Export-Import Bank of India's 32nd

Commencement Day ANNUAL LECTURE

on

"Capital Flows: What Do We Know?"

by

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Capital Flows: What Do We Know?

Prof. Barry Eichengreen

It is an honor to deliver this Commencement Day Lecture at the India Export-Import Bank. And it's always good to start a lecture with a story. Because I'm the lecturer, I get to pick the story. And because I've been at this for a while – "this" being academic research on international and development economics, leavened with economic history and occasional policy work – I can pick a story from my past.

Twenty years ago, almost to the day, I went to work as a Senior Policy Advisor at the International Monetary Fund. I worked with two renowned international monetary economists, Stanley Fischer, the First Deputy Managing Director, and Michael Mussa, Economic Counsellor and Head of the Research Department. I arrived shortly before Fischer gave a widely-noted address to a seminar on Asia and the IMF at the September 1997 Bank/Fund meetings, entitled "Capital Account Liberalization and the Role of the IMF." In it, he asked whether capital account liberalization should be a goal of emerging markets, whether eventual capital account convertibility should be an obligation of IMF members, and whether the Fund's Articles of Agreement should be amended to recognize this obligation.[1]

Of course, my arrival at the Fund and Fischer's address came in the wake of another important event, namely Thailand's devaluation of the Baht and the eruption of the Asian financial crisis. Malaysia's Prime Minister Mahathir Mohamed famously blamed international investors – hedge funds and others – and the cross-border capital flows for fomenting the crisis. The Fund asked me to investigate the role of hedge funds in the crisis. This was the one time I had a team of Ph.D. economists and a corporate credit card – but that's another story.[2] In addition, they asked Mussa and I to re-examine policies toward the capital account in emerging markets and the role of capital controls. The result was a study that we presented to the Fund's Executive Board and published as an IMF Occasional Paper under the title "Capital Account Liberalization: Theoretical and Practical Aspects."[3]

In that paper, we distilled what we could from the record of cross-border lending to emerging markets since the resumption of bond-market intermediated lending at the beginning of the 1990s. International bond markets had been largely inactive since the defaults of the 1930s, 1940s and 1950s. Not until the Brady Plan,

1. Stanley Fischer, "Capital Account Liberalization and the Role of the IMF," IMF Seminar (19 September 1997), https://www.imf.org/en/News/Articles/2015/09/28/04/53/sp091997.
2. Barry Eichengreen, Donald Mathieson, Sunil Sharma, Bankim Chadha, Laura Kodres and Anne Jansen, "Hedge Funds and Financial Market Dynamics," IMF Occasional Paper (15 May 1998).
3. Barry Eichengreen and Michael Mussa, with Enrica Detragiache and Giovanni Dell'Ariccia, "Capital Account Liberalization: Theoretical and Practical Aspects," IMF Occasional Paper (30 September 1998).

converted non-performing bank credits into bonds at the end of the 1980s did it start up again. Putting these flows in the context of the earlier history of international bond markets helped, but we still had limited experience with which to work. Still, we did what we could. Nonetheless, as a good academic I went on and published a journal article based on our findings once I returned to academia.[4]

In this lecture, I want to build on that earlier work by doing three things. First, I will describe the state of play – my attempt to synthesize the literature on international capital flows and capital account liberalization – at the turn of the century. In effect, I will summarize the conclusions of that earlier article, "Taming Capital Flows." Next I will take advantage of the fact that we now have another 15 years of experience with international capital movements to see how much of that earlier conventional wisdom about volatility, composition and regulation survives, and if any of these earlier views about regularities must be modified in light of subsequent experience. In doing this, I will build on some recent research conducted jointly with Poonam Gupta and Oliver Masetti of the World Bank.[5] Finally, I will attempt to draw out the policy implications for emerging markets in general and India in particular.

* * * * *

In that earlier article, I started by contrasting two extreme views: first, the view that cross-border financial transactions, like other market transactions, have benefits that vastly exceed the costs; and second, the view that capital flows are not essential or even helpful for economic development and only heighten volatility and crisis risk. I then attempted to stake out what I called "the messy middle."

Inhabitants of the messy middle, I wrote, find it hard to accept that inward foreign investment is without benefits. Foreign investment was integral to the development of the overseas regions of recent European settlement in the nineteenth century, when it financed railways, ports and urban infrastructure. It came bundled with managerial and technological knowledge. Twentieth century history points in the same direction: all the now-rich economies have open capital accounts and borrow and lend internationally. If domestic financial liberalization has benefits of growth and development, why then is the same not true also of external financial liberalization? And why should emerging markets be different?

4. Barry Eichengreen, "Taming Capital Flows," World Development 28, pp.1105-1116, republished in Barry Eichengreen, Capital Flows and Crises (MIT Press, 2003), pp.289-306.
5. Barry Eichengreen, Poonam Gupta and Oliver Masetti, "Are Capital Flows Fickle? Increasingly? And Does the Answer Still Depend on Type?" World Bank Working Paper (February 2017).

But the inhabitants of the messy middle also acknowledge the existence of costs and risks. Information asymmetries may be more severe in emerging markets, heightening moral hazard and adverse selection. Banks with access to international markets may therefore over borrow, creating stability risks. Investors in this information-impacted environment may attempt to infer market conditions and opportunities from the behavior of other investors, giving rise to herding and amplifying volatility. There are even circumstances where modest improvements in the information environment, as developing countries strengthen supervision and regulation, corporate governance and transparency, aggravate that volatility rather than reducing it.[6]

Historical experience is consistent with these cautions. The historical record on debt finance, in particular, points to the prevalence of information asymmetries, agency problems and instability.[7] That said, the historical correlation between capital controls and crises is not clear: while one might think that countries with stringent controls are less exposed to crisis risk, the former are not randomly selected; when crisis risk is higher for other reasons, countries will be more inclined to maintain or impose controls.[8] But the stylized historical fact that international capital mobility can create risks is undeniable.

* * * * *

What implications for policy, circa 2000, flowed from this perspective? First, open the capital account only after financial market have been liberalized and decontrolled. If interest rates are not decontrolled and create a wedge between onshore and offshore rates, then capital account liberalization can become a vehicle for capital flight. This is a problem that China encountered recently, when the relaxation of capital controls got out ahead of domestic interest rate decontrol. The Chinese authorities then responded by tightening up capital account restrictions and speeding domestic deposit rate control, which makes sense. (Better late than

6. Stephen Morris and Hyun Shin, "Unique Equilibrium in a Model of Self-fulfilling Currency Attacks," American Economic Review 88, pp.587-597.
7. Marc Flandreau, "Reputation, Regulation and the Collapse of International Capital Markets, 1920-1935," CEPR Discussion Paper 11747 (January 2017).
8. Barry Eichengreen and Michael Bordo, "Crises Now and Then: What Lessons from the Last Era of Financial Globalization?" in Paul Mizen ed., Monetary History, Exchange Rates and Financial Markets: Essays in Honour of Charles Goodhart, Volume 2 (Edward Elgar, 2003), pp.52-91; Reuven Glick, Xueyan Guo and Michael Hutchison, "Currency Crises, Capital Account Liberalization, and Selection Bias," Federal Reserve Bank of San Francisco and University of California, Santa Cruz (June 2004).

never, one might say.) In addition, if the banking system is poorly regulated or undercapitalized, management will have an incentive to engage in excessive risk taking and use offshore funding available through the capital account to lever up its bets -- more so to the extent that bank liabilities are explicitly or implicitly guaranteed by the authorities.

Second, liberalize foreign direct investment first. This is the form of investment that most plausibly comes packaged with organizational and technological knowledge. It is the form least likely to aggravate weaknesses in the banking system. It is less footloose than portfolio capital and less likely to flee in a panic. All this points to the wisdom of freeing foreign direct investment early in the capital account liberalization process.

Third, liberalize stock and bond markets next. Foreign investment in securities poses fewer risks than foreign deposits. Because bank deposits are a contractual obligation to repay at par, the withdrawal of foreign deposits can pose an immediate threat to the stability of the banking system. When foreign investors liquidate their positions in stock and bond markets, in contrast, their actions just affect the prices of those securities. Falling equity and bond prices can still cause problems, to be sure, for local investors and entities like the government with funding needs. But the evidence is clear that the term structure of portfolio capital flows (specifically, the share of short-term flows in total capital inflows) is a leading indicator of crisis risk. [9]

The problem is that encouraging the development of equity markets is easier said than done. Equity markets are almost always and everywhere late to develop. In particular, encouraging foreign participation in emerging equity markets is not easy.

Fourth, liberalize offshore bank borrowing last. This was the fundamental lesson of the Asian crisis. Banks are the weakest link in the financial chain. Access to offshore markets allows them to lever up their bets. One only wishes that the United States and Europe had remembered this lesson in the run-up to the Global Financial Crisis.

Fifth, rely on market-friendly instruments for managing the capital account. Efforts to fine-tune the capital account carry their own risks. As people in India will be aware, they can create a burdensome administrative bureaucracy conducive to rent-seeking and corruption. Interventions that rely on markets rather than bureaucrats minimize these dangers. A widely-cited example is Chile's policy of imposing a 30 percent non-interest-bearing deposit requirement for one year on all capital imports, which was subsequently removed as the country's financial markets

9. See Dani Rodrik and Andres Velasco, "Short-Term Capital Flows," in Boris Pleskovic and Joseph Stiglitzeds; Annual World Bank Conference on Development Economics (World Bank, 2000).

deepened and matured. The brilliance of the one-year term was that it implied a heavier tax on investors with short horizons than those prepared to stay for the duration. It was transparent and insulated from administrative discretion. A large literature grew up analyzing the effectiveness of these policies. My reading of the conclusions is that the measures in question had at least some effect in lengthening the maturity structure of external debt while doing little to slow economic development and growth. [10]

Sixth, align domestic institutions and policies with the capital account regime. This means, among other things, that countries with a more open account will have to accept greater exchange rate flexibility, it being hard to hold the exchange rate stable in the presence of an open capital account. Or, more precisely, in the presence of an open capital account together with the policy autonomy that democratic politics demand of governments and central banks.[11] Again, this is a lesson that China learned, the hard way, in the course of liberalizing its capital account. Similarly, countries with an open capital account have less room for fiscal laxity, since investors concerned with debt sustainability find it easier to flee. The modern literature points to the importance of multi-year budgeting, limited vertical fiscal imbalances between the states and federal government, and the advantages of an independent fiscal council for countries in this position.

Seventh, foreign reserves may provide less protection against outflows than what meets the eye. Using reserves to finance outflows and support the exchange rate may only create expectations of additional future use of reserves, which will continue until there are no more reserves to use. In an environment of asymmetric information, using reserves may be taken as a negative signal that instills panic rather than dissolving it. This danger is highest when the authorities find it difficult to credibly commit to undertake other reforms to solve the problems that are feeding the capital outflows in the first place.

Recall how South Korea had more than $240 billion of reserves, a large amount for a country of its size, prior to the Global Financial Crisis, but how $200 billion somehow became a red line below which it was unsafe to fall, and how the country was able to safely navigate the crisis only with the help of an exceptional $40 billion dollar swap line from the Federal Reserve. Or recall how China entered its recent difficulties with nearly $4 trillion of reserves, but how $2.8 trillion, the amount pointed to by IMF debt sustainability analyses as the maximum level the country needed, was somehow singled out by investors as a critical threshold below which reserves could not safely fall.

10. See Bernard Laurens and Jaime Cardoso, "Managing Capital Flows: Lessons from the Experience of Chile," IMF Working Paper 98/168 (December 1998); Atish Ghosh and Mahvash Qureshi, "What's In a Name? That Which We Call Capital Controls," IMF Working Paper no.16/25 (February 2016).
11. This is the theme of Barry Eichengreen, Globalizing Capital: A History of the International Monetary System (Princeton University Press, 1998).

It follows that countries experiencing capital account crises need recourse to a global safety net. This was my eighth and final point. We are clearly moving in the right direction, as Figure 1 shows. But twenty years later, despite the creation of a variety of new IMF facilities and windows and regional arrangements like the Chiang Mai Initiative Multilateralization and the European Stability Mechanism, that safety net is still riddled with holes, as observers in India well realize.[12]

* * * * *

These, then, were the lessons of experience as distilled from the first decade of securitized finance – the first decade since bond markets started up again. The question I now want to ask is how many of those lessons survive the experience of 15 or so additional years of market-intermediated international capital flows.

To do so, I analyze, together with my co-authors, trends in capital flows from 1990 through 2015.[13] We consider the principal emerging markets, 34 in number.

What do we find? On average, FDI and non-FDI inflows are now roughly equal in amount. Median average annual flows are 2.6 percent and 2.4 percent of GDP annually (these are unweighted averages for our 34 countries). Within non-FDI flows, other (mainly bank intermediated) flows are largest, followed by portfolio debt. The relative magnitude of other flows has declined, while that of portfolio debt has increased, since the Global Financial Crisis. Portfolio equity flows remain relatively small, averaging 0.2 percent of GDP over the entire period and just 0.16 per cent a year in the last five years. Outflows are smaller than inflows, these being emerging markets.

Measuring volatility by the standard deviation and coefficient of variation (adjusting the standard deviations by the means), we find that non-FDI flows are relatively volatile. Portfolio debt flows and banking flows are the most volatile. Non-FDI flows are more volatile than FDI flows and less persistent.

12. See Ed Denbee, Carsten Jung and Francesco Paterno, "Stitching Together the Global Financial Safety Net," Financial Stability Paper no.36 (Bank of England, February 2016).
13. While a majority of previous studies have utilized annual data largely for reasons of availability and convenience, I work here with quarterly data. This allows my coauthors and I to analyze capital flows at business cycle frequencies and around country-specific sudden stops and global stops, events that are hard to pinpoint using annual data.

In Table 1 we compare successive five year periods. Portfolio debt inflows increased in 2006-10 and again in 2011-15. Less widely appreciated, FDI outflows from emerging markets rose strongly in 2006-10. Other (mainly bank-intermediated) flows also increased in 2006-10.

The results thus reveal few changes on the inflow side. Capital inflows into emerging markets are volatile, but not increasingly so. What is new is the growing volatility of outflows from emerging markets, bank-related outflows after the turn of the century, and FDI outflows after 2005 and especially after 2010. That outflows are a growing source of capital-account volatility in emerging markets is not adequately appreciated in the literature, in our view.

We then examine the behavior of capital flows around sudden stops and their association with crises. We classify an episode as a sudden stop when total capital inflows (FDI, portfolio equity and debt, and other inflows by non-residents) decline below their average in the previous 20 quarters by at least one standard deviation, when that decline lasts for more than one quarter, and when flows are two standard deviations below their prior average in at least one quarter. The sudden-stop episode then ends when flows recover to at least the prior mean minus one standard deviation. We define an episode of capital flight analogously, as a sharp increase in gross outflows by residents.[14]

Perhaps not surprisingly, portfolio equity, portfolio debt and other inflows all turn negative during sudden stops. But the decline in inflows is sharpest for other flows and smallest for FDI. Figure 4 shows that while FDI inflows decline, their decline is small relative to other types of flows, and FDI inflows remain positive during sudden stops. In contrast, average portfolio equity and debt inflows turn negative in sudden stop periods. Although the drop at t=0 is sharp, inflows recover and are back at pre-crisis levels within four quarters of the start of the episode. Other flows also turn negative at t=0, and recover very slowly, more slowly than portfolio equity and debt flows. Other flows still remain negative four quarters after the beginning of the sudden stop episode.

In addition, portfolio equity and debt outflows, and especially other outflows, drop significantly in sudden stops. This suggests that resident flows are stabilizing. However, the decline in outflows during sudden stops is smaller than the decline in inflows. So even if the fall in outflows by residents partially offsets the fall in inflows by non-residents, this stabilizing impact is only partial, and net inflows still decline.

14. Specifically, a period qualifies when total capital outflows exceed the average in the previous 20 quarters by at least one standard deviation, when the increase lasts for more than one quarter, and when outflows are two standard deviations above their prior average in at least in one quarter. Capital flight episodes then end when capital outflows decline below the prior mean plus one standard deviation.

During periods of capital flight all categories of capital outflow increase--the increase is again largest for other flows, followed by debt outflows. It is smallest for FDI.

To analyze the drivers of capital flows, we estimate regressions where capital flows of different types are regressed on global factors like the Federal Funds Rate and the VIX (converted in log scale) and on a vector of country specific variables--quarterly real GDP growth; capital account openness; financial sector depth (stock market capitalization or bank assets as per cent of GDP); and proxies for the business environment.[15] From the viewpoint of emerging markets, we can think of the first set of variables as push factors, and the second set as pull factors.

The results suggest that FDI is driven mainly by pull factors, while portfolio flows are driven mainly by push factors, and bank flows are driven by both. Most capital flows are not strongly correlated with the Federal Funds Rate, excepting portfolio debt inflows (an increase in the US policy rate predictably dampens portfolio debt flows into emerging markets). Higher global risk aversion as captured by VIX reduces non-FDI capital inflows but not FDI inflows (the coefficient on the VIX is negative and significant for all non-FDI flows and largest for portfolio debt and portfolio equity flows). FDI seems to be affected more by domestic than external factors; a better investment climate is associated with larger FDI inflows. Growth and the investment climate do not appear to act as pull factors for portfolio flows, in contrast.

We next ask whether the effects of these variables have changed in recent years, using 2003, the mid-point of our sample, as the possible break point. We construct time dummy for post 2003 period and interact it with the variables included in the regressions. We do not find much evidence of a change in the coefficients after 2003. Dummies for different periods, before and after 2000, 2008 and 2010 respectively, similarly do not yield significant interactions with the explanatory variables.

We analyzed the correlates of outflows analogously. Most of the patterns for outflows are broadly similar to those for inflows. Non-FDI outflows are higher during periods of lower risk aversion. Global risk aversion as a measured by the VIX is also a significant determinant of FDI outflows from emerging markets (in contrast to FDI inflows to emerging markets, where the VIX was not significant as noted above). Both FDI and non-FDI outflows are strongly correlated with median global and regional outflows.

15. We lag these by one quarter (or one year for the variables that are available at annual frequency). Regressions are estimated with country-fixed effects and robust standard errors.

One of our key findings is that capital outflows from emerging markets, FDI and bank-related outflows in particular, have grown not just larger but also more volatile. We can use these regression results to ask which determinants of these outflows have themselves grown more volatile. The one determinant of outflows that is robustly significant and also become more variable over time is the VIX. The coefficient of variation of the VIX rises by more than half between 1990- 2000 and 2001-2010. Although it comes down slightly in 2011-2015, it is still significantly higher than in the earlier 1990-2000 period. There is also an increase in the volatility of GDP growth which translates into more volatile capital outflows in the 2006-2010 period relative to other years, although this change is not statistically significant relative to other periods.

Our findings underscore that emerging markets should treat capital flows with caution; and that the outflows from emerging markets, both FDI and bank-related flows, have come to play a growing role and deserve greater attention from analysts and policy makers.

* * * * *

How then must the conventional wisdom from the turn of the century be revised in light of recent experience with international capital flows? My answer is: only slightly. Recent experience confirms that capital flows are volatile, so that the capital account of the balance of payments should be liberalized only gradually, as other measures are meanwhile taken to strengthen domestic financial markets and institutions, and as policies, including policies toward the exchange rate, are adapted to the more open capital account. Regulations affecting FDI should be relaxed first, since FDI remains the least volatile form of capital flow. But even a limited fall in FDI inflows can cause problems when gross FDI inflows are financing a large current account deficit, as in Turkey. And FDI outflows from emerging markets, which have become increasingly important in recent years, can constitute a vehicle for capital flight, as in China, which has been forced to reverse earlier measures liberalizing outward FDI inresponse to this problem.

Emerging markets can then follow up on measures encouraging FDI with gradual liberalization of their policies toward international bond and equity market flows. But flows into emerging equity markets remain limited; this is what we should expect, after all, given that information asymmetries and questions about corporate governance, which are the fundamental obstacles to equity finance, are defining features of emerging markets.

There was much discussion in the early 2000s about the greater ability of emerging markets to place bonds denominated in their own currencies with international investors (about the declining importance of "original sin," as the problem of foreign-currency borrowing is sometimes known).[16] This change, it was said, reflected their success in developing financial markets and strengthening policies. Hindsight suggests that this success, in fact, reflected mainly the strength of emerging-market currencies in a period when growth was strong and then when the major advanced country central banks cut their interest rates to unprecedented low levels and engaged in quantitative easing. More recently, the extent of "original sin" – the share of external debt denominated in foreign currencies – has been rising again, since 2008 in Africa and the Middle East, since 2012 in Latin America and the Caribbean, since 2013 in Developing Europe, and since 2014 in Developing Asia and the Pacific.[17] So here too, caution should be the byword for officials contemplating the liberalization of securities markets. And it should especially be the byword for those contemplating the liberalization of bank-intermediated flows, the most volatile and dangerous form of capital flow.

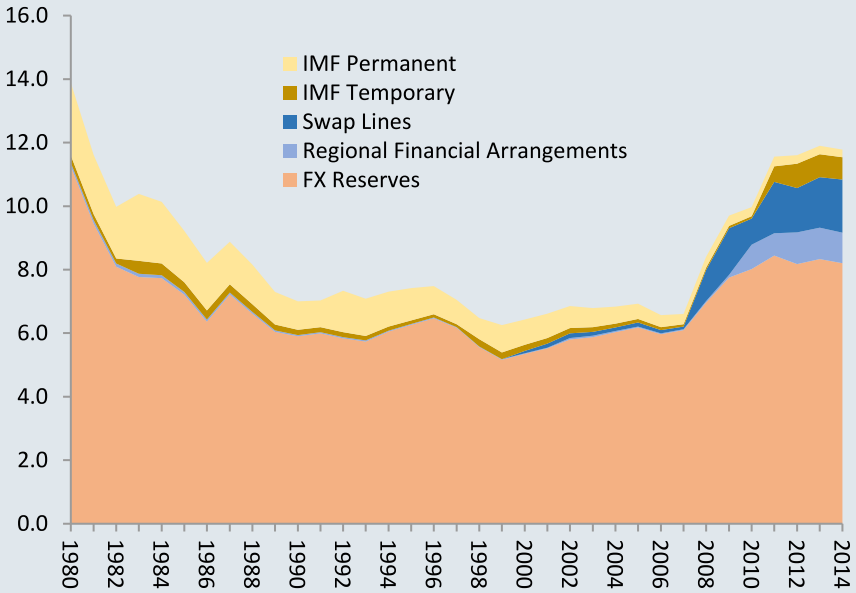
16. See Barry Eichengreen and Ricardo Hausmann (1999), "Exchange Rates and Financial Fragility," in Federal Reserve Bank of Kansas City, New Challenges for Monetary Policy (Kansas City, MO: Federal Reserve Bank of Kansas City), pp.329-368.
17. See Erik Klok, "Impact of Exchange Rate Movements on Debt Servicing Costs in Developing Countries," unpublished manuscript, Netherlands Ministry of Foreign Trade and Development, January 2017.

How does India stack up in these respects? India has been prudent in moving gradually and incrementally when liberalizing the capital account in the course of the last 25 years, starting with policy toward FDI inflows, followed by policy toward portfolio equity inflows and then debt inflows, and turning last policy toward outflows, gradually raising the ceilings and increasing the range of transactions subject to automatic approval.[18] It has been wise to accompany that move with a more flexible exchange rate. It needs to worry about short-term debt flows, including external commercial borrowing, whose relative importance has been rising in recent years, albeit from low levels. It needs to keep an eye on outward FDI, which is greater than in other emerging markets and where regulation is more permissive for corporates than individuals (where we know that corporates as well as individuals can engage in cross-border financial arbitrage). India could also move further in the direction of price-based as opposed to quantitative restrictions on capital account transactions. It needs to further strengthen its banking system so that the banks, especially public-sector banks with lower asset quality and governance issues, can cope with the volatility to which larger international financial flows give rise. But the story, as I read it, has been broadly positive. India has a variety of other pressing challenges. But fundamental reform of its capital account-management practices, happily, is not one.

Thank you very much.

18. For details see Atish Ghosh, Mahvash Qureshi and Eun Sun Jang (2016), "Capital Flows and Capital Controls in India: Confronting the Challenges," in Chetan Ghate and Kenneth Kletzer eds., Monetary Policy in India (Mumbai: Springer India), pp.299-333.

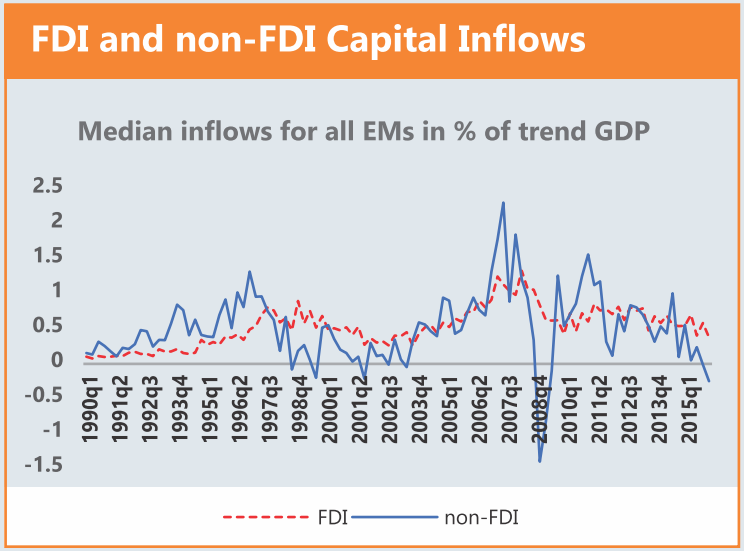
Figure 1.
Global Financial Safety Net As Percentage Of External Liabilities, 1980–2014



Note: series are stacked in same order as legends for ease of reference.

Sources: IMF International Financial Statistics, IMF World Economic Outlook, RFAs, updated and extended version of data set constructed by Philip Lanep and Gian-Maria Milesi-Ferretti, "The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities, 1970-2004," Journal of International Economics 73 (2007), pp.223-250.

Figure 2: FDI and non-FDI Capital Inflows



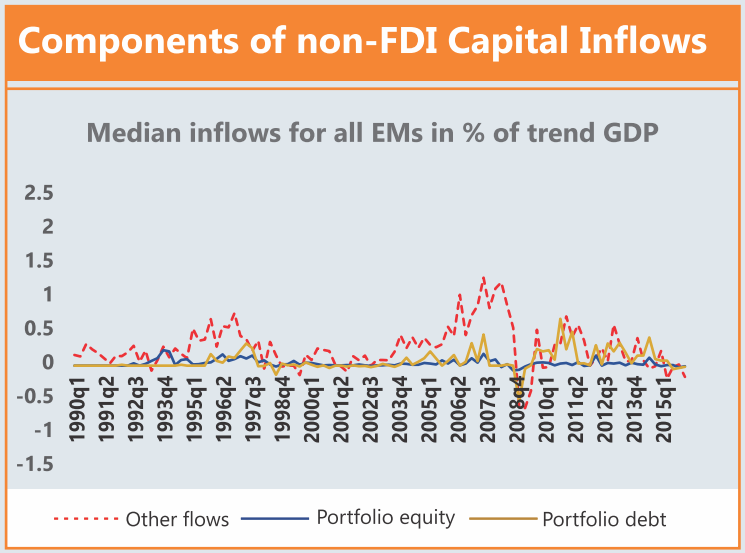
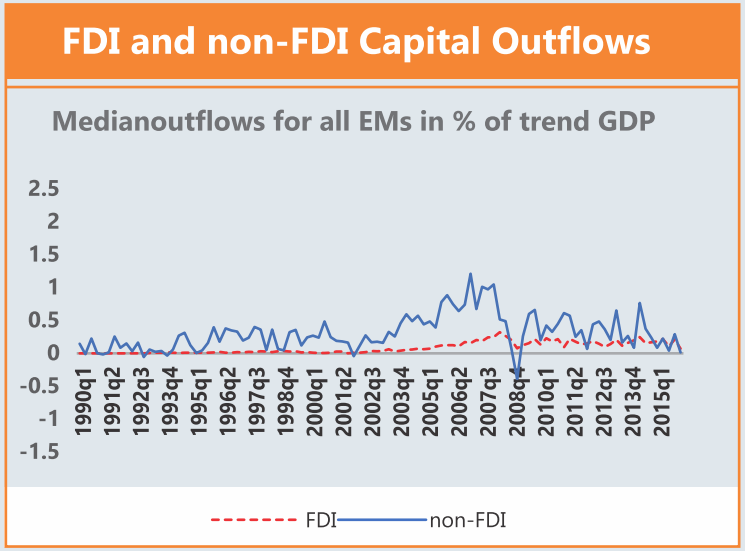


Figure 3: FDI and non-FDI Capital Outflows



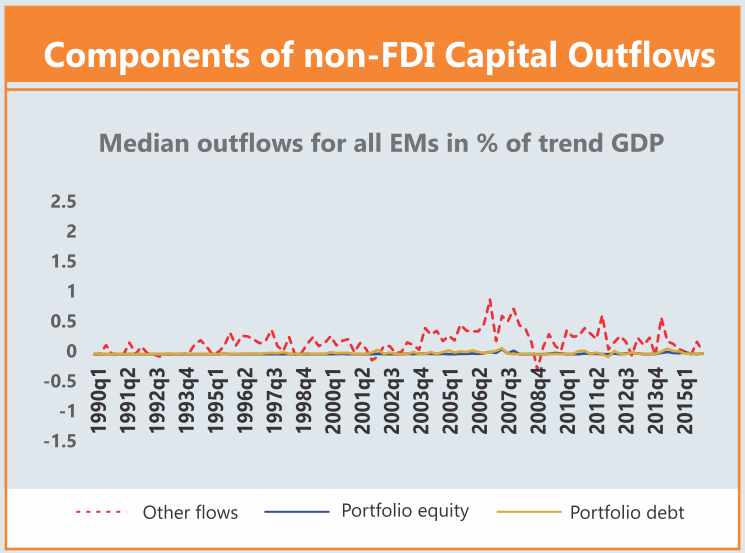
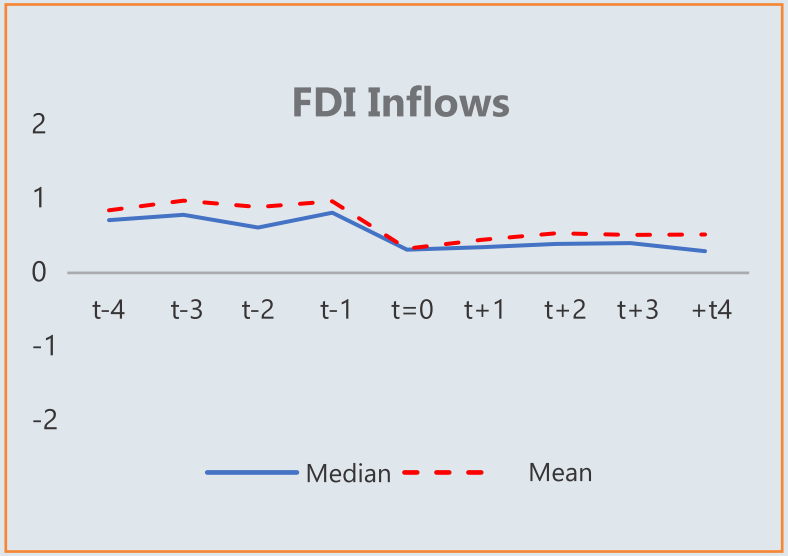
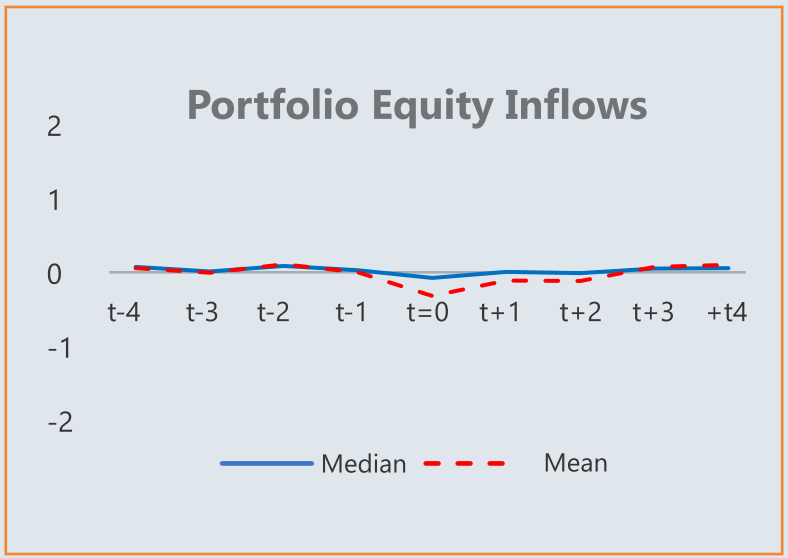
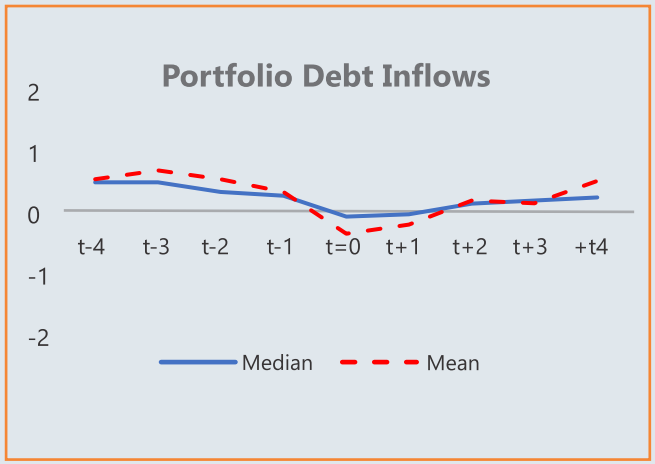
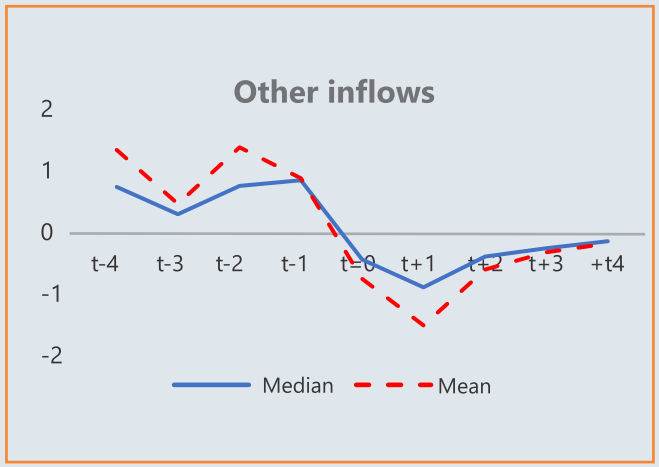


Figure 4: Capital Inflows around Sudden Stops









Notes: This figure shows the behavior of respective types of capital inflows, as % of trend GDP, around stop periods. t=0 is the first quarter of a stop period. For each period (t-4 to t+4) first the mean is calculated for different sudden stops for a given country. Solid line is the median of the country means, and broken line is the mean of the country means.

Table 1: Trends in the Magnitude and Volatility of Capital Inflows and Outflows

			1991-1995	1996-2000	2001-2005	2006-2010	2011-2015
FDI	inflows	Mean (quarterly average)	0.23	0.76	0.55	0.92	0.69
		Standard deviation	0.15	0.50	0.38	0.59	0.41
		Coeff. of variation	0.61	0.71	0.70	0.57	0.56
FDI	outflows	Mean (quarterly average)	0.01	0.04	0.07	0.29	0.20
		Standard deviation	0.02	0.07	0.14	0.30	0.26
		Coeff. of variation	0.93	1.25	1.49	1.11	1.17
Portfolio equity	inflows	Mean (quarterly average)	0.06	0.05	0.03	0.05	0.04
		Standard deviation	0.10	0.12	0.09	0.21	0.14
		Coeff. of variation	1.35	1.56	2.21	1.99	2.79
Portfolio equity	outflows	Mean (quarterly average)	0.00	0.00	0.01	0.04	0.01
		Standard deviation	0.00	0.02	0.04	0.12	0.03
		Coeff. of variation	1.91	2.44	2.19	1.80	1.68
Portfolio debt	inflows	Mean (quarterly average)	0.03	0.11	0.10	0.20	0.38
		Standard deviation	0.23	0.39	0.40	0.63	0.63
		Coeff. of variation	1.52	1.72	1.58	2.64	1.97
Portfolio debt	outflows	Mean (quarterly average)	0.01	0.03	0.04	0.05	0.02
		Standard deviation	0.07	0.09	0.14	0.24	0.17
		Coeff. of variation	1.95	2.08	1.85	2.38	1.44
Other flows	inflows	Mean (quarterly average)	0.39	0.33	0.16	0.55	0.24
		Standard deviation	0.96	0.73	0.62	1.16	0.73
		Coeff. of variation	0.80	1.47	1.00	1.53	1.45
Other flow	outflows	Mean (quarterly average)	0.09	0.22	0.18	0.31	0.19
		Standard deviation	0.64	0.68	0.68	1.14	0.73
		Coeff. of variation	1.43	1.68	2.21	2.32	2.29

Note: Mean, standard deviation and coefficient of variation are the median across all countries in the sample during respective time period. All capital flows are expressed as % of annual trend GDP.

Barry Eichengreen

George C. Pardee and Helen N. Pardee Professor of Economics and Political Science, University of California, Berkeley

Barry Eichengreen is the George C. Pardee and Helen N. Pardee Professor of Economics and Professor of Political Science at the University of California, Berkeley, where he has taught since 1987, and Pitt Professor of American History and Institutions, University of Cambridge, 2014-15. He is a Research Associate of the National Bureau of Economic Research (Cambridge, Massachusetts) and Research Fellow of the Center for Economic Policy Research (London, England). In 1997-98 he was Senior Policy Advisor at the International Monetary Fund. He is a fellow of the American Academy of Arts and Sciences (class of 1997).

Professor Eichengreen is the convener of the Bellagio Group of academics and economic officials and chair of the Academic Advisory Committee of the Peterson Institute of International Economics. He has held Guggenheim and Fulbright Fellowships and has been a fellow of the Center for Advanced Study in the Behavioral Sciences (Palo Alto) and the Institute for Advanced Study (Berlin). He is a regular monthly columnist for Project Syndicate.

His most recent books are Hall of Mirrors: The Great Depression, The Great Recession, and the Uses--and Misuses--of History (January 2015), From Miracle to Maturity: The Growth of the Korean Economy with Dwight H. Perkins and Kwanho Shin (2012) and Exorbitant Privilege: The Rise and Fall of the Dollar and the Future of the International Monetary System (2011) (shortlisted for the Financial Times and Goldman Sachs Business Book of the Year Award in 2011).

Professor Eichengreen was awarded the Economic History Association's Jonathan R.T. Hughes Prize for Excellence in Teaching in 2002 and the University of California at Berkeley Social Science Division's Distinguished Teaching Award in 2004. He is the recipient of a Doctor Honoris Causa from the American University in Paris, and the 2010 recipient of the Schumpeter Prize from the International Schumpeter Society. He was named one of Foreign Policy Magazine 's 100 Leading Global Thinkers in 2011. He is a past president of the Economic History Association (2010-11 academic year).

EXIM BANK's COMMENCEMENT DAY ANNUAL LECTURES

Sr. No.	Date	Speaker	Presiding Officer	Topic
1)	03.03.1986	Dr. Deepak Nayyar Prof. of Economics JNU, New Delhi	Dr. C. Rangarajan Dy. Governor RBI	International Trade in Services : Implications for Developing Countries
2)	17.03.1987	Dr. Partha Dasgupta Prof. of Economics University of Cambridge, U. K.	Dr. C. Rangarajan Dy. Governor RBI	The Resource Basis of Economics
3)	04.02.1988	Shri Abid Hussain Member Planning Commission	Dr. V. G. Rajadhyaksha Former Member Planning Commission	Foreign Trade Policy in Indian Planning
4)	02.03.1989	Shri M. Narasimham Vice Chairman Administrative Staff College of India, Hyderabad	Shri D. N. Ghosh Chairman SBI	Globalisation of Financial Markets and India
5)	05.03.1990	Mr. Sidney Dell Sr. Fellow, United Nations Institute for Training & Research	Shri R. N. Malhotra Governor RBI	Reforming the World Bank for the Tasks of the 1990s
6)	15.03.1991	Prof. Pranab Bardhan Prof. of Economics University of California, Berkeley	Dr. Kirit Parikh Director IGIDR	The State & Dynamic Comparative Advantage

Sr. No.	Date	Speaker	Presiding Officer	Topic
7)	05.03.1992	Dr. (Ms.) Isher Judge Ahluwalia Research Professor Centre for Policy Research, New Delhi	Dr. V. Krishnamurthy Member Planning Commission	Trade Policy & Industrialisation in India
8)	04.01.1993	Lord Meghnad Desai Prof. of Economics London School of Economics & Political Science, U.K.	Dr. S. S. Tarapore Dy. Governor RBI	Capitalism, Socialism and the Indian Economy
9)	21.03.1994	Dr. Vijay Joshi Fellow, Merton College, Oxford	Prof. Kaushik Basu Delhi School of Economics	Macroeconomic Policy and Economic Reform in India
10)	27.03.1995	Dr. Stanley Fischer First Dy. Managing Director. IMF, USA	Dr. C. Rangarajan Governor RBI	Economic Reform and the Poor
11)	06.03.1996	Mr. Rajat Gupta Managing Director McKinsey & Co.,Inc, USA	Dr. Freddie A. Mehta Chairman Forbes Group	Reaching New Heights of Productivity
12)	04.03.1997	Dr. Pedro Aspe Former Finance Minister of Mexico	Dr. Y. V. Reddy Dy. Governor RBI	Challenges of Privatization & Globalisation - The Mexican Experience

Sr. No.	Date	Speaker	Presiding Officer	Topic
13)	30.03.1998	Mr. Charles H. Dallara, Managing Director, Institute of International Finance, Washington D.C.	Shri S. S. Tarapore Former Dy. Governor RBI	Outlook for Emerging Markets & India following the Asian Currency Crisis
14)	10.03.1999	Dr. C. Fred Bergsten, Director, Institute for International Economics, Washington D.C.	Shri A. V. Ganesan, Former Commerce Secretary, GOI	India and the Global Trading System
15)	29.03.2000	Dr. Eisuke Sakakibara, Professor, Keio University, Japan	Dr. Bimal Jalan Governor, RBI	Asia in the 21st Century – The Role of India and Japan
16)	22.03.2001	Prof. Nicholas Stern, Chief Economist & Vice President, World Bank, Washington D.C.	Dr. Shankar Acharya, Chief Economic Adviser, MOF, GOI	Building a climate for Investment, Growth and Poverty Reduction in India.
17)	22.04.2002	Dr. Per Pinstrup Andersen, Director General. International Food Policy Research Institute, Washington D.C.	Dr. M. S. Gill, Former Chief Election Commissioner, GOI	Indian Agriculture in a Globalising World
18)	05.08.2003	Rt. Hon. James Bolger, ONZ, Former Prime Minister of New Zealand Chairman, World Agricultural Forum	Mr. Jagdish Capoor Chairman Agricultural Finance Corporation	International Trade in Agriculture: Emerging Scenario

Sr. No.	Date	Speaker	Presiding Officer	Topic
19)	10.03.2004	Dr. Eduardo Aninat, Former Dy. Managing Director, International Monetary Fund & Former Finance Minister of Chile	Dr. Vijay Kelkar, Advisor to Union Finance Minister	The Challenges of Globalisation in the Trade & Financial Areas: A Perspective from Developing Countries
20)	10.03.2005	Mr. Rubens Ricupero, Former Secretary General, UNCTAD	Mr. Tarun Das Chief Mentor CII	Trade and Development: Challenges for Developing Countries
21)	02.05.2006	Sir Suma Chakrabarti, Permanent Secretary, Department of International Development, U.K.	Smt. Shyamala Gopinath Dy. Governor, RBI	Role of the State in Trade & Development
22)	20.04.2007	Dr. David Hulme Professor of Development Studies, IDPM, University of Manchester, UK	Dr. Rakesh Mohan Dy. Governor, RBI	Inclusive Globalisation: Tackling Chronic Poverty
23)	18.03.2008	Mr. Kemal Dervis Administrator United Nations Development Programme (UNDP)	Dr. Arvind Virmani Chief Economic Adviser DEA, MOF, GOI	Perspectives on the New Structure of the World Economy
24)	13.03.2009	Mr. Justin Yifu Lin Chief Economics & Senior Vice President, The World Bank	Dr. Dilip M. Nachane Director, Indira Gandhi Institute of Development Research, Mumbai	Beyond Keynesian Economics – A Stimulus for Development

Sr. No.	Date	Speaker	Presiding Officer	Topic
25)	18.3.2010	Mr. Supachai Panitchpakdi Secretary-General of UNCTAD	Dr. Subir Gokarn, Dy. Governor, RBI	Reconstructing Economic Governance: An Agenda for Sustainable Growth and Development
26)	27.07.2011	Prof. Yu Yongding President China Society of World Economics	Dr. Y. V. Reddy Former Governor, RBI	Rebalancing the Chinese Economy
27)	21.11.2012	Prof. Jagdish Bhagwati Professor of Economics, Law and International Affairs Columbia University	Dr. Subir Gokarn Dy. Governor, RBI	Developments in the World Trading System: India's Options
28)	14.03.2013	Prof. Pranab Bardhan Professor of Economics University of California, Berkeley	Dr. Urjit R. Patel Dy. Governor, RBI	The Theory of Trade and Development from the Indian Point of View
29)	14.02.2014	Prof. Kishore Mahbubani Dean, Lee Kuan Yew School of Public Policy National University of Singapore	Dr. Dilip M. Nachane Member, Economic Advisory Council to the Prime Minister	The Great Convergence: Can India Make It?

Sr. No.	Date	Speaker	Presiding Officer	Topic
30)	23.03.2015	Dr. John Lipsky Senior Fellow, Paul H. Nitze School of Advanced International Studies Johns Hopkins University, Washington D.C. Former Dy. Managing Director, IMF	Dr. Hasmukh Adhia Secretary, MOF, GOI	Evolving International Governance, Emerging Markets and India's Economic Prospects
31)	21.03.2016	Dr. Donald Kaberuka Former President of the African Development Bank Group	Mr. Sunil Arora Secretary, Ministry of Information & Broadcasting, GOI	Promoting Africa-India Investment in the New Global Landscape
32)	27.03.2017	Prof. Barry Eichengreen George C. Pardee and Helen N. Pardee Professor of Economics and Political Science, University of California, Berkeley	Mr. S.S.Mundra Dy. Governor, RBI	Capital Flows: What Do We Know?