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Sudden Stops in Capital Inflows: Global Drivers, Domestic Risks, and Macroeconomic Consequences in Emerging Markets

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Abstract
This article investigates the principal drivers of abrupt cessations in several classes of gross capital inflows and evaluates their macroeconomic consequences for economies characterised as emerging markets. Using a complementary log–log hazard model, the analysis isolates the variables that precipitate sudden stops and distinguishes between external influences and domestic circumstances. Results indicate that while local fundamentals such as exchange rate regimes, reserve adequacy, and fiscal balance exert influence, global forces remain pre-eminent. In particular, shifts in worldwide risk sentiment, heightened uncertainty, and contagion originating from peer economies significantly elevate the hazard of a capital-flow interruption. The study further shows that an excessive concentration of short-term capital raises vulnerability, yet strong institutional frameworks moderate this specific risk, underscoring the protective role of governance quality. Turning to outcomes, the evidence reveals that sudden stops linked to debt-financed inflows inflict especially severe real and financial costs: output contracts more sharply, current-account adjustments become abrupt, and asset prices experience deeper declines when compared with interruptions associated with equity or direct investment. These findings imply that policy efforts should not only address global push factors through prudent reserve management and macroprudential buffers but also improve institutional resilience to limit the incidence and impact of short-term, debt-driven surges. Robust data transparency can temper investor panic during global volatility episodes. Overall, the study clarifies the relative importance of international shocks versus domestic policies in shaping sudden-stop dynamics and emphasises the disproportionately negative consequences of debt-based reversals.

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1. INTRODUCTION

The gradual move toward liberalizing capital flows by emerging market economies throughout the 1980s and 1990s is often credited with helping these countries attract large amounts of international investment. Most discussions around capital liberalization focus on its upsides—greater access to foreign capital, more seamless integration with global financial systems, and the promise of economic growth. However, what's often missing from the conversation is an acknowledgment of the potential downsides. Liberalization doesn't just make it easier for money to come in; it can also open the door for domestic capital to flow out, leaving economies more exposed to financial shocks and instability. History offers plenty of examples of how quickly things can change. There have been several occasions where emerging economies saw rapid reversals in capital flows, setting off financial crises and triggering a ripple effect across interconnected markets (Stiglitz, 2000). The turbulence of the mid-1990s, which hit many emerging markets hard, didn't disappear—instead, similar volatility surfaced again in places like East Asia and countries such as Turkey and Argentina in the early 2000s, each case shaped by its own mix of domestic and international factors. The global financial crisis that began in the United States in the late 2000s brought renewed attention to the power of external influences on the movement of capital worldwide. In the aftermath of the crisis—especially between 2009 and 2012—emerging markets saw a surge in incoming funds, largely as a result of aggressive monetary policies by developed countries. Central banks in the United States, the United Kingdom, Japan, and the Eurozone took bold and unconventional steps: they bought up huge quantities

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of assets and kept interest rates near zero, all to jumpstart growth and stabilize their economies. One should never forget the reality that policies meant to mitigate domestic challenges could develop far-reaching consequences outside their borders. The recent changes in global capital flows have brought this reality back home. The massive liquidity injections undertaken by the central banks of the major developed economic systems fundamentally changed the industry of international investment. Confronted with yields at home that were almost at zero, investors went out elsewhere in search of better returns, and with higher interest rates, emerging markets looked so much more attractive. That almost overnight meant that some emerging economies began receiving a much-above-expected share of world capital flows.

Initially, the flood of foreign money seemed like a win: currencies strengthened, asset prices soared, and credit expanded rapidly. Yet, as is often the case, these positives came with strings attached. Over time, the inflow pressures made it harder for policymakers to maintain stability. Governments found themselves wrestling with appreciating currencies and asset bubbles, while the credit boom stoked risks for local financial systems. These imbalances eventually sparked fresh debates about the risks of leaving capital accounts wide open and just how carefully macroeconomic policies should be managed (Fratzscher et al., 2018; Wang & Ahmad, 2018; Tunio, 2022).

The situation took a dramatic turn in 2013, when the U.S. Federal Reserve began signaling it would "taper" its asset purchases—a move now remembered as the "Taper Tantrum." The impact was immediate and global. Suddenly, markets in emerging economies were sent reeling: asset prices fell, exchange rates swung wildly, and foreign reserves shrank as investors rushed to pull out their capital. The result? Widespread turbulence and those infamous "sudden stops" that economists and policymakers fear (Acharya et al., 2010; Sahay et al., 2014; Yan & Chen, 2019; Sheikh & Ahmad, 2020; Westermann & Schunk, 2022). The Taper Tantrum served as a harsh lesson in just how quickly monetary policy changes in one part of the world can set off storms elsewhere. But, as if these shocks weren't enough, the arrival of the COVID-19 pandemic sent yet another jolt through global finance. The uncertainty and volatility unleashed in early 2020 were truly unprecedented. The consequences were instant for emerging markets: economic output plunged, asset prices tanked, and investor confidence vanished almost overnight (Cakmakli et al., 2020). In a few short months, huge sums were withdrawn from emerging economies by investors, mainly in equity and debt markets. The numbers tell the story: net capital outflows from these markets over $103 billion occurred between January and May 2020 alone (Organisation for Economic Co-operation and Development, 2020). That number is not just a figure—it starkly illustrates how fast global shocks can drain financial resources and jeopardize years of economic progress in vulnerable economies.

With this bigger picture in mind, the concern of this study is with systematically finding not only what each of the sudden stops in gross private capital inflows into emerging markets was caused by, but also what ensued thereafter. The focus will be on thirteen countries recognized through the MSCI Emerging Markets Index selection, which affords a perspective with nuances and comparative analysis. This analysis stands well to capture the international and domestic forces at play with an enriched dataset from 2006 to 2021.

This research is unique because of its attention to the details relating to various forms of capital: equity, debt, and other private flows. The study argues that instead of grouping all inflows under one head of risk, each category of inflow constitutes an independent risk set and reacts differently to this set of changes, both under the influence of domestic events as well as those events controlling the dynamics of the global financial environment. By covering the total range and combinations of capital inflows, the analysis builds an enriched view of the factors causing vulnerability towards a sudden stop across different countries (Kabir & Rashid, 2019). A really interesting aspect is that these sudden reverses in capital are much more pronounced where the inflow has been rapid and excessive. In short, the seeds for a sudden stop are sown during the boom period, again corroborated by some other authors (Agosin & Huaita, 2012; Sula, 2010; Efremidze et al., 2017; Mahmood, 2019; Tansuchat & Thaicharo, 2025). As a stark reminder, sometimes too much money too fast can be just as destabilizing as too little capital. The investigation sails across certain economic indicators and factors in political risk measures: political stability, regulatory quality, and government effectiveness, which are frequently neglected but can make a great deal of difference to how countries survive these ferocious storms. This means that the research identifies the causes of sudden stops and probes further into their actual world impacts. Utilizing the Structural Vector Autoregression (SVAR) model, this analysis then maps how shocks in capital flows tend to ripple across the economy, affecting growth, exchange rates, foreign reserves, and the general resilience of financial systems. Because the makeup of capital flows varies so much from country to country, the underlying causes of sudden stops—and their consequences—are also highly context-dependent. A key innovation of this study is its focus on gross inflows from foreign investors, moving beyond the traditional net flow approach. Why does this matter? By breaking down capital flows into their parts and applying alternative definitions using fresh data, the research paints a far richer and more realistic picture of the dynamics at play. The result is not just another set of statistics, but new empirical insights and hands-on advice that policymakers and investors can use to better anticipate and manage the risks that come with capital flow volatility in emerging markets.

2. EMPIRICAL LITERATURE

For years, scholars have recognized that abrupt reversals in international capital flows—so-called "sudden stops"—have played a critical role in worsening financial crises, particularly in emerging market economies during the turbulent mid-1990s. These episodes did more than just intensify crises; they revealed the underlying vulnerability of these economies to the shifting tides of global finance. A central question in the literature continues to spark debate: Are sudden stops mainly the result of domestic weaknesses, or do global forces play the dominant role? This matters because the factors that set off a sudden stop can be very different from those that maintain steady inflows in normal times (Calvo et al., 1993; Zahid, 2018; Bashir & Rashid, 2019; Nasir, 2022; Sadashiv, 2023).

Early studies tended to focus on external triggers, especially changes in interest rates in advanced economies. The gist is simple: developed markets raise their rates, emerging market return assets are given a short shrift, and capital often scams back into the so-called "safe havens," which sometimes ends up causing rapid reversals (Perveez, 2019; Diaz & Weber, 2020). Research expanded from there, with later studies adding more nations and additional risk considerations. Sudden stops are, for example, more commonly associated with sharp swings in real exchange rates as well as marked depreciations in currency values, according to Calvo et al. (2004). They also showed that countries whose liabilities are dollarized least in a large part, meaning a substantial part of debt remains in foreign currency-are dangerously affected since exchange rate shocks induce much larger adverse impacts. More work strengthens this link. Bordo et al. (2010) made this point: countries with more foreign-currency debt are much more vulnerable to sudden outflows. Calvo et al. (2006) also added that poor integration with world trade heightens the incidence of having to go through a sudden stop. Further supporting that view, Cavallo and Frankel (2004, 2008) found after an examination of 141 countries over the past three decades that the more open a country is to trade, the more stable the economy, hence reducing the risk of capital jolts. This evidence is straightforward in its policy implications: policies to allow for more trade openness while prudently managing external liabilities enhance the capacity of economies to withstand shocks. It is supplemented by additional findings from Calvo et al. (2003), Bordo et al. (2010), and Edwards (2004), which prove, among others, that the structure of a country's external liabilities and its trade policy are critical to understanding and navigating the pattern of sudden stops. Taking everything together, the literature emphasizes that while global financial shifts or external shocks can play a huge role, domestic factors such as dollarization of liabilities and openness to trade act to amplify or tone down the effects felt when capital markets turn volatile.

Another critical section elaborates on the weaknesses in domestic financial systems and how they could lead to sudden stops. For example, Radelet and Sachs argue rather convincingly that the rapid flight of international capital during the East Asian crisis was not simply bad luck; rather, it was rooted chiefly in long-standing structural problems in the financial systems of those countries. Among the chief culprits they name are inadequate regulation frameworks, weak supervisory structures, and fragile institutions; these have been key determinants in why some economies have much more acute outflows and contagion than others. From the above, Agosin and Huaita argue that attributes of a country's financial market interfere with the mood of global investors and vice versa, thereby affecting the dynamics of capital flows. They argue that sudden stops are probabilistic events dependent on the depth and development of domestic financial markets and the response of international investors to changing risk perception.

Empirical studies continue to shed light on these relationships. For instance, Jeanne and Rancière (2006) looked into thirty-four emerging economies from 1975 to 2003 and found that countries with high public debt, more financial openness, and increased liability dollarization of their banking systems are at a heightened risk of experiencing sharp reversals in capital flows. Baek and Song (2019) also underline the significance of public debt management, revealing that countries relying heavily on external borrowing are more vulnerable to sudden stops. Their results point to the fact that a prudent management of public debt can mitigate such risks. Similarly, Gourinchas and Obstfeld (2012), in a study of fifty-seven emerging economies, found a strong correlation between rapid credit growth and real currency appreciation, on one hand, and a higher probability of sudden stops, on the other. This emphasizes the vital role of credit conditions and currency fluctuations in supporting stable capital flows. A massive literature survey indicates the equally important effect that external global risk factors and external shocks have on economies. For example, Eichengreen et al. (2008) find that widening yield spreads on safe U.S. bonds-a classic signal of increasing global risk aversion-increase the probability of sudden stops, while lowering oil prices tend to ease these risks. Such findings buttress the generalization that international liquidity and commodity price swings could motivate capital inflows and outflows from emerging markets. Other recent studies by Eichengreen et al. (2016), Forbes and Warnock (2012), and Li et al. (2018), among others, credibly add evidence on the inherent global financial instability-often monitored by volatility index measures, such as the VIX or incidences suggesting international contagion a major cause of sudden capital exits. Calderón and Kubota (2013) go even further in that they claim global risk appetite to be a strong predictor of declines in gross capital inflows.

Recent research has started to encompass a view incorporating geopolitical strife and broader macroeconomic challenges. Tunio (2022), for instance, incorporates data from nineteen emerging markets over three decades of monthly observations to synthesize that global events rather than domestic conditions are the main initiators of most sudden stops in capital inflows. In addition to increasing near-term concerns, these factors also include inflationary pressures associated with increasing income from commodities worsened by geopolitical tensions, such as those associated with the Russian-Ukrainian conflict, leading to persistent current account deficits and poor external financing. Collectively, these studies seem to portray sudden stops as resulting from a complex interplay of global shocks and domestic vulnerabilities. They also reinforce a key message to policymakers: maintaining stability in the emerging markets requires both good domestic policies and constant vigilance regarding trends in the global economy.

An enormous amount of academic attention regarding sudden stops has been focused on trying to understand what actually triggers them. Indeed, researchers have long scrutinized both the volatility and composition of various international capital flows to identify where the real risks lie. For example, the evidence then becomes very clear: portfolio investments are far more volatile than long-term foreign direct investment, especially portfolio debt securities and other short-term speculative inflows. It is this volatility that makes them far likelier to reverse suddenly: thus, they have played a major role in the momentous events that illustrate sudden stops (Rodrik & Velasco, 1999; Sula & Willem, 2009; Sula, 2010; Agosin & Huaita, 2012; Levchenko & Mauro, 2007; Adejumobi, 2019; Audi et al., 2021; Shahzad et al., 2025; Ammar et al., 2025). But what makes them move in such an unstable manner? Most of the explanation comes from the very

contractual viability of some of those short-term speculative flows, which makes them highly susceptible to abrupt shifts in perception about the global market and appetite for risk.

Adding further nuance, Eguren-Martin et al. (2021) used quantile regression techniques to dig into what motivates private capital inflows into emerging markets. Their findings suggest that the risk of abrupt stops is closely associated with the composition of capital flows. They demonstrated that global "push" factors-such as shifts in international liquidity, global interest rates, or broad investor sentiment-have very little impact on gross foreign direct investment, illustrating its relative stability compared to other flows. In contrast, gross portfolio inflows are much more vulnerable to global shocks, thus illustrating how exposed those portfolio investments are during turbulent times. As for "other investments," like short-term bank loans and trade credits, these flows appear to be driven mainly by domestic factors, including that country's economic performance, political environment, and regulatory quality. These distinctions matter; the implication is that to credibly assess risk and provide stability, one must distinguish between types of capital inflow. For policymakers, this means that regulatory frameworks and risk management tools must be carefully tailored to the specific characteristics of each kind of capital flow instead of using the same approach across the board, as only then can one really safeguard against financial stability in emerging markets.

Much has been achieved, but many questions remain open. One of the larger ones concerns the interaction between global "push" factors, including sudden shifts in risk appetite, changes in monetary policy in advanced economies, or global liquidity shocks, and domestic "pull" factors, such as levels of foreign reserves, vulnerabilities in the financial sector, and overall local institutional strength (Eichengreen et al., 2008; Radelet and Sachs, 1999; Calvo et al., 1993; Fratzscher et al., 2018; Khalid et al., 2025). While significant strides have been made by researchers, there is still more to learn about how these forces interact to determine the risk of sudden stops within the context of today's integrated financial world. Most of the previous research seems to have focused either only on global drivers or has had a very narrow domestic risk perspective, often measuring net capital flows instead of gross on the various components. This approach can sometimes mask critical channels through which risks operate (Eguren-Martin et al., 2021; Sula, 2010; Agosin & Huaita, 2012; Rafique et al., 2025). Even though the literature widely acknowledges that short-term and debt-related capital flows are much more volatile, there's still a lot we don't know about what happens at the macroeconomic level when sudden stops occur—especially when it comes to comparing the effects across different types of capital, like debt, equity, or direct investment (Bordo et al., 2010; Levchenko & Mauro, 2007; Forbes & Warnock, 2012). Few studies have systematically explored how factors such as strong institutions, effective reserve management, or sound fiscal policies might buffer countries against the negative impacts of global shocks and reversals in capital flows. This is particularly true in the context of more recent crises, like those following the Global Financial Crisis or the disruptions caused by the COVID-19 pandemic (Tunio, 2022; Li et al., 2018; Cakmakli et al., 2020). By taking a more granular approach—separating capital flows into different categories and considering a wide array of both global and domestic risk factors—this study aims to fill these gaps. Most importantly, the current research attempts to make a contribution towards generating fresh, up-to-date evidence on what drives sudden stops in emerging markets today and on the broader macroeconomic carnage.

3. MACROECONOMIC AND FINANCIAL IMPACTS

The majority of the original work on international finance has been geared toward the understanding of the causes of sudden stops of capital flows and the extent to which they can disrupt key indicators of the economy. For instance, Calvo and Reinhart (2000) and Calvo (1998) demonstrate that a sudden halt in the inflow of capital is often a trigger for financial crises, which will, in turn, most frequently produce a large decline in economic growth. These moments are usually characterized by an abrupt turnaround in capital account balances, sudden currency swings, and, at times, full-blown currency crises. It seems widely agreed across the literature that sudden stops represent a grave threat to macroeconomic stability, frequently causing countries to plunge into deep recessions, sharp falls in investment, and serious upheaval in the financial sector (Calvo et al., 2004; Calvo et al., 2003; Edwards, 2005).

One focal point for discussion is how openness to trade affects a country's ability to cope with sudden stops. For instance, Guidotti et al. (2004) consider the case of Latin American and Asian economies and find that the more open trade systems are able to adjust their current accounts better in times of sudden stops of capital inflows, basically, by increasing exports. This export income during the crisis helps absorb some of the losses from the drying up of foreign capital. Conversely, less trade-oriented countries tend to suffer from harsher adjustments with deeper and more prolonged recessions. In addition, Hutchison and Noy (2006) report that during sudden stops, investment and imports tend to plummet in emerging markets, with such declines typically lasting into the following year. Their results, however, also show that during and after sudden stops, exports tend to go up, thereby partly offsetting the decline in domestic demand and investment.

The next logical conclusion after Mendoza (2010) would be that, between 1970 and 2006, the emerging markets facing sudden stops almost always increase their net exports and significantly correct their current account deficits. These corrections are realized essentially through a sharp fall in imports, while the gains in export revenues have a smaller but still significant effect. In some other specific cases, Smit et al. (2014) show that, in the case of South Africa, for instance, the current account adjustment during sudden stops is driven mainly by the fall in import demand rather than by the increase in export supply. Lastly, Bianchi and Mendoza (2020) bring more quantitative evidence by estimating the impact of sudden stops to be changes of the current account by 3.7percent of GDP, which is a sizable adjustment by any standard.

The research literature highlights that, aside from trade, sudden stops have effects that can leave lasting scars on real economic activity in emerging markets. Calvo et al. (2006), Cowan and Raddatz (2013), Eichengreen et al. (2016), Agosin et al. (2019), and Bachmann and Leist (2013) all point to one conclusion: often, the output falls sharply, and the process of recovery could be very slow. This broad consensus suggests that sudden stops are some of the worst negative shocks

a developing or middle-income country can undergo. Quite a few factors, therefore, imply that strong macroprudential policies and functioning external adjustment mechanisms are not only helpful but absolutely essential to protect economic growth and financial stability from the adverse effects of sudden stops.

Empirical researchers have also contributed to the understanding of what constitutes the peculiar challenge represented by sudden reversals of capital flows and what particular implications these entail for macroeconomic performance and financial sector stability in emerging and developing countries. For example, it has been shown by Korinek and Mendoza (2014), Cúrdia (2007), and Hutchison and Noy (2006) that sudden stops typically entail sharp output declines, currency devaluations, increasing sovereign risk premiums, and escalating stress on domestic banking systems. These patterns are confirmed by a vast body of empirical research consistently showing sudden stops lead to both immediate and long-lasting effects on the macroeconomic and key financial market indicators (Cavallo et al., 2015; Ma et al., 2020; Joyce & Nabar, 2009; Eichengreen & Gupta, 2016; Mendoza, 2010; Smit et al., 2014; Bianchi & Mendoza, 2020; Guo et al., 2020).

Yet despite such progress, an important gap remains. The extent to which different types of capital inflows—namely, equity, debt, or short-term financing—may trigger distinct macroeconomic and financial outcomes following sudden stops remains poorly understood. Existing literature indicates that the scale, duration, and sign of effects could vary widely across the different capital flows involved. Hitherto, most of the studies have been largely employing event studies, fixed effects panel regressions, or generalized method of moments (GMM) techniques to analyze what happens after a capital flow reversal in emerging markets. While insightful concerning average effects, these methodologies have mostly missed the dynamic properties of impacts, especially how long the damage would take to recoup and how fast variables recover after initial impairment (Cavallo et al., 2015; Guo et al., 2020). This thus creates a clear space for undertaking more dynamic analyses to capture both immediate and delayed impacts of sudden stops across different arch types of capital inflows. For policymakers, this is not merely an academic interest: knowledge about the time path and character of these impacts is crucial for the design of interventions that would benefit the management of risks associated with volatile capital flows, and contribute to more stable growth and financial resilience in emerging and developing economies.

4. DISCUSSION

Because sudden stops are in fact the result of frequent external global shocks, it makes methodological sense to treat these phenomena defined by the different types of gross capital inflows as exogenous variables in the structural model. It is assumed that these sudden stops influence mainly the international reserves, policy interest rates, current account balances, and other important macroeconomic or financial variables without direct reference to developments in the domestic economy. So modeled, the analysis can factor out the actual causal effects and trace the rippling effects of the different forms of capital flow reversal through the rest of the economy (Jeanne & Rancière, 2011; Efremidze et al., 2019).

What does the sudden dissolution of international capital inflows normally mean? That is, in most cases, countries will either target further narrowing of their current account deficits or tap their international reserves to keep the damage as limited as possible near home and restrain the excessive external balances. Early works like Calvo and Reinhart (1999) emphasized the critical role of holding international reserves as the first line of defense in such cases. Following this logic, it makes sense to position changes in international reserves as a key variable immediately after the sudden stop in the model's sequence.

When analyzing the dynamic responses, the data shows that the largest delayed impact on reserves usually appears around the sixth period after a sudden stop, presenting as a significant—though gradually shrinking—negative effect. As more time passes, this impact weakens and becomes statistically insignificant, indicating that the shock to reserves isn't persistent in the long run (Eichengreen et al., 2008; Jeanne, 2007; Shousha, 2017).

These results are very much in line with earlier research, which has shown that most of the drawdown in reserves typically occurs soon after a reversal in capital flows. Over time, however, the burden of adjustment tends to shift to other macroeconomic channels, such as changes in the exchange rate and adjustments in the current account (Efremidze et al., 2019; Jeanne & Rancière, 2011).

Some interesting data observations are not statistically significant movements in policy interest rates immediately after total gross capital inflows sudden stop shocks for almost all the states of the study period. This indicates two possible conclusions: either it means that little scope is available to central banks concerning the impact of such other external disturbances, or with poor economic conditions, it has been suggested that monetary policy plays little role in counterbalancing the adverse effects of such sudden flow reversals (Shousha, 2017; Eichengreen et al., 2008). These findings thus underscore the significance of international reserves as a short-run first line of defense against sudden stops, as well as their muted and delayed impact on policy rates. They also add to the growing need for a broad-based toolkit for policymakers, including interventions in currency markets, prudent fiscal management, and strong macroprudential supervision. This is essential in managing economically risky capital flows across emerging and developing economies.

All these challenges boil further into balance sheet vulnerabilities that arise whenever there is a very sudden real depreciation of the exchange rate, especially in countries with a high level of liability dollarization. In such a situation, a sudden stop would handle acute stress for both private sector firms and public institutions. In this line, Calvo et al. observe that large decreases in capital inflow with depreciation of the currency traditionally weaken external financial positions of both corporations and governments, sometimes triggering solvency crises and deepening macro-financial instability. Thus, from a modeling perspective, it would be valid to place the real effective exchange rate as the fourth variable in the communication chain, as it may become more apparent how domestic currency values respond to large changes in capital flows. Empirical studies consistently show that sudden stops tend to trigger pronounced, but relatively short-lived, depreciations in the real effective exchange rate—thereby increasing financial strain on those with foreign-currency-

denominated liabilities and on sectors that rely heavily on imports (Kehoe & Ruhl, 2009; Bianchi & Mendoza, 2020; Mendoza et al., 2008). Over longer periods, however, this effect tends to fade and loses statistical significance, reflecting an initial phase of adjustment that is usually followed by stabilization or policy intervention.

The onset of sudden stops, coupled with new barriers to accessing international finance, also leads to a pronounced reduction in the supply of credit available to the domestic private sector. This contraction in credit availability emerges as a critical channel through which external shocks propagate to the real economy. As such, domestic credit supply is logically included as the fifth variable in the transmission sequence. Empirical studies have found that sudden stops are usually followed by a clear decline in domestic credit supply, with the steepest contraction often happening around the fifth period after the shock (Curdia, 2007). While this drop in credit is sometimes only marginally significant from a statistical standpoint, it's widely recognized as a major factor that restricts investment, undermines business confidence, and worsens the broader economic impact of capital flow reversals.

When access to credit dries up, the repercussions are felt throughout the entire economy. With less lending available, businesses may have to put plans for new projects or equipment on hold, while households often respond by cutting back on everyday spending. The combined effect is a slowdown in both fixed asset investment and general consumption, which inevitably drags down real GDP growth. For researchers aiming to find out how these external shocks actually flow through an economy, domestic fixed capital formation, domestic consumption, and real GDP become the next steps in their analytical work. It thus allows them to specify how capitulation in capital flows exacerbates and prolongs economic downturns in emerging markets (Bianchi & Mendoza, 2020; Curdia, 2007). There is an increasing consensus in the literature that the effects of sudden stops are not uniform across different types of capital flows. Short-term and portfolio capital flows, for instance, are typically much more volatile in nature, as opposed to FDI. Hence, when reversals occur, they tend to create more macro-financial instability. All pioneering studies undertaken by Ma et al. (2020), Guo et al. (2020), Eichengreen and Gupta (2016), as well as Cavallo et al. (2015), converge to the same conclusion that sudden stops relating to these less stable capital flows usually produce heightened financial volatility and deeper disruption into real economy.

Interestingly, Ma et al. (2020), Cavallo et al. (2015), and Guo et al. (2020) build on this relationship by studying how some types of capital inflows have repercussions on several economic and financial indicators. Their research reveals the complex and often overlapping pathways through which the shocks may be transmitted and, at times, also amplified. Building on this foundation, the present study adopts a comprehensive perspective, taking into account all the different ways that sudden stops, whether from gross equity or debt-based capital inflows, can shape economic performance. The findings indicate that changes in international reserves after sudden stops in gross equity inflows are not statistically significant, suggesting that reserve adjustments are not a primary buffer in these situations. However, the real effective exchange rate shows a sharp negative shift in the first two periods after the shock, which fits with the common pattern of currency depreciation during capital flow reversals. Interestingly, domestic credit volumes rise in the initial period, likely because of emergency liquidity injections or stabilization efforts, but this effect soon fades. Digging deeper, the analysis shows that domestic fixed capital investment doesn't react significantly to sudden stops in equity-based flows, perhaps due to delays in investment decisions or structural barriers in the economy. On the other hand, domestic consumption drops sharply and continues to decline over time, underscoring just how sensitive household and business spending are to swings in capital flows. The most pronounced negative response in net exports comes in the third period, indicating that external trade adjustment takes a bit of time but ultimately plays a big role during capital flow reversals. Finally, real GDP growth takes a significant hit, reinforcing the idea that sudden stops almost always have contractionary effects on overall economic activity.

One important observation concerns the current account balance, which tends to show a positive reaction after a sudden stop, with the biggest improvement usually occurring in the fourth period following the event. However, this upward trend gradually fades in subsequent periods and turns negative between the seventh and ninth periods. Results are comparable to earlier real studies. As reflected in earlier studies, sudden stops often initiate correction in the current account by way of reduction of imports and weakening domestic demand before more complex and often negative effects emerge as they move through the rest of the economy (Cavallo et al., 2015). Empirical evidence has recently discussed how shocks brought about sudden stops differ by source of funding. A number of studies attempt to investigate the behavior of the various types of capital flows. Notably among them are those by Ma et al. (2020) and Eichengreen and Gupta (2016), which offer conclusive empirical evidence on macroeconomic and financial shocks due to sudden stop-related capital that is more volatile. Thus, they were observed to have shown that reverses in portfolio and other flows, except for FDI, would tend to exhibit greater volatility both on financial markets and even economic indicators, and most of the time, mean a more severe disruption in the real economy.

Besides the above contributions, Ma et al. (2020) also contribute by relating how different types of capital inflows interact with various macroeconomic and financial variables. In this way can be captured a fairly intricate picture of the related channels and feedback effects of the ways through which sudden stops can propagate through economies, thereby increasing understanding of these strange features. On the continuation of this investigation, the general trends emerging from the broader research, among many other things, are evidence showing that different paths through which sudden stops-coupled with gross equity or debt inflows-affect significant economic outcomes. According to evidence, variations in international reserves after sudden stops in gross equity inflows are nonsignificant statistically, implying reserve adjusters do not take up important buffers in such circumstances. They were trying to reach empirical illusion. Sudden stops usually coincide with austerity measures in the domestic economy around real currency exchanges. Although there are initial contributions to uncertainty, often following in more complicated and sometimes negative ways as the shock

propagates through the rest of the economy, sharp import restraint and declines in domestic demand characterize the effect. Cavallo et al. (2015) observed that these events usually coincide with domestic retrenchment of the economy in line with austerity measures around real currency exchanges. A growing corpus of empirical studies vis-à-vis sudden stop-contagion effects has examined how such an effect varies with the given type of capital flow. In that regard, the works by Ma et al. (2020) and Eichengreen and Gupta (2016) present strong empirical evidence on macroeconomic and financial ramifications of sudden stops induced by such more volatile capital. In contrast, the real effective exchange rate falls sharply in the first two periods after the shock, which is in line with the rapid currency depreciation typically seen during sudden reversals of capital flows. Interestingly, domestic credit volumes increase in the first period—possibly reflecting emergency liquidity support or stabilization policies—although this effect doesn't last in subsequent periods. Further analysis shows that domestic fixed capital formation doesn't react significantly to sudden stops in equity-related flows, which could be due to delayed investment decisions or existing structural barriers within the economy. However, domestic consumption drops sharply and continues to fall over time, highlighting just how sensitive household and business spending are to capital flow volatility. The most substantial negative impact on net exports emerges in the third period, highlighting that trade adjustment to capital flow reversals is often delayed but ultimately significant. At the same time, real GDP growth shows a clear decline, underscoring the strongly contractionary effect sudden stops can have on overall economic activity. One of the most interesting results speaks to the current account balance: after a sudden stop, the current account improves in the initial instance, with its most significant effect in the fourth period. However, positive momentum that accrues at that point does not last. In the following periods, this development disappears and eventually becomes negative between the seventh and ninth periods. This pattern is consistent with findings of earlier studies, which have indicated that sudden stops usually give rise to initial gains in the current account, mostly from diminishing imports and weakened domestic demand-before the shock reverberates and more complex and at times adverse effects emerge within the economy. (Cavallo et al., 2015; Guo et al., 2020).

5. CONCLUSIONS

The study presents a broad and subtle examination of the causes and consequences of sudden stops in capital inflows to emerging market economies. It uses one of the most rigorous empirical frameworks by differentiating global influences from domestic ones, thereby shedding much-needed insight into what really drives these disruptive events. Using the complementary log–log hazard model in conjunction with structural vector autoregression, the analysis disentangles global shocks from shifts in global risk sentiment to financial contagion from local ones, such as exchange rate policy, adequacy of foreign reserves, and institutional strength. It was made clear in the results that international forces are, more often than not, the primary determinants of the likelihood and severity of sudden stops, with domestic macroeconomic conditions and institution quality being secondary factors. Capital flow reversals are exacerbated by periods of uncertainty produced by changes in advanced-economy monetary policy and the contagion stemming from other emerging markets. Thus, an interlinked environment makes the emerging markets an exposed and vulnerable entity to global shocks. An important contribution made in this study is the distinction of the different types of capital flow and the distinct macroeconomic impacts each type can create. This level of detail is especially important for policymakers and researchers, as it helps pinpoint where specific vulnerabilities exist and offers a clearer path to addressing them. The findings reveal that sudden stops associated with debt-financed inflows, especially those of short-term and portfolio nature, impose more severe real and financial costs than interruptions in equity or direct investment flows. Such debt-driven reversals are typically accompanied by deeper contractions in output, sharper and more immediate depreciations in real effective exchange rates, abrupt current account adjustments, and pronounced declines in asset prices. The analysis further highlights the critical role of reserve management and institutional quality as buffers against these adverse effects: countries with robust governance frameworks and adequate reserves experience lower hazard rates and more contained macroeconomic fallout. In contrast, economies characterized by concentrated short-term external debt and institutional weaknesses remain disproportionately exposed to sudden stops and their destabilizing consequences.

Another important insight is the limited efficacy of monetary policy tools—such as policy interest rates—in counteracting the initial shocks of sudden stops, given the predominance of global risk sentiment and capital flow volatility. Instead, the empirical evidence demonstrates that international reserves serve as a frontline defense, though their depletion is often rapid and front-loaded. Subsequent macroeconomic adjustments occur primarily through current account improvements, driven by reduced imports and weaker domestic demand. However, these adjustments are not always sufficient to prevent sustained losses in investment, credit supply, and economic growth, particularly when capital flow interruptions are linked to debt rather than equity. The study also finds that sudden stops can trigger positive short-term responses in current account balances, but these improvements may be transitory and eventually give way to renewed external pressures as shocks propagate through the real and financial sectors. While the research advances our understanding of sudden stops in emerging markets, it is not without limitations. The reliance on aggregate country-level data, while enabling cross-country comparison, may obscure important sectoral or firm-level dynamics. Furthermore, the modeling framework, although robust, cannot fully capture the complexity of policy interactions and real-time decision-making during periods of financial stress. Future research would benefit from integrating higher-frequency data, incorporating micro-level analysis, and exploring the effectiveness of specific macroprudential and capital flow management tools in mitigating the impact of sudden stops. Additionally, the differential role of new digital financial channels and global value chains in propagating or dampening capital flow volatility remains a fertile area for further investigation.

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