Interpretation of ADB Macroprudential Indicators: RETA 5869
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Indicators	Interpretation	References	Other studies
Domestic credit (% of GDP) [growth]	Considered as an indicator of a monetary policy stance w/c is incompatible with the currency peg. Very high growth rates of domestic credit may serve as a crude indicator of the fragility of the banking system. This ratio usually rises in the early phase of the banking crisis. It may be that as the crisis unfolds, the central bank may be pumping money to the banks to alleviate their financial situation.	Kaminsky and Reinhart,1998	
M1& M2 growth	These indicators are measures of liquidity. High growth rate of these indicators might indicate excess liquidity which may fuel speculative attacks on the currency thus leading to a "currency crisis".	Eichengreen, Rose and Wyplosz, 1995	
Quasi money (% of GDP)	Represents liquid banking deposits such as savings and time deposits that are not directly used as money. This has a slower velocity of ciculation than Money.	www.cbr.ry/eng/dp/Denob_97_engl.htm	
M2 (% of GDP)	Measure of "financial deepening". An increase in this indicator (and a stable inflation rate) signifies that the economy is effective in translating liquidity expansion into output.		
Money Multiplier (M2/money base)	An indicator associated with financial liberalization. Large increases in the money multiplier can be explained by the draconian reductions in reserve requirements (which often accompanies fin.lib.).	Kaminsky & Reihart, 1999	Calvo & Mendoza (1996); Goldstein (1998)
M2 (% of International Reserves)	Captures to what extent the liabilities of the banking system are backed by international reserves. In the event of a currency crisis, individuals may rush to convert their domestic currency deposits into foreign currency, so that this ratio captures the ability of the central bank to meet those demands.	Kaminsky & Reihart, 1999	
M2 to international reserves growth			
Credit to Public Sector (% of GDP)	Solvency indicator of the public sector. [solvency is described as the ability to meet the present value of external obligations]	Evans et.al., 2000	Edwards (1989)
Net Profits (as % of Avg Assets) [banks]	One of the most commonly used measures of profitability. Unusually high profitability may be a sign of excessive risk taking.	Evans et.al., 2000	
Share of 10 Top stocks in trading (% of total volume of trading)	If the share of the top 10 stocks in stocks is large, any shock affecting the stock prices of these companies may have adverse effects in the stock market.		
Short-term debt (% of foreign reserves)	The inverse of this indicator is the single most important indicator of reserve adequacy in countries with significant but uncertain access to capital markets.	Evans et.al., 2000	
Real lending rate - Real deposit rate	An increase above a threshold level possibly reflects a deterioration in credit risk as banks are unwilling to lend.	Kaminsky & Reinhart, 1999	
Bank Capital (% of total Asset) Total Asset (% GDP)	Capital adequacy and availability ultimately determines the robustness of financial institutions (especially baking institutions) to shocks to their balance sheets.	Evans et.al., 2000	

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Growth of Total Asset			
Share of 3 Largest Banks (% of total assets)	The analysis of financial sector stability may sometimes require information on the condition of individual large banks because of their market power or the possibility of contagion to other firms. If the assets of the financial institutions are highly concentrated to these big players, any shocks to these banks will have adverse effects on the banking system as a whole.	Evans et.al., 2000	
Loans to the Key Economic Sector	A large concentration of aggregate credit in a specific economic sector or activity, especially commercial property, may signal an important vulnerability of the financial system to developments in this sector or activity. Loan concentration can be dangerous in almost any sector of the economy.	Evans et.al., 2000	
Real Estate Loans	In the past, many financial crises have been caused or amplified by downturns in particular sectors of the economy spilling over into the financial system. This has often been the case for concentration in real estate which can be subject to severe boom and bust price cycles.	Evans et.al., 2000	
Non-performing loans (% of total loans)	An increasing trend in this ratio signals a deterioration in the quality of credit portfolios and, consequently, in financial institutions' cash flows, net income and solvency.	Evans et.al., 2000	
Foreign Direct Investment (FDIs) Portfolio Investment	The composition of capital flows has been considered an important factor in a number of currency crises in emerging market countries. Two important types of these flows which are portfolio vs FDIs. FDIs are long-term capital inflows which increases the productive capacity of the country and produce the revenues necessary to cover future capital outflows while portfolio investments are often perceived as low-productivity investments. Countries are particularly velnerable if their current acoount deficits are accompanied by low FDIs or by over-investment in low productivity investments.	Evans et.al., 2000	
Capital Adequacy Ratio (ratio of total capital on risk weighted assets)	A declining trend in this ratio may signal increased risk exposure and possible capital adequacy problems.	Evans et.al., 2000	
Central Bank Credit to Financial Institutions	A large increase in central bank credit to banks and other financial institutions -as proportion of their capital or their liabilities- often reflects severe liquidity (and frequently also solvency) problems in the financial sector.	Evans et.al., 2000	
Current Account Deficit (% of GDP)	A rise in this ratio is generally associated with large external capital inflows that are intermediated by the domestic financial system and could facilitate asset price and credit booms.	Evans et.al., 2000	
Total Loans (% of Total Deposits)	The ratio of credit to total deposits may give indications of the ability of the banking system to mobilize deposits to meet credit demand. A high ratio may indicate stress in the banking system and a low level of liquidity to respond to shocks.	Evans et.al., 2000	
Real Effective Exchange Rate	Real appreciation of the currency which occurs in the context of a large current account deficit is a source of increased vulnerability of the country.	Golstein, 1998.	

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International Reserves	Rapid growth of domestic credit relative to the demand for money, fiscal imbalances and credit to the public sector would deplete int' l reserves. A low ratio of international reserves(in central bank and financial system as a whole) to short-term liabilities is seen, particularly by investors, as a major indicator of vulnerability.	Kaminsky,Lizondo & Reinhart, Evans et.al., 2000	
International Reserves (% of imports)	An indicator of reserve adequacy or how the financial system can respond to the economy's import demands.		
Composite Stock Price Index	A sharp decline in the stock prices may signal adverse market perceptions of the health of the stock market.		
Total Debt (% to GDP)	This indicates the solvency of the country, particularly the ability to repay total external debt using the a year's income.		

References:

Evans, O. et.al, 2000. Macroprudential Indicators of Financial System Soundness. IMF Occasional Paper 192, IMF, April 2000.
Kaminsky, G. S. Lizondo and C. Reinhart. 1998. "Leading Indicators of Currency Crises", IMF Staff Papers, Vol. 45 (March).
Goldstein, M. 1998. Early Warning Indicators and the Asian Financial Crisis. Prepared for EMEAP meeting.
Kaminsky, G. and C. Reinhart. 1999. "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems", American Economic Review, Vol. 89.