

# U.S. financial push factors and debt capital flows to Latin America: An ARDL bounds testing approach

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## Abstract

This study analyzes the impact of U.S. financial push factors on net debt capital flows to Brazil, Chile, and Mexico, focusing on both long-run and short-run relationships using an error correction model. The ARDL bounds testing approach provides evidence of a long-run relationship between U.S. push factors and net debt capital flows for Chile and Mexico, but not for Brazil.

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## 1 Introduction and Motivation

Free capital flows between countries are essential for financial stability, investment, and growth. But emerging markets (EMs) are particularly vulnerable to external shocks like the Global Financial Cycle (GFC), which can drive volatile swings in capital availability. Rey (2015) highlights, “as capital flows respond to US monetary policy, they may not be appropriate for the cyclical conditions of many economies”, often misaligning with domestic cyclical conditions and causing excessive credit growth in booms or retrenchment in downturns. The effectiveness of local policymaking is often reduced, necessitating capital controls or macroprudential instruments to mitigate adverse effects (Cerutti et al. (2015)). Certain types of capital flows, such as portfolio debt and equity flows, carry significant risks. Their net flows are closely linked to asset price and exchange rate

fluctuations, making them particularly dependent on central bank policy decisions. Additionally, when portfolio debt is borrowed in foreign currencies, it introduces currency and default risks for domestic banks.

While capital inflows pose risks, they also offer significant benefits, and different types of capital flows affect growth in different ways. Among the various forms of capital flows, portfolio debt directly increases the domestic capital supply, thereby lowering interest rates, which in turn stimulates consumption and investment. Other types, such as foreign direct investments (FDIs) or portfolio equity flows, influence domestic growth indirectly through knowledge spillovers and externalities.

Countries can influence certain domestic factors, but global push factors are largely beyond their control. Policymakers in EMs must therefore understand the impact of specific push factors to manage the risks associated with volatile capital flows.

This study investigates the impact of the GFC on portfolio debt flows to EMs, focusing specifically on Brazil, Chile, and Mexico. The GFC, an unobservable phenomenon, is approximated by directly observable push factors from the U.S..

The paper is structured as follows. Section 2 provides a historical overview of capital flows to emerging markets, while Section 3 discusses the push and pull framework. Section 4 presents the data and descriptive statistics, followed by the ARDL reparameterization in Section 5 and model estimation in Section 6. Section 7 discusses the results.

## 2 A Short History of Capital Flows to Emerging Markets

The modern literature on capital flows to emerging markets began in the early 1970s, when international bank lending to developing countries increased significantly. Several factors contributed to this growth, including the oil price shocks of 1973 and 1979, a combination of stagflation and low interest rates in industrialized economies, and an increase in global money supply following the collapse of the Bretton Woods system. However, the expansion of capital flows was disrupted by the Latin American debt crisis in the early 1980s, primarily triggered by rising interest rates in the United States and other advanced economies. This led to a series of sovereign defaults, starting with Mexico, followed by Argentina, Brazil, and Venezuela, all of which were unable to repay their foreign debt in US dollars. In the late 1980s and early 1990s, flows to Latin America recovered, supported by a recession in the United States and improvements in macroeconomic fundamentals in recipient countries. This upward trend continued until the late 1990s, when the Asian Financial Crisis in 1997 caused another significant contraction in flows. Thailand, once a booming economy with substantial private foreign debt and equity inflows, experienced speculative attacks on its currency and was forced to unpeg the Thai baht from the dollar. As a result, the baht lost half its value, leading to massive capital flight as foreign investors withdrew equity due to fears of further instability and devaluation. The combination of collapsing currency values and mounting foreign debt led to a national liquidity crisis and bankruptcy. The panic spread across Southeast Asia, reducing investor confidence in developing markets. It likely also contributed to a significant drop in oil prices, reaching a historic low at the time. Around the same period, Russia defaulted on its bonds. These late-1990s events triggered a global "flight to quality," as investors shifted from risky emerging market bonds to safer alternatives. In the early 2000s, capital flows revived once more, only to be interrupted by the Global

Financial Crisis in 2008. After a brief recovery following the GFC, flows slowed between 2011 and 2016 before picking up again in 2017.

### 3 Determinants of Capital Flows: The Push/Pull Framework

A central question in the literature on capital flows is whether they are primarily driven by external "push" conditions or domestic "pull" characteristics, and through which transmission channels these factors affect capital flows. The seminal works of Calvo et al. (1993) and Fernandez-Arias (1996) introduces the push-pull framework and laid the foundation for this distinction.

Pull factors, which are demand-side determinants, include institutional quality, income per capita, capital and trade openness and the financial development. In many emerging markets, domestic savings are insufficient to meet the demand for capital, creating a "deflationary gap" that results in high interest rates and macroeconomic instability. While high interest rates generally attract foreign capital and form a necessary condition for capital inflows, they are not sufficient. For capital flows to materialize, stability must also be achieved through domestic policies and economic reforms that reduce investment risks.

Push factors are supply-side determinants that affect the availability of global liquidity. These include global risk aversion, commodity prices, U.S. economic growth, and U.S. interest rates. Monetary policy, particularly in advanced economies, is a key push factor. For example, Bhattarai et al. (2021) shows that expansionary U.S. quantitative easing (QE) shocks significantly increase capital flows into emerging markets, with inflows peaking at approximately 2% of GDP during such periods. The federal funds rate, another primary tool of U.S. monetary policy, influences global interest rate differentials, making it a determinant of flows seeking yield in emerging economies. Similarly, the ex-post real policy interest rate accounts for the inflation-adjusted return on U.S. assets, providing a more direct measure of the opportunity cost of investing abroad. The TED spread is included as a measure of liquidity and credit risk in global financial markets, while the slope of the yield curve captures market expectations about future economic conditions and monetary policy. The REER reflects the competitiveness of the U.S. dollar, which affects the attractiveness of dollar-denominated investments. The VIX, often referred to as the "fear index," measures implied volatility in the U.S. stock market and is widely regarded as the key proxy for the global financial cycle. Higher VIX levels typically signaling risk aversion and triggering capital outflows from riskier EM assets, while lower levels indicate greater risk appetite and increased inflows.

Recent contributions to the literature include Fratzscher (2011), Forbes and Warnock (2012), and Cerutti et al. (2015). Cerutti et al. (2015) found that global push factors drive co-movement of capital inflows in 34 emerging markets, with sensitivity varying by flow type and market structure. Fratzscher (2011) showed that push factors (global risk and liquidity) dominate capital flows during crises, while pull factors matter more in recovery. Moreover, Fratzscher (2011) found that since the recovery period of March 2009, domestic pull factors have increasingly dominated as drivers of capital flows, particularly in regions like Emerging Asia and Latin America. Forbes and Warnock (2012) identified global risk as important in extreme capital flow episodes, with limited influence from domestic factors. M2 money supply, while representative of liquidity conditions, was found to have

an statistically insignificant impact on debt capital flows to Latin American countries (Cerutti et al. (2017)).

In a meta-study, Koepke (2015) reviewed over 40 studies and summarized the main drivers of capital flows to emerging markets. The analyzed transmission channels for capital flows are portfolio equity, portfolio debt, banking flows, and foreign direct investment (FDI). Koepke (2015) found that increasing global risk aversion and higher interest rates in mature economies tend to reduce portfolio equity, portfolio debt, and banking flows. However, the impact on FDI is less clear, with mixed evidence reported across studies. Mature economy output growth positively correlates with portfolio equity and portfolio debt, while the evidence on a relationship between mature economy output growth and banking flows and FDI are mixed. Regarding the pull factors: domestic growth and domestic asset returns are positively associated with all forms of capital flows, and country risk indicators typically have a negative relationship with inflows.

In a literature survey, Hannan (2018) highlights that while the occurrence of capital flows is primarily influenced by external factors, the extent to which a particular emerging market economy benefits from these surges depends on domestic conditions. These include the level of financial market liberalization and integration into global financial markets.

The specific determinants of capital flows vary by flow type (net or gross), and specific channels of capital flows like FDI, portfolio debt or portfolio equity. The findings support the explanation that, for FDI, the long-term returns of production facilities—primarily driven by domestic pull factors—are more significant than push factors such as international interest rates, which, in turn, are important for short-term capital flows.

The effect of pull or push factors is usually estimated using panel, VAR or VEC models.

## 4 Data and Correlation analysis

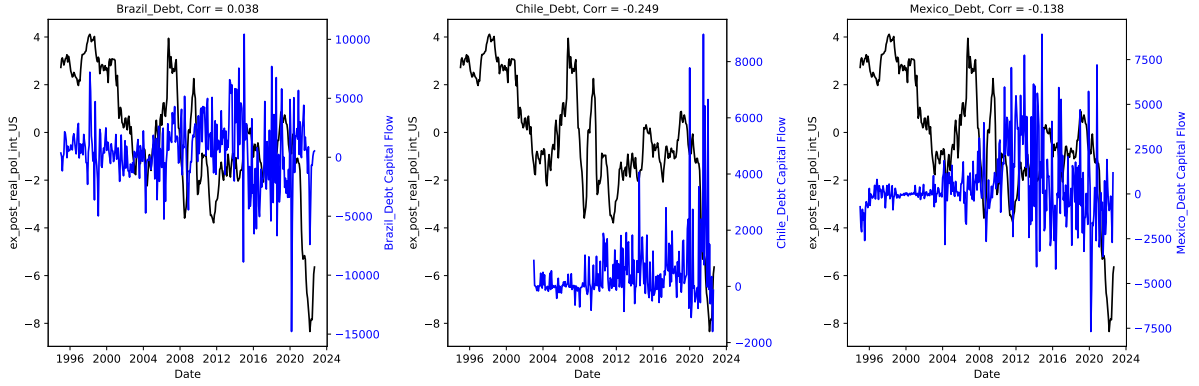
Monthly capital debt flow data for Brazil, Mexico and Chile were obtained from the IMF dataset on international capital flows, that includes observations for Brazil and Mexico from 1995 to 2022 and for Chile from 2003 to 2022.

For the push factors, the analysis focuses on a selected set of variables that are theoretically and empirically relevant for explaining capital flows into emerging markets. Specifically, the variables included in the analysis are the U.S. nominal policy interest rate (the federal funds rate), the ex-post real policy interest rate (calculated as the nominal rate minus U.S. CPI inflation), the TED spread (the difference between the three-month LIBOR and the three-month U.S. treasury bill rate), the slope of the U.S. yield curve (10-year minus 3-month treasury rates), the real effective exchange rate (REER) of the U.S., and the VIX (volatility index).

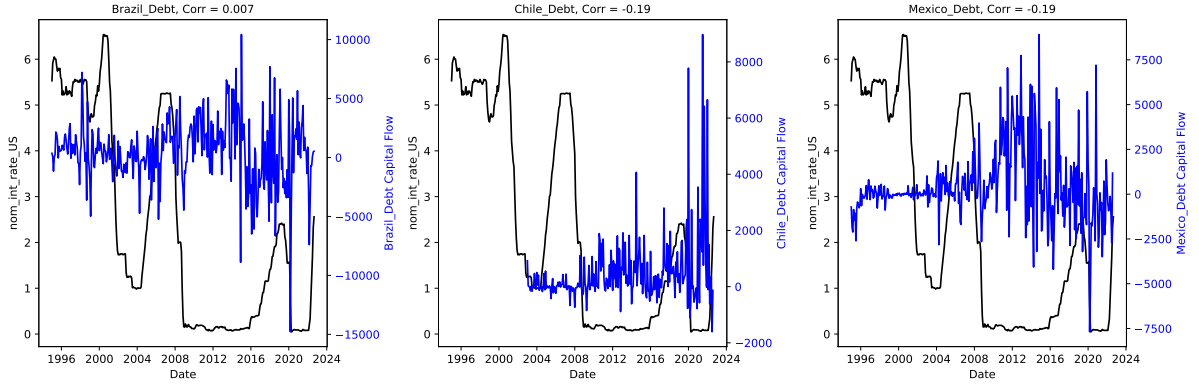
Figures 1 and 2 present the debt capital flows alongside selected U.S. push variables over time, including correlation coefficients. The scatterplots in Figures 3 and 4 illustrate the relationships with fitted linear regression lines. The varying correlations underline the necessity of analyzing each country individually.

For Brazil, the key drivers of net portfolio debt are the USD REER ( $-0.36$ ) and the VIX ( $-0.2$ ), while the TED spread, US yield curve, interest rates, and ex-post real policy rate show no significant correlation. In Chile, the ex-post real policy rate ( $-0.25$ ), TED spread ( $-0.21$ ), and US interest rate ( $-0.2$ ) are the primary influences, whereas the VIX,

(a) Debt Capital Flows and Ex-Post Real Policy Interest Rate.



(b) Debt Capital Flows and Nominal US Interest Rate.



(c) Debt Capital Flows and REER.

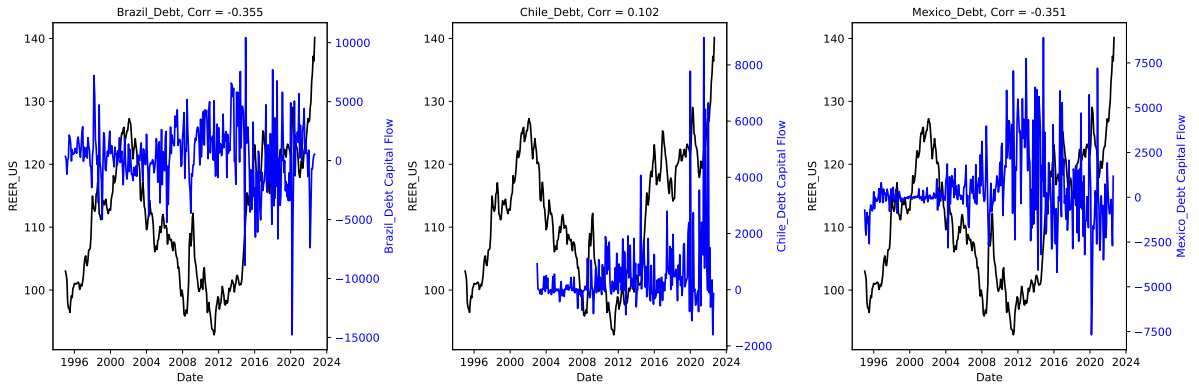
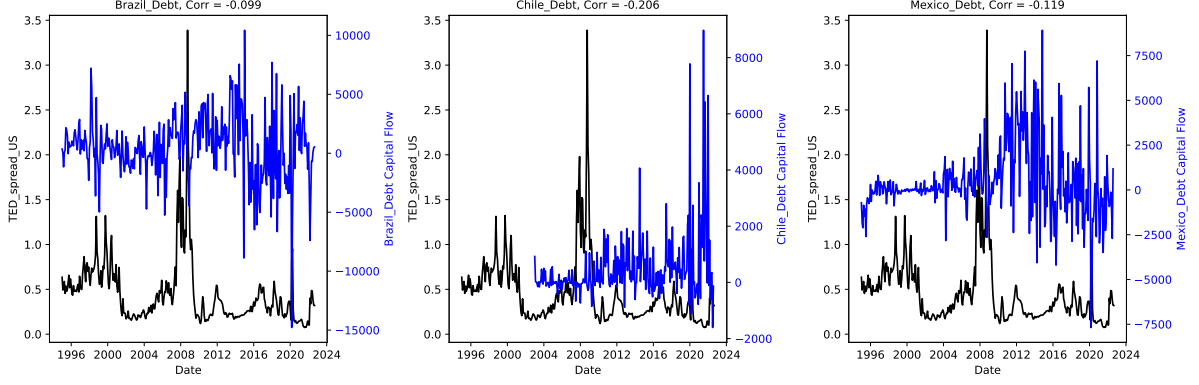
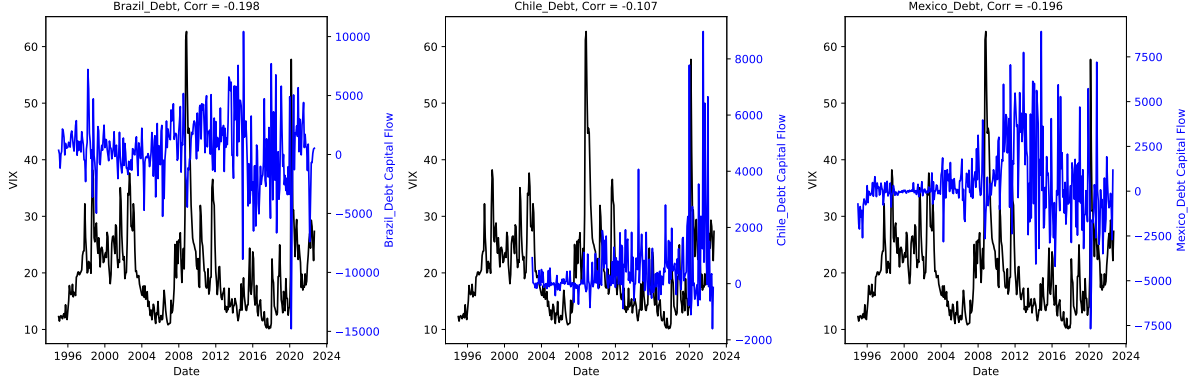


Figure 1: Time series of debt Capital Flows and Selected Push Factors (Part 1).

(a) Debt Capital Flows and TED Spread.



(b) Debt Capital Flows and VIX.



(c) Debt Capital Flows and US Yield Curve.

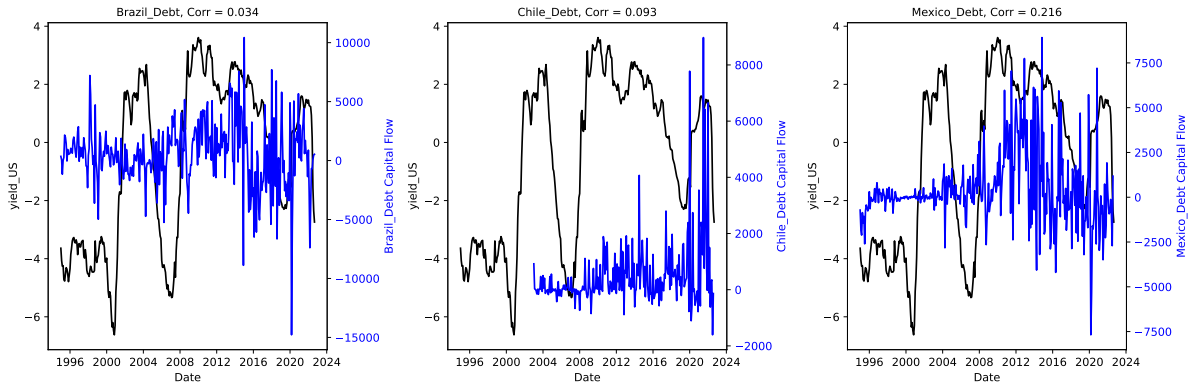
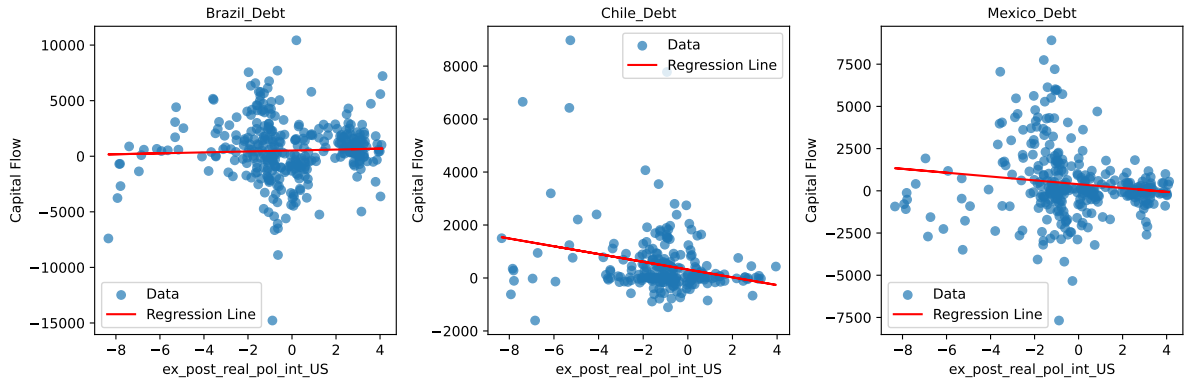
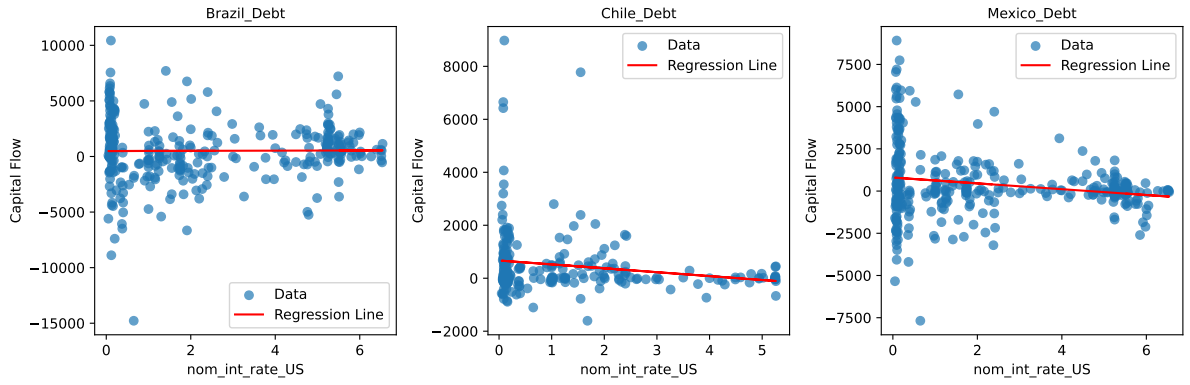


Figure 2: Time series of debt Capital Flows and Selected Push Factors (Part 2).

(a) Debt Capital Flows and Ex-Post Real Policy Interest Rate.



(b) Debt Capital Flows and Nominal US Interest Rate.



(c) Debt Capital Flows and REER.

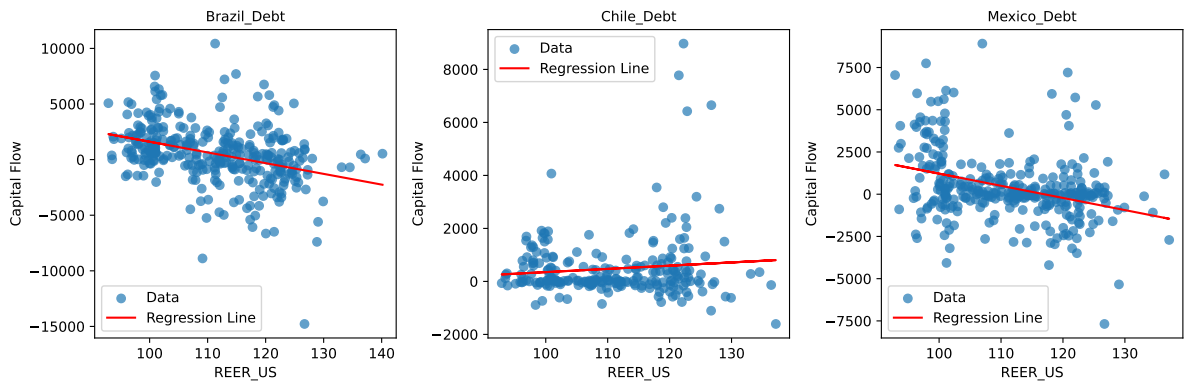
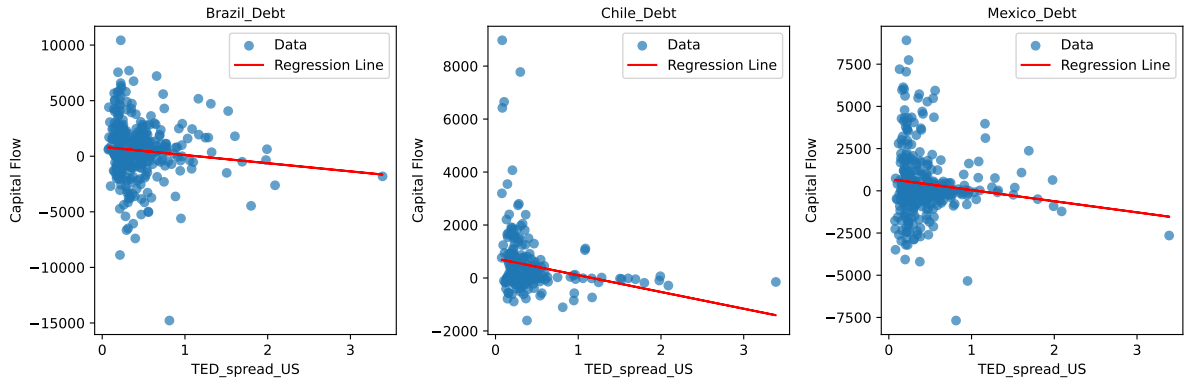
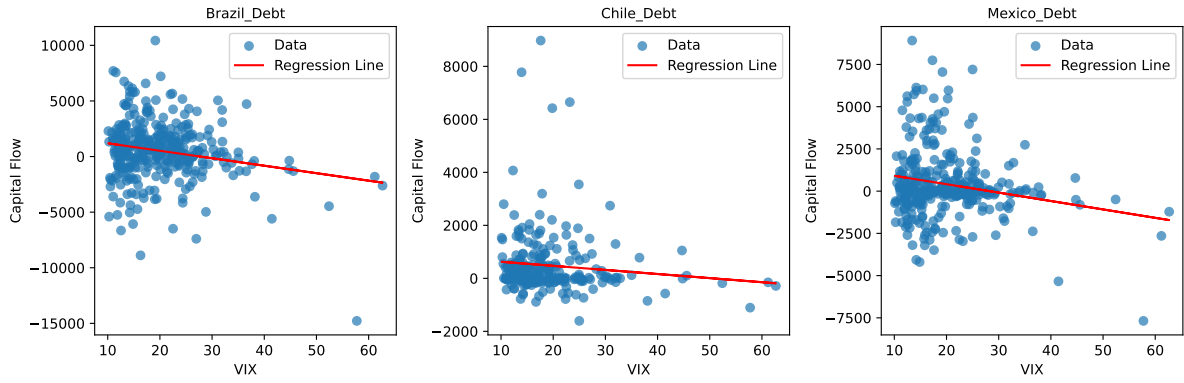


Figure 3: Scatter plots of debt Capital Flows and Selected Push Factors (Part 1).

(a) Debt Capital Flows and TED Spread.



(b) Debt Capital Flows and VIX.



(c) Debt Capital Flows and US Yield Curve.

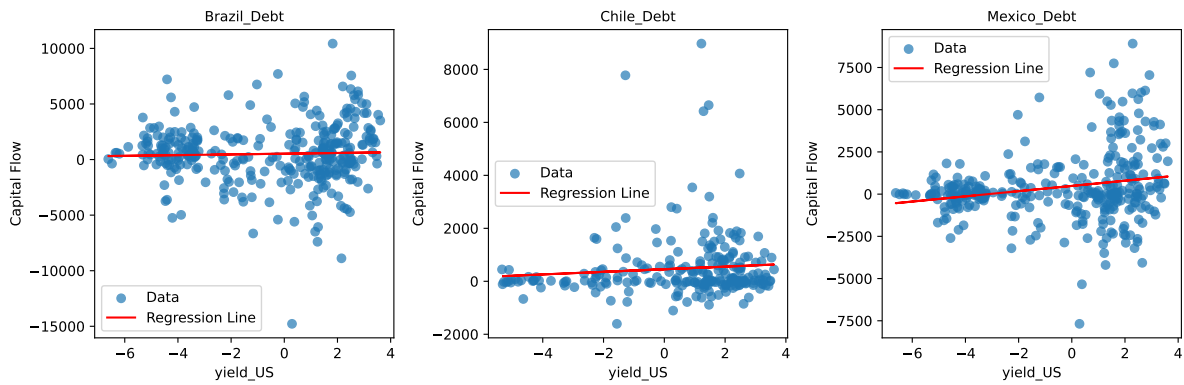


Figure 4: Scatter plots of debt Capital Flows and Selected Push Factors (Part 2).



USD REER, and US yield curve exhibit weaker correlations. Mexico's key drivers include the USD REER ( $-0.35$ ), VIX ( $-0.20$ ), US Yield curve ( $0.22$ ), and the US interest rate ( $-0.19$ ), with the TED spread and ex-post real policy rate showing minimal correlation.

It should be noted that this linear analysis does not capture potential nonlinear effects observed in the scatter plots, nor does it distinguish between short- and long-term impacts.

## 5 ARDL reparameterization

Dynamic relationships among variables are usually analyzed using vector autoregressive (VAR) or vector error-correction (VEC) models. However, when variables have a natural ordering that excludes contemporaneous feedback from the response variable to the explanatory variables, a single-equation autoregressive distributed lag (ARDL) model offers a simpler and more efficient approach.

The ARDL model can be reparameterized into an error-correction (EC) form, allowing a clear distinction between the long-run relationships and the short-run dynamics.

Pesaran and Shin (1998) and Hassler and Wolters (2006) highlight some advantages of the ARDL approach over alternative strategies for cointegration analysis. It allows for the inclusion of both stationary and nonstationary variables without requiring pretests for integration order. Additionally, short-run and long-run coefficients are consistently estimated simultaneously. However, the ARDL framework assumes that the dependent variable does not influence simultaneously the long-run equilibrium of explanatory variables, which would cause endogeneity issues. In cases where such feedback exists, the VAR or VEC framework is more appropriate.

If we expect the existence of a long run equilibrium relationship between  $y$  and a set of  $K$  explanatory variable, a baseline model would be given by:

$$y_t = b_0 + b_1 t + \mathbf{x}_t' \boldsymbol{\theta} + e_t \quad (1)$$

However, this model is only a valid regression if  $y_t$  and some of or all the variables  $x_t$  are cointegrated such that the error term  $e_t$  is stationary ( $I(0)$ ). In the short run, the process might divert from this equilibrium, but the above equation is silent about the dynamic evolution of the process when it is off the equilibrium path. With the inclusion of lags of the dependent and independent variables, we can model the dynamic evolution of the process when it is off the equilibrium path. Such a model would be given by a general ARDL( $p, q, \dots, q$ ) model with intercept, linear trend and lag orders  $p, q$ :

$$y_t = c_0 + c_1 t + \sum_{i=1}^p \phi_i y_{t-i} + \sum_{i=0}^q \beta_i' x_{t-i} + u_t \quad (2)$$

in which the regression error term  $u_t$  is free of serial correlation.

To gain a better interpretability of the model's coefficients, we can reformulate the ARDL model in EC representation Hassler and Wolters (2006):

$$\Delta y_t = c_0 + c_1 t - \alpha(y_{t-1} - \boldsymbol{\theta}' \mathbf{x}_{t-1}) + \sum_{i=1}^{p-1} \psi_{y_i} \Delta y_{t-i} + \sum_{i=0}^{q-1} \psi_{x_i}' \Delta \mathbf{x}_{t-i} + u_t \quad (3)$$

Because of the nonlinear interaction between the coefficients  $\alpha$  and  $\theta$ , we cannot directly fit (3) with OLS. However, we can fit the following model:

$$\Delta y_t = c_0 + c_1 t + \pi_y y_{t-1} + \pi_x \mathbf{x}_{t-1} + \sum_{i=1}^{p-1} \psi_{y_i} \Delta y_{t-i} + \sum_{i=0}^{q-1} \psi'_{x_i} \Delta \mathbf{x}_{t-i} + u_t \quad (4)$$

and easily recover the so-called speed-of-adjustment coefficient  $\alpha = -\pi_y$  and the long-run coefficients  $\theta = \frac{\pi_x}{\alpha}$ . The corresponding standard errors can be computed with the delta method (Pesaran and Shin (1998)). The speed-of-adjustment coefficient  $\alpha$  indicates how quickly  $y_t$  reverts to its long-run equilibrium after a distortion.  $\alpha = 1$  implies full correction in the next period, while  $\alpha = 0$  means no return to equilibrium. Values between 0 and 1 reflect partial adjustment, with the gap closing gradually over time. For a long-run level relationship to exist, we need both  $\theta \neq 0$  and  $\alpha > 0$ , as shown by Kripfganz. The remaining coefficients  $\psi_{y_i}$ ,  $\psi_{x_i}$  capture the short-run dynamics that are not prescribed by the equilibrium-reverting forces.

The ARDL-EC representation models long-run and short-run effects and should be used if a long-run levels relationship is found by the popular bounds-test procedure from Pesaran et al. (2001). If there is evidence against a long-run level relationship, a ARDL in first differences is estimated:

$$\Delta y_t = c_0 + c_1 t + \sum_{i=1}^{p-1} \psi_{y,i} \Delta y_{t-i} + \sum_{i=0}^{q-1} \psi'_{x,i} \Delta x_{t-i} + u_t$$

## 6 Model estimation

As explained in Section 4, the analysis focuses on three Latin American countries and important push factors: TED spread (TED\_spread\_US), global market volatility (VIX), ex-post real policy interest rate in the U.S. (ex\_post\_real\_pol\_int\_US), U.S. Treasury yield (yield\_US), U.S. nominal interest rate (nom\_int\_rate\_US) and the real effective exchange rate of the U.S. dollar (REER\_US).

As a preliminary step, I tested for multicollinearity. In an ECM, multicollinearity testing should focus on the short-run variables ( $\Delta x_t$ ), as multicollinearity in the long-run relationship is inherent and effectively addressed in the ARDL-EC. Table 1 presents the VIF value, indicating that no multicollinearity exists among the push factors.

Variable	VIF
TED_spread_US	1.4307
VIX	1.3404
ex_post_real_pol_int_US	1.0957
nom_int_rate_US	2.0665
yield_US	2.3331
REER_US	1.1199

Table 1: Variance Inflation Factor (VIF) for Variables

Table 2 shows the number of cointegration relationships among the analyzed variables, including capital flows for each country. The ARDL-EC model assumes a single cointegration relationship involving  $y_t$ . However, as noted by Kripfganz and Schneider

(2023) and Pesaran et al. (2001), a cointegration rank greater than one (e.g. for Chile) does not violate this assumption if cointegration exists only among the elements of  $x_t$ . Additionally, the absence of feedback effects from  $y$  to  $x$  is assumed, which is reasonable since EM capital flows are unlikely to influence the GFC.

Table 2: Cointegration Rank Results for Analyzed Countries

Country	No. of Cointegrations
Brazil_Debt	1
Chile_Debt	2
Mexico_Debt	1

I tested the order of integration with an augmented dickey fuller test, shown in 3. No variable in the dataset is integrated of order  $I(d > 1)$ , making it suitable for the

Table 3: Order of Stationarity for Variables

Variable	Order
nom_int_rate_US	I(1)
TED_spread_US	I(1)
VIX	I(0)
ex_post_real_pol_int_US	I(1)
yield_US	I(0)
REER_US	I(1)
Brazil_Debt_inf	I(0)
Chile_Debt_inf	I(1)
Mexico_Debt_inf	I(1)

ARDL-EC model. As Brazil's debt capital flows are stationary at level, no test for a long-run relationship is needed, allowing the direct use of ARDL in differences. Long-run relationships must still be tested for Chile and Mexico.

To determine whether to estimate the "long-run" error correction form or the short-run standard ARDL in differences, I performed the ARDL bounds test. Test case 4, including an intercept and a linear time trend, was selected. The optimal lag structure was chosen by minimizing the AIC with a maximum of 6 lags. The null hypothesis of the ARDL bounds test is that there is no long-run level relationship. Conclusive evidence occurs when the test statistic lies outside the bounds: below the lower bound indicates no rejection, above the upper bound indicates rejection, and values between the bounds are inconclusive. The 95% critical values for the bounds test are  $CV_{l,u} = [2.65, 3.62]$ , with estimated F-statistics of  $F_{\text{Chile}} = 4.47$  and  $F_{\text{Mexico}} = 5.61$ . The results indicate that the null hypothesis of no long-run relationship can be rejected for both, Chile and Mexico, and the ARDL-EC form is appropriate for these countries

Tables 4,5 and 6 show the model results for Brazil, Chile and Mexico.

For Brazil, the autoregressive components are highly significant, indicating a strong dependence of current capital flows on their past values. A capital flow shock in period  $t$  is expected to reduce capital flows in subsequent periods. Among the explanatory variables, the VIX has a negative and significant impact on capital flows, indicating that increases in market volatility reduce capital flows to Brazil. The real effective exchange

Table 4: Regression Summary for Brazil

<b>Dependent Variable:</b>	D.capital_flow
<b>Number of Observations:</b>	332
<b>Model:</b>	ARDL(5, 1, 2, 1, 1, 2, 1)
<b>Method:</b>	Conditional ML, HAC robust
<b>AIC:</b>	6074.625
<b>Variable</b>	<b>Coefficient (SE)</b>
const	94.02 (290.71)
trend	-0.09 (1.51)
D.capital_flow.L1	-0.814 (0.056) ***
D.capital_flow.L2	-0.671 (0.068) ***
D.capital_flow.L3	-0.422 (0.071) ***
D.capital_flow.L4	-0.314 (0.065) ***
D.capital_flow.L5	-0.162 (0.053) ***
D.TED_spread_US.L0	-714.10 (977.87)
D.TED_spread_US.L1	491.50 (956.40)
D.VIX.L0	-103.41 (39.78) **
D.VIX.L1	-112.03 (40.15) ***
D.VIX.L2	-82.29 (37.68) **
D.ex_post_real_pol_int_US.L0	406.17 (397.07)
D.ex_post_real_pol_int_US.L1	323.00 (391.89)
D.yield_US.L0	637.20 (613.20)
D.yield_US.L1	51.69 (631.53)
D.REER_US.L0	-259.29 (117.34) **
D.REER_US.L1	-166.90 (128.19)
D.REER_US.L2	167.65 (118.84)
D.nom_int_rate_US.L0	757.42 (1443.30)
D.nom_int_rate_US.L1	1452.98 (1429.70)
<b>Significance Levels:</b>	* p<0.05, ** p<0.01, *** p<0.001

rate (D.REER\_US.L0 = -260.3987) shows a significant and negative short-run effect, suggesting that a stronger U.S. dollar relative to other currencies recudes capital inflows into Brazil. Other variables, such as the TED spread, U.S. real policy interest rates, and U.S. yield, do not show statistically significant effects in this model.

In the case of chile, the coefficient of the lagged dependent variable (capital\_flow.L1 = -0.8231) indicates a strong error correction mechanism, suggesting that approximately 82.3% of the deviation from the long-run equilibrium is corrected in the subsequent period. In the short run, the second lag of nominal interest rate changes (D.nom\_int\_rate\_US.L2 = -2065.093) exhibits a negative and significant effect, suggesting that previous changes in U.S. nominal interest rates have a short-term impact on capital flows. Consistent with theoretical expectations, the VIX coefficients are negative in both the long and short run, but they are not statistically significant.

The coefficient of the lagged dependent variable (capital\_flow.L1 = -0.6796) indicates a moderate error correction mechanism, with approximately 67.96% of deviations from the long-run equilibrium corrected in the following period. In the long run, the real effective exchange rate (REER\_US.L1 = -51.8280) has a significant and negative impact, suggesting that a stronger U.S. dollar relative to other currencies reduces capital

Table 5: Regression Summary for Chile

<b>Dependent Variable:</b>	D.Net Debt flow Chile
<b>Number of Observations:</b>	236
<b>Model:</b>	UECM(5, 1, 1, 1, 1, 1, 5)
<b>Method:</b>	Conditional ML, HAC robust
<b>AIC:</b>	3913.808
<b>Variable</b>	<b>Coefficient (SE)</b>
const	2125.06 (954.48) **
trend	2.19 (1.81)
capital_flow.L1	-0.823 (0.131) ***
TED_spread_US.L1	-361.87 (374.43)
VIX.L1	-21.58 (14.04)
ex_post_real_pol_int_US.L1	-120.84 (83.55)
yield_US.L1	-163.98 (129.73)
REER_US.L1	-10.88 (7.01)
nom_int_rate_US.L1	-204.94 (234.60)
D.capital_flow.L1	-0.294 (0.118) **
D.capital_flow.L2	-0.090 (0.160)
D.capital_flow.L3	0.126 (0.199)
D.capital_flow.L4	0.168 (0.104)
D.TED_spread_US.L0	-384.99 (395.49)
D.VIX.L0	-1.70 (17.89)
D.ex_post_real_pol_int_US.L0	-7.76 (116.04)
D.yield_US.L0	175.34 (208.75)
D.REER_US.L0	-53.10 (51.50)
D.nom_int_rate_US.L0	401.57 (760.85)
D.nom_int_rate_US.L1	179.38 (551.67)
D.nom_int_rate_US.L2	-2065.09 (931.25) **
D.nom_int_rate_US.L3	-845.21 (665.67)
D.nom_int_rate_US.L4	1044.30 (592.20) *
<b>Significance Levels:</b>	* $p < 0.05$ , ** $p < 0.01$ , *** $p < 0.001$

inflows to Mexico. In the short run, the VIX ( $D.VIX.L0 = -79.7228$ ) has a negative and significant effect, indicating that increased market volatility reduces capital flows to Mexico. Additionally, real effective exchange rate ( $D.REER_US.L0 = -155.2300$ ,  $p = 0.054$ ) is marginally significant, implying a short-run sensitivity of capital flows to exchange rate changes.

The comparison of AIC values provides insight into how well the models explain debt capital flows driven by U.S. push factors for each country. Given that  $AIC_{Chile} = 3914 < AIC_{Mexico} = 5856 < AIC_{Brazil} = 6074$ , and assuming the models are correctly specified, this suggests that debt capital flows to Chile are more strongly influenced by U.S. push factors compared to flows to Mexico or Brazil.

## 7 Discussion and Conclusion

Chile, Brazil, and Mexico share similarities as emerging markets in Latin America, making them partially comparable. Additionally, they are all commodity exporters, which exposes their economies to external shocks. However, they also exhibit differences. Brazil has a strong industrial and agricultural base, while Chile's economy is smaller and heavily dependent on copper exports. Mexico, in contrast, is a trade-oriented economy with strong ties to the U.S., driven by trade agreements.

This study provides insights into the long-run dynamics of capital flows by employing an Error Correction Model (ECM), which captures both short-run adjustments and long-run equilibrium relationships. The analysis reveals a moderate to strong error correction mechanism for both Chile and Mexico. While not all long-run relationships are statistically significant, the signs of the coefficients are consistent across models. Specifically, a negative long-run relationship is observed between debt capital flows and the VIX, the ex-post real policy interest rate, the U.S. yield, the REER, and the nominal interest rates. In the short run, the majority of coefficients are also consistent across all three models.

Further improvements could involve incorporating pull factors, such as domestic economic conditions, and considering not only U.S.-based push factors but also those from other major economies, such as the EMU, the UK, or Japan.

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Table 6: Regression Summary for Mexico

<b>Dependent Variable:</b>	D.Net Debt flow Mexico
<b>Number of Observations:</b>	332
<b>Model:</b>	UECM(5, 1, 1, 1, 1, 1, 5)
<b>Method:</b>	Conditional ML, HAC robust
<b>AIC:</b>	5856.456
<b>BIC:</b>	5947.415
<b>HQIC:</b>	5892.750
<b>Variable</b>	<b>Coefficient (SE)</b>
const	7585.07 (2090.01) ***
trend	-2.27 (3.26)
capital_flow.L1	-0.680 (0.125) ***
TED_spread_US.L1	84.94 (449.19)
VIX.L1	-29.01 (22.22)
ex_post_real_pol_int_US.L1	-71.69 (55.62)
yield_US.L1	-138.77 (238.31)
REER_US.L1	-51.83 (14.78) ***
nom_int_rate_US.L1	-285.77 (395.64)
D.capital_flow.L1	-0.236 (0.104) **
D.capital_flow.L2	-0.110 (0.107)
D.capital_flow.L3	-0.102 (0.109)
D.capital_flow.L4	-0.073 (0.061)
D.TED_spread_US.L0	-189.05 (547.29)
D.VIX.L0	-79.72 (27.35) ***
D.ex_post_real_pol_int_US.L0	-3.44 (217.88)
D.yield_US.L0	288.95 (356.52)
D.REER_US.L0	-155.23 (79.84) *
D.nom_int_rate_US.L0	1352.61 (1000.33)
D.nom_int_rate_US.L1	86.96 (693.87)
D.nom_int_rate_US.L2	-666.76 (562.37)
D.nom_int_rate_US.L3	420.11 (456.27)
D.nom_int_rate_US.L4	-1002.85 (524.70) *
<b>Significance Levels:</b>	* p<0.05, ** p<0.01, *** p<0.001