

Sustainable Financial Intermediation in Support of Infrastructure Sector

by

Ajay Sagar

Asian Development Bank

This article was originally published in February 2008 **Project Finance International Magazine** a publication of Thomson Financial

The views expressed in this paper are those of the author and do not necessarily reflect the views or policies of the Asian Development Bank.

Sustainable intermediation

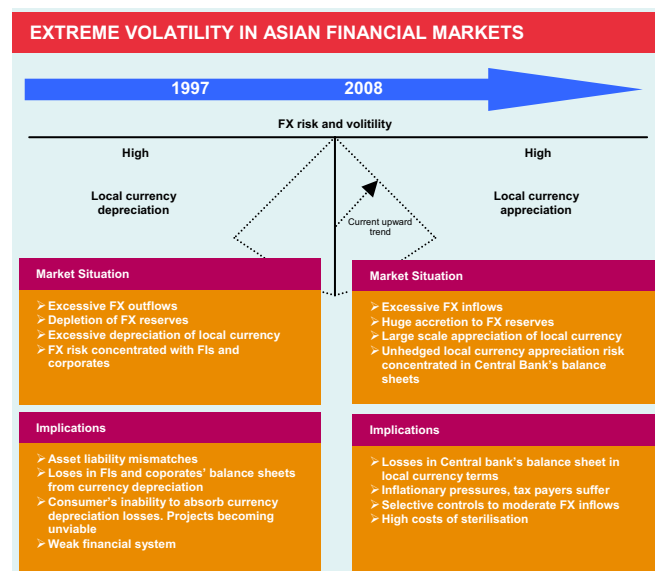
Developing Asian economies need trillions of dollars in infrastructure investment to achieve their GDP growth targets. As per official estimates, huge infrastructure investment is required in the next five years in core infrastructure sectors such as power, highways, railways, urban infrastructure and ports. The borrowing requirement of other infrastructure segments including telecom, housing, oil and gas, tourism, rural and agriculture infrastructure is also likely to be significant. Infrastructure projects in abovementioned segments have long gestation period and require local currency denominated financing at fixed interest rates so as to avoid refinancing, currency mismatch and interest rate risks. Most of the developing countries in Asia have recently amended their accounting standards bringing them on par with international accounting standards. This entails the requirement that the borrowers charge their currency losses on foreign currency borrowings to profit and loss account in the year such losses occur compared to the past practice of capitalizing such losses. Infrastructure regulators are now moving towards best practices that disallow currency fluctuation losses to be passed on to consumers. Such amendments are imperative, given the income of the consumer invariably does not go up with FX depreciation.

As a backdrop it would be useful to compare the current macro economic scenario of developing Asia with the macro economic scenario that existed immediately after the Asian financial turbulences in 1997. Asia has witnessed huge swings in foreign currency markets. A lot has changed since then - the present scenario being the inverted image of 1997 turbulences. In the past, Southeast Asia saw massive devaluation of local currencies due to excessive foreign currency outflows, and depletion of foreign currency reserves. Both financial institutions and corporates, had asset and liability mismatches through currency and tenor risks on their balance sheets. Infrastructure projects funded in unhedged foreign currency became unviable as consumers expressed

their inability to absorb pass through currency depreciation losses in the form of increased tariffs. Financial systems became weak requiring host governments to bail out banks and financial intermediaries through blanket guarantees.

Now in 2008 and almost 11 years later, developing Asia, especially the middle income countries, is now faced with headwinds and a scenario completely opposite to that of 1997. A significant amount of foreign currency reserves have been built up by central banks. The challenge in Asian countries is now emanating from 'problem of plenty' due to a surge in inflows of foreign currency resulting in large scale appreciation of local currencies. In the process of build up of foreign currency reserves, central banks in Asia may have ignored the need of having a proper risk management framework as suggested by IMF in its guidelines for foreign exchange reserve management. It will not be surprising, if these foreign currency reserves remain unhedged against local currency appreciation risks. Given that central banks prepare their balance sheets in their respective local currencies, the risks associated with local currency appreciation are now beginning to take the toll on their balance sheets. Central banks and host governments are now struggling with inflationary pressures, as sterilization and local currency appreciation costs increase. Credit rating agencies and planners are now closely monitoring such sterilization and currency appreciation costs that are adding to the fiscal deficit burden as these costs could now amount to a significant percentage of the country's GDP. As a result, foreign currency inflows including offshore borrowings are being discouraged as the risks are now concentrated in the central banks' balance sheets. Central banks end up taking a double dip due to this surge in FX inflows as they have to bear the costs of sterilization and local currency appreciation associated with such inflows. Thus the main challenge before the

planners and the central banks is to develop an appropriate mix of measures that would ensure that excess liquidity is channeled to economic growth investments, particularly into infrastructure development than consumption.



Traditionally banks have been major providers of infrastructure finance in developing Asia which requires long term local currency financing. While there exists, a huge demand for long term local currency financing, the supply of long term local currency denominated financing at fixed interest rates is limited, as banks rely on their short term deposits for funding. In providing such long term local currency financing, banking and financial sector needs to follow prudent risk management practices and remain resilient by not exposing itself to systemic risks. Other financial intermediaries forming part of the financial sector that provide long term local currency finance at fixed interest rates include financial institutions, non bank finance companies including leasing companies, bond markets, pension funds, provident funds, and insurance companies.

While the demand for the infrastructure investment over the next 5 years has been quantified, it may be useful to gather information on the supply side and the potential capacity of the banking and financial system to provide such long term local currency denominated financing in the next 5 years. Such an exercise will then help planners identify gaps and to focus on taking appropriate and corrective action to support infrastructure development. It is likely that most of the developing Asia faces a supply side gap for long term local currency funding in support of infrastructure than a demand side gap. Hence policy makers will need to consider macro prudential supply side measures as differentiated from demand side modalities, that will help facilitate the increased availability of long term funding in local currency at fixed interest rates to bridge the supply gap in long term local currency funding in support of infrastructure and housing sectors that generate economic growth. The need to recognize the importance of supply side dynamics of long term local currency funding at fixed interest rates is highly

relevant for developing Asia.

It is estimated that the supply gap is likely to be significant and existing available mechanisms are not sufficient to tackle the current problem. This calls for a more sophisticated approach. Some of the supply side measures include maturity transformation of retail deposits and increased access to foreign resources. Maturity shift of retail supply of short term funds in support of sustainable economic growth through infrastructure development is preferred in developing countries over consumption led growth driven that may also resort to inflationary pressures. The second option - funding from foreign sources is however denominated in hard currency. An issue therefore arises on effectively tapping the foreign resources that will enable borrowing by infrastructure project borrowers denominated in local currency.

Policy makers and central banks are now particularly examining the key elements of macro-prudential orientation of the alternative being considered. This is in direct contrast to a micro-prudential orientation. A macro-prudential orientation entails a great deal of focus on financial system as a whole as opposed to individual financial institutions. As a result, a macro-prudential perspective makes supervisors particularly alert to the possibility that a specific course of action may make eminent sense for individual financial institutions but may not necessarily result in desirable aggregate outcomes. Policy makers are now cognizant of the fact that macro-prudential orientation is an important complement to a micro-prudential orientation. It involves a multi dimensional awareness in the pursuit of financial stability, the identification of vulnerabilities, and the calibration of policy tools. There is a need to incorporate macro factors in financial sector risk assessments, as it puts a premium on understanding the links between the macro economy and the financial system as well as market dynamics¹. Given the existence of headwinds as mentioned earlier, the challenge is to craft sound macro economic policies that will further strengthen Asian domestic economies.

Local currency bond issuances, credit guarantees, and cross currency swaps are some of the different modalities that are currently being used for development of long term local capital markets. Individual country specific circumstances will help decide an appropriate modality (bond issuance, credit guarantee or cross currency swaps) as each modality has a different macro economic implication. To be able to assess associated implications, it is necessary to distinguish between symptoms that can be observed and the underlying causes. Local currency bond issuance and credit guarantees are generally seen as asset side solutions or demand side interventions as these interventions allow the financial intermediary to help tap the existing supply of long term local currency funding. However such modalities crowd out existing sovereign, non-sovereign and private sector borrowing in the absence of an increased supply of local currency funds for investment. Maturity transformation of retail funds and making them available for infrastructure investment over consumption would be seen as liability

¹ Basel Committee on Banking Supervision and Financial Stability Forum have been advocating the need for ensuring financial stability from a macro-prudential perspective.

side solution or a supply side intervention to help decrease the gap in supply of long term funds in local currency. Such modalities have to be developed in a manner that does not create competition with the commercial banking system but supplements development of long term local capital markets. Funded cross currency swaps by multilateral financial institutions with their respective developing member countries would be seen as liability side or supply side intervention that will help decrease the gap in supply of long term local currency funds.

Untapped Potential of Development Finance Institutions to Catalyze Private Investment' presented by World Economic Forum (WEF) under its Financing for Development Initiative undertaken in partnership with United Nations Department of Economic and Social Affairs (UNDESA) and the Swiss Agency for Development and Cooperation (SDC) a recommendation was provided that developing countries with ample foreign currency reserves could further develop their local capital markets could be developed further through the

Central Bank's Balance Sheet - Impact of Local Currency Appreciation

(In Billion)

	Scenario 1						Scenario 2 (Preferred Scenario)																	
	Reserves from External Borrowings												Reserves from Cross Currency Swap with Multilaterals											
	Description	Assets		Description	Liabilities		Description	Assets		Description	Liabilities													
	\$	LCU		\$	LCU		\$	LCU		\$	LCU													
2006 \$1 = LCU 50	FX Assets	100	5000	Domestic Liabilities	100	5000	FX Assets	100	5000	Domestic Liabilities	100	5000												
2008 \$1 = LCU 40	FX Assets	100	4000	Domestic Liabilities	125	5000	FX Assets	100	4000	Domestic Liabilities	125	5000												
	LCU Appreciation Loss	25	1000				LCU Asset/ Receivables (from Swap Counterparty)	25	1000															
		125	5000					125	5000															

(LCU = Local Currency Unit)

ADB has recently introduced a new local currency swap product for injecting long term local currency financing in the targeted sectors that generate economic growth. Under this new initiative, ADB will swap its hard currency for local currency with its developing member country for long tenors stretching up to 15 to 20 years. The local currency will in turn be lent by ADB to infrastructure project developers, sponsors, and financial intermediaries without sovereign guarantee based on an acceptable credit rating from international credit rating agencies. The structure creates a win-win position for the parties involved as neither party takes currency risk. The role of the host government in undertaking a cross currency swap intervention is that of a Facilitator. A cross currency swap is a non-debt instrument. It materially differs from an offshore borrowing and does not create fiscal deficit. A cross currency swap that entails exchange of principal amounts simply changes the currency composition of the cash available with the government during the life of the swap. A cross currency swap is not a public debt. The transaction remains neutral in a manner such that the increase in foreign currency funds available with the government is offset by a corresponding decrease in local currency funds and upon maturity of the swap at a future date, the decrease in foreign currency funds is offset once again by an increase in local currency funds by the same initial amount. Central banks prefer this modality as it in turn insulates the central bank from local currency appreciation risk and other associated costs. In undertaking such intervention, ADB provides necessary risk mitigation in a manner that is in the interest of all parties involved.

In a report titled 'Building the Monterrey Consensus: The

use of local currency swaps. Policy makers in these countries are now concerned that the huge pile of foreign currency reserves may be a sign of an inefficient domestic financial intermediation. While developing Asia is witnessing excessive inflows of foreign exchange, it is also producing Asian multinationals. In recent years, Asia has invested a considerable sum on offshore acquisitions. However such acquisitions were mainly funded predominantly by offshore financial intermediaries with negligible participation of local banks. This unique situation has compounded the woes of Asian central banks. Primary reason for lack of participation of local banks in such financings is the underdeveloped nature of long term local currency swap markets in developing Asia. This unique situation has compounded the woes of Asian central banks and monetary authorities. There is an urgent need to develop sustainable funded cross currency swap structures in developing economies that will promote a healthy two way capital flows. Multilateral financial institutions can bridge the gap in developing such financial intermediation through appropriate risk mitigation tools.

Swap market development is now considered imperative for promoting financial intermediation in support of increasing the supply of long term local currency financing and attracting foreign direct investment in the infrastructure sector as well as other long gestation projects. Essentially, swap market development is crucial to promoting local capital markets. Development of local capital market requires developing all aspects of capital markets including but not limited to

Impact of Funded and Non Funded Cross Currency Swaps on Financial System

1 - There are generally two types of cross currency swaps that are undertaken by financial intermediaries. The main difference being if the cross currency swap requires exchange of principal amounts of two currencies involved in the transaction. In a cross currency swap that does not involve exchange of principal amounts, parties to the swap agree to exchange differences at the maturity of the swap. While the former type of swap is called funded swap, the latter type of swap falls in the category of non-funded swap. In the latter case, banks generally hold cross currency swaps on their trading book rather than for their hold to maturity book that runs through the life of the swap. While the end result in both the cases may appear to be same, yet there are different sets of implications on the health of banking and financial system. There are systemic risks associated with non-funded swaps as banks generally end up taking these swaps by keeping an open position based on their own view of future currency and interest rate movements. In addition, in undertaking non-funded swaps that involve exchange of difference, banks generally rely on the monetary policy stance of the central bank. It is now widely acknowledged that in certain developing countries, the cost of undertaking such non-funded swaps is in turn indirectly borne by the central bank or the host government as the hard currency so released in

the system is absorbed by the central bank in undertaking liquidity management.

2 - These two alternatives appear to be conceptually similar but operationally distinct with different implications. One way to differentiate the two alternatives is to see if the proposed alternative has the likelihood of requiring central bank to intervene in the foreign currency market. It is obvious that in undertaking cross currency swaps with counterparties (irrespective of their strong or weak credit credentials) that either do not require hard currency and at the same time do not have local currency, the likelihood of central bank ending up buying foreign currency through sterilization measure is higher than in the case of a cross currency swap undertaken with a counterparty that has a natural need for hard currency and do have local currency.

3 - For examining this issue in detail, it is imperative to see the intent of the counter parties in addition to the credit worthiness of the counterparties in undertaking such a transaction. In developing countries, non-funded swaps may generally be undertaken by banks (irrespective of their high credit rating) that either do not need hard currency or do not possess local currency. Their intention is to either

hedge the swap exposure by undertaking a back to back swap with another counter party or hold the swap on its trading books (as differentiated from client account swaps) by keeping open positions. These open positions on a collective basis, if constituting a significant amount of exposure could pose a serious threat to the health of country's banking and financial system. In a systems context, non-funded swaps thus have the potential of creating currency volatility in the financial system. This activity then poses challenge for the central bank, as it manages the overall liquidity in the system with dual objective of maintaining orderly conditions in domestic financial markets and to contain currency volatility in the financial market. This is being done by a central bank through the process of sterilization whereby central bank uses various instruments to absorb liquidity on a continuous basis.

4 - From a systems context, it is useful to note that in a financial system with interlinked claims and obligations, one party's obligation is another party's asset. Any unhedged or open position, if undertaken in excessive limits is then considered similar to irresponsible bubble creating activity and needs to be monitored and

quite often checked appropriately. In a tightly knit financial system, externalities transmitted by undertaking speculative activities do have far reaching consequences. Such transactions affect the market more than the parties involved in the transaction and have the potential of creating adverse spillover effect on the financial system. It is the role of policy makers to identify and control such moral hazards. Another aspect that policymakers need to consider is the signal that needs to be sent to the financial markets. Developing countries would prefer foreign banks undertaking long term lending in support of infrastructure than making trading profits by undertaking speculative activities that are detrimental to the health of a financial system. More and more developing countries are now desirous of attracting foreign banks' risk appetite and capital for economic and productive growth over trading activities that may some times be driven by regulatory or monetary policy arbitrage opportunities.

equity, bonds, forex and cross currency swap markets. While the need of the developing countries is to encourage use of derivative products in support of long term financing for infrastructure projects, market participants at the same time tend to offer derivative products for generating arbitrage income, either regulatory or otherwise or for speculation. Foreign investors in undertaking offshore investment decisions for long gestation infrastructure projects prefer the existence of long term cross currency swap markets especially, if their returns are not assured in hard currency. It then enables foreign investors to take informed decisions through proper identification of expected return on investment by mitigating exchange risk volatility. Financial institutions and non bank finance companies that are adequately capitalized and have the risk assessment capacity can play a significant role for infrastructure development by providing financial intermediation through capacity creating modalities that are supply side driven than demand side driven to fill in the supply side financing gap.

ADB supports projects that are pioneering and aim at improving private sector led development. ADB favors projects that pioneer new contractual structures and promote better risk sharing, help promote a better financial

environment for the private sector by providing new sources of debt and equity financing and building institutions that promote more stable and liquid capital markets that is inclusive of equity, debt and swap markets. In addition to providing direct support to infrastructure projects, ADB provides support to financial intermediaries and capital market institutions that are key to economic development. These financial intermediation projects have a significant catalytic impact in channeling foreign and domestic equity and debt capital to productive sectors of the economy. Sponsors of financial sector projects approach ADB as they can significantly benefit from the presence of a multilateral institution. ADB takes the risk of the financial institution which in turn will take the credit risk on ultimate borrower or a sub-participant bank/financial institution. In undertaking its interventions, ADB plays a catalytic and demonstrational role. It prefers cofinancing arrangements with other bilateral and commercial lenders. ADB's participation is intended to catalyze financing from local and foreign resources, and not to compete. ADB prefers its intervention modalities structured in a manner that is macro-prudential, pioneering and replicable.

Ajay Sagar is Head, Private Sector and Financial Services Group in the ADB's Private Sector Operations Department. (asagar@adb.org)