



ISSN: 2249-7307

Vol. 11, Issue 9, September 2021

SJIF – Impact Factor = 8.075 (2021)

DOI: 10.5958/2249-7307.2021.00012.8

---

## CAUSES OF CAPITAL FLIGHT: EMPIRICAL EVIDENCE FROM BANGLADESH

**Abdullahil Mamun\***

\*Associate Professor

Department of Business Administration  
International Islamic University Chittagong  
Kumira, Chittagong, BANGLADESH  
Email id: ahm.economics@gmail.com

---

### ABSTRACT

*Capital flight from Bangladesh throws the economy a formidable challenge in realizing the objectives of its general economic policy. The study identifies the major contributors to capital flight based on an extensive literature survey, but picking up the factors mostly accountable for capital flight from Bangladesh is an empirical issue that the study attempts to address. It identifies the capital flight series resorting the residual method and applies the ARDL Bounds testing approach to examine the short-run dynamics and nature of equilibrium of flight capital from Bangladesh in the long-run for the period 1981-2019. The study finds significant evidence to support capital flight from Bangladesh both in the short-run as well as in the long-run with a tendency to get back to its long-run equilibrium value. The most appealing finding is the capital flight fostering growth, an exception from the theoretical expectation. But the factors like higher expected return on investment abroad, liquidity effect of foreign aid and most importantly, political uncertainty is significantly contributing to capital flight from Bangladesh. Results of the study have important implications for policymakers to design appropriate policies and employ pertinent tools to reduce the political risk of doing business in curbing capital flight from Bangladesh.*

**KEYWORDS:** *Capital Flight, Residual Method, Bangladesh, Bounds Test*

---

### 1. INTRODUCTION

Capital flight, usually refers to the illegal transfer of capital abroad disdaining the domestic law of a country, is found to be widely prevalent in developing economies. Capital flight from these countries that fell both in importance and amount between the second half of the 1990s and 2000s have been marked a sharp rise in recent years. Global Financial Integrity (GFI, 2020) recently reports that developing countries lost USD 8.7 trillion of their capital that augmented at a yearly average inflation-adjusted rate of 6.5% between 2008 and 2017- significantly outpacing the GDP growth of these economies. On the other hand, there was a rising trend in net borrowing by the government of these countries. The total external debt of developing economies climbed 5.3 percent to \$7.8 trillion in 2019 (World Bank, 2020). Therefore, it is evident that capital flees from

the developing countries while their governments largely depend on external borrowing to finance their investment projects. The amount of capital flight was significantly higher than foreign direct investment (FDI) and even expressively more than the official development assistance through the 2010s (World Bank, 2020). However, its dampening effect on domestic investment by constraining domestic saving is one of the major concerns for achieving the desired level of output growth. Capital flight accounts for about 24 percent of domestic savings during 1981-2019 (World Bank, 2020) which indicates that capital flight limits the productive capacity of these economies making capital scarce.

Capital flight can be viewed as a reaction to unfair treatment of capital of a country in its domestic territory or can be regarded as an illegitimate transaction (Schneider, 2003). The discriminatory treatment to domestic capital could occur for a variety of reasons like inappropriate taxation, real interest rate differentials, and weak exchange rate policy. Capital is responsive to the change in the tax structure. An increase in tax on income from domestic capital usually leads capital to fly towards low-tax destinations. Again, countries offering a higher rate of interest in real terms are often able to draw the attention of investors from countries where the interest rate is low. A balance of Payments crisis, for example, a large current account deficit (CAD) can cause depreciation in the exchange rate and create a motive for capital flight. Schneider (2003) shows that capital flight from a highly indebted economy with poor economic performance gravely constrained its economic development. Studies find that many of the developing countries that were unable to meet their external debt servicing obligations were also experiencing capital flight in the early 1980s (Ajilore, 2010; Ampah and Kiss, 2019; Mamun, 2020). Hence, the ability to repay the external debt of a country is largely reflected by its capital flight measures. It is a signal to the international financial organizations of the possible risk and thus restrains them not to lend further to a flight burdened economy. Whatever be the case, it tones down the pace of development in several ways. First, the level of capital per worker in an economy reduces due to capital flight, which is deemed as one of the most vital sources of growth of any economy; second, taxing capital abroad is arduous for two main reasons: the national fiscal authority does not have sufficient information about investment overseas and enforcing law in other countries is almost impossible even if government has data; and finally, capital flight works as an origin of uneven distribution of welfare as it requires large volumes of money and a good knowledge of investment abroad to open offshore bank accounts (Pastor, 1990). Thus, flight of capital, reducing the availability of resources for domestic investment and impeding capital formation, acts as a crucial barrier in achieving desired goals of an economy envisaged in its development objectives.

Bangladesh, being the counterpart of the developing world, has also been experiencing a massive outflow of domestic capital since the late 1970s, but what makes the issue much burning is its recent surge, capital flight in terms of the total amount of all of the value gaps identified in each of 170 bilateral trade relations between Bangladesh and all of its global trading associates in 2008-2017 is reached to USD 7.53 billion through trade misinvoicing and other channels (GFI, 2020). Bangladesh lies among the most capital flight experienced economies of Asia. The total amount of capital flight from this economy is nearly USD 206 billion during 1981-2019. The highest capital flight from Bangladesh occurs in the 2010s, about USD 121 billion, which is also the highest in terms of its share in GDP. Capital flight fell short of official development assistance (ODA) and foreign aid only in the 1980s as a percent of GDP. Otherwise, it took always a higher share in GDP than the net FDI and ODA and foreign aid throughout the sample period which is apparent from table 1. Being a capital scarce economy, it is therefore imperative to identify the factors causing capital flight from Bangladesh. Literature suggests a number of factors that may induce capital flight from an economy, but picking up the most accountable factors of capital flight from Bangladesh is an empirical issue.

**TABLE 1: EXTENT OF CAPITAL FLIGHT FROM BANGLADESH**

Period	Capital Flight	Capital Flight (% of GDP)	Net FDI (% of GDP)	ODA (% of GDP)
1980s	22.35	7.02	0.00	7.27
1990s	25.65	4.91	0.11	3.21
2000s	37.18	4.34	0.62	1.59
2010s	120.89	7.74	1.31	1.68

Source: Author's Calculation based on WDI of World Bank 2021 (Billion, Constant 2010 USD)

With this backdrop, the present study aims to investigate factors causing capital flight with its short-run as well as long-run behavior in response to the change in responsible factors which will help policymakers design appropriate policies and employ pertinent tools in curbing capital flight from Bangladesh.

The study is structured as follows. Next to the introduction, section two provides a review of earlier on the determinants of capital flight from developing economies. Section three deals with the model and methodology of the research. The empirical findings are summed up in section 4. The study ends with conclusions.

## 2. LITERATURE REVIEW

Numerous studies are there on the factors inducing capital flight from developing country perspective examining the short-run causality and long-run movement of flight capital. This section will review the earlier studies from developing country perspective and from Bangladesh which will be worthwhile to identify the factors driving capital out of a country as well as the causal nexus.

Earlier studies on Latin American, Sub-Saharan and South Asian countries offer ample literature on the determinants of capital flight in developing economies. Ndikumana & Boyce (2003) summarize the factors based on key findings from a set of 17 studies conducted in developing countries. This study as well briefly discusses the major influencing factors mostly emphasized in the literature in order to specify a rational model for the study of capital flight from Bangladesh.

a. Capital Inflows: Capital inflows of various types can be responsible for capital flight in various ways. Ndikumana & Boyce (2003) finds the annual flow of external borrowing as the most common factor of flight of capital in empirical research. Few empirical works have studied the effect of the stock of debt against debt flows on capital flight (Vos, 1992; Collier, 2001; Ndikumana, Boyce and Ndiaye, 2014). A few studies have found evidence of foreign aid fuelled capital flight (Hermes and Lensink, 2001). The supply of foreign exchange furnished by capital inflows provides liquidity to support capital flight (Lensink, Hermes and Murinde, 2000), appreciate local currency in the short run, but it may not sustain in the long run, which may lead residents to shift away from the domestic assets anticipating an eventual depreciation (Boyce, 1992).

b. Real Effective Exchange rate (REER): Alam and Quazi (2003), Cuddington (1986), Vespignani (2008), Ljungwall and Wang (2008) have considered REER as a factor that controls capital flight. The REER is likely to have an indirect impact on capital flight as it embodies the view that depreciation of local currency cuts purchasing power, and hence stimulates capital flight since investors switch to foreign assets to protect their assets. In other words, depreciation of domestic currency reduces asset values denominated in domestic currency in response to which investors seeking to protect their investment switch to foreign asset due to which capital flight rises. Expectations of home currency depreciation leads to the surge of the relative prices of importable, thus inspiring domestic residents to hoard a share of their assets overseas (Ljungwall and Wang, 2008). Cuddington (1986), Anthony and Hughes Hallett, (1992) and Pastor (1990) investigate the factors triggering capital flight from some Latin American countries and observed that exchange

rate overvaluation has a crucial role in causing capital flight.

c. Domestic Interest Rate: Financial repression, distinguished by artificially low interest rates on domestic deposits, is a significant determinant that decisively affects capital flight. A repressive financial regime characterized by lower domestic interest rates in real term may diminish returns on domestic investment, which may tempt the investors to transfer their capital abroad (Dooley, 1988; Cuddington, 1986; Arezki, Rota-Graziosi and Senbet, 2013). However, while capital flight studies from African economies oppose the association between the extent of capital flight and interest rates (Hermes & Lensink, 1992; Nyoni, 2000), it is quite evident for the case of South Asia (Beja, 2007; Quazi, 2004).

d. Real Interest Rate Differentials (RIRD): RIRD between capital haven and source economies can cause capital flight. The higher real interest rate in capital haven countries will give incentive to the residents of the source country to substitute the foreign for the domestic assets. (Alam and Quazi, 2003). Facing relatively lower return rates on domestic investments, Investors will obviously be interested in dispatching their capital abroad to countries with higher returns (Lessard and Williamson, 1987). However, through lower domestic real interest rates, financial repression in the capital-source economy would bring about a lower RIRD between the capital haven and source economy, which may lead to capital flight as well by inspiring replacement of external for internal assets (Lessard and Williamson 1987; Boyce 1992). Poster (1990), Boyce (1992), Vos (1992), and Alam and Quazi (2003) find that higher RIRD between the capital-haven and capital source countries expressively contribute to capital flight, while it is absent in studies of Ng'eno, (2000) and Beja (2007).

e. GDP growth rate: Sustained growth rates in real GDP indicates the presence of lucrative opportunities for domestic investment. It induces the entrepreneurs to invest more domestically, which checks the flight of capital abroad (Lessard and Williamson 1987; Boyce 1992). Empirical research also accept the argument that higher level of capital flight of an economy is associated with the lower rate of economic growth (Pastor, 1990; Nyoni 2000; Alam&Quazi, 2003, Quazi, 2004). It can also be postulated that capital flight creates a deficit in investable funds and also contributes to a foreign exchange deficit, which ultimately hinders economic growth. Thus, there may prevails a simultaneous causal nexus between GDP growth and capital flight (Alam&Quazi, 2003).

f. Foreign Exchange Reserve: Larger foreign exchange reserves translate into better credit ratings easing external borrowings and thus restrain capital flight developing investors' confidence in the home country. On the contrary, large reductions in foreign exchange reserves suggest the dollarization of national assets and thus flight of capital. Increases in foreign exchange reserves show a negative correlation with capital flight. Studies suggest that external borrowings fuel capital flights and adequate international reserves discourage borrowings from external sources and capital flights for the cases of Indonesia, Malaysia, and Thailand (Beja, 2007). Boyce (1992) also found foreign exchange reserves as a significant contributor to capital flight during the 1962–86 period in Philippines.

g. Political Instability: the uncertainty that arises from political risk or socio-political instability can explain residents' capital flight abroad. The argument is that if the residents are exposed to the potential risk of eroding the future value of their asset holding due to the uncertainty that may arise from a change in power of state or change of government policy, they will transfer money in a relatively safe destination (Alesina and Tabellini, 1989; Lensink, Hermes, and Murinde, 2000; Le and Zak, 2006). *Political unrest* and uncertainties, hurting investors' confidence, cause domestic capital to fly to capital haven destinations. Hermes and Lensink (2001) and Lensink et al. (2000) have identified that under ceteris paribus condition, political instability brings about greater capital flight and that political freedom and democracy are related to less capital flight.



$$\Delta \ln CF_t = \alpha_0 + \sum \beta_i \Delta \ln CF_{t-i} + \sum \gamma_j \Delta GR_{t-j} + \sum \delta_j \Delta IRD_{t-j} + \sum \lambda_j \Delta \ln AID_{t-j} + \sum \eta_j \Delta DP_{t-j} + \theta z_{t-1} + e_t \quad (2)$$

where CF stands for capital flight, GR is the GDP growth rate, IRD means interest rate differentials, AID refers to foreign aid and DP indicates political dummy. Here, z is the "error-correction term", which is the OLS residuals series found for the long-run model (1). The expected signs for the long-run coefficients based on the literature survey are  $a_2 < 0$ ,  $a_3 > 0$ ,  $a_4 > 0$ ,  $a_5 > 0$ .

### 3.3 Data Sources

To derive the capital flight series employing the residual method, the study relies on data from World Bank (2020). The empirical analysis of this study employs annual secondary data of GDP growth, foreign exchange reserve, foreign development assistance, or foreign aid are taken in billion US dollar values considering 2010 as the base year from World Development Indicators of World Bank (2020). The study considers the US real interest rate as a proxy for interest rate abroad in measuring interest rate differentials as there is enough evidence that the US is the most preferred destination for residents of Bangladesh while they transfer funds. Data on the rate of inflation, interest rate differential, nominal exchange rate, CPI of the US and Bangladesh are also collected from the same source. A dummy variable for political instability in Bangladesh is expected to offer a more vivid picture as it passes through years of political turbulence throughout the sample period and hence the study applies a political dummy assigning the value '1' for the years of political turbulence and '0' for others.

It covers the period from 1981 to 2019. Logarithmic values of all relevant variables have been taken before conducting the stationary tests. The study applies Augmented Dickey Fuller (AD) and Phillips-Perron (PP) tests to identify the order of integration of the variables. Test results are summarized in table 5. Unit root test results find capital flight and interest rate differentials stationary at the level for both trend processes and without trend processes; however, GDP growth rate is non-stationary without trend but stationary with trend. The foreign aid variable is found to be stationary at the first difference level and hence disappears the long-run information to display a long-term equilibrium relationship.

**TABLE 5: AUGMENTED-DICKEY-FULLER (ADF) AND PHILLIPS-PERRON (PP) UNIT ROOT TEST**

Variables	Test in	Includes	ADF		PP	
			t-statistic	p-value	t-statistic	p-value
lnCF	Level	Intercept	-4.286 (0)	0.0022*	-4.196(10)*	0.0027
		Trend, Intercept	-4.302 (0)	0.0099*	-4.177(14)*	0.0132
GR	Level	Intercept	-2.659 (0)	0.0930**	-2.503(2)	0.1248
		Trend, Intercept	-4.844 (0)	0.0027*	-5.038(6)*	0.0017
IRD	Level	Intercept	-4.706 (0)	0.0007*	-5.564(7)*	0.0001
		Trend, Intercept	-4.445 (0)	0.0070*	-5.066(7)*	0.0016
lnAID	Level	Intercept	-1.040 (0)	0.7255	-0.428(29)	0.8918
		Trend, Intercept	-2.498 (0)	0.3266	-2.491(3)	0.3297
	First Difference	Intercept	-6.162 (0)	0.0000*	10.506(29)*	0.0000
		Trend, Intercept	-6.011 (0)	0.0001*	10.012(29)*	0.0000

Figures in brackets show the lag length

\* Significant at 5 % level

\*\* Significant at 10% level

### 4. Empirical Results

According to the Bounds test result in table 6, the null Hypothesis 'no long-run relationships exist'

is rejected for the capital flight equation meaning that there exists a long-run cointegrating relationship among the variables which is unique as such a cointegrating relationship is not found for other variables. Interest rate differential lies in the inconclusive region for a 5 percent level of significance but the long-run coefficients are found to be highly insignificant. However, for a 1% level of significance, it accepts that there exists no long-run relationship for the interest rate differential equation. It implies that there is only one cointegrating relationship present among the variables and thus GR, IRD, AID and DP can be considered as the exogenous long-run forcing variables for capital flight. Therefore, the long-run capital flight equation can be estimated in order to find the coefficients of the relationship.

**TABLE 6: BOUND TEST FOR EXAMINING THE EXISTENCE OF COINTEGRATING RELATION**

Dependent Variable	F-statistics	Critical Value Bounds*		
		Significance	Lower Bound	Upper Bound
CF	6.677*	10%	2.2	3.09
GR	1.921	5%	2.56	3.49
IRD	3.281	2.5%	2.88	3.87
AID	1.792	1%	3.29	4.37

Note: \* Pesaran Critical Values

An ARDL(2,1,1,0,3) model is found to be appropriate for estimating long-run relationships based on Akaike Information Criteria (AIC). The model passes the test of serial correlation and is also stable. The estimated long-run equation is reported below. All the coefficients are statistically significant meaning that capital flight is substantially influenced by foreign aid along with growth rate and interest rate differentials. The signs of the coefficients satisfy the theoretical expectations except for the growth rate. Alam&Quazi (2003) found the coefficient of growth rate met theoretical expectation for the period 1973-99 but was highly insignificant. While theory suggests that higher GDP growth rates reduce capital flight, the study finds a significant positive long-run relationship between economic growth and capital flight that has a greater economic implication. Political instability as represented by the political dummy has a substantial impact on capital flight in the longrun.

Long-Run Capital Flight Equation-

$$\ln CF = -23.086 + 1.299 GR_t + 0.265 IRD_t + 2.527 \ln AID_t + 5.876 DP_t + e_t$$

(10.556)	(0.623)	(0.111)	(1.044)	(1.541)
-2.187	2.085	2.386	2.421	3.812
0.042	0.052	0.028	0.026	0.001

The short-run dynamic Error-correction model for ARDL(2,1,1,0,3) scheme is shown in table 7. The sign and magnitude of the coefficient of ECT determine the stability of the model in the longrun that needs to be ranged from 0 and 2 with a negative sign and highly significant to ensure the presence of long-run equilibrium relationship among capital flight, economic growth, interest rate differentials, foreign aid and political dummy. If the value of the coefficient of ECT lies in between 0 and -1, it means that capital flight converges to its long-run equilibrium value with the change in the dependent variable. In other words, the system is said to be stable as it tends to return to its equilibrium value in the longrun. Again, if the value lies in between -1 and -2, a dampening oscillation of the system about its long-run equilibrium is obvious that the study exhibits. As the highly significant coefficient of ECT is -1.69, it means that the system oscillates around its long-run equilibrium value in a dampening fashion to correct its short-run errors, and thereby confirms the long-run equilibrium relationship between regressors and regressand. In other words, the system has a tendency to get back to its long-run equilibrium value.

**TABLE 7: ERROR-CORRECTION ESTIMATE FOR ARDL MODEL**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(lnCF(-1))	0.442*	0.164	2.703	0.0146
D(GR)	1.017**	0.557	1.827	0.0844
D(IRD)	0.147	0.120	1.225	0.2364
D(lnAID)	6.524*	2.451	2.662	0.0159
D(DP)	0.919	0.948	0.969	0.3456
D(DP(-1))	-6.258*	1.378	-4.540	0.0003
D(DP(-2))	-3.363*	1.034	-3.256	0.0044
ECT <sub>t-1</sub>	-0.1691*	0.0226	-7.470	0.0000

Notes: \* significant at 5% level of significance

\*\* significant at 10% level of significance

Regarding the short-run causality among the variables, the Wald-statistics are reported below in table 8 employing short-term Granger causality test on ECM. According to Wald test statistics, the null hypothesis that growth rate and political dummy do not cause capital flight in the short-run is rejected at 10 percent level of significance, while no causalities from interest rate differentials and foreign aid to capital flight are rejected at 5 percent level of significance. It indicates that growth rate along with interest rate differentials, foreign aid and political instability cause capital flight in the short run.

The growth rate of Bangladesh economy that was 3.54% in the 1980s reached 5.55% in the 2000s picked to 6.75% in the 2010s. Despite the sustained and substantial economic growth, capital flight from Bangladesh seems to be growth driven which is an exception of theoretical expectation. Political turmoil and uncertainty throughout the sample period can be partly blamed for such a massive transfer of capital. The politics of Bangladesh, which is characterized as highly volatile, encountered several striking political turbulences particularly on the eve of every national election coupled with innumerable political strikes. It is not surprising that businesses try to circumvent unstable and conflict-prone areas which are evident from the highly significant political dummy for the case of the study, which can, in turn, be argued as a reason for why capital flights from Bangladesh to safer capital haven destinations even despite the higher economic growth.

**TABLE 8: WALD TEST RESULTS**

Null Hypothesis	Chi-square	p-value
GR does not cause CF	6.488 **	0.0902
IRD does not cause CF	17.569 *	0.0002
AID does not cause CF	8.197 *	0.0042
DP does not cause CF	3.481 **	0.0621

Note: \* Significant at 5% level

\*\* Significant at 10% level

A highly significant coefficient of interest rate differential, in the long run, stands to mean that the expected returns on investment in capital haven countries are much higher than in Bangladesh. Again, no causality from interest rate differential to capital flight in the short run is rejected at a high level of significance meaning that differential in real interest rate between capital haven countries and Bangladesh is a source of capital flight.

Furthermore, the liquidity effect of foreign capital on domestic capital that occurs when foreign aid furnishes liquidity through transfer from government to the private sector to support domestic capital flight is evident both in the short run and in the long run. Undoubtedly, higher economic growth inspires domestic capital owners to keep their capital at home offering profitable investment opportunities, but higher expected returns on investment abroad together with political



uncertainty and inflow of foreign capital in terms of foreign aid induce capital owners to transfer their capital abroad and thereby crowded out the benefits of potential growth effects on the domestic economy.

## 5. CONCLUSION:

Given the dearth of capital investment and high dependence on foreign aid to finance the development programs, capital flight from Bangladesh is becoming more common and appears to be a fundamental barrier to attaining the macroeconomic policy objectives set by policymakers. The study finds significant evidence to support capital flight from Bangladesh both in the short-run as well as in the long-run with a tendency to get back to its long-run equilibrium value. Interest rate differentials, foreign aid and political dummy are found to be significant in driving capital out of Bangladesh. But the most appealing finding is the capital flight fostered by growth, an exception of theoretical expectation that has important policy implications. Why, despite the sustained growth of over 6 percent in recent years, capital has continued to be flown from Bangladesh is a vital policy issue. Political uncertainty and higher expected return from investment abroad together with the liquidity effect of foreign aid pave the way for capital flight. Besides, foreign companies investing in a growing economy like Bangladesh are transferring their huge proceeds rather than reinvesting, and in many instances, they withdraw their investment and transfer their older production capacity and machines particularly due to the lack of a conducive environment in the host country, and hence once again political hostility becomes evident in abolishing the benefits that Bangladesh could achieve through welcoming more capital from abroad owing to its fabulous growth performance. Therefore, it should be the prime concern for policymakers to reduce the political risk by offering a transparent and well-functioning legal framework and business environment of doing business to fight against capital flight.

## DECLARATIONS

**Author Contributions** - The author does hereby declare that this manuscript is original, has not been published before and is not currently being considered for publication elsewhere.

**Conflicts of Interest-** The author reports no conflicts of interest associated with this publication.

**Funding** –None

**Data Availability Statement** – The study collects data from public sources. Thus, data are readily available. Sources are mentioned in section 3.

**Acknowledgments** – None

**ORCID ID:** 0000-0001-6997-4434

## REFERENCES

- Ajilore, T. O. (2010). An economic analysis of capital flight from Nigeria. *International Journal of Economics and Finance*, 2(4), 89-101. <https://doi.org/10.5539/IJEF.V2N4P89> Corpus ID: 55693368
- Alam, M. I. and Quazi, R. M. (2003) ‘Determinants of Capital Flight: an econometric case study of Bangladesh.’, *International Review of Applied Economics*, 17(1), pp. 85–103. doi: 10.1080/713673164.
- Ampah, I. K., and Kiss, G. D. (2019). Economic policy implications of external debt and capital flight in sub-Saharan Africa's heavily indebted poor countries. *Society and Economy*, 41(4), 523-542.
- Anthony, M. L. and Hughes Hallett, A. J. (1992) ‘How Successfully Do We Measure Capital Flight? The Empirical Evidence from Five Developing Countries’, *The Journal of Development Studies*, 28(3), pp. 538–556. doi: 10.1080/00220389208422244.
- Arezki, R., Rota-Graziosi, G. and Senbet, L. W. (2013) ‘Capital flight risk’, *Finance and*

*Development*, 50(3), pp. 26–28.

Beja, E. L. (2007) 'Brothers in distress: Revolving capital flows of Indonesia, Malaysia, and Thailand', *Journal of Asian Economics*, 18(6), pp. 904–914. doi: 10.1016/j.asieco.2007.08.005.

Bhagwati, J. N. (1964) "On the Under-Invoicing of Imports", *Bulletin of the Oxford University Institute of Economics & Statistics*, 26(4), 389-97. <https://doi.org/10.1111/j.1468-0084.1964.mp27004007.x>

Boyce, J. K. (1992) 'The revolving door? External debt and capital flight: A Philippine case study', *World Development*, 20(3), pp. 335–349. doi: 10.1016/0305-750X(92)90028-T.

Collier, P. (2001) 'Flight Capital as a Portfolio Choice', *The World Bank Economic Review*, 15(1), pp. 55–80. doi: 10.1093/wber/15.1.55.

Cuddington, J. T. (1986) *Capital flight: Estimates, issues, and explanations*. Edited by E. Seiler. NEW JERSEY (Princeton Studies in International Finance). Available at: [http://www.princeton.edu/~ies/IES\\_Studies/S58.pdf](http://www.princeton.edu/~ies/IES_Studies/S58.pdf).

Dooley, M. P. (1986). Country specific Risk premiums, capital flight, and net investment income payments in selected developing countries Washington. DC, IMF Departmental Memorandum, 17.

Dooley, M. P. (1988) 'Capital Flight: A Response to Differences in Financial Risks', *IMF Staff Papers*, (35), pp. 422–436.

Eggerstedt, H., Hall, R. B. and Van Wijnbergen, S. (1995) 'Measuring capital flight: A case study of Mexico', *World Development*, 23(2), pp. 211–232. doi: 10.1016/0305-750X(94)00123-G.

Engle, Robert F., and Clive W. J. Granger. 1987. Co-integration and Error Correction: Representation, Estimation, and Testing. *Econometrica: Journal of the Econometric Society* 55 (2): 251–276.

Erbe, S. (1985) 'The flight of capital from developing countries', *Intereconomics*, 20(6), pp. 268–275. doi: 10.1007/BF02925467.

GFI, (2020). Trade-related illicit financial flows in 135 developing countries: 2008–2017. Retrieved from [shorturl.at/dBIYZ](http://shorturl.at/dBIYZ) on August, 29, 2021.

Ghatak, S., & Siddiki, J. U. (2001). The use of the ARDL approach in estimating virtual exchange rates in India. *Journal of Applied statistics*, 28(5), 573-583.

Hermes, N. and Lensink, R. (1992) 'The magnitude and determinants of capital flight: The case for six sub-Saharan African countries', *De Economist*, 140(4), pp. 515–530. doi: 10.1007/BF01725243.

Hermes, N. and Lensink, R. (2001) 'Capital flight and the uncertainty of government policies', *Economics Letters*, 71(3), pp. 377–381. doi: 10.1016/S0165-1765(01)00392-5.

Johansen, S., 1996. Likelihood based Inference in Cointegrated Vector Autoregressive Models. Oxford University Press, Oxford.

Lensink, R., Hermes, N. and Murinde, V. (2000) 'Capital flight and political risk', *Journal of International Money and Finance*, 19(1), pp. 73–92. doi: 10.1016/S0261-5606(99)00034-0.

Lessard, D. and Williamson, J. (1987) *Capital Flight and Third World Debt*. Institute for International Economics, Washington, D.C.

Ljungwall, C. and Wang, Z. (2008) 'Why is capital flowing out of China?', *China Economic Review*, 19(3), pp. 359–372. doi: 10.1016/j.chieco.2007.09.001.

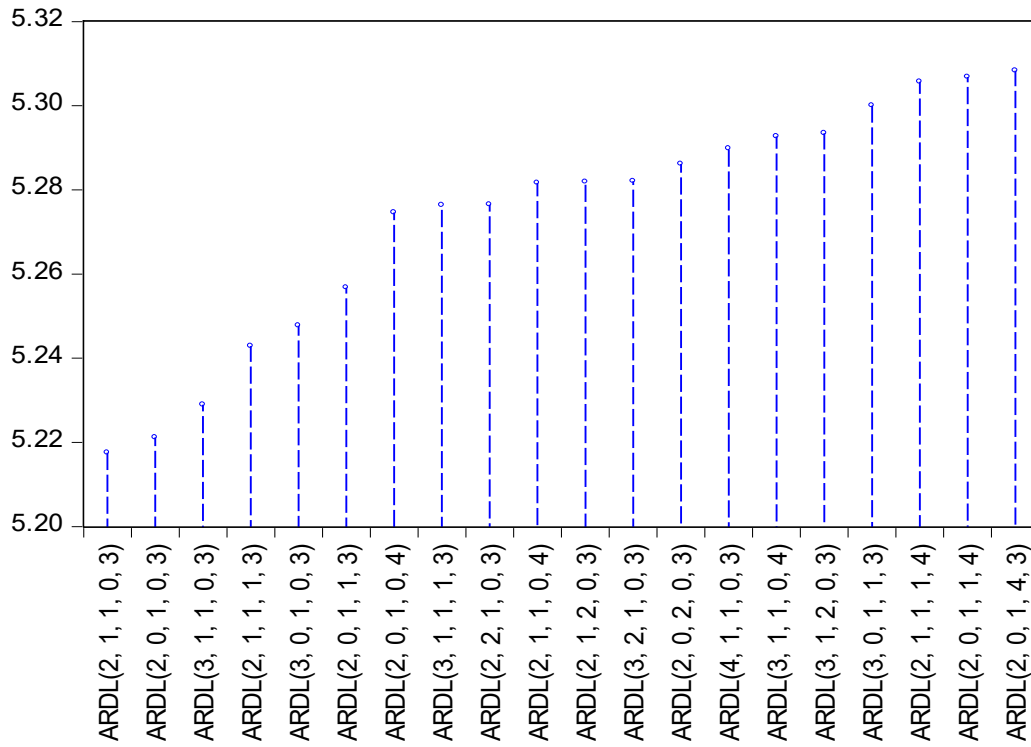
Mamun, A. (2020) 'Growth Faltering Capital Flight: Empirical Evidence from Turkey', *IIUC Business Review*, 9(1).

Morgan Guaranty (1986). LDC capital flight, *World Financial Markets*, pp. 13–15.

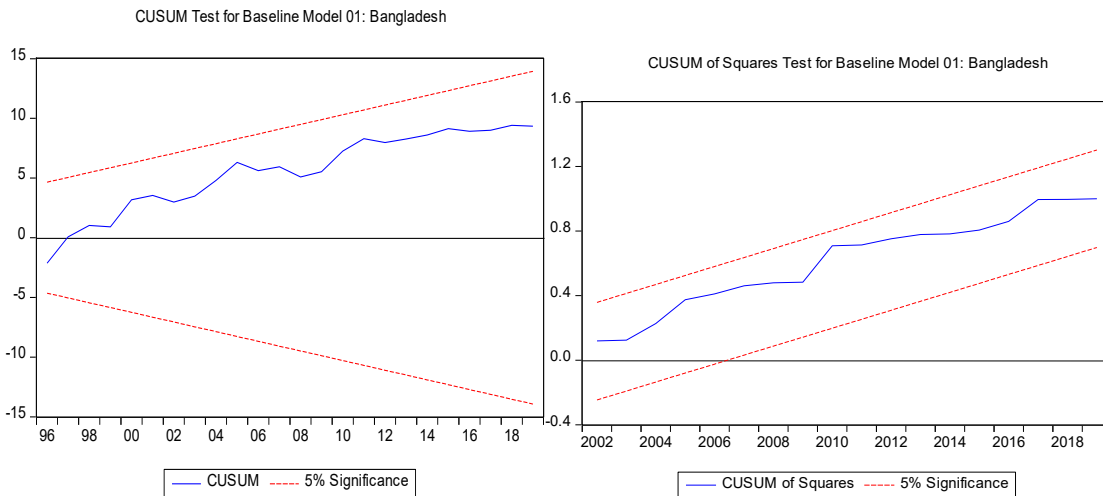
- Ndikumana, L. and Boyce, J. K. (2003) 'Public debts and private assets: Explaining capital flight from Sub-Saharan African countries', *World Development*, 31(1), pp. 107–130. doi: 10.1016/S0305-750X(02)00181-X.
- Ndikumana, L., Boyce, J. K. and Ndiaye, A. S. (2014) 'Capital Flight: Measurement and Drivers', in *Capital Flight from Africa: Causes, Effects and Policy Issues*, pp. 15–54.
- Ng'eno, N. K. (2000) 'Capital flight in Kenya', in Ajayi, S. I. and Khan, M. S. (eds) *External debt and capital flight in sub-Saharan Africa*. International Monetary Fund, Washington, D.C., p. 300.
- Nyoni, T. S. (2000) 'Capital Flight from Tanzania', in Ajayi, S. I. and Khan, M. S. (eds) *External debt and capital flight in sub-Saharan Africa*. International Monetary Fund, Washington, D.C., p. 265.
- Pastor, M. (1990) 'Capital flight from Latin America', *World Development*, 18(1), pp. 1–18. doi: 10.1016/0305-750X(90)90099-J.
- Pesaran, M. H., Shin, Y., and Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of applied econometrics*, 16(3), 289-326.
- Quazi, R. (2004) 'FOREIGN AID AND CAPITAL FLIGHT', *Journal of the Asia Pacific Economy*, 9(3), pp. 370–393. doi: 10.1080/1354786042000272008.
- Schneider, B. (2003) *Measuring capital flight: estimates and interpretations*, Working Paper. Available at: <http://dspace.cigilibrary.org/jspui/handle/123456789/22958>.
- Sicular, T. (1998) 'Capital Flight and Foreign Investment: Two Tales From China and Russia', *The World Economy*, 21(5), pp. 589–602. doi: 10.1111/1467-9701.00150.
- Vespignani, J. L. (2008). Capital flight, saving rate and the golden rule level of capital: Policy recommendations for Latin American countries. *American Review of Political Economy*, 6(2), 1-15.
- Vos, R. (1992) 'Private Foreign Asset Accumulation, Not Just Capital Flight: Evidence from the Philippines', *The Journal of Development Studies*, 28(3), pp. 500–537. doi: 10.1080/00220389208422243.
- World Bank. (1985). *International Capital and Economic Development*, World Development Report 1985. Washington, DC: World Bank.
- World Bank (2021) *International Debt Statistics (IDS) 2021*, World Bank Publications Global Development Finance. doi: 10.1596/978-1-4648-1610-9.
- World Bank (2020) *World Development Indicators 2020*

## Appendix

### Akaike Information Criteria (top 20 models)



**Figure 1: Model Selection Summary**



**Figure 2: CUSUM and CUSUM of Square tests for Bangladesh**