. Government bond markets and financial sector efficiency

Domestic bond markets contribute to the reduction of currency risk. Less apparent, perhaps, is their contribution to the reduction of interest rate risk. Australia provides a case in point.

With consistent fiscal surpluses and ever lower levels of net debt the Australian government questioned in 2002 whether it should continue to issue government bonds.³⁰ Its review into the issue considered a number of arguments for retaining the government bond market: the pricing and referencing of other financial products, managing financial risk, providing a long-term investment vehicle, implementing monetary policy, providing a safe haven in times of financial volatility, attracting foreign capital inflows, and promoting Australia as a global financial centre. The key conclusion of the review was that the cost of managing interest rate risk would rise in the absence of a government securities market, as Treasury bond futures market are more efficient at this task than interest rate swaps.³¹ The loss in efficiency would translate to a higher cost of capital. Given this conclusion, public debt management policy in Australia now has the dual goals of seeking to contribute to financial sector efficiency and manage cost and risk in the government’s debt portfolio.³²

3.3. Local bond markets: conclusion

In sum, the development of local bond markets will reduce the currency mismatch problem on national balance sheets as it will allow sovereigns to raise substantial amounts of their capital at home, but such development is difficult to achieve. Efficient bond markets require a highly developed rule of law, and complex supporting legal, institutional and human infrastructure. These factors take many years to develop. Many developing countries are working towards this end. Most are at least a decade away

²⁹Idid.

³⁰Commonwealth of Australia Treasury Department, 2002, Review of the Commonwealth Securities Market. Discussion paper prepared for the Commonwealth Debt Management Review. Canberra: Commonwealth of Australia Treasury Department.

³¹Comley, Blair, and Turvey, David, 2005, Debt Management in a Low Debt Environment: The Australian Government’s Debt Management Framework (Working Paper 2005 – 02). Canberra: Commonwealth of Australia Treasury Department at 48.

³²Id, 48-49.

from achieving it. So what can the international financial community do to assist now?

4. TOWARDS AN INTERNATIONAL SOLUTION

Four types of remedy for sovereign balance sheet induced instability have been advanced: re-regulating domestic financial markets, reimposing capital controls, adopting a common international currency, and adopting an international solution to the currency-mismatch problem.³³ Of these, the adoption of an international currency is intuitively appealing. However, it is not a practical option at least for the foreseeable future.³⁴ Calls for more controls over financial markets and international capital flows are understandable, but the opportunity costs are quite high³⁵ as financial sector development enhances economic development. This leaves us, then, to enquire into the feasibility of the fourth option: an international solution to the currency mismatch problem.

This initiative could be advanced under the umbrella of the United Nations' Millennium Development Goals. Goal 8 directs the international community to 'deal comprehensively with developing countries' debt problems through national and international measures to make debt sustainable in the long-term'.³⁶ This is in addition to enhanced debt relief for heavily indebted poor countries and the cancellation of official bilateral debt, which are separately mentioned under Goal 8.³⁷

Eichengreen is certain some form of international initiative is needed.³⁸ While countries remain burdened with currency mismatches, and domestic markets remain underdeveloped, extreme domestic volatility with the capacity to threaten international financial instability will remain. Debtor countries can only do so much by themselves to minimise this instability. Creditors need to assume more responsibility and international institutions are best placed to play the leading role. The IMF needs to go beyond improving its surveillance of balance sheet structures. There are several possibilities for more actively addressing currency mismatches: the multilateral development banks (MDBs), such as the World Bank and Asian Development Bank, could change their lending policies; emerging market borrowers could make greater use of local currency-indexed bonds; and

³³Eichengreen, *supra*, 21-34.

³⁴Having said this, the success of the Euro and the debate on the merits of an Asian currency unit hold out the prospect of future international currency consolidation.

³⁵Eichengreen, *supra*, 23. Although we would argue these opportunity costs are not as high as the cost of crises facilitated by financial sector liberalisation.

³⁶United Nations, UN Millennium Development Goals (MDG). <http://www.un.org/millenniumgoals/>.

³⁷*Id.*

³⁸Eichengreen, *Id.*, 14-15.

creditor countries and MDBs could redenominate foreign currency loans into local currency in debt restructurings.³⁹

4.1. Changing the lending policies of multilateral development banks

MDBs usually lend in US dollars. In doing so, the MDB protects itself against currency risk but contributes to the currency mismatch problem facing its borrower and thus works against its own development mandate. Urgent change to the lending practices of the MDBs is required, particularly for the concessional finance windows of these institutions.

To illustrate, the World Bank lends through the International Bank for Reconstruction and Development (IBRD) and its concessional arm, the International Development Association (IDA). The IBRD operates in international markets and actively minimises currency mismatches from its perspective; ie. it seeks to avoid funding its lending in local currency by borrowing in other currencies. In the words of Hausmann and Rigobon “missing markets on its liability side prevent the IBRD from lending in more appropriate forms”.⁴⁰ So, US dollar lending has become the standard. But there is an alternative in the form of a debt market in inflation-indexed emerging market currencies.⁴¹ If this market existed, the World Bank could borrow in a basket of these inflation-indexed currencies and lend to individual countries in their own inflation-indexed currency. By this method, the World Bank could become part of the solution rather than part of the problem.⁴²

It may be arguable that the IBRD should not be in the business of promoting solutions to currency mismatches at the expense, perhaps, of its own balance sheet. We argue, however, that this is precisely what the IBRD should be doing as its primary function is to alleviate poverty. Certainly there would seem to be few arguments against the IDA adopting this course. Its development mandate would be better fulfilled by a move away from US dollar lending and it is funded by grants from developed countries, not by its own borrowing, so lending in local currencies would not generate currency mismatches for it.⁴³ The IDA could lend in inflation-indexed local currency at current interest rates and achieve the same level of IDA reflows.⁴⁴

This approach is a far superior mechanism for transferring and managing risk than leaving the currency risk with the debtors. The IDA could diver-

³⁹Williamson, John, 2005, *Curbing the Boom-Bust Cycle: Stabilising Capital Flows to Emerging Markets*. Washington DC: Institute for International Economics.

⁴⁰Hausmann and Rigobon, *supra* 13.

⁴¹Eichengreen and Hausmann, *supra*, 6.

⁴²Hausmann and Rigobon, *supra*.

⁴³Eichengreen and Hausmann, *supra*, 12.

⁴⁴Hausmann and Rigobon, *supra*.

sify its risk across member countries and borrowing countries could have a debt stock that remains constant in terms of domestic consumption, as opposed to being denominated in the relatively more volatile and counter-cyclical foreign currency. The indexing would also allow inter-temporal smoothing of the risk through debt service being relatively more in the years when the economy is performing better and relatively less when the economy is performing poorly.⁴⁵

Furthermore, this approach would underpin the adoption of a floating exchange rate. Countries could adopt a more flexible exchange rate because they would be less concerned about currency mismatches and the associated 'fear of floating', a fear that has led to inappropriate and ultimately unsustainable fixed exchange rates in many countries.⁴⁶

4.2. Local currency solutions

To the extent it is difficult for borrowing countries to issue conventional 'vanilla' local currency debt there are index-linked solutions that would ameliorate the mismatch problem. Williamson advocates issuing GDP-linked bonds in international markets and inflation-indexed bonds in domestic markets.⁴⁷ He would complement these instruments with a fiscal incentive that would encourage both borrowers and lenders in emerging markets to issue and hold local currency-denominated financial instruments with the objective of substantially reducing currency mismatches.⁴⁸

Investor resistance to GDP-indexed bonds is potentially an issue, but the MDBs are in an ideal position to promote these instruments. The most obvious way is to incorporate these instruments into sovereign debt restructurings. This would provide an investor base, a deep and liquid market, and MDB 'blessing' for the instrument. The MDBs would have an ongoing role in promoting the instrument in their dialogue with member countries, gauging investor interest, and underpinning the quality of national statistical agencies: a necessity if the GDP statistics and thus the GDP-indexed bond, are to be credible.⁴⁹

⁴⁵Ibid; and Buckley, Ross, 2002, Strategic Options for Asian Nations in the Era of Hot Money. In *Asia Pacific Governance: From crisis to reform*. Edited by Sampford, Condlin, et al. Hampshire, UK: Ashgate; Buckley, Ross, 2001, A Tale of Two Crises: The Search for the Enduring Lessons of International Financial Reform. *UCLA Journal of International Law and Foreign Affairs* 6, 1-43 at 1; Buckley, Ross, 1999, International Capital Flows, Economic Sovereignty and Developing Countries. *Yearbook of International Economic and Financial Law*, 17-46; Creditors and Investors. *Banking and Fin. L. R.* 15, 431-454; and Buckley, Ross, 1999, Six Lessons for Banking Regulators from the Asian Economic Crisis. In *Perspectives on Banking, Finance & Credit Law*. Edited by Weerasooria. Sydney: Prospect Media.

⁴⁶Id.

⁴⁷Williamson, *supra*, 110.

⁴⁸Id, 111.

⁴⁹Id, 113.

4.3. Re-orienting the paris club

The use of GDP-linked bonds in debt restructurings also suggests a role for the Paris Club, the standing group of 19 governments with large claims on other governments. The Paris Club has historically presented itself as a debt collector largely independent of international debt relief initiatives. Of late, however, there has been a gradual move towards granting debt relief. Since the Evian Approach of October 2003, the Paris Club has taken more account of ongoing debt sustainability and adopted a more flexible approach in deciding on the treatment to be adopted.⁵⁰ But financial distress is related not only to debt levels but also to the relationship between revenues and debt servicing costs.⁵¹ The volatility machine can come into play for almost any debt level, with the proviso that larger mismatches give rise to greater potential distress. Even a reduced debt stock in foreign currency exposes a nation to potentially severe volatility.

Rather than merely reducing the total debt owed to its member nations, it would be preferable for the Paris Club to re-denominate the re-negotiated debt in the local currency of the debtor. Some may argue this allows the debtor to inflate the debt and debt-servicing obligation away. This incentive is there, but that does not mean the borrower would be prepared to accept the wider economic costs of inflation to achieve this narrow end. In today's world, central banks are far less tolerant of inflation and inflation will raise the cost of issuing any new debt.

Clearly, the Paris Club re-denominating debt into local currency transfers currency risk from the debtor to the creditors. But this is as it should be: the creditor is in the best position to assume the risk and the greater currency risk is, to an extent, offset by the reduced risk of default. This step would remove the market failure identified by Stiglitz.

5. CONCLUSION

Foreign currency exposures of sovereign borrowers and of banks and corporates in emerging economies continue to pose a threat to the stability of the international financial system. Borrowing countries can do more to strengthen their sovereign balance sheets through better public debt management practices but are severely constrained by not being able to borrow abroad in their own currencies. While initiatives are under way to assist the development of domestic bond markets, it will take time to develop these

⁵⁰Paris Club, The Evian Approach <http://www.clubdeparis.org>.

⁵¹Pettis, *supra* 2, 103; and Buckley, Ross, 2001, A Tale of Two Crises: The Search for the Enduring Lessons of International Financial Reform. *UCLA Journal of International Law and Foreign Affairs* 6, 1-43.

markets, and, in any case, there will be limits on the number of currencies demanded in an internationally diversified portfolio.

The MDBs are better placed than individual countries to support financial instruments that reduce currency risks. They could construct a synthetic instrument for their own operations that was based on a basket of emerging market currencies and they could promote the issuance of GDP-indexed bonds and inflation-indexed bonds by member countries. They could also incorporate GDP-indexed bonds in sovereign debt restructuring exercises.

But the most effective debt restructuring initiative, and the one that could be most easily implemented, provided the political will is sufficient, is for Paris Club reschedulings to be denominated in the currency of the debtor country. This would require creditor countries to bear the foreign exchange risk, but this is a risk worth taking given it reduces the risk of ongoing debt-servicing problems caused by exchange rate weakening in the borrowing country.

At the end of the day, all efforts to strengthen the international financial system will remain open to being undermined by foreign currency mismatches. The international community, through the MDBs and the Paris Club, have been neglecting their duty by not leading a global effort to address currency mismatch problems. The opportunity to substantially enhance international financial stability is there to be taken.

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