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Keywords: Capital control measures, Capital flows, Capital account liberalisation, International financial integration.

JEL Code: F36, F38, F3, G15, G18

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Evolution of capital controls on foreign institutional investment in India*

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Abstract

In this paper, we trace the evolution of capital controls on foreign institutional investment in India, by hand constructing a a dataset of legal interventions with respect to foreign institutional investment in India. We classify interventions into different categories depending on whether they pertain to procedural or substantive measures (such as investment limit or conditions), and also classify them depending on the asset class that they affect. We assign scores to each intervention depending on whether it restricts or liberalises the regime governing foreign institutional investment in India. The dataset can be used to understand the manner in and extent to which, Indias capital account has gradually opened up since the economic liberalisation reforms of the mid 1990s and the circumstances in which these interventions were made. It can also throw insights on the impact of different legal interventions with respect to foreign institutional investment on outcomes such as foreign investment inflows into India, currency volatility, credit growth and stock market returns.

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1 Introduction

The capital account of a country is a summary of inflows and outflows of foreign capital to and from the host country. Different countries have different levels of capital account openness and hence foreign investors are able to invest in countries in varying degrees, even when the host countries are attractive investment destinations. This is because policy makers in the host country often impose a multitude of restrictions on the capital account in order to control the flows of capital in and out of the country. India happens to be such a country where the capital account was initially closed and over the decades the authorities have been gradually relaxing the legal restrictions that govern foreign investment flows. From time to time new restrictions are also imposed on the foreign investors. The frequent changes in capital controls make India a good case-study to analyse capital account liberalisation, and the manner in which it has progressed over the years.

In this paper we trace the evolution of capital controls on foreign inflows into India. We build a dataset that quantifies the legal restrictions imposed by the Indian authorities on foreign investors interested in investing in the Indian financial markets.

We focus on a specific class of foreign investors, namely foreign portfolio investors or foreign institutional investors (henceforth, FPIs or FIIs). FPIs are institutional investors who play an important role through their investments in the equity and debt markets. They are critical for financing investment in emerging economies such as India where domestic saving (roughly 30% of gross domestic product) falls short of the investment requirements.

The early thinking on capital account de-control in India was that inflows into the equity market were beneficial only if they originated from certain kinds of investors. Thus, certain classes of investors, such as pension funds, endowments funds etc were given greater flexibility to invest in the Indian markets in the early 1990s.[1] The framework governing the investments was formalised in the form of Securities and Exchange Board of India (Foreign Institutional Investors) Regulations, 1995. Since 1995, the framework governing FII investments has undergone several rounds of easing and tightening.

FIIs constitute a significant proportion of the capital market investment in India. The net investment by FIIs has increased manifold from INR 13 crores in 1992-93 to INR 73,858 crores in 2019-20 (data till November 25, 2019).[2] In fact, the success story of the Indian equity market is widely attributed to foreign institutional investment. This is also captured by the growing prominence of FII investment in Indian firms. A study shows that the number of *high FII firms* (firms where FII investment is above the median value) has steadily risen from 35 in 2001 to 274 in 2011.[3] Hence, tracing the evolution of India's capital account framework governing foreign institutional investment provides an

[1] Ila Patnaik and Ajay Shah, *India's Financial Globalisation*, IMF Working Papers 11/7, International Monetary Fund, Jan. 2011, URL: https://ideas.repec.org/p/imf/imfwpa/11-7.html.

[2] https://www.fpi.nsdl.co.in/web/Reports/Yearwise.aspx?RptType=5

[3] Ila Patnaik and Ajay Shah, "The investment technology of foreign and domestic institutional investors in an emerging market", in: *Journal of International Money and Finance* 39 (2013), pp. 65–88, ISSN: 0261-5606, URL: http://www.sciencedirect.com/science/article/pii/S0261560613000922.

interesting case study of India's journey towards capital account liberalisation.

Cross-country de-jure measures (such as the Chinn-Ito index[4] and the Schindler[5] index) measure the *level* of capital controls using the summary classification tables published by the IMF in the AREAER.[6] Schindler developed a dataset on capital controls based on restrictions on inflows and outflows over six asset categories, namely equity, bonds, money market, collective investment, financial credit, and foreign direct investment. The dataset covers 91 countries over the period 1995 to 2005. Fernandez et al. built on this dataset by providing indicators of inflow and outflow controls across ten asset categories over the period 1995 to 2013. A value closer to one indicates presence of controls. For India, the aggregate score has changed from 1 to 0.95. Similarly, the Chinn-Ito dataset covers the period of 1970–2017 for 182 countries. The index value ranges from 2.35 for the most financially open countries to -1.92 for the least financially open economies. For India, the index value has remained constant at -1.21– a value that indicates a high degree of restrictions on capital account.[7]

While these measures are useful for cross-country comparisons, they do not capture the complexity of the capital controls framework in a country like India which has a comprehensive set-up for the administration of capital controls. A major limitation of these de-jure measures is that they report one value of financial openness for every year. This overlooks the specific changes in capital controls happening within the year and hence makes it difficult to analyse the impact of these capital control changes. For example the Chinn-Ito index assigns a score of -1.21 to India for a long time period from 1970 to 2017, implying that India has had a closed capital account during this entire period. In reality however India's capital account has experienced many changes throughout this period. From time to time restrictions have been relaxed and new restrictions have been imposed on various asset classes. So to classify India as having a closed capital account for more than four decades would be an oversimplification and would miss the detailed nuances of India's capital account liberalisation process.

Moreover, measures such as the Chinn-Ito index detect a move towards capital account liberalisation only when a specific category of controls is dismantled.[8] In countries like India however, the process of capital account liberalisation has mostly involved greater access without dismantling the structure of controls. This implies that the easing episodes as well as the tightening actions can be reversed without altering the fundamental framework. Such a complex framework cannot be captured through de-jure measures of capital controls that present an average picture for a long period of time.

[4]M.D. Chinn and H. Ito, "A new measure of financial openness", in: *Journal of Comparative Policy Analysis* 10.3 (2008), pp. 309–322.

[5]Martin Schindler, "Measuring Financial Integration: A New Data Set", in: *IMF Staff Papers* 56.1 (2009), pp. 222–238.

[6]Annual Report on Exchange Arrangements and Exchange Restrictions

[7]The Chinn-Ito measure is a broader measure of financial openness covering also restrictions on the current account of the balance of payments and on the foreign exchange market.

[8]Pasricha et al. argue that the annual indices are better at capturing the extensive margin of controls (i.e. how many types of transactions are regulated) rather than the intensive margin of controls (i.e. how the regulations change over time for each type of transaction).

To counter these difficulties, recent literature has shifted focus from *level* of capital controls to the precise measurement of capital control actions (CCAs).[9] As an example, in a recent study, the authors create a new database with detailed information on weekly changes in controls on capital inflows, capital outflows, and macroprudential measures related to international transactions from 2009 to 2011 for 60 countries.[10] Pasricha develops a weekly dataset of capital controls that measures policy actions by 21 emerging market economies over the period 2001–2015. This dataset is used to present empirical evidence on the motivations for capital controls in emerging economies. In another paper, Pasricha et al. uses a fine-grained dataset of capital control actions for 16 emerging economies between 2001 and 2012. The authors use this dataset to investigate the effectiveness of controls in reducing gross inflows and improving monetary policy autonomy. The authors also find that annual indices such as the Chinn-Ito measure and the "Capital Control Measures: A New Dataset" may not be optimal for assessing the impact of capital control changes.

The contribution of our paper is that we hand-construct a dataset by counting separately every regulatory instrument that changes controls on foreign portfolio investment in India, similar to what "Motivations for capital controls and their effectiveness" have done for controls on foreign borrowing in India. This yields a very detailed dataset with actions for each policy instrument. Moreover, our data-set covers information on asset-classes as well as on the categories of restriction or easing. Therefore, it is a richer data-set and amenable to research on deeper questions.

All capital account transactions in India are prohibited unless explicitly permitted. The permissions are granted through a set of legal instruments issued primarily by the Reserve Bank of India (RBI) and also by SEBI. Restrictions differ according to the type of foreign investor, the type of asset class, the intended recipient of foreign capital, the end use of foreign capital, etc.

In order to obtain improvements in measurement, we build a country-specific dataset based on extensive details of the legal restrictions under which the FIIs (or FPIs) can invest in India. Changes to the capital control actions (CCAs) on FPIs are published by the RBI and the SEBI in their circulars which are publicly available. We analyse the text of these circulars to construct the dataset. To the best of our knowledge, this is the first paper that presents a detailed dataset on CCAs on FPIs.

FPIs have been allowed to invest in Indian markets since 1992 which is when the capita account liberalisation process began. In the 1990s, FPI investments were governed by Government of India guidelines and permissions under Foreign Exchange Regulation Act, 1973 (FERA). In 1999, the Foreign Exchange Management Act (FEMA) was enacted. Since then cross-border capital flows coming into India are governed by FEMA and the

[9]Kristin Forbes, Marcel Fratzscher, and Roland Straub, "Capital-flow management measures: What are they good for?", in: *Journal of International Economics* 96, Supplement 1 (2015), 37th Annual NBER International Seminar on Macroeconomics, S76–S97, ISSN: 0022-1996; Gurnain Kaur Pasricha, *Policy Rules for Capital Controls*, BIS Working Papers 670, Bank for International Settlements, Nov. 2017, URL: https://ideas.repec.org/p/bis/biswps/670.html; Gurnain Kaur Pasricha et al., "Domestic and multilateral effects of capital controls in emerging markets", in: *Journal of International Economics* 115.C (2018), pp. 48–58, DOI: 10.1016/j.jinteco.2018.08, URL: https://ideas.repec.org/a/eee/inecon/v115y2018icp48-58.html.

[10]Forbes, Fratzscher, and Straub, see n. 9.

rules and regulations made under FEMA. In our paper, we track the changes in FPI investments post the enactment of FEMA. Hence the duration of our dataset is from 2000 to 2018.

During this 18 year period, the total number of legal instruments issued with regard to FPI capital controls was 112. Often the same instrument was used to specify multiple changes in capital controls. We count changes brought in by the same instrument separately.[11] Once all the changes are considered as separate events, the total number of capital control actions (CCAs) are 151. The easing events are substantially higher in number at 99, compared to the tightening events which were 27 in number.

We also track capital control changes by a) eligibility b) investment condition c) investment limit and d) procedure. Since FIIs/FPIs are allowed to invest in various asset classes, we track the easing and tightening of restrictions across asset classes such as debt, derivatives, equity, general and others. Our analysis shows that controls on FPI investment in debt instruments have been eased the most during the span of our study.

The dataset described in this paper can be used to understand the extent to which India's capital account has gradually opened up since the economic liberalisation reforms of the mid 1990s. The data can be used to analyse the circumstances in which these instruments were introduced and to evaluate their impact on outcomes such as foreign investment inflows into India, currency volatility, inflation and cost of capital in the economy.

The capital controls dataset and related statistics presented in this paper will give policy makers a comprehensive overview of the evolution of legal restrictions on foreign portfolio investment in India over time, and the frequency with which changes have been brought about. The data presented here will allow finance practitioners and foreign investors to understand the current state of capital account openness in India which in turn may help them undertake investment decisions.

The rest of the paper is structured as follows: Section 2 traces the evolution of the Foreign Institutional Investment (FII) regime (now referred to as the Foreign Portfolio Investment (FPI)). Section 3 describes the legal foundations of the present arrangements governing FPI investments in various asset classes. Section 4 describes our dataset and presents the various classification schemes. Section 5 concludes the paper and proposes avenues for future research.

2 Liberalisation of foreign portfolio investment regime

In this section, we delve deeper into the evolution of the foreign portfolio investor regime (or the foreign institutional investor regime.)

Until the 1980s, India's development strategy focussed on import-substitution and self-reliance. India embarked on the process of liberalisation in the early 1990s. One of the elements of the liberalisation process was the opening of the external sector in a

[11] An example of our approach is placed in Section A in Appendix.

phased manner. *The Report of the High Level Committee on the Balance of Payments* by C.Rangarajan set the broad framework of reforms in the external sector. The early initiatives on external sector liberalisation were based on the following features:

1. Compositional shift from debt to non-debt creating capital flows took place.
2. Strong restrictions against debt inflows and all outflows were kept in place.
3. Equity investments were favoured if they originated from certain categories of foreign investors such as institutional investors. Hence a limited opening of equity market was undertaken where certain kinds of *institutional* investors were able to register with the securities market regulator and were allowed to invest in Indian securities.
4. While the official discourse was in favour of long-term foreign investments, deeper liberalisation of foreign direct investment took place much later.

From September 14, 1992, FIIs and overseas corporate bodies (OCBs) were permitted to invest in financial instruments, with suitable restrictions. The guidelines were provided through a Government of India press note which mandated FIIs to obtain an initial registration from SEBI. In addition, the RBI's general permission was needed under the Foreign Exchange Regulation Act (FERA).[12]

These guidelines were suitably incorporated under the *Securities and Exchange Board of India (Foreign Institutional Investors) Regulations, 1995.* With enactment of the Foreign Exchange Management Act, 1999 and the *Foreign Exchange Management (Transfer or Issue of Security by a person resident outdie India) Regulations, 2017*, the foreign exchange dealings of the FIIs came under the regulatory purview of the RBI.

From 1992, FIIs have been allowed to invest in all securities traded on the primary and secondary markets, including shares, debentures and warrants issued by companies which were listed or were to be listed on the stock exchanges in India and in schemes floated by domestic mutual funds. There has been a gradual approach towards liberalisation of the policy governing FII investments. The liberalisation has taken the form of:[13]

1. Liberalisation of investment limits
2. Relaxation of eligibility conditions
3. Expansion of instruments eligible for FII investments
4. Procedural simplifications

In 1995 SEBI released regulations for FII investment. The regulations provided a limited scope for investment in debt securities. The regulation mandated that not less than 70% of the aggregate of all investments made by FIIs should be in equity and equity related

[12] National Stock Exchange of India Limited, "Indian Securities Market: A Review", in: 2011, chap. Foreign Investment, pp. 177–199, URL: https://www.nseindia.com/content/us/ismr_full2011.pdf.

[13] See, Ministry of Finance, *Report of the Expert Group on Encouraging FII Flows and Checking the Vulnerability of Capital Markets to Speculative Flows*, Working Papers id:351, eSocialSciences, Jan. 2006, URL: https://ideas.repec.org/p/ess/wpaper/id351.html.

instruments (commonly referred to as the 70:30 route).[14] While there has been an overall liberalisation of FII investment in Indian securities market, a key feature has been the liberalisation of FII investment in rupee denominated debt securities.

From November 1996, FIIs were allowed to make 100% investments in debt securities as a separate sub-category called 100% debt funds. Such investments could be in listed or to be listed corporate debt securities or in dated government securities. In April 1998, FIIs were permitted to invest in dated government securities subject to a ceiling of USD 1 billion. FII investments in debt securities were subject to an array of quantitative restrictions.

From mid 1990s to 2004, FII investment in debt securities was subject to a limit of USD 1 billion. SEBI prescribed separate limits of investment via the 70:30 route and the 100% debt route. USD 100 million was permitted under the 70:30 route and USD 900 billion was permitted under the 100% debt route.

In November 2004, the overall limit was increased from USD 1 billion to USD 1.75 billion. In December, 2004 a separate limit of USD 500 million was announced for FII investment in corporate bonds. Since then, separate limits are announced for Government bonds and corporate bonds. In the subsequent years there has been a gradual increase in the quantitative limits for FII investment in government and corporate bonds.

A major milestone towards rationalisation of FII investment in debt securities was achieved in 2008 when SEBI did away with the demarcation of FII investments under 70:30 and 100% route. As a result, since 2008, we see sharp increase in limits for FII investment in government and corporate bonds. While the limits were progressively increased, the framework governing FII investment in debt securities remained unduly complex. Sub-limits were introduced in the form of Government debt-Old and Government debt-Long. Similar complexities also existed in corporate debt.

On April 1, 2013, another major milestone was achieved through simplification of FII investment in debt securities. The separate sub-limits of investment in Government debt-Old and Government debt-Long were merged into a single limit of USD 25 billion. Similarly, the separate sub-limits of FII investment in corporate debt were merged into a single limit of USD 51 billion.[15]

While quantitative restrictions were eased, greater policy impetus was on foreign currency denominated borrowings. The present policy framework incentivises firms to borrow in foreign currency. This exposes firms to the risk of currency mismatch.[16] Borrowings in foreign currency can lead to the problem of 'original sin'.[17] When a company or government borrows in foreign currency, it can suffer from currency mismatch–borrowing and repaying

[14]See Sub-regulation 2 of Regulation 15 of SEBI FII Regulations, 1995, available here: https://www.sebi.gov.in/acts/fiiregu2009.pdf

[15]See, https://www.sebi.gov.in/sebi_data/attachdocs/1364824242052.pdf

[16]Barry Eichengreen, Ricardo Hausmann, and Ugo Panizza, *Currency Mismatches, Debt Intolerance and Original Sin: Why They Are Not the Same and Why it Matters*, Working Paper 10036, National Bureau of Economic Research, Oct. 2003, DOI: 10.3386/w10036, URL: http://www.nber.org/papers/w10036.

[17]Ila Patnaik et al., *Foreign investment in the Indian Government bond market*, Working Papers 13/126, National Institute of Public Finance and Policy, Sept. 2013, URL: https://ideas.repec.org/p/npf/wpaper/13-126.html.

in foreign currency but earning in local currency. A sharp depreciation of the local currency can then induce credit stress. If a large swathe of firms suffer from currency mismatch, it can lead to systemic risk considerations. A safer policy option is to encourage foreign investment in rupee denominated debt. Since 2015, FPI investment in rupee denominated debt securities has moved from quantitative restrictions to percentage based limits.[18]

FII investment in exchange traded currency derivatives (ETCD) is a recent phenomenon. In 2014, the ETCD market was open for FPIs but subject to restrictions.[19] The intent of the restrictions was that FPIs should be allowed access to the ETCD market only for hedging the currency risk arising out of exposure to Indian debt and equity securities. The RBI prescribes position limits for FPI for long and short positions for different currency pairs.

In 2014, when the ETCD market was open to FPIs, they could take a position (both long and short) upto USD 10 million without having to establish the existence of an underlying exposure. For taking a position beyond USD 10 million, FPIs were required to demonstrate existence of an underlying exposure. Since then while the position limits have been eased in a phased manner, the complexity of having to demonstrate the existence of an underlying exposure beyond a prescribed position limit still persists.

Table 1 Complex history of controls on foreign institutional investment in India

Pre-1995	FIIs may invest in financial instruments, subject to RBI permission
1995	SEBI (Foreign Institutional Investors) Regulations, 1995
	Not less than 70% of investment by a FII in equity and equity-linked securities
1996	Concept of 100% debt funds
2000	Enactment of FEMA and FEMA 20, bringing FII investment under the regulatory purview of RBI.
2004	Separate limits for investment by FIIs in Government bonds and corporate bonds
2008	No more demarcation of FII investments under 70:30 and 100% route
2014	Enactment of SEBI (Foreign Portfolio Investors) Regulations, 2014
2014	FPIs allowed to invest in exchange traded currency derivatives
2019	New regulations

[18] Reserve Bank of India, *Investment by Foreign Portfolio Investors (FPI) in Government Securities Medium Term Framework*, 2019.

[19] Reserve Bank of India, *Risk Management and Inter-bank Dealings: Guidelines relating to participation of Foreign Portfolio Investors (FPIs) in the Exchange Traded Currency Derivatives (ETCD) market*, 2014, URL: https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=8952&Mode=0.

3 Legal foundations of the present arrangement

3.1 Foreign portfolio investments in debt

Foreign portfolio investment in debt is governed by Schedule 5 to the *Foreign Exchange Management (Transfer or Issue of Security by a person resident outdie India) Regulations, 2017.* Schedule 5 allows FPIs to invest in dated Government securities/treasury bills, non-convertible debentures, commercial papers issued by an Indian company, units of domestic mutual funds etc. The RBI notifies investment conditions for foreign portfolio investors in debt through A.P (DIR Series), Circular.[20] Till 2015, FPIs investment in Government securities were fixed in absolute terms. The limits for FPI investment in Government securities was last increased to USD 30 billion in June 2013. Restrictions were also placed on FPI investment in short-term Government debt.[21]

This framework was changed in October 2015 with the introduction of the Medium term framework. Under this framework, the limits for FPI investments are fixed in percentage terms and are increased incrementally to reach a certain percentage of outstanding loans.Subsequently for corporate bonds, the framework moved from quantitative limits to percentage based limits in 2018.[22]

The limit for FPI investment in Central Government securities is currently fixed at 6% of outstanding stock of securities in 2019-20. The limit for FPI investment in corporate bonds is fixed at 9%. Since 2018, RBI has been liberalising the restrictions on FPI investments in short-term debt.[23] FPIs are also subject to security-wise limits.[24]

3.2 Foreign portfolio investments in equity

Foreign portfolio investments in capital instruments is governed by Schedule 2 to the *Foreign Exchange Management (Transfer or Issue of Security by a person resident outdie India) Regulations, 2017.* The schedule prescribes the individual and aggregate limits of investment of FPIs in the paid up equity capital of an Indian company. The schedule mandates that the total holding of each FPI or an investor group shall be less than 10 percent of the total paid-up equity capital or less than 10 percent of the paid-up value of each series of debentures or preference shares or share warrants issued by an Indian company. Also the total holdings of all FPIs put together shall not exceed 24 percent of paid-up equity capital or paid up value of each series of debentures or preference shares or share warrants. Any further increase requires approval from the firm's board.

FPI investment in listed equity has been liberalised over the years. The limits can be extended to sectoral FDI caps for most of the sectors. Further liberalisation towards

[20]https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11241&Mode=0
[21]https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=9128&Mode=0
[22]See https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11241&Mode=0
[23]See https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11303&Mode=0
[24]https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11303&Mode=0

harmonisation of FPI and FDI limits has been proposed by the Report of the Working Group on FPI Regulations.[25]

3.3 Foreign portfolio investments in derivatives

In September 2003, the *Foreign Exchange Management (Transfer or Issue of Security by a person resident outdie India) Regulations, 2017* was amended to allow FIIs and NRIs to invest in all exchange traded derivative contracts. Pursuant to this amendment, FIIs/FPIs are allowed to trade or invest in all exchange traded derivative contracts subject to limits prescribed by the SEBI. The general permission to invest in exchange traded derivative contracts is derived from sub-Regulation 5 of Regulation 5 of *Foreign Exchange Management (Transfer or Issue of Security by a person resident outdie India) Regulations, 2017*.

FPI participation in exchange traded currency derivatives is governed by the provisions of *Foreign Exchange Management (Foreign Exchange Derivative Contracts) (Amendment) Regulations, 2014*. In addition, Section 45W of the RBI Act, 1934 gives powers to the RBI to issue directions to persons dealing in currency futures and options.[26]

4 Measurement of capital control actions (CCAs)

The dataset that we have built captures CCAs on FPIs for a period of 18 years from January 1, 2000 to December 31, 2018.[27] Our sample period begins in the year of operationalisation of *Foreign Exchange Management (Transfer or Issue of Security by a person resident outdie India) Regulations, 2017*. We quantify CCAs for debt, equities as well as derivatives.

During this 18 year period, the total number of legal instruments issued with regard to FPI capital controls was 112. Often the same instrument was used to specify multiple changes in capital controls. We count changes brought in by the same instrument separately.

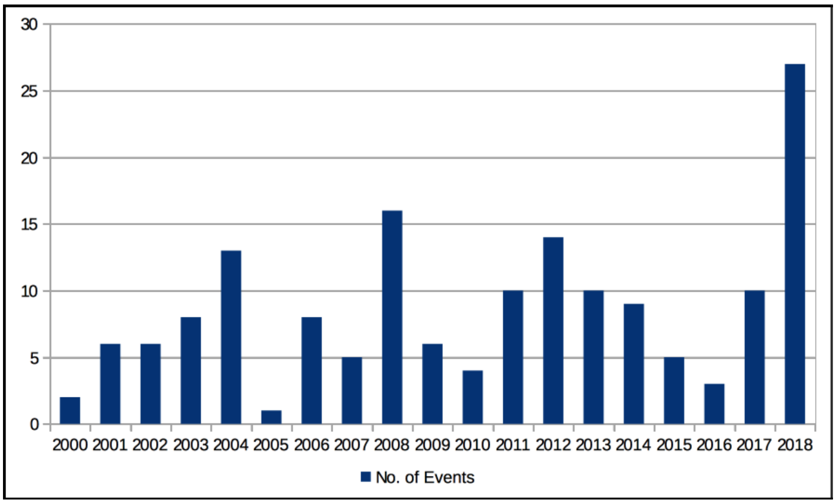
[25] Securities and Exchange Board of India, *Report of the Working Group on FPI Regulations*, Report, 2019.

[26] Section 45W of the RBI Act states:

> "The Bank may, in public interest, or to regulate the financial system of the country to its advantage, determine the policy relating to interest rates or interest rate products and give directions in that behalf to all agencies or any of them, dealing in securities, money market instruments, foreign exchange, derivatives, or other instruments of like nature as the Bank may specify from time to time"

[27] Radhika Pandey et al., "Legal restrictions on foreign institutional investors in a large, emerging economy: A comprehensive dataset", in: *Data in Brief* (2019), p. 104819, ISSN: 2352-3409, DOI: https://doi.org/10.1016/j.dib.2019.104819, URL: http://www.sciencedirect.com/science/article/pii/S2352340919311746.

Figure 1 Number of capital control events by year



Furthermore separate instruments issued by the RBI and SEBI which have the same effect on capital controls are counted only once.

Once all the changes are considered as separate events, the total number of capital control events are 151. Therefore on average, there have been roughly 8 or 9 capital control events every year during the sample period that we look at. Figure 1 depicts the year-wise count of capital control actions in relation to FPIs. The maximum number of capital control actions are seen in the year 2018.

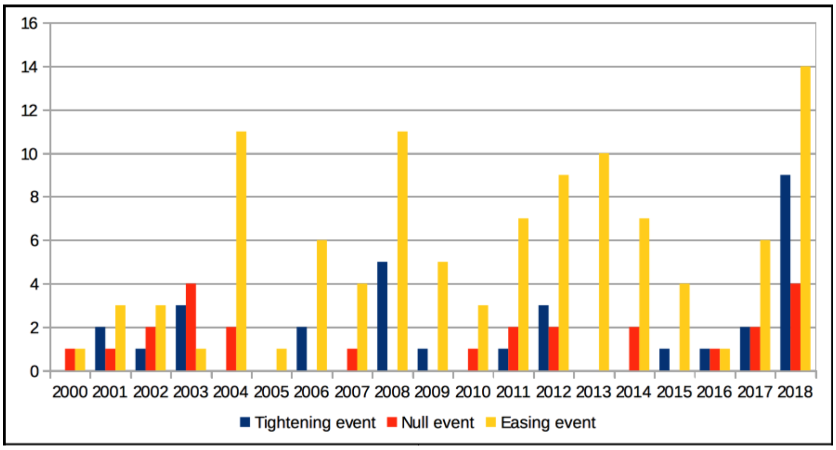
The CCAs can be of two types-easing and tightening. In the rest of the paper, we refer to them as FPI easing events and FPI tightening events, respectively. Easing refers to relaxation of existing controls or any action that makes it easier for foreign investors to invest in the host country. Tightening is the opposite; it refers to actions that are intended to make it harder for foreign investors to invest in the host country.

In our dataset we classify each capital control change as 'easing' or 'tightening'. Easing events are marked as '+1' and tightening events are marked as '-1'. The changes that are ambiguous or primarily relate to procedural changes that are neither easing nor tightening are marked as '0' and classified as null events.

Figure 2 shows the number of easing and tightening events by the year. The maximum number of FPI easing events took place in 2018 (14 in number) followed by 2008 (13 in number) and 2013 (10 in number). The maximum number of FPI tightening events also took place in 2018 (9 in number) followed by 2008 (4 in number). For the full period of study, the easing events are substantially higher in number at 99, compared to the tightening events which were 27 in number. 25 events are classified as null meaning that these capital control events qualify as neither easing nor tightening.

We next consider two types of classifications of every CCA. One based on the intended end objective of the action and the other based on the kind of assets to which the action would apply. For each of these classifications, we further divide the capital controls into easing vs. tightening events.

Figure 2 Year-wise easing and tightening of capital control events



In the first classification scheme, we divide the capital controls into four categories depending on their intended end objective. These categories are:

1. **Eligibility**: This category refers to capital control actions used to decide the kind of foreign investors who might be eligible to invest in the Indian financial markets.
2. **Investment condition**: This category refers to capital control actions that govern the conditions subject to which investments can be undertaken by foreign investors. As an example, in 2004, FPIs were allowed to issue offshore derivative instruments against securities held by them as the underlying in the Indian stock exchange.
3. **Investment limit**: These are capital control actions that deal with limits on investments by FPIs.
4. **Procedure**: The law on capital controls establishes an elaborate administrative procedure for enforcement. This category consists of controls that affect the administrative procedures that foreign investors need to follow in order to invest in the Indian debt and equity markets. For example, a change in the procedure for registration of an FPI with regulatory authorities in India will be classified in this category.

Figure 3 depicts the FPI capital control actions classified into the above mentioned four categories, during the sample period. We find that about 60 percent of the capital control actions during the study period relate to investment conditions, and 20 percent are 'procedure' related changes. The remaining 20 percent of the capital control actions relate to eligibility criteria or investment limits. The year 2018 witnessed the highest number of capital control actions in relation to investment conditions (18 in number), followed by 2008, and 2012.

In Figure 4, we depict the number of easing and tightening events across the four categories. Of the FPI easing events during this period, more than half pertained to 'investment conditions' and the next largest chunk constituting about 19 percent pertained to 'investment limits'. The highest number of tightening events (about 77 percent of the total FPI tightening events) were about 'investment conditions'. Thus, statistics show that majority of

Figure 3 Categories of capital controls by the year

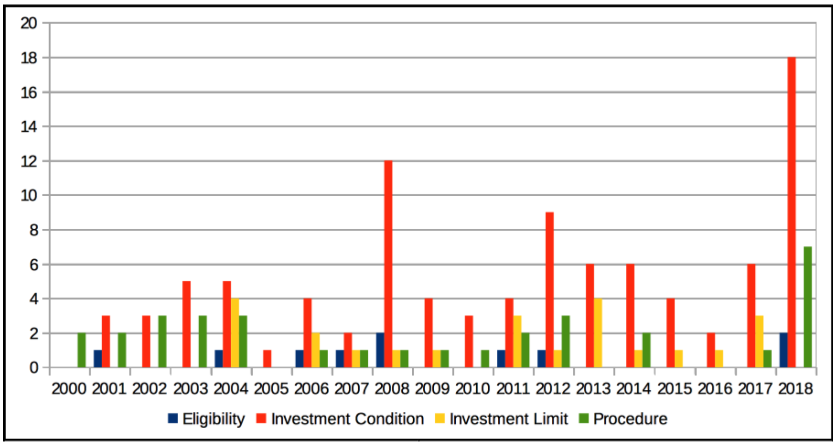
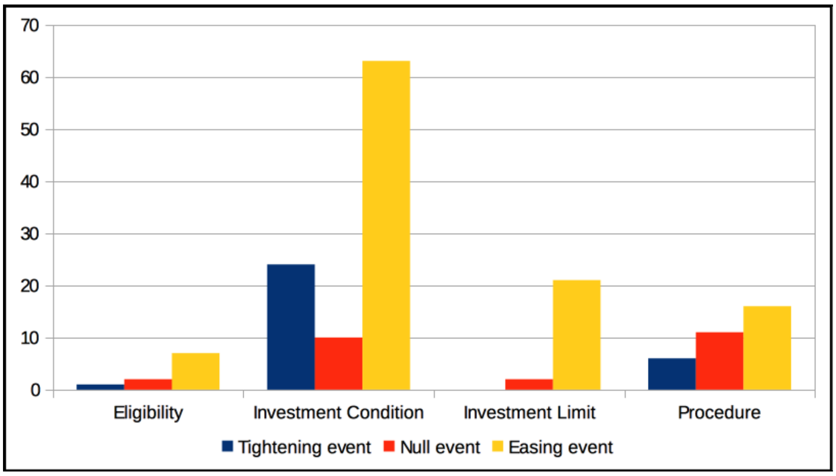


Figure 4 Easing and tightening of categories of capital controls



the capital control actions during the period from 2000 to 2018 have been in the domain of 'investment conditions'.

In the second classification scheme, we split the capital control events into four main asset classes, namely "debt", "derivatives", "equity" and "general". This classification helps understand which kind of assets witnessed the most capital control actions over the last two decades, as far as foreign investment is concerned. Debt refers to investment in both corporate and government bonds. Derivatives include products such as equity futures and options, commodity derivatives etc. Equity refers to investment in the stocks and shares of Indian companies. Finally those capital control changes that do not relate to changes in the asset class of debt, equity or derivatives but relate to, for example easing/tightening of *procedures* across all asset classes or easing/tightening of eligibility of FPIs across all asset classes, are grouped under the category of "general".

We also create another category called "other" to track changes in asset classes other

Figure 5 Capital controls by asset class

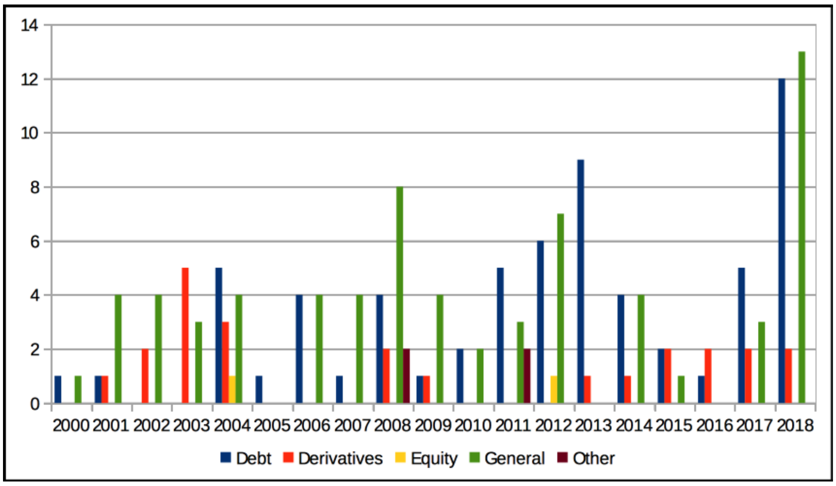
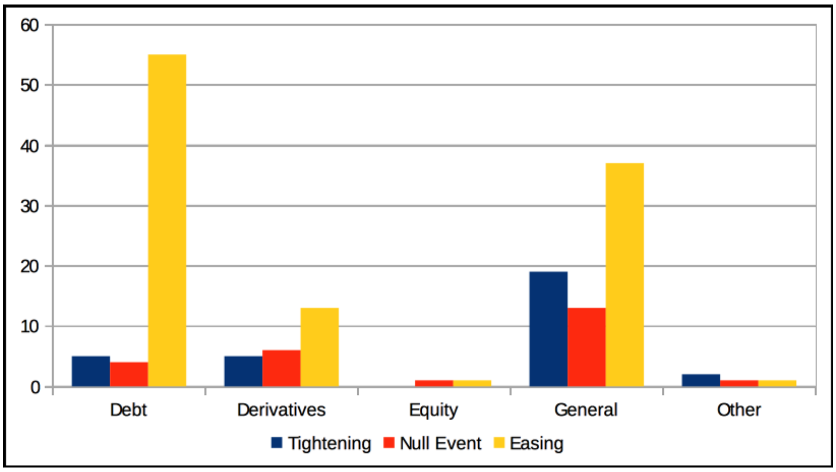


Figure 6 Easing and tightening of capital controls by asset classes



than "debt", "equity" and "derivatives". For example, FPIs investments in Mutual Funds and Collective Investment Schemes (CIS) would be captured under the "others" category. As shown in Figure 5, the "general" category saw the highest number of capital control actions (69) followed by "debt" (64) and "derivatives" (24). "Equity" (2) saw the least.

In Figure 6, we plot the number of easing vs. tightening events across the various asset classes. We find that the category debt saw the highest number of capital controls easing whereas the general category faced the maximum tightening of controls. The easing in the debt category reflects a shift from the restrictive quantitative based limit to percentage based limits for FPIs. This is distinct from the framework governing FII investment in equity where percentage based limits were imposed from the very inception.

5 Conclusion and way forward

The conventional literature in the field of capital controls focuses on de-jure measures such as the Chinn-Ito Index and the Schindler Index. Recent literature abstracts from the de-jure measures to detailed measurement of specific capital control actions.

In this paper we construct such a dataset on capital control actions governing investments by foreign portfolio investors or FPIs (formally referred to as FIIs) in Indian financial markets across various asset classes-equity, debt and derivatives. When capital account decontrol was introduced in the 1990s FIIs were an important part of the early initiatives towards capital account liberalisation. Since the early 1990s FIIs have been allowed to invest in a number of instruments. However they are still subject to extensive controls in the form of investment conditions, eligibility criteria, investment limits and procedural aspects.

Our dataset was built by hand collecting qualitative information on the entire gamut of capital controls that were either imposed or relaxed by the concerned regulatory authorities in India with respect to FPI in India. The concerned regulatory authorities include either the central bank of India- The Reserve Bank of India (RBI), or the securities regulator- Securities and Exchange Board of India (SEBI). Our study spans a period of 18 years commencing on 1st January, 2000 and ending on December 31, 2018. Our sample period begins in the year of operationalisation of the Foreign Exchange Management Act, 1999 (FEMA), which is the Indian law that governs foreign investment in India.

We find that most of the capital control changes relate to changes in investment conditions. We see the maximum number of changes in capital controls relating to FPIs in 2018 and most of these were easing episodes. 2005 saw the least number of such events. We find that for the full period of study, the easing events are substantially higher in number at 108, compared to the tightening events which were only 31 in number. We also find that the FPI investment in the 'debt' category witnessed the highest extent of capital control easing.

This dataset opens up various avenues for future research. An important strand of literature analyses the motivations for capital control changes i.e. whether macroeconomic or macroprudential concerns motivate the imposition of controls. Hence the dataset we have built can be used to analyse the circumstances in which these capital control measures were introduced and to evaluate their impact on outcomes such as foreign investment inflows into India, currency volatility, inflation and cost of capital in the economy. This will help us analyse whether capital controls on FIIs in India have been effective in achieving the envisaged objectives. In future research we aim to address these questions using the dataset.

A Legal instruments and capital control actions

In this section we present example of a legal instrument (a SEBI circular) through which two easings were introduced: A circular issued on April 1, 2013 rationalised limits for FIIs in both government debt and corporate debt. The precise change was as under:

1. A single limit of USD 25 billion was introduced for FII/FPI investment in government securities by merging the limits prescribed for Government Debt (Old) and Government Debt (Long).
2. A single limit of USD 51 billion was introduced for FII/FPI investment in corporate bonds by merging the sub-limits for QFIs, FIIs, and FIIs in long-term infra bonds.

These changes rationalised the foreign investor limit for government debt and corporate debt. Hence in our database, they are counted as two separate capital control actions.

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