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Inflows and Policy: Middling Through

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Abstract

The paper (i) briefly surveys India's policy choices over the reform period with respect to liberalization of the capital account, their underlying rationale and politics, (ii) demonstrates the kinds of capital inflows that resulted; their special characteristics, (iii) assesses the contributions of the inflows; their risks and stresses for policy, and (iv) examines the impact of and handling of the East Asian and the Global Financial Crisis.

Key words: Capital flows; capital account liberalization; FX market; Crises impacts

JEL Classification nos.: F21, F32, G18

Introduction

There has been a sharp escalation in capital flowing into India following the early nineties reforms liberalizing entry and exit for private Foreign Investments¹ (FIs). Inflows were more than just a portfolio rebalancing following permission for entry; there was also a general fall in home bias in asset allocation. Entry barriers were lifted just as technology lowered transaction costs of investing abroad and made restrictions difficult. Lower interest rates in the developed world pushed fund managers to seek higher returns in emerging markets even as reforms and higher growth reduced risk. Developed countries, particularly the US, had a comparative advantage in the provision of financial services, and therefore pushed for liberalization, even as it itself turned more towards self- regulation. As a consequence leverage exploded, magnifying cross border flows.

Facing inflows is an inevitable part of globalization. The latter has many potential benefits, which can fructify with the correct strategic response. Inflows do make more resources available, demonstrate better organization and technology, offer a stimulus to local investment, an opportunity for better allocation of world savings, and for better price discovery in markets.

But inflows to emerging markets (EMs) are subject to sudden stops or reversals due to infectious panics unrelated to fundamentals. Herd behaviour can cause, or at least magnify, cumulative worsening expectations. These are external shocks facing EMs. The East Asian and the global financial crisis interrupted jumps in inflows. Inadequacies in the international financial architecture compound the problems, forcing EMs to adopt costly self-insurance measures. Reserve accumulation occurs also because of limited absorptive capacity. But this, and oil surpluses, imply a flow from the poor to rich as reserves are invested abroad.

¹ These include Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI) and other long- and short-term investment flows.

India has a policy strategy in this context and it can be described as “muddling through”. There has been some deregulation, to take advantage of the wave, yet protect against the volatility; to develop markets even while restricting foreign participation until they reach full maturity and can handle volatility. Deregulation distinguished between types and direction of flows. Liberalization was much greater for equity compared to debt flows including bank loans, and for foreign compared to domestic residents. The rationale was equity, in contrast to debt, shares in risk. Therefore liabilities are reduced in a crisis. For example, as markets fall during outflows the value remitted is lower. Debt inflows are more difficult to service in difficult times while equity takes a write down. Inflows have to be allowed to go out if they are to come in, but continuing restrictions on domestic capital outflows can reduce the reserve cover required. Limits on foreign loans prevent excessive borrowing in response to domestic distortions, even while selective relaxation makes credit available for productive purposes.

We examine the effectiveness of the Indian strategy². While muddling through increases tools available with a policymaker, it can give too much discretion. Judgements made under considerable uncertainty can sometimes be lacking. A possible solution is to write more complex rules, closely tailored to the context, thus reducing discretion to the minimum necessary. Such a principled pragmatism implies although a river is crossed feeling the stones, knowledge of the riverbed allows one to anticipate some of the stones.

Capital account convertibility: Consequences

Table 1 shows the rise in different categories of inflows following liberalization. Permitted types of flows vary in their time horizon, volatility and the arbitrage opportunities they respond to.

² The analysis builds upon and expands earlier work. References not given because of space constraints are available at www.igidr.ac.in/~ashima. Figures quoted, unless otherwise mentioned, are from RBI and Ministry of Finance websites.

Table 1: Foreign Inflows in India

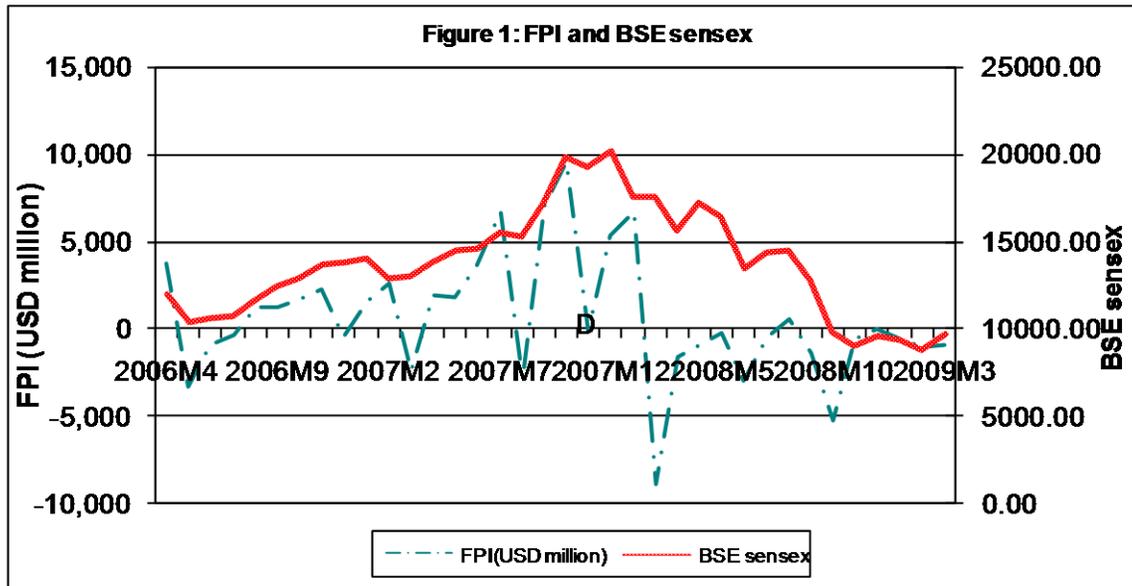
	FDI (USD b)	FPI (USD b)	FI total (USD b)	NRI deposits (USD b)	ECBs (USD b)	Change in reserves (Inc-) (USD b)	Current account	Capital account
							% of GDP (deficit minus)	
1990-91	0.1	0.01	0.1	2.1	2.3	1.3	-3.0	2.3
1991-92	0.1	0.004	0.1	5.8	1.5	-3.4	-0.3	1.5
1992-93	0.3	0.2	0.6	2.2	-0.4	-0.7	-1.7	1.6
1993-94	0.6	3.6	4.2	1.2	0.7	-8.7	-0.4	3.5
1994-95	1.3	3.8	5.1	1.0	1.1	-4.6	-1.0	2.8
1995-96	2.1	2.8	4.9	1.0	1.3	2.9	-1.6	1.3
1996-97	2.8	3.3	6.1	3.3	2.9	-5.8	-1.2	2.9
1997-98	3.6	1.8	5.4	1.2	4.0	-3.9	-1.4	2.5
1998-99	2.5	-0.1	2.4	1.0	4.4	-3.8	-1.0	2.0
1999-00	2.2	3.0	5.2	1.5	0.3	-6.1	-1.0	2.5
2000-01	4.0	2.8	6.8	2.3	4.3	-5.8	-0.6	1.9
2001-02	6.1	2.0	8.2	2.7	-1.6	-11.8	0.7	1.8
2002-03	5.0	1.0	6.0	3.0	-1.7	-17.0	1.2	2.1
2003-04	4.3	11.4	15.7	3.6	-2.9	-31.4	2.3	2.9
2004-05	6.1	9.3	15.4	-1.0	5.2	-26.2	-0.4	4.1
2005-06	9.0	12.5	21.5	3.7	2.5	-15.1	-1.2	3.1
2006-07	22.8	7.0	29.8	4.3	16.1	-36.6	-1.1	4.9
2007-08	34.4	29.4	63.8	0.2	22.6	-92.2	-1.5	9.2
2008-09	35.2	-13.9	21.3	4.3	8.2	20.1	-2.4	0.6

Source: calculated from <http://www.rbi.org.in>

There was steady acceleration in both net FDI and FPI³. FDI requires stable growth prospects. Even in China the big jump came about ten years after opening out. For India a big jump came in 2006-07 and higher levels continued despite the global crisis. Gross inflows were even higher, since Indian firms began investing abroad.

³ After falling to \$3b in Q4 of the crisis year 2008, FIs were back at \$15b in Q1 of the next year. FPI swung from a negative -11.3\$b over April-Dec. 2008, to a positive \$23.6b over the corresponding period in 2009, while FDI remained steadily positive.

FPI shows more fluctuations, turning briefly negative during the East Asian crisis. It peaked at \$29.4b in 2007-08 but 2008-09 saw outflows of \$13.8b. Inflows during the period when stock markets were moving up were 3 times larger than outflows during equivalent movements down⁴, demonstrating the risk sharing effect (Figure 1).



Source: Calculated with data from RBI and BSE.

Note: M refers to the month of the year.

Figure 1 shows FPI to be more volatile than the BSE index with possible mutual causation between the two⁵. The rise in stock indices, or Tobin's q, helps firms raise money. Anticipation of firms' better performance induces more investment. Loans become easier to get and more venture capital enters. The policy studies literature does show that higher equity inflows have been associated with higher level of domestic investment (Henry, 2007). India demonstrated this in the high growth period of 2003-08, as the ratio of gross investment to GDP rose from 25.2 to 39.1. Firms benefited, but households did not. Retail participation shrank after reforms, which raised entry costs for the average investor. Markets remained narrow in many respects, and therefore excessively volatile. Free foreign entry was allowed in mutual funds, which were

⁴ In the two years prior to October 2007 the BSE stock index rose from 8000 to 20,000 and FPI inflows were \$ 47 billion. But over the next year, as stock markets fell back to 8000, outflows were only \$15 billion.

⁵ The respective coefficients of variation (the standard deviation divided by the mean) are 5.7 and 0.22. Time series studies confirm the causation.

supposed to give savers more options, and develop the financial services industry taking local skills to international levels. But mutual funds focused on the high end, and on firms. Thus foreign entry is not a panacea. Other conditions also have to be in place. Eventual internationalization of Indian financial services is required as Indian companies go global. But the sequencing has to be correct.

Relaxation of External Commercial Borrowing (ECB) norms in 2006 aggravated net inflows, despite liberalization also of firms' investment outflows. Since domestic interest rates exceeded foreign and the exchange rate was expected to appreciate, firms borrowed abroad to finance ambitious investment plans.

NRI flows did not show the same amplification. They respond to opportunities for interest rate arbitrage, but NRI deposit rates were capped in the later years. So NRI inflows were quite low when other types of inflows were booming.

The Table also shows there was a current account deficit (CAD) during much of the period but it remained limited. Since the positive capital account far exceeded the negative current account, a large part of the capital flows were absorbed as reserves⁶.

The CAD is also the excess of domestic savings over investment. A small CAD implied the contribution of foreign savings to financing the resource gap remained small, although they may have contributed to relieving sectoral financing constraints and to developing markets. Empirical tests largely have found that only countries with strong domestic institutions, markets and government finances benefit from foreign inflows. These features determine absorptive capacity that reduces volatility and also gives countries the ability to withstand volatility.

Since macroeconomic policy affects the investment savings gap, the extent of reserve accumulation is a policy decision. The alternative is to allow appreciation, which would

⁶ India's foreign currency reserves peaked at \$ 315.66 billion in June 2008 and had fallen to 262 billion in end March 2009, when they exceeded India's foreign debt by just \$ 22 billion. Although outflows were only \$20 billion, much of the fall was due to valuation effects.

increase net imports and the CAD. If temporary capital inflows determine the real exchange rate—it would deviate from equilibrium. Large persistent current account surpluses do require appreciation but not persistent deficits as in India. Since exports are part of a labour absorbing development strategy, and have to match rising imports, the exchange rate has to be competitive. Even so, there was greater exchange rate flexibility. Some appreciation and two-way movement occurred as the dollar depreciated after 2003.

Moreover, reserves provide confidence to financial markets. Other ways of absorbing inflows were selective easing of outflows by domestic residents and trade liberalization. Supporting the domestic investment environment, for example by reducing the gap between domestic and foreign interest rates, also absorbs inflows, but this depends also on deepening markets and reducing administrative interventions—a general rise in absorptive capacity. Given India’s higher interest rates, the sterilization⁷ of reserve accumulation, to maintain targeted rates of money supply growth, imposed large interest costs borne by the Government, (explicitly shown in the Budget), RBI and banks.

Table 2: Equity and Debt Flows to Emerging Markets

Billions of USD	2003	2004	2005	2006	2007	2008	2009f	2010f
Private flows, net	229.0	330.9	528.3	561.8	887.8	392.3	140.5	373.2
of which								
<i>Equity investment, net</i>	138.5	195.1	250.4	223.8	296.9	185.6	240.9	250.0
of which								
<i>Direct equity investment, net</i>	103.2	154.7	197.4	172.1	304.8	277.9	215.4	225.1
<i>Portfolio equity investment, Net</i>	35.4	40.4	53.0	51.7	-8.0	-92.3	25.5	24.9
Commercial banks, net	29.8	58.8	181.0	223.4	398.1	91.5	-91.9	57.5
Credit flows, net	33.4	60.2	180.2	222.0	395.5	90.3	-92.6	56.8
Other private creditors, net	60.7	77.1	96.9	114.6	192.8	115.2	-8.5	65.6

⁷ As foreign assets replaced domestic securities in the Reserve Bank of India’s (RBI) balance sheet, its stock of government securities was nearing depletion. A Market Stabilization Scheme (MSS), consisting of 91-day to 1-year government bonds, was introduced in March 2004. The government issued new bonds whose proceeds were sequestered in a special account with the RBI, thus neutralizing the liquidity impact of RBI’s FX purchase. During capital outflows in 2008 it was possible to buy back MSS securities, which contributed to financing expanded government borrowing requirements because of the fiscal stimulus.

Note: 'f = Institute of International Finance (IIF) forecast

Source: Calculated from <http://www.iif.com/>

The sharp rise in inflows after 2003 was also due to external factors. Table 2 shows the surge in different types of capital flows into EMs. Post crisis forecasts do not expect 2007 type of peaks given deleveraging. To the extent the peak was an aberration due to regulatory weakness in developed countries, self-insurance and restrictions against the surge was the correct policy response. While equity flows rose, the sharpest rise was in credit flows. India's restrictions on banks⁸ and on debt flows protected it from this surge. East European countries that had allowed free entry of foreign banks suffered the most. Large foreign inflows were intermediated through these banks but when they were in trouble home country rescue packages were not available to the branches.

IMF data also shows that private foreign inflows to EMs fell in the period following the East Asian crisis, but more than doubled to an annual average of about \$ 200 billion over 2003-06, peaking at 617.5 billion in 2007⁹. It has been argued that US monetary policy that kept rates low was responsible for the flood into EMs, seeking higher returns. But US policy interest rates had been held at 1 percent over June 2003 to June 2004, and were raised after that. So if low US interest rates were driving the flows they should have been highest in 2003-04 not in 2007, when the federal fund rate peaked at 5.25 percent. Leverage enhanced flows in response to profit opportunities.

Nominal amounts outstanding in derivatives grew from \$100 trillion in 2002 to \$516 trillion in April 2007 (BIS, 2007). Since 2000 the market for mortgage-backed securities exceeded that for US treasury notes and bonds. Asset backed securities peaked at \$4.1 trillion in 2006 and credit default swaps at \$57 trillion in June 2008. Open positions as part of the carry trade facilitated cross border flows. Although the cost of replacing contracts and the credit exposure are much lower, notional amounts capture the open

⁸Compulsory reserve requirements (CRR), statutory liquidity requirements (SLR), limits on open positions, securitization etc. constrain the ability of Indian banks to intermediate foreign borrowing.

⁹ The figures are calculated from data available at <http://www.imf.org/external/pubs/ft/weo/2009/01/pdf/tables.pdf>

interest. In 2004 the US securities regulator, Securities and Exchange Commission, relaxed the net capital rule or ceiling of twelve times capital on borrowing for investment banks, allowing them to use their own models to determine risk. As a result leverage shot up; when Lehman Brothers was allowed to fail its leverage was 30:1 compared to 15:1 for a commercial bank. The 33 percent compound annual rate of growth in derivatives occurred just over the period regulations were relaxed.

Compared to this growth in derivatives, other sources of liquidity were trivial: US broad money supply growth, for example, averaged about \$15 trillion with an annual growth rate of about 6 percent¹⁰. Modern financial markets have large powers to endogenously create liquidity, and a strong motive to do so in good times. Poor incentive features and the lack of universal regulation increased this procyclicality.

Capital account convertibility: Politics

A political economy, overturned by events, underlay the gradual process of capital account convertibility (CAC). Financial interests, and the IMF dominated by these interests, strongly pushed for full capital account liberalization in the 90s. Since financial reforms were easy to do compared to difficult domestic institutional reform, and there were attractive potential kickbacks, policy makers were also inclined to liberalize. But the East Asian crisis threw a spanner in the works as the costs of CAC ahead of domestic financial reform became clear.

In India lobbying varied from those who wanted full CAC and a flexible exchange rate, to those who would restrict all types of inflows and control market activity. Apart from extreme pro- and anti-market positions, there were also serious analytical issues. Those who wanted more controls were concerned about crises from volatile flows, fiscal vulnerability, Dutch disease and appreciation hurting an export led growth strategy, or inflow driven asset bubbles in narrow domestic markets (Nachane, 2007, Sen, 2007). Those for faster CAC wanted more market-led innovation, an end to financial repression

¹⁰ The figures are calculated with data available at <http://www.federalreserve.gov/econresdata/default.htm>.

and distortions, and the chance to develop India as a center for financial services given its skilled manpower (Rajan¹¹, 2009).

The first Tarapore Committee (1997) set out macro preconditions for CAC, including improved government finances and current account, and the second (Tarapore, 2006) set out the micro-institutional development required in financial markets. But the East Asian crises overturned the first and the global financial crisis overturned the second committee's recommendations for faster liberalization. Thus CAC proceeded slowly, as did the task of strengthening domestic markets and policy institutions¹². There was real progress in the latter, notwithstanding complaints about regulatory speed breakers.

Extreme pro-market positions could not survive the repeated crises, absence of serious reform in the international financial architecture, and excessive leverage due to foreign regulatory lapses. But anti-market forces could not survive the reaction to stifling past controls, the need for financing growth, and pressures to keep up with developments elsewhere. For example FX (foreign exchange) futures were allowed in Indian stock exchanges after they were started at the Dubai exchange. Box 1 illustrates the development of the Indian FX market.

Box 1: Indian FX Markets

Table 3 and 4 show both the very low level of Indian FX markets, and the extreme rapidity of their development. The average daily turnover in Indian FX markets, which was about US \$3.0 billion in 2001, grew to US \$34 billion in 2007, one of the fastest rates of growth among world markets (Table 3).

¹¹ The macroeconomic section in the report expressed the naïve view that giving capital more freedom in good times would induce it to be more loyal in bad times. But capital is driven by expected returns. Strength attracts it and weakness, or even a hint of weakness, leads to exit.

¹² There were considerable developments in the money, equity, and FX markets, and in strengthening regulatory frameworks.

Table 3:FX Turnover Compared to Other Sources of Currency Transactions

USD billion	Daily FX turnover (April)				Merchandise trade, daily average		FX inflow, daily average	
	2001	Percent of world total	2007	Percent of world total	2000	2007	2000	2007
Australia	52	3.22	170	4.26	0.46	1.05	0.04	0.06
India	3	0.18	34	0.85	0.38	1.17	0.03	0.18

Note: (1) Foreign inflows are measured as the current account deficit plus reserve gains. (2) Merchandise trade is calculated as exports plus imports of goods and services (absolute values) (3) FX turnover is on net-gross basis and includes spot, outright forwards and swap transactions.

Source: Calculated from the Bank for International Settlements (BIS, 2007, Table E16, pp. 82, <http://www.bis.org/publ/rpfx07a.pdf>), the International Financial Statistics (IMF, various years).

Table 4: Aspects of the Indian FX Market

	USD billion	2001-02	2006-07
	FCY/INR ^a		
1	Total spot turnover (sales + purchases)	450.16	2085.39
2	Total spot intervention (sales + purchases)	385.81	316.88
3	2 as % of 1	8.57	1.52
4	Share of 1 due to interbank(%)	64.75	67.08
5	Share of 1 due to merchant(%)	35.25	32.91
6	Total forward as % of total spot	20.82	22.94
7	Total swap as % of total spot ^b	149.63	61.01
8	Total spot (for April) ^c	30.38	252.53
9	Share due to RDs (from CB survey) (%)	68.15	78.02
10	Share due to other financial insts. (%)	5.76	10.49
11	Share of non-financial insts.(%)	26.09	11.49
12	Share in total spot of local transactions(%)	95.98	89.86
13	Share in total spot of cross border tran.(%)	4.02	10.15
14	Total FX derivatives as % of total spot	0.06	226.77

Note: Items (1) to (7) were calculated from RBI bulletins. The data was collected for all the months in the given years and summed up. Each year is taken from July to June. (8) to (14) are figures for the month of April as is available in the Central Bank (CB) Surveys (BIS). (9) to (14) are as percentage to (8); FCY: Foreign currency; INR: Indian rupees; RDs: Reporting dealers

^a All transactions involve exposure to more than one currency

^b Excluding "tomorrow/next day" transactions

^c A swap is considered to be a single transaction in that the two legs are not counted separately. Including "tomorrow/next day" transactions

Deepening shows in the expansion of the turnover relative to trade transactions (Table 3) sharp increase in derivative trade, cross border transactions, and decrease in the share of the RBI¹³ transactions (Table 4); advent of electronic trading and communication platforms, which reduce transaction costs and risks; falling bid-ask spreads; changing profile of customers from passive price takers in foreign trade related services, to FIIs and to corporates taking ECB loans, or undertaking mergers and acquisitions. Corporates sometimes had treasuries as large and sophisticated as those of banks.

Gradual reforms followed comprehensive blueprints set by various government committees starting in 1995. Earlier policy sought to limit hedging tools to entities with direct underlying foreign exchange exposures. However, since a larger set of economic agents now had foreign exchange risk there was a shift to “economic exposure” (the effect of exchange rates on a firm's value), to allow flexibility in managing FX risk.

Even so, Indian derivative trading remains a small fraction of that in other EMs such as Mexico or South Korea. In futures markets intra-day trades dominate, and open interest that denotes hedging activity is low. Liquidity and robustness to shocks is far from that in the US market. Short-term instruments with maturities of less than one year dominate, and activity is concentrated among a few banks. As elsewhere, FX transactions are mostly over-the-counter structured by banks. The most widely used derivative instruments are the forwards and foreign exchange swaps (rupee-dollar). But because of user demand for liquid and transparent exchange traded hedging products, currency futures were started in 2008 and later extended to multiple currencies. Multilateral netting on market platforms saves transaction cost. Guarantees from the trade date reduce foreign exchange settlement and counterparty risk.

¹³ The low intervention figure for 2006-07 is actually special to that year since there were only purchases and no sales. Purchases more than doubled the next year as inflows rose. Equivalent purchases only in 2001-02 were \$23 billion. The share of intervention was 10.4 in 2003-04, but has fallen in recent years.

Liberalization: Surviving crises

Did opening out, during a period when major global crises occurred, benefit India? The presumption in liberalizing reforms was the country could handle volatility, but the sheer size of global crises was not foreseen. There were benefits, since the trend rate of growth was higher, and there was development of new growth foci so that growth was no longer government driven. India did not have a financial crisis, but growth became volatile. The slowdowns over 1997-2002 and in 2008-09 can be attributed partly to international crises and partly to policy mistakes in handling.

Middling through gives a lot of discretion to policy-makers and this can be used with varying degrees of effectiveness. Monetary policy has a challenging task to support inclusive growth, withstand volatile flows of unprecedented magnitude, and prevent asset bubbles in narrow markets, even while deepening and crises proofing those markets. It succeeded spectacularly in most objectives, but a policy more attuned to context could have reduced volatility and further improved economic performance.

Sharp interest rate rise in response to exchange rate volatility during the East Asian crisis helped trigger the growth slowdown; episodes of tightening in response to repeated supply shocks helped sustain the slowdown. Instead policy could have focused on the supply side, tackling the problem at its root. Moreover, domestic interest rates much higher than international rates, created arbitrage gaps for carry trade driven inflows through gaps in controls.

Reserves, together with the preference for equity over debt liabilities reduced vulnerability to crises as currency and maturity mismatches were contained. Large reserves held in foreign securities meant gain from currency depreciation, thus lowering its impact. Self insurance implied costs but the alternative advocated to allow the rupee to float and liberalize debt inflows (Rajan, 2009), would have hurt the country badly during the global crises and deleveraging cycle that followed. EMs that followed such advice were worst hit. As Calvo (2005) has documented, sudden stops independent of the fundamentals of the country, impose large costs on many EMs.

Caballero and Krishnamurthy (2004) show that in shallow markets domestic firms underinsure reversals. Because of domestic financial market imperfections, they cannot sell insurance to those who need it. Bond issuance (deepening) would allow firms needing external resources to share their revenues with those with access to foreign funds thus creating more hedging. This is an example of how markets create value by satisfying differentiated needs. Although deeper financial markets and better global governance can provide more efficient forms of insurance, policies such as capital inflow taxation, liquidity requirements, exchange rate and reserve management, are justified in their absence.

Innovative contextual policies are also required. For example, along with the provision of more instruments for hedging, random two-way exchange rate movements, large enough to deliver a substantial loss to one-way bets are essential to induce hedging or the laying off of currency exposure. In East Asia relatively fixed exchange rates, with domestic interest rates exceeding international, encouraged unhedged short-term foreign borrowing, which made the system extremely sensitive to interest rate changes.

Moderate two-way movement within an implicit 5 percent band over 2004-6 was not sufficient to overcome strong expectations of medium term appreciation given India's high growth rate. In 2007, market expectations of the Rupee-USD rate had even reached 32. Many corporates borrowed abroad based on such expectations, increasing currency risk. Some had entered into so called hedging deals, which were actually bets on the value of the Swiss Franc. With the steep rupee depreciation in 2008 many firms lost money. Such deals, where Indian banks were often a front for foreign banks, sometimes sidestepped existing rules that prevented leverage or underlying risk from exceeding export income. Although firms were not allowed to write options, deals were structured so that firms were in effect doing so. The deals were so complex that some firms did not understand the risks they were taking. The RBI intervened largely to decrease volatility, but creating some volatility would have improved incentives to hedge.

Another post Asian crisis lesson is the danger of short-term debt. As creditors refused to rollover such debt, the shock to highly leveraged firms and their banks created bankruptcies and intensified the crisis.

India was careful to keep short-term debt low. But with overconfidence from high growth, similar higher domestic interest rates, an appreciating rupee, and more freedom, firms raised their foreign borrowing¹⁴. Therefore the liquidity squeeze from outflows, drying up of external credit, and the jump in spreads for EMs,¹⁵ after the fall of Lehman, together with the depreciating rupee, was a severe shock to firms' balance sheets. The Reserve Bank's rapid liquidity provision, and the healthy state of Indian banks, allowed firms to substitute domestic credit for foreign. Although the fear factor led to a fall in consumer credit demand, credit to firms was maintained. There was only a marginal fall in aggregate credit growth¹⁶, unlike in the West.

Indian banks were healthy because the RBI had also followed prescient countercyclical macro prudential policies. For example, it increased banks prudential cover for real estate loans, thus moderating a property boom. However, the finance ministry's relaxation of ECB norms during peak inflows acted in the opposite direction to further fuel the spike in inflows.

But firms need external finance. Although aggregate savings are high, about half of household savings are in a not readily available physical form. Indian debt markets have not shown the dynamism of FX, equity and money markets. Instruments to hedge interest rate risk are missing. Long-term funds for infrastructure are scarce. Financial exclusion is

¹⁴ External debt had increased to 22 percent of GDP in 2009, with the share of short-term debt (largely trade credits) at 21.5 percent (compared to 7 percent in the late nineties) and ECBs at 27.3 percent. Non-government share of debt rose to 74.6 percent.

¹⁵ The spread on the Morgan Stanley emerging market bond index (EMBI+) jumped up to 850 in October 2008, from 300 in August. It did not sustain that peak, but began steadily decreasing from March 2009, and in July had reached 400. The index for Asia was the lowest at 330 reflecting the better prospects for this region.

¹⁶ RBI's survey showed credit growth to be 20.5 (March 2009) compared to 23.4 (March 2008) in the top hundred banking centres. The figures for deposit growth were 21 and 25.7. While credit to industry was maintained, personal loan categories showed some fall. In July 2009 annual credit growth of scheduled commercial banks was 16.3 compared to 25 a year ago.

especially high for smaller firms who cannot access equity markets and international markets. The first priority must be to bring more households and firms into the financial system. More even access to bank accounts, use of new technology and institutional structures, data collection including the availability of credit histories, can improve inclusion and intermediation of domestic savings. Until these domestic distortions, including large interest gaps and one-way predictable exchange rate movements are removed, liberalizing debt inflows has to be done with caution. Unhedged excessive private borrowing abroad, driven by domestic distortions, is dangerous.

Liberalization: Policy

Although improvements are possible, and one can debate timing, mix, degree and direction, some flexibility of exchange rates, reserve accumulation in response to volatile inflows, graded restrictions on the capital account, market development with countercyclical prudential regulations have helped India side-step crises, and achieve respectable growth despite financial turbulence. On the whole regulators exhibited a healthy contrarian attitude, and democratic pulls and pressures resulted in a middling through process. This has a better chance of success in EMs needing development over several fronts to achieve robust diversified growth.

Diversified sources do sustain Indian growth including domestic demand, agriculture, openness, technology, the demographic profile, the infrastructure cycle, high savings and having crossed a critical threshold. As a net commodity importer India gains from lower global prices. Dependence on external demand is low compared to other Asian countries. While foreign capital does not contribute much to aggregate resources it is useful in financial intermediation. But post crisis a sufficient quantity of inflows have revived.

Post Lehman growth did not collapse as those who believed India's performance to be entirely dependent on foreign largesse expected. Given our export share of 15 percent, the trade shock reduced GDP one percent below potential in 2008-09. The health of the financial sector also helped a V shaped recovery unlike in the West, where financial sector weaknesses and low demand imply persistent weakness.

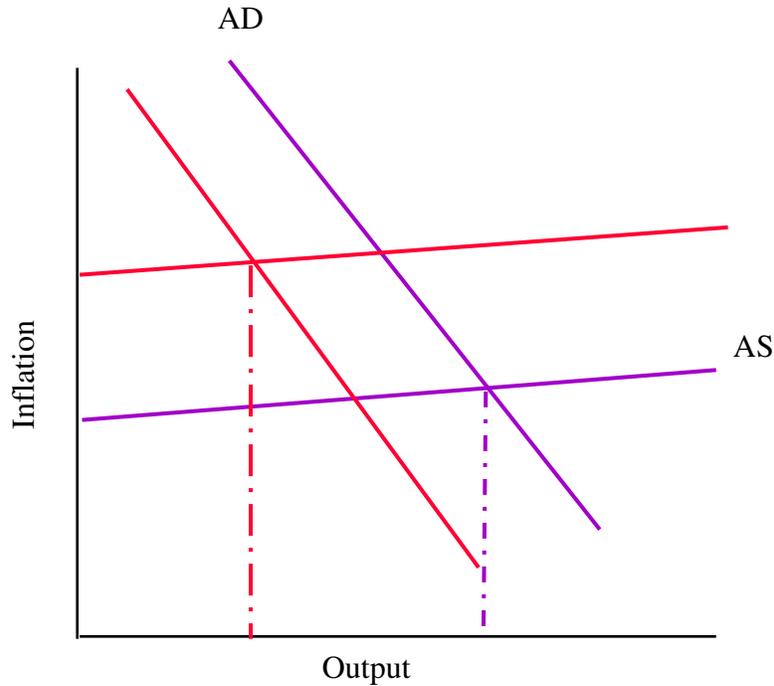


Figure 2: Aggregate demand (AD) and supply (AS)

Monetary and fiscal policy responded rapidly and in a coordinated fashion to the crisis. The global push for individual country government's to provide a demand stimulus allowed us to do what we needed. The post reform Indian macro policy combination was fiscal loosening and monetary tightening. This has adverse consequences when the structure of the economy is as depicted in Figure 2. Frequent supply shocks and chronic fiscal waste push up an elastic supply curve as costs rise. It is elastic since output is generally below potential as a large labour force shifts, during a catch-up high growth phase, to more productive occupations. Inflation expectations, fiscal populism and distortions are other factors pushing up the supply curve. Monetary tightening, in such circumstances, has a high output cost with little effect on inflation, as it pushes the demand curve leftwards. Better fiscal rules will make more relaxed monetary policy feasible.

Fiscal Policy

High Indian growth despite high deficits is regarded as a puzzle. But Indian private savings are high enough to cover for some government dissaving, thus preventing a large current account deficit and potential currency crises. Moreover, high transitional growth in a populous country reduces deficit and debt ratios. To the extent government expenditure helps maintain high growth it is sustainable.

But there is a tendency for unproductive populist expenditure and waste in a low-per capita income democracy. India has seen successful tax reform and elasticity in revenues but reform in expenditure management has been lacking. The Fiscal Responsibility and Budget Management (FRBM) Act adopted in 2003 has been kept in letter rather than spirit. Where necessary, capital expenditure has been cut, and off balance sheet items used to achieve targets. Better incentive features are possible. For example, expenditure caps can improve incentives to comply, while protecting productive expenditure. The composition of public expenditure would then change towards human, social and physical capital. The Thirteenth Finance Commission has enabled some countercyclical fiscal policy by setting paths for debt reduction. The post crisis experience has demonstrated the efficacy of a fiscal stimulus when output falls below potential.

Monetary Policy

Operational monetary policy needs to respond to outcomes rather than be tied to nominal money supply targets based on uncertain estimates of rapidly changing potential output. It should gradually move to becoming more forward-looking, responding to forecasts of inflation, so as to more successfully anchor inflation expectations at lower output cost. The aim should be more to reduce costs or shift the supply curve downwards in anticipation of cost shocks. Low interest rates help to facilitate the supply response. Short-term nominal exchange rate flexibility can also contribute. Of all the monetary transmission channels the lag from the exchange rate to CPI is the shortest. The higher the weight of imported goods in CPI the more effective is this channel. This weight rises as border prices begin to affect food prices. Food is still a major component of the

average Indian consumption basket. If dependence on oil imports is also high, an inverse movement of the exchange rate in response to commodity price shocks can moderate inflation.

Such a response of the nominal exchange rate to temporary supply shocks also contributes to crises proofing. The ensuing two-way movement removes an implicit government guarantee and encourages hedging to reduce risk. But it is also necessary to limit excessive volatility, even as homeopathic doses of volatility strengthen thin markets. There is room to surprise markets at times and work with them to achieve targets at others.

A more appreciated nominal rate can help sustain a positive interest rate differential to the extent it leads to expected future depreciation, although with a large interest differential some restrictions on the capital account will be required.

But the real exchange rate must not depart for long from competitive equilibrium levels. Productivity improvements allow a more appreciated non-inflationary equilibrium real exchange rate. The latter is inversely related to real wages—rising average wages require a more appreciated real exchange rate. But a rise in the average wage level cannot occur until surplus labour is absorbed in the modern sector—thus limiting real appreciation. Balassa-Samuelson type appreciation of the real exchange rate, driven by equality of wages across sectors with varying productivity, comes at a later stage, when the labour transition is complete. If the average real wage is low, nominal appreciation will not lead to real appreciation since prices will not rise. If conversely, the real exchange rate compatible with the minimum wage is more appreciated than that warranted by labour productivity, a spiral of wage price inflation results. A better alternative to divorcing food prices from border prices through a tariff-food subsidy-procurement barrier is direct income transfers to those below the poverty line. In the longer term steps must be taken to raise agricultural productivity.

Since domestic interest rates generally exceed international, liberalization gives policy the opportunity to reduce domestic rates, thus closing the arbitrage gap¹⁷ to the extent compatible with the domestic cycle, the inflation differential, any risk premium, and a reasonable return to savings. High spreads also have to be reduced. A lower interest rate stimulates the supply response, maintaining the higher growth feasible in transition economies. It also reduces the cost of government debt. High savings and long-term capital inflows invalidate the argument that developing countries interest rates have to be higher to reflect the scarcity of capital.

Low interest rates are said to create asset price bubbles in thin markets. But the answer is to use counter-cyclical prudential regulation and deepen markets, not give up the chance to stimulate capital accumulation.

Monetary policy loses autonomy under a fixed exchange rate and a fully open capital account—to the extent the capital account is not fully open and the exchange rate has some flexibility, monetary policy is effective. This effectiveness is further enhanced by the use of tools such as FX markets intervention, and as markets deepen, signaling to affect the exchange rate, freeing the interest rate for the domestic cycle.

As long as poor global governance and regulation create excess volatility of foreign inflows EMs must implement different kinds of self and group insurance. The priority must be on strengthening domestic institutions with capital convertibility to follow only after stringent preconditions are met. One of these is reform of the international financial architecture. Calls for reform after every crisis die down with the crisis. If the greater representation of EMs in the G-20 fructifies in real improvements, risks of openness will

¹⁷ Despite restrictions on debt flows and limits on open positions, international banks found ways participate in the carry trade, where they borrowed in low interest currencies such as the yen and lent in high interest countries. This was one reason for weakness of the low interest rate dollar and yen, prior to the crisis. After the crisis the carry trade unwound because although the arbitrage gaps continued, credit had frozen. In addition, invisible flows in the current account are correlated to interest differentials. Export payments can be sent earlier and import credit invested locally. NRI loans to relatives can be disguised as transfers—all the more since the purpose does not have to be specified for remittances of less than rupees 5 lakhs.

be lowered. The absence of major change almost two years after Lehman does not bode well, however.

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List of Abbreviations:

AD	Aggregate Demand
AS	Aggregate Supply
BIS	Bank of International Settlements
BSE	Bombay Stock Exchange
CAC	Capital Account Convertibility
CAD	Current Account Deficit
CB	Central Bank
CPI	Consumer Price Index
CRR	Compulsory Reserve Requirements
ECB	External Commercial Borrowing
EMs	Emerging Markets
FCY	Foreign Currency
FDI	Foreign Direct Investment
FIIs	Foreign Investment Institutions
FPI	Foreign Portfolio Investment
FRBM	Fiscal Responsibility and Budget Management
FX	Foreign Exchange
GDP	Gross Domestic Product
IIF	Institute of International Finance
IMF	International Monetary Fund
INR	Indian Rupee
MSS	Market Stabilization Scheme
NRI	Non Resident Indian
RBI	Reserve Bank of India
RDs	Reporting Dealers
SEC	US Securities Regulator
SLR	Statutory Liquidity Requirements
USD	US Dollar