INDIAN DEVELOPMENT POLICY REVIEW
Vol. 5, No. 1, 2024, pp. 15-29

URL: www.esijournals.com

Impact of Regulations on ECB Inflows

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Abstract: External commercial borrowings (ECB) are the loans availed by the resident entities from non- resident eligible lenders under norms established by the government. The government amends its policies from time to time to enable domestic enterprises to borrow from global markets. Since liberalization, Government of India also has relaxed its policies to allow Indian firms to access the international capital markets. Present study focuses on examination of the impact of key changes in ECB policy done by government of India on ECB inflows. This is performed by conducting CHOW breakpoint analysis and ARIMA modelling methodologies. The results of CHOW break test indicate significant impact of policy changes on the pattern of capital inflows, and the findings of ARIMA model indicate a significant gap between actual and forecasted ECB inflows.

Keywords: External commercial borrowings, policy changes, liberalization

Received : 28 March 2024
Revised : 30 April 2024
Accepted : 18 May 2024
Published : 28 June 2024

TO CITE THIS ARTICLE:

Md. Deen Islam & Jamil Sayeed (2024). Navigating the Waters of Policy: Assessing the Impact of Bangladesh's National Women Development Policy 2011 on Women in Char Areas. *Indian Development Policy Review,* 5: 1, pp. 15-29.

1. Introduction

As an emerging economy India needs to finance its short and long-term capital needs from various internal as well external sources. These sources primarily include owned and borrowed funds. The borrowed funds comprise of overseas loans categorized under external debt, which is one of the major parts of India's balance of payment account (BoP). The data on India's external debt compiled by Ministry of Finance (GoI) and Reserve Bank of India (RBI) delineates an upward trend indicating high demand of external debt in the country. It is noteworthy that foreign currency borrowings by Indian corporates, i.e., external commercial borrowings (ECB) have gained prominence in India's total external debt in in last few decades.

ECBs are the commercial loans availed in foreign currency by Indian corporates from non-resident lenders. These can be raised through the issue of securitized

instruments like bonds and floating rate notes. Generally, it includes borrowings in the form of foreign currency convertible bonds (FCCBs), foreign currency exchangeable bonds (FCEBs), buyers and suppliers' credit, and trade credit. During 1950s to 1980s the Indian firms could access to international capital markets only through bilateral and multilateral assistance. Later, these sources were supplemented with the commercial borrowings. Initially, the Department of Economic Affairs, Ministry of Finance (DEA, MoF) used to frame the ECB policies through the guidelines, which was later handed over to RBI.

Now, ECBs in India are governed by FEMA (Foreign Exchange Management Act, 1999). The high-level committee of FEMA advises the Government of India to formulate, review, and publish ECB policy in consultation with RBI through the guidelines or the press releases from time to time. While formulating or modifying ECB policy, the authorities generally consider changes in macroeconomic indicators, such as, prevailing exchange rates, interest rate differentials, currency depreciation, and many other factors such as corporates' needs, end-usage of ECB, condition of external financial markets, challenges in external sector management, and the trend of ECBs.

After enactment of FEMA in 1999, the Government of India has liberalized its ECB policy from time to time to allow the Indian firms to access the international capital markets on a larger scale. Recently, with a view to enhance the borrowing options for Indian firms and ease the borrowing procedure from international market, the GoI eased-out the ECB regulatory framework to a greater extent. The Sahoo Committee (2013) constituted to develop a framework to access the domestic and overseas capital markets come out with a report on ECBs which focused on assessing the currency risk of Indian firms. It analyzed earlier ECB policies and suggested that the policies framed should aim to make the capital available to the firms at lowest possible cost. The committee also provided certain recommendations on the regulations of ECBs and strongly recommended for hedging the sematic risk and allow ECBs denominated in Rupee.

The ECB policy interventions made by the government of India led to rise in the ECB inflows in the country, which resulted in the high accumulation of debt in the past few decades. This study focuses on the policies undertaken by the government for easing the ECB norms and examines the impact of policy changes (exogeneous shocks) on the trend and pattern of ECB inflows over time. It aims to answer two questions, viz., (i) whether fluctuations in ECB inflows are caused by policy announcements, and (ii) whether a structural break exists in the ECB inflows. First section of the paper gives an overview of the problem, second section presents brief review of literature, the third section enumerates major policy changes, fourth section portrays the flow of

ECBs in India over a period from 2001 to 2022 and describes results based on CHOW breakpoint analysis, and the fifth section concludes the study.

2. Literature Reviews

ECB is an emerging issue in the Indian capital market, and there is paucity of literature on issues related with intricacies of ECBs in India. However, a few researchers attempted to identify determinants and risks involved in ECBs and describe policy changes concerned with ECBs in India. A brief review of these studies is presented below:

ECBs are growing in emerging and developing economies, which raised the fear of crises and threaten financial stability in India. Singh (2009) his study observed that the raising demand of ECBs in India are affected by domestic real activities, interest rate differentials, and credit market shocks at global level. Goyal (2014) discussed macroeconomic implications of capital inflows to India. He mentioned that policy makers should take suitable measures to ensure the positive impact of ECB inflows on the economy. Patnaik *et al.* (2016) described the influence of regulations on ECB inflows in India. They mentioned that the government while formulating ECB policies has liberal attitude resulting into higher foreign capital inflows which is ultimately leading to increase in systemic risk emanating from the unhedged borrowings. Sethuram (2018) also mentioned that RBI while modifying ECB policies should consider its impact on foreign currency inflows.

Ray *et al.* (2017) analysed the impact of micro and macro factors on the trend and composition of ECBs in India. They mentioned that among various factors capital account openness plays an indicative role in influencing ECB flows. They also mentioned that interest rates reduction, partially flexible exchange rates, and inflationary conditions are the prominent factors which have adverse impact on ECB flows and may encourage domestic credits. Bose *et al.* (2017) analysed the impact of export-oriented policies enabling access to ECBs to Indian firms. Based on the sensitivity of exporting activities of financially vulnerable firms they observed that the firms availing ECBs have higher exporting activities as compared to those having access to domestic finance sources only. They suggested for considering hedging cost and currency risk while availing cheap and affordable loans from the foreign market. ECBs comprise largest part in India's external debt and play a significant role in debt accumulation of the country (Tripathy, 2019).

Pradhan and Hiremath (2019) examined the trends and policies related with ECBs and suggested for an appropriate decision on the ECB cap. Pradhan and Hiremath (2020) while examining the effects of ECBs on the investment of Indian corporates suggested for limiting the dependence on ECB particularly during the period of

currency depreciation. They however mentioned that it would be possible when easy and cheap credit would be made available to Indian corporates within the country. Saxena (2020), in a study on dynamics of ECBs in India observed that ease in ECB policy during 2019 raised the level of overseas borrowings, which resulted into the negative impact on the balance sheet of the firms. Focusing on the dangerous side of ECB inflows, he suggested that government should be cautious while formulating the policies of ECB, and Indian corporates while applying for ECBs, should consider exchange rate risks. Pradhan and Hiremath (2020) in their study observed that the over dependence of Indian corporates on external source of financing and a continuous depreciation in the currency is resulting into the shrinking of Indian exports. Ranjeev (2022) found Index of Industrial Production (IIP) as a pull factor to ECB. He mentioned that IIP has a positive link with ECB inflows in India in both the long and short term. He also suggested best hedging ratio (63 percent of ECBs exposure) during periods of high volatility.

3. ECB Policy Framework

To improve the ease of doing business, the government of India and RBI in January 2019 decided to rationalize the policy framework pertaining to ECBs and RDBs. Some of its salient features of the new policy framework include:

- Erstwhile three tracks of availing ECBs merged and categorised into two major divisions; the first category termed as "Foreign Currency Denominated ECB" merged track I and II, and second category (Track III – Rupee Denominated Bonds) changed as "Rupee Denominated ECBs".
- Expended the list of the eligible borrowers.
- The list of recognised lenders now includes the multilateral and financial institutions, foreign branches/ subsidiaries of Indian banks.
- Minimum Average Maturity Period (MAMP) for all ECBs will be 3 years.
- Eligible borrowers under the automatic route can raise ECBs up to USD 750 million or equivalent per financial year. In case of foreign currency (FYC) ECB raised from direct foreign equity holder, the ECB liability-equity ratio should not exceed 7:1.

3.1. Foreign Currency (FYC) Denominated ECB

- The foreign currency of ECBs (bank loans, floating/ fixed rate notes/ bonds or debentures, trade credits beyond 3 years; FCCBs, FCEBs, and financial lease) can be any freely convertible foreign currency.

- The eligible borrowers of ECBs include all the entities eligible to receive FDI including port trusts, SIDBI, EXIM Bank, and units in SEZ.
- In case of foreign currency ECBs, the borrowers are allowed to covert foreign currency in freely convertible foreign currency or in the INR. The exchange of foreign currency ECBs to INR ECB will be at the exchange rate prevailing on the date of agreement or at an exchange rate agreed upon between the parties concerned, whichever is less.
- The hedging provision of foreign currency are subjects to certain guidelines. The infrastructure space companies are required to hedge 70 percent of their ECBs exposure compulsorily, if the MAMP is less than 5 years.

3.2. INR Denominated ECB

- INR ECBs include bank loans, floating or fixed rate notes, bonds or debentures, preference shares, trade credits, financial lease, and plain vanilla RDBs issued overseas.
- The eligible borrowers consist of borrowers eligible to raise FYC ECBs, and registered entities engaged in microfinance activities.
- The exchange rate for conversion of INR ECBs is the rate prevailing on the date of settlement. The exchange of INR ECBs to any other currency is not permitted.
- All the overseas investors of INR ECBs are eligible to hedge their exposure in Rupee with AD category I banks in India.

The recognized lenders in both the cases (FYC ECB and INR ECB) are same. These should be resident of Foreign Action Task Force (FATF) or International Organization of Securities Commissions (IOSCO) compliant country. The Minimum Average Maturity Period (MAMP) of 3 years is also same in both cases, and before completion of MAMP call and put options cannot be exercised. The All in Cost (AIC) ceiling per annum (i.e., benchmark rate plus 450 bps spread) is also same in both the cases. The end-uses of ECBs are decided by the government. The negative list of end-uses for which ECB proceeds cannot be used includes real estate activities, investment in capital market, and equity investment.

The chronology of ECB policy changes during 2001 – 2022 presented in box – 1 indicates that although, many other events of liberalisation and modification of ECB rules are considered important by lenders and borrowers and resulted into increase in the ratio of ECBs to overall external debt, but these could bring a very little impact on net ECB inflows. The major amendment in ECB policy was done in the year 2015 when the government for the first time introduced bifurcation of ECBs into 3 Tracks. It resulted into increase in increase in ECB inflows to 34 percent in 2016.

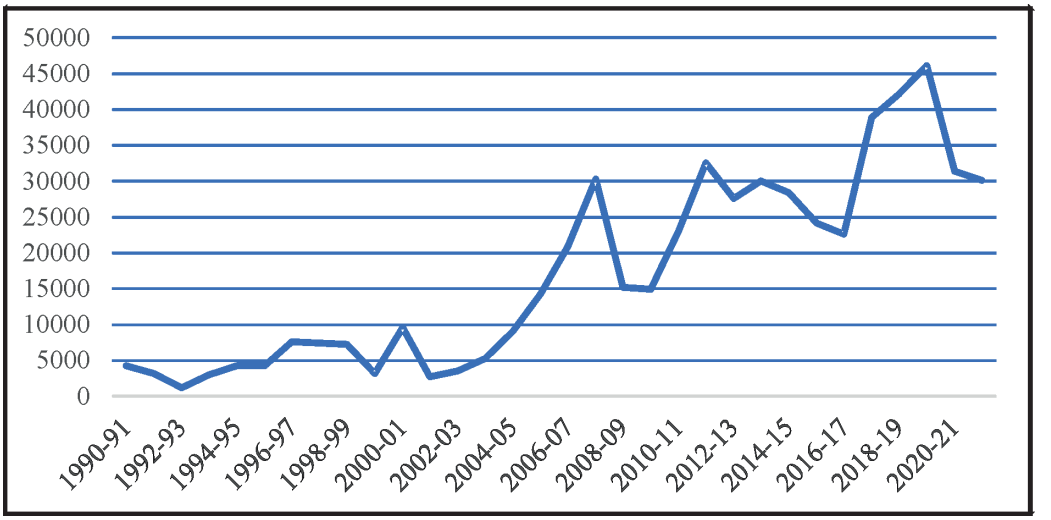
4. Analysis and Findings

In 1991, the government of India liberalized its trade policies and started welcome of all types of debt and non-debt foreign capital flows in the country, one of which was ECB. The data (table 1) shows that ECB inflow in India have been highly volatile since implementation of new economic policies (1991). In the initial two years, there was a decline in the percent of ECB inflows; it gained momentum with a 155 percent increase in 1993, most likely due to the removal of trade barriers and the privatization of government-owned sick units. The enactment of FEMA (1999) also resulted in significant increase of 200 percent in ECB inflows. Due to revision of all-in-cost ceilings and removal of the prepayment limit of USD 100 million in 2003, the ECB inflows again registered significant increase of 73.75 and 57.89 percent in two consecutive years, i.e., 2004-05 and 2005-06 respectively. But, due to large increase in ECB outflows from USD 3890 million in 2004-05 to USD 11835 million in 2005-06, net inflows fell significantly by 51.71 percent in 2005-06.

The government of India in 2005-06 enhanced the list of eligible borrowers which resulted into enormous increase in ECB inflows from USD 14343 million in 2005-06 to USD 20883 million in 2006-07. Again, with expansion in MAMP from 5 to 10 years in 2006, the ECB inflows increased by 45 percent in 2007-08. With changes in all-in-cost ceilings and prepayment limit of ECBs implemented in 2007 and 2008, the ECB inflows decreased sharply by 49.74 percent in 2008-09; it may also be caused by economic shocks of 2008. This drop showed reverse trend after 2009-10 with a 54.4 percent and 41.14 percent increase in ECB inflows in 2010-11 and 2011-12 respectively. After a critical adjustment, although no substantial impact was observed in ECB inflows in 2015-16 and 2016-17 due to the war situation in Russia, an upshot of 72.15 percent was reflected in 2017-18. The modification in ECB general policy framework (January 2019) again resulted in increase in ECB inflows and decrease in outflows which led to increase in net ECB inflows by 120 percent in 2019-20.

Present study focuses on examination of the impact of key changes in ECB policy done by government of India on ECB inflows. This is performed by conducting CHOW breakpoint analysis and ARIMA modelling methodologies. CHOW breakpoint analysis is used to determine structural changes in the data series, and ARIMA modelling is done to compare the forecasted and actual ECB flows. Structural breaks generally occur when the trend of a series is affected by an event or the movement in a particular series is distorted or truncated. While analysing breakpoints in the series of ECB inflows, it was discovered that the government implemented significant interventional strategy in the year 2006, 2015, and 2019 which resulted in a shift in the structure of ECB flows.

CHOW breakpoint analysis consists of three important stages; first is to draw series graph, second is to perform initial regression, and third is to run the CHOW Breakpoint test. Graph 1 shown below demonstrates a sharp change in the pattern of the ECB inflows between 1990-91 and 2021-22.



Graph 1: ECB Inflows

Source: Author's calculation

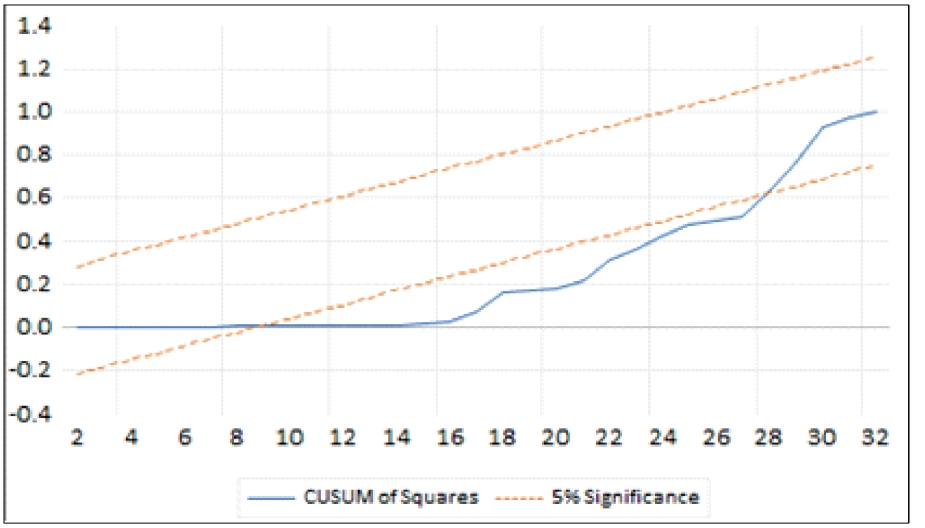
The results of regression analysis presented in table 2 reject the null hypothesis of no breakpoint since F-statistics is significant at 5 percent level of significance. The CHOW breakpoint test validated by plotting the CUSUMSQ (Graph 2) mirrors a digression away from border at 5 percent level of significance level, suggesting a break in the series from tenth observation (1999-2000) to thirtieth observation (2019-20).

Table 2: CHOW Test

F- statistics	14.98380	Prob. F (1,19)	0.0010
Log likelihood ratio	12.21034	Prob. Chi-Square (1)	0.0005
Wald Statistics	14.98380	Prob. Chi-Square (1)	0.0001

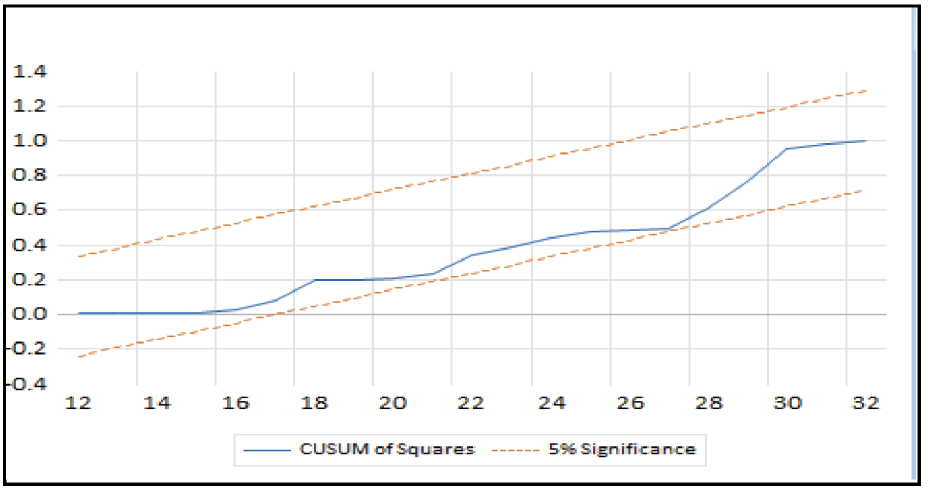
Source: Authors calculation using Eviews.

The stability diagnostics by CUSUMSQ conveys that there is a breakpoint in the series, notably in 2006 and 2019 indicating a substantial rise in ECB inflows.



Graph 2: CUSUMSQ Graph
Source: Author's calculation

As the breakpoint appears to exist in the series, a dummy variable is created to check the model's specification; in this case, the ten observations, i.e., 2000-01, is considered. The values above the tenth observations are marked as 0, and the values after that are marked as 1. The model is stable and falls under the 5% threshold of significance after regressing and using the CUSUMSQ test to assess the dummy variable's stability diagnostic.



Graph 3: CUSUMSQ with Dummy variable.

Source: Authors' calculation

Policymakers and regulators estimate future trends of some economic series to formulate policies based on earlier realizations of such variables. To analyse and forecast the flow series at breakpoints the researchers employed Autoregressive Integrated Moving Average (ARIMA) model methodology. ARIMA model consists of four steps, viz., identification, estimation, diagnostic checking, and forecasting. The identification technique comprises displaying the series to illustrate its stationarity and calculating the autocorrelation function (ACF) and partial autocorrelation function (PACF) of raw data based on the correlogram. Since ACF and PACF are outside the 5 percent level of significance, ECB inflows series is non-stationary. Hence, first difference of the raw data is used to construct the correlogram again (Graph 3). It demonstrates same pattern of ACF and PACF, and both ACF and PACF are statistically significant at the third and seventh lags. ARIMA (3,1,3), ARIMA (3,1,7), ARIMA (7,1,7), and ARIMA (7,1,3) are four preliminary ARIMA pattern models for differenced ECB series.

Table 3: Result of Equations Estimates through Four ARIMA Models

Differenced ECB credit	ARIMA (3,1,3)	ARIMA (3,1,7)	ARIMA (7,1,3)	ARIMA (7,1,7)
Significant coefficient	1	2	2	0
Sigma2 (volatility)	31168559	23643038	25969545	25594093
Adj. R2	0.1283	0.3387	0.2737	0.2842
AIC	20.38	20.19	20.25	20.42
SBIC	20.57	20.38	20.44	20.61

Source: Author's calculation using Eviews

Among four models, ARIMA (3,1,7) is found to be most suitable model with most significant coefficient (P value < 0.05), lowest sigma square (volatility), greatest adjusted R square, and lowest Akaike info and Schwarz criterion (Table 3). The correlogram of the residuals (Graph 3) is flat and falls between the 5 percent threshold of significance, indicating that all the information has been collected and model is fit for forecasting. To determine whether the forecast is accurate or not, the projected series graph is compared to the actual series.

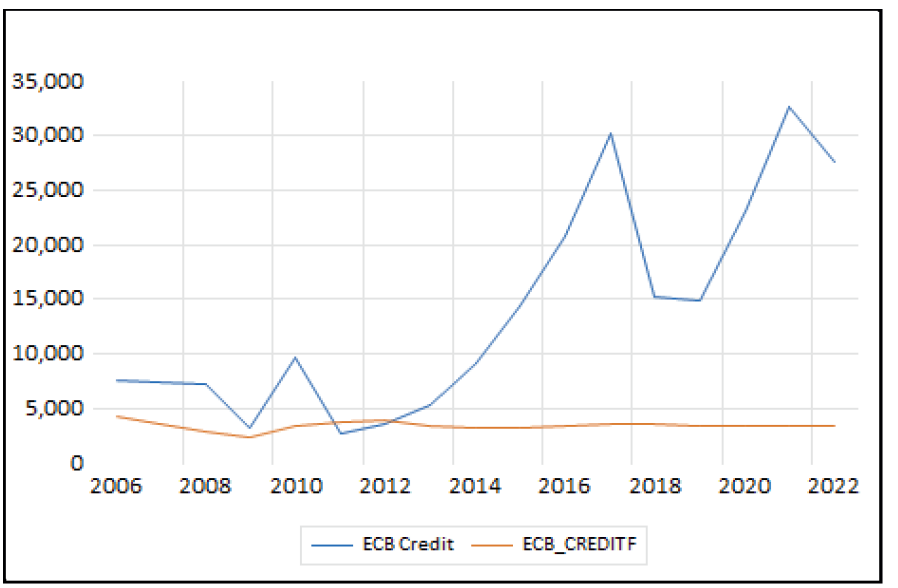
The forecast series based on ARIMA (3,1,7) model is resented in Graph 5. In the graph ECB credit is actual ECB inflows and ECBF represents forecasted ECB inflows for a period from 2006 to 2022. It indicates that there is a significant difference between actual and forecasted ECB inflows, and the actual ECB inflows follow the government's policy shift in 2006, 2015 and 2019.

Sample (adjusted): 2 32
Included observations: 31 after adjustments

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	-0.070	-0.070	0.1684	0.682
		2	-0.192	-0.198	1.4721	0.479
		3	-0.348	-0.396	5.9022	0.116
		4	0.096	-0.041	6.2495	0.181
		5	-0.114	-0.324	6.7575	0.239
		6	0.156	-0.055	7.7483	0.257
		7	0.268	0.273	10.805	0.147
		8	-0.037	-0.086	10.868	0.209
		9	-0.316	-0.160	15.521	0.078
		10	-0.057	0.049	15.682	0.109
		11	0.103	-0.081	16.227	0.133
		12	0.166	0.123	17.719	0.125
		13	0.012	0.053	17.727	0.168
		14	-0.050	-0.174	17.877	0.212
		15	-0.080	0.091	18.285	0.248
		16	-0.125	-0.074	19.349	0.251

Graph 3: Correlogram

Source: Author's calculation using Eviews



Graph 4: Actual and Forecasted ECB Inflows

Source: Author's calculation

5. Conclusion

The study presents an insight on the impact of ECB policy measures adopted by the RBI on foreign capital inflows. By evaluating the policy change, individual policy adjustments are identified, providing important insight into the dynamics of ECB inflows. The data show that policy changes have a major impact on the pattern of ECB inflows. The inflows have changed noticeably indicating that the RBI has made it easier to avail ECBs.

APPENDIX: I

Box 1: ECB Policy Changes Since 2001	
2001	No change
2002	More than 70 percent of the export proceeds can be credited by the corporates in their EEFC account.
2003	Revision of all-in-cost ceilings and prepayment limit of USD 100 million is removed.
2004	Revision of all-in-cost ceilings.
2005	Enhance the list of eligible borrowers.
2006	The MAMP is extended from 5 years to 10 years
2007	Changes in the all-in-cost ceilings and changes the prepayment limit to USD 400 million.
2008	All-in-cost ceilings are again modified. The limit for Rupee expenditure was raised.
2009	No change
2010	Changes in all-in-cost ceilings i.e., 500 bps for more than 5 years.
2011	Issuance of ECB in Renminbi (RMB) under approval route. Enhancement of ECBs under automatic route, limit has been raised from USD 500 million to USD 750 million. Enhancement of all-in-cost ceilings.
2012	SIDBI is now an eligible borrower for availing ECB for on-lending to MSME sector, only for permissible end uses, under MSMED Act, 2006 The limit for availing ECBs under automatic route by the eligible borrowers is enhanced to USD 750 million. The revised guidelines are: (a) MAMP of 3 years for ECB up to USD 20 million (b) MAMP of 5 years for ECB above 20 million and up to 750 million. The eligible borrower can also raise FCCBs up to USD 750 million for permissible end uses. And the corporates in the service sector can raise FCCBs up to USD 200 million. The refinancing of existing outstanding FCCB can be now reckoned as part of the limit of USD 750 million available under automatic route.
2013	The limit for NBFC-IFCs are now allowed to avail ECBs up to 75 percent of owned funds under automatic route. The hotel sector is also allowed to avail ECBs for the purpose of refinancing of Rupee loan availed from Indian banking system.
2014	The definition of infrastructure sector will now include 'Maintenance, Repair and Overhaul' (MRO) as a part of airport infrastructure. It has also been decided that the eligible Indian companies are now not allowed to raise ECB from overseas subsidiaries of Indian banks for the purpose of refinance/ repayment of Rupee loan raised from domestic banking system. The eligible ECB borrowers are permitted to park their ECB proceeds both under automatic and approval route in term of deposits with AD Category I banks in India for a maximum period of six months.

2015	ECB Policy regarding issuance of Rupee denominated bonds from overseas, with an MAMP of 5 years. **Revised ECB framework:** Removed various restrictions on end-uses, expansion in the list of overseas lenders to include long term lenders such as, insurance companies, pension funds, sovereign wealth funds etc. There will now be 3 Tracks: Track I, II and III comprising of medium-term foreign currency denominated ECB with MAMP 3/5 years, long-term foreign currency denominated ECB with MAMP of 10 years, and Indian Rupee denominated ECB with MAMP 3/5 years respectively.
2016	The NBFC-IFC, NBFC-AFC, CIC and Exploring, Mining and Refinery (under infrastructure sector) are eligible to raise ECB through Track I with MAMP of 5 years, subjects to different end-uses. The limit for borrowing under automatic route is USD 750 million. The MAMP of FCCBs/ FCEBs is 5 years. the AD Category I banks are now having the power to approve the requests from borrowers for extension of matured but unpaid ECB, to convert them into equity. The start-ups recognized by the central government are now allowed to raise ECB, with an MAMP of 3 years, the limit of borrowing is USD 3 million per financial year in INR or any other freely convertible foreign currency or both.
2017	No changes.
2018	The MAMP requirement for the ECB by infrastructure sector has been reduced from 5 years to 3 years. And the mandatory hedge coverage has been reduced from 100 percent to 70 percent for ECBs raised under Track I
2019	The ECB framework is revised in the following manner. Mergers of the tracks, expansion of the eligible borrowers list, raised the MAMP and the individual limit of availing ECB.
2021	With an objective to provide relief to the COVID affected borrowers the unutilized ECB proceeds can be parked in term deposits.
2022	The individual limit of availing ECB is raised from USD 750 million to USD 1.5 billion.

Source: Master Circulars, and RBI notifications on ECB policy changes

APPENDIX II

Table 1: ECB Flows in India (USD Million)

Year	*Inflows*	*Outflows*	*Net Flows*	*% Change in Inflows*	*% Change in Net Flows*
1990-91	4282	2028	2254		
1991-92	3152	1690	1462	-26.39	-35.1375
1992-93	1179	1545	366	-62.60	-74.9658
1993-94	3015	2329	686	155.7252	87.43169
1994-95	4249	3125	1124	40.92869	63.8484
1995-96	4261	2977	1284	0.282419	14.23488
1996-97	7579	4723	2856	77.86904	122.4299
1997-98	7382	3372	4010	-2.59929	40.40616
1998-99	7231	2864	4367	-2.04552	8.902743
1999-00	3207	2874	333	-55.6493	-92.3746
2000-01	9621	5318	4303	200.00	1192.192

Year	*Inflows*	*Outflows*	*Net Flows*	*% Change in Inflows*	*% Change in Net Flows*
2001-02	2687	4272	1585	-72.0715	-63.1652
2002-03	3514	5206	1692	30.77782	6.750789
2003-04	5228	8153	2925	48.77632	72.87234
2004-05	9084	3890	5194	73.75669	77.57265
2005-06	14343	11835	2508	57.893	-51.7135
2006-07	20883	4780	16103	45.59716	542.0654
2007-08	30293	7684	22609	45.06058	40.40241
2008-09	15223	7361	7862	-49.7475	-65.2262
2009-10	14954	12146	2808	-1.76706	-64.2839
2010-11	23089	11162	11927	54.40016	324.7507
2011-12	32590	22247	10344	41.14947	-13.2724
2012-13	27617	19132	8485	-15.2593	-17.9718
2013-14	30060	18283	11777	8.846001	38.79788
2014-15	28368	25638	2729	-5.62874	-76.8277
2015-16	24157	28686	4529	-14.8442	65.95823
2016-17	22584	28686	6102	-6.51157	34.73173
2017-18	38879	39062	183	72.15285	-97.001
2018-19	42162	31746	10416	8.444147	5591.803
2019-20	46149	23188	22960	9.456383	120.4301
2020-21	31388	31522	134	-31.9855	-99.4164
2021-22	30110	21975	8135	-4.07162	5970.896

Source: Handbook on Indian Economy, RBI (various issues)

References

Arunperumal, A. (2016) External Commercial Borrowings in India - An Overview. International Journal on Recent and Innovation Trends in Computing and Communication. ISSN: 2321-8169 Volume: 4 Issue: 11

Bose, U., Mallick, S. and Tsoukas, S. (2017), Does Easing Controls on External Commercial Borrowings boost Exporting Intensity of Indian Firms? *Conference paper,* https://ifrogs.org › PDF › CONF_2017 › Bose_Mallick_Tsoukas_2017.

Calvo, G.A., Leiderman, L. & Reinhart, C.M. (1994) Inflows of Capital to Developing Countries in the 1990s: Causes and Effects. Inter-American Development Bank Office of the Chief Economist, Working Paper 302.

Dev, S. (2012) External Commercial Borrowings in India and its Sensitivity to Macroeconomic Factors: An Empirical Analysis. Finance Area, Institute of Management, and Information Science. https://ssrn.com/abstract=2406766.

Goyal, M. (2014) Macroeconomic Implications of Total Capital Inflows in India. *International Research Journal of Commerce Arts and Science.* Volume 5. Issue 3.

Gupta, S. (2014) External Commercial Borrowing: Quest in India. International Journal of Multidisciplinary Approach and Studies, Volume 01, No. 4

Kumarasamy, U. (2012) Does Foreign Exchange Reserve Affect External Commercial Borrowings – Indian Pragmatic Indication. Journal of Arts, Science & Commerce, Vol. III, Issue 2(2)

Patnaik, I., Shah, A. & Singh, N. (2016) Foreign Currency Borrowing by Indian Firms: Towards a New Policy Framework. *National Institute of Public Finance and Policy,* NIPFP Working paper series, working paper no. 167.

Pradhan, AK. and Hiremath, GS. (2019), External commercial borrowings by the corporate sector in India. *Wiley, J Public Affairs*. 2019; e1987. Practitioner paper

Pradhan, AK. and Hiremath, GS. (2020), Do external commercial borrowings and financial development affect exports? *Cogent Business & Management*, 7:1, 1796269,

Pradhan, AK. and Hiremath, GS. (2020), Effects of foreign currency debt on investment of the firms in emerging economy. *Wiley Int J Fin Econ. 2020;1-12.*

Ranjeev, (2022), India's External Commercial Borrowings: Determinants and Optimal Hedge Ratio. *RBI Working Paper Series*. WPS (DEPR): 03/2022.

Ray, P., Sur, A. & Nandy, A. (2017), India's External Commercial Borrowing: Trends, Composition, and Determinants. *Indian Institute of Management Calcutta,* WPS No. 802,

RBI (2000), Master Circular: External Commercial Borrowings. *A.P. (DIR Series)* Circular No.10 (September 5, 2000)

RBI (2001), Indian Direct Investment outside India *A.P. (DIR Series)* Circular No.32 (April 28,2001)

RBI (2002), External Commercial Borrowings (ECBs) – Prepayment *A. P. (DIR Series)* Circular No. 22 (September 17, 2002)

RBI (2003), External Commercial Borrowings (ECBs) by Units in Special Economic Zones (SEZs) *A.P. (DIR Series)* Circular No.29 (October 18, 2003)

RBI (2004), Master Circular: External Commercial Borrowings A.P. (DIR Series) Circular No.60.

RBI (2005), Master Circular- External Commercial Borrowings and Trade Credits. *RBI/2005-06/23*

RBI (2006), Master Circular- External Commercial Borrowings and Trade Credits. *RBI/2006-07/25.*

RBI (2007), Master Circular- External Commercial Borrowings and Trade Credits. *RBI/2007-08/23.*

RBI (2008), Master Circular- External Commercial Borrowings and Trade Credits. *RBI/2008-09/20.*

RBI (2009), Master Circular- External Commercial Borrowings and Trade Credits. *RBI/2009-10/ 27.*

RBI (2010), Master Circular- External Commercial Borrowings and Trade Credits. *RBI/2010-11/8*

RBI (2011), Master Circular- External Commercial Borrowings and Trade Credits. *RBI/2011-12/ 9.*

RBI (2012), Master Circular- External Commercial Borrowings and Trade Credits. *RBI/2012-13/12.*

RBI (2013), Master Circular- External Commercial Borrowings and Trade Credits. *RBI/2013-14/12*

RBI (2014), Master Circular- External Commercial Borrowings and Trade Credits. *RBI/2014-15/3*

RBI (2015), External Commercial Borrowings (ECB) Policy – Revised framework. *RBI/2015-16/255*

RBI (2016), Master Direction - External Commercial Borrowings, Trade Credit, Borrowing and Lending in Foreign Currency by Authorised Dealers and Persons other than Authorised Dealers. *RBI/FED/2015-16/15*

RBI (2018), External Commercial Borrowings (ECB) Policy – Review of Minimum Average Maturity and Hedging Provisions *A.P. (DIR Series)* Circular No.11

RBI (2019), Master Circular: External Commercial Borrowings: new policy framework. *RBI/2018-19/109, A.P. (DIR Series),* Circular No. 17.

RBI (2020), External Commercial Borrowings (ECB) and Trade Credits (TC) Policy – Changes due to LIBOR transition. RBI/2021-22/135

Report of the Committee to Review the Framework of Access to Domestic and Overseas Capital Markets (MS Sahoo, 2015). *Ministry of Finance Government of India* (Phase II, Part II: Foreign Currency Borrowing) (Report III).

Sethuram, S. (2018), External Commercial Borrowings: An Analysis of the Liberalisation Policy. *IRE Journals*, Volume 2 Issue 5, ISSN:2456-8880.

Saxena, SP. (2020), Dynamics of external commercial borrowings in India. International *Journal of Foreign Trade and International Business* 2020; 2(2): 11-17.

Singh, B. (2009). Changing Contours of Capital Flows to India, *Economic and Political Weekly, 58-66.*

Tripathy, SN. (2019), Evaluating the Trends and Policies of External Commercial Borrowings (ECBs) in India. *Orissa Economic Journal.* Vol. 51, No.1 & 2, Jan-June & July- Dec. 2019: 107.