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Beyond the Literature: What Policymakers Reveal About Financial Asset Overvaluation?¹

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Abstract

This paper explores how global shocks transmit to emerging market and developing economies (EMDEs) when assets in major financial centers are overvalued. While international organizations and historical experience have long warned about asset overvaluation, academic research has yet to scrutinize its role as a source of global financial vulnerability. Using a panel local projection model and plausibly exogenous shocks, we find that a tightening in global financial conditions raises sovereign spreads in EMDEs and the effect is amplified when assets are overvalued. Strong external balances help cushion this impact, which is particularly important in current context of elevated volatility.

Keywords: *Global Financial Cycle; Asset Overvaluation; Asset Pricing; Financial; Risk-taking*

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1 Introduction

April 2, 2025, was unlike any other day for financial markets. That day—dubbed “Liberation Day”—the U.S. government announced a 10% tariff on all imports, along with additional tariffs of up to 50% on selected countries. This announcement triggered a sharp rise in risk aversion, prompting investors to shift their portfolios toward safer assets. There were ramifications for financial markets globally, and major media outlets highlighted the resulting tightening in global financial conditions (CFG).

Far less noticed, however, was that this episode followed a period of “pricing for perfection.” Fueled by expectations of accommodative monetary policy by the Federal Reserve and a strong U.S. economy, asset prices had been rising significantly since 2023. Such an environment, characterized by rapidly rising and potentially overvalued assets, may suggest excessive risk-taking and therefore heightened vulnerability to future market corrections.

Against this backdrop, asset overvaluation is a key focus for major international financial institutions. Flagship reports such as the IMF’s *Global Financial Stability Report*, the FSB’s *Annual Vulnerabilities Assessment*, the BIS’s *Annual Economic Report*, the OECD’s *Economic Outlook*, and the World Bank’s *Global Economic Prospects* now routinely report asset valuation metrics to monitor global vulnerabilities. This focus builds on earlier efforts—the BIS introduced the term “asset price inflation” as early as 1990, and the OECD explicitly incorporated indicators of overvaluation following the 1997 Asian crisis. Currently, most of international organizations’ reports rely on these metrics.

However, despite its well-documented role in historical episodes of volatility and the attention it receives from international organizations, academic research has yet to scrutinize the role of asset overvaluation as a source of global financial vulnerability. One strand of the literature examines how global shocks affect asset prices in advanced economies and EMDEs (Maćkowiak, 2007; Miranda-Agrippino and Rey, 2020; Yilmazkuday, 2025), while another develops theoretical frameworks to understand the root causes of asset overvaluation more broadly (Brunnermeier and Oehmke, 2013). Yet, to the best of our knowledge, no existing work in the literature has explored asset overvaluation as a source of global financial vulnerability—nor its potential amplification effects of global shocks or how these propagate across advanced economies and EMDEs.²

In this paper, we fill this gap. We investigate whether the impact of financial tightening on sovereign spreads in EMDEs depends on vulnerabilities accumulated in the global financial system—specifically, whether it leads to larger increases in the Emerging Market Bond Index (EMBI) when asset prices in global financial centers are overvalued. We also examine whether this effect is mitigated by country-specific factors, particularly external balances as reflected in the current account. A surplus suggests that a country’s external borrowing has been limited, potentially reducing a country’s vulnerability to global shocks.

² Wang and Liu (2023) examine the role of GFC shocks in fueling unsustainable housing price trends across international markets.

To this end, we build a monthly dataset (1999–2025) with information on interest rates, stock prices, and implied volatility to construct asset valuation gap indexes for the U.S. and Europe—two major financial centers—and a GFC index. We then use Jordà’s (2005) panel local projection model to assess how a GFC shock affects EMBI spreads in EMDEs, depending on pre-existing levels of the valuation gaps indexes.

The results show the shock raises spreads, especially when equity prices in financial centers are overvalued. In particular, our estimates indicate that a one standard deviation shock increases spreads by 69.5 bp (U.S.) and 59.2 bp (Europe), with overvaluation adding up to 28 bp. However, EMDEs experiencing current account surpluses can mitigate these effects through two channels—directly, by dampening the shock, and indirectly, by reinforcing the buffer during overvaluation periods—providing up to 25 bp of moderation, or about 15% of the baseline impact.

The remainder of the paper is structured as follows. Section 2 introduces the modeling framework. Section 3 describes the dataset. Section 4 presents the main results. Section 5 concludes.

2 Methodology

We use a local projection method and the following specification:

$$EMBI_{i,t+h} = \alpha_{i,h} + \beta_{1,h}GFC_t + \beta_{2,h}GFC_t \times V_{t-1} + \gamma_h X_t + u_{i,t+h} \quad (1)$$

where h is the estimation horizon $h \in (0, 1, \dots, 12)$; $EMBI_{i,t+h}$ is the EMBI spread of country i at horizon h ; GFC_t is an index of global financial conditions at month t ; V_{t-1} is a stock market valuation gap index in global financial centers at $t - 1$; X_t is a vector of control variables; $\alpha_{i,h}$ denotes the country fixed effect for country i at month t ; and $u_{i,t+h}$ is the error term.³ To construct the global financial condition and the valuation gap indexes we use variables of major financial centers. These variables are arguably exogenous to idiosyncratic factors in EMEs, mitigating concerns about endogeneity and thus allowing for a causal interpretation of our results. Similarly, the conditioning variable, V_{t-1} , is lagged to ensure it is predetermined with respect to the GFC shock, further addressing potential endogeneity concerns.

Our coefficients of interest, $\beta_{1,h}$ and $\beta_{2,h}$, capture the response of the EMBI to a GFC shock when stock markets are fairly valued ($V_{t-1} = 0$) and stretched ($V_{t-1} > 0$), respectively. A positive (negative) value of $\beta_{1,h}$ indicates that a tightening of GFC increases (decrease) the EMBI. A positive (negative) $\beta_{2,h}$ suggests that this effect is amplified (dampened) when assets are overvalued.

We augment this model to assess how a country’s external balance influences the sensitivity of EMBI spreads to GFC shock as follows:

³ The control variables include one lag of the EMBI, one lag of the GFC index, and one lag of the valuation gap index.

$$EMBI_{i,t+h} = \alpha_{i,h} + \beta_{1,h}GFC_t + \beta_{2,h}GFC_t \times V_{t-1} + \beta_{3,h}GFC_t \times CA_{i,t-1} + \beta_{4,h}GFC_t \times V_{t-1} \times CA_{i,t-1} + \gamma_h X_t + u_{i,t+h} \quad (2)$$

where $CA_{i,t-1}$ is the (lagged) current account balance as a share of GDP.⁴

This specification introduces two additional coefficients of interest: $\beta_{3,h}$ and $\beta_{4,h}$. A negative (positive) value of $\beta_{3,h}$ indicates that a current account surplus moderates (exacerbates) the effect of GFC shocks. $\beta_{4,h}$ captures how this effect depends jointly on external balance and asset valuation. In this case, the effect hinges on both the sign of $\beta_{4,h}$ and the interaction between the two conditioning variables. For instance, when assets prices are overvalued, a negative $\beta_{4,h}$ indicates that the additional effect of GFC tightening is mitigated by current account surplus.

3 Data

We build a monthly dataset with global and country-specific variables spanning from 1999 to 2025. Among the global variables, we include two asset price valuation gap indexes— for the U.S. and Europe. Each index is proxied by the average of two equity market-based indicators. The first is a measure of the deviation of prices from their fair value, based on a metric by Campbell and Shiller (1988).⁵ The second is the cyclical component of the Cyclically Adjusted Price-Earnings (CAPE) ratio, extracted using a Hodrick-Prescott filter.⁶ Before taking the average of the two indicators, we normalize them by their historical standard deviations to ensure comparability.

Figure 1 shows the valuation gap indexes for the United States and Europe since 1999 and 2003, the years with available data. Consistent with assessments of international institutions, they show that valuations increased significantly in late 2024 and early 2025 (BIS, 2024; IMF, 2024, 2025; World-Bank, 2024). However, they were still below those observed in the U.S. before the crash of the dot-com bubble, when excessive optimism about internet-related companies drove significant asset price increases; however, they already exceeded those seen in the run-up to the global financial crisis.

The second global indicator is the GFC index. A natural benchmark is the measure of Miranda-Agrippino and Rey (2020), which relies on a panel of 858 risky asset price series. However, the dataset only extends to 2019. Thus, we construct a parsimonious GFC measure, drawing on: (i) the shadow federal funds rate and the main shadow refinancing rate for Europe (Wu and Xia, 2016);⁷ (ii) two equity indices—the Standard & Poor’s 500 (S&P 500) and the EURO STOXX 50; and (iii) their

⁴ In this specification, we also include as controls the lag of the current account to GDP ratio and the interaction between this lag and the lag of the valuation gap index.

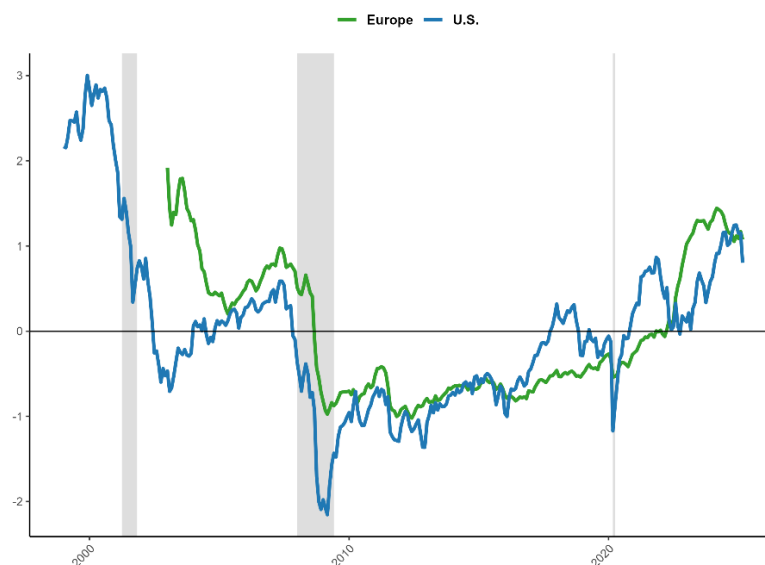
⁵ See the Appendix B for further explanation.

⁶ Since vulnerabilities stemming from overvaluation tend to build up over long horizons, the literature employs larger smoothing parameters λ when analyzing financial cycles compared to business cycle studies. Drehmann and Yetman (2018) recommend $\lambda = 400,000$ for quarterly data. Since we use monthly data, we convert it to $\lambda = 32,400,000$ as Ravn and Uhlig (2001).

⁷ Wu and Xia’s (2016) rates are not available until 2025. We extend them by using the effective federal funds rate for the U.S. and the main refinancing rate for the Euro area, since the shadow rate coincides with the -term policy rate when the zero lower bound is not binding.

measures of implied volatility, the CBOE VIX and the implied volatility of the EURO STOXX 50. We compute the first principal component of these variables, using annual growth rates for the equity indices and levels for the other variables.

Figure 1: Asset valuation gap measures



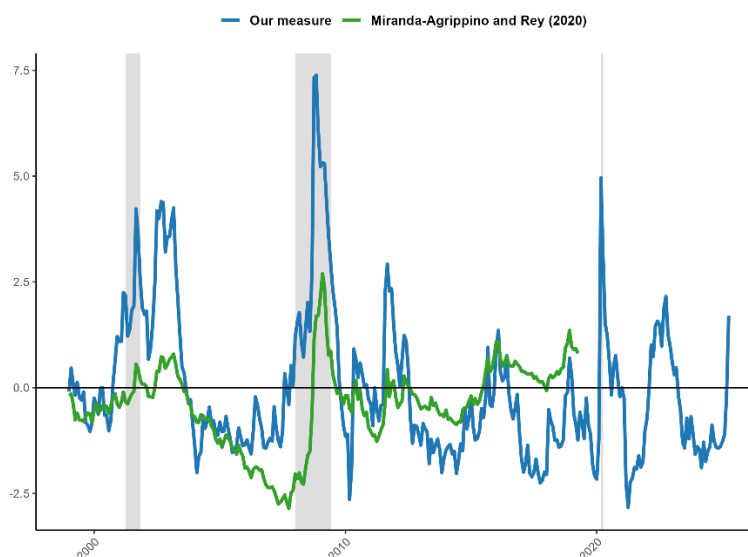
Note: These measures are constructed as the average of two components: one derived from the Campbell and Shiller (1988) approach and the other from the cyclical component of the CAPE ratio. Positive (negative) values indicate that global assets are overvalued (undervalued). The series spans from January 1999 to March 2025 for the U.S., and from January 2003 to March 2025 for the Europe. Shaded areas indicate U.S. recessions.

Figure 2 shows that, despite employing a simpler methodology, our GFC index broadly tracks the dynamics of Miranda-Agrippino and Rey's measure (2020).⁸ The two indicators take the maximum value during the onset of the Global Financial Crisis in 2008. Specifically, they both increase following the dot-com collapse, remain subdued in the subsequent years, and peak again by significantly more in 2008, and during the European Sovereign Debt Crisis. Our measure also points to higher financial stress beginning in early 2025, following a shift toward more protectionist rhetoric globally.

For country-specific variables, we use the EMBI+ spread and calculate the current account-to-GDP ratio. Since the latter is available at a quarterly frequency while the other variables are monthly, we assign the same quarterly value to each month within the corresponding quarter. We consider the nine EMEs listed in Table 1—these are all the economies for which EMBI+ data are available for at least the last 15 years of data.

⁸ To ensure comparability with our indicator, we invert the sign of Miranda-Agrippino and Rey's (2020) index.

Figure 2: Global Financial Cycle: alternative measures



Note: Comparison of two Global Financial Cycle measures. The indicator is Miranda-Agrippino and Rey (2020) uses information on 858 global risky asset prices. We compute our measure computed as the first principal component from the six indicators described in Section 3. Both indices are monthly, with higher values indicating tighter global financial conditions. Miranda-Agrippino and Rey's measure ends in April 2019, whereas our measure extends through March 2025. Shaded areas indicate U.S. recessions according to NBER.

Table 1: Sample Averages of Country-Specific Variables

	EMBI (Basis Points)	Current Account Balance (% GDP)
Brazil	424.89	-2.23
Colombia	316.90	-2.84
Indonesia	214.09	0.40
Mexico	239.10	-1.19
Panama	255.60	-5.72
Peru	263.19	-1.70
Philippines	242.74	0.65
South Africa	246.10	-1.98
Türkiye	396.35	-2.99
Average	288.77	-1.96

Note: EMBI data from Bloomberg; current account and GDP figures come from the IMF and Haver, respectively. For both series, data are available from at least 1999, except for EMBI data for South Africa and Indonesia, and current account data for Panama, which begin a few years later. Detailed sample coverage is detailed in Appendix A.

EMBI's vary significantly across countries, with Brazil and Türkiye showing the highest average spreads, while Indonesia shows the lowest (Table 1). While the average current account balance

across countries was negative, there is heterogeneity: most ran deficits, but a few, namely the Philippines and Indonesia, registered surpluses. In general, countries with lower EMBIs had stronger external positions; however, this relationship is not one-to-one—Panama, for example, exhibited relatively low EMBI levels but running sizable deficits. For all these countries, data are available from at least 1999, except for the EMBI data for South Africa and Indonesia the current account data for Panama, for which coverage begins a few years later.

4 Empirical Results

Table 2 presents the estimates from the model specified in Equation 1. We estimate two otherwise identical specifications that differ only in the equity valuation gap metric: Model 1 incorporates the U.S. index, while Model 2 uses the European counterpart.

Both models yield positive estimates for $\beta_{1,h}$ across all horizons, with most coefficients statistically significant at the 1% level. The results indicate that a GFC tightening raises EMBI spreads. At its peak (month 2), a one-unit shock raises them by 40.18 and 34.23 bp in Models 1 and 2, respectively. Thus, a one standard deviation shock (1.73)—a more intuitive sense of economic magnitude—increases EMBI spreads by 69.51 and 59.20 bp, respectively. These impacts are sizable, representing approximately 24% of the historical average spread and 41% of the average standard deviation across countries.

Table 2: Baseline specifications

<i>Model 1: $EMBI_{i,t+h} = \alpha_{i,h} + \beta_{1,h}GFC_t + \beta_{2,h}GFC_t \times V_{US,t-1} + \gamma_h X_t + u_{i,t+h}$</i>												
Horizon	1	2	3	4	5	6	7	8	9	10	11	12
GFC	28.44*** (4.43)	40.18*** (5.45)	36.05*** (6.68)	30.62*** (7.15)	28.60*** (7.11)	27.43*** (7.57)	21.74*** (6.54)	17.20*** (5.50)	15.46*** (5.12)	15.37*** (5.37)	14.90*** (5.12)	14.17** (5.53)
GFC x V_{US}	1.23 (1.13)	3.27* (1.81)	5.34** (2.59)	7.23** (3.18)	9.27*** (3.53)	11.39*** (3.78)	13.52*** (4.14)	14.98*** (4.45)	15.68*** (4.76)	16.35*** (5.08)	16.89*** (5.40)	16.84*** (5.69)
<i>Model 2: $EMBI_{i,t+h} = \alpha_{i,h} + \beta_{1,h}GFC_t + \beta_{2,h}GFC_t \times V_{EU,t-1} + \gamma_h X_t + u_{i,t+h}$</i>												
Horizon	1	2	3	4	5	6	7	8	9	10	11	12
GFC	25.41*** (5.02)	34.23*** (5.66)	30.20*** (6.45)	25.64*** (6.12)	25.41*** (6.14)	25.41*** (6.60)	20.47*** (5.36)	16.82*** (4.61)	15.74*** (4.76)	15.41*** (5.39)	13.42** (5.24)	12.04** (5.21)
CFG x V_{EU}	1.02 (1.52)	3.28 (3.31)	6.72 (4.50)	10.60** (5.31)	13.51** (5.67)	15.35** (6.03)	16.84*** (6.49)	17.79*** (6.72)	18.44*** (6.84)	19.06*** (6.94)	19.21*** (6.75)	20.89*** (6.02)

Note: The table reports the response of the EMBI to a one unit tightening shock in global financial conditions (*GFC*), along with the additional effect conditional on equity market valuation gaps in the U.S. ($GFC \times V_{US}$) or Europe ($GFC \times V_{EU}$). Standard errors clustered by country and time are reported in brackets. Statistical significance is denoted by asterisks: one for the 10% level, two for the 5% level, and three for the 1% level. The projection horizon spans from 1 to 12 months.

The effects are amplified when global equity markets are overvalued, as indicated by the positive $\beta_{2,h}$ coefficients. The amplification is particularly pronounced for horizons beyond six months, where the coefficients are consistently significant at the 1% level. The amplification reaches 16 and 20 bp in Models 1 and 2, respectively, when asset prices are one unit above fair value. Considering a one standard deviation GFC shock combined with a one standard deviation overvaluation in the valuation indexes, the additional effect increases to approximately 28 and 27 bp.⁹ These impacts represent nearly half the size of the effect observed when asset prices are at fair value.

Table 3 reports the estimates from the model of Equation 2, applied separately to the U.S. and European valuation gap measures (Models 3 and 4). A GFC shock affects EMDES more severely when equity markets are overvalued also in these specifications. In most cases, the effect is statistically significant at the 1% level.

Table 3: Extended specifications

<i>Model 3: Model 1 + $\beta_{3,h}CFG_t \times CA_{i,t-1} + \beta_{4,h}GFC_t \times V_{US,t} - 1 \times CA_{i,t-1}$</i>												
Horizon	1	2	3	4	5	6	7	8	9	10	11	12
CFG	27.01*** (4.13)	36.47*** (4.76)	29.82*** (5.62)	22.49*** (6.16)	19.95*** (6.35)	19.11*** (6.95)	14.23** (6.25)	10.18* (6.11)	9.53 (6.60)	10.84 (7.41)	11.77 (7.18)	12.18 (7.48)
CFG x V_{US}	1.05 (0.98)	2.40 (1.63)	3.82* (2.26)	4.94* (2.59)	6.56** (2.80)	8.56*** (2.90)	10.48*** (3.13)	11.61*** (3.24)	12.53*** (3.39)	13.79*** (3.48)	14.82*** (3.75)	15.10*** (4.08)
CFG x CA	-0.61*** (0.22)	-1.49*** (0.49)	-2.43*** (0.67)	-3.21*** (0.96)	-3.54*** (1.09)	-3.53*** (1.21)	-3.34** (1.43)	-3.25* (1.79)	-2.78 (2.08)	-2.15 (2.36)	-1.57 (2.48)	-0.97 (2.61)
CFG x CA x V_{US}	-0.20 (0.14)	-0.64** (0.31)	-1.03*** (0.39)	-1.48*** (0.56)	-1.76*** (0.63)	-1.85** (0.73)	-1.95** (0.90)	-2.09* (1.15)	-1.91 (1.34)	-1.56 (1.52)	-1.22 (1.61)	-0.94 (1.70)
<i>Model 4: Model 2 + $\beta_{3,h}CFG_t \times CA_{i,t-1} + \beta_{4,h}GFC_t \times V_{EU,t} - 1 \times CA_{i,t-1}$</i>												
Horizon	1	2	3	4	5	6	7	8	9	10	11	12
CFG	23.73*** (4.65)	30.66*** (5.01)	24.59*** (5.70)	19.24*** (5.99)	19.16*** (6.34)	19.77*** (6.60)	16.01*** (5.54)	13.69*** (5.02)	14.35*** (5.41)	15.91** (6.72)	14.96** (6.48)	14.66** (6.72)
CFG x V_{EU}	0.14 (1.90)	0.94 (3.63)	3.20 (4.74)	6.39 (5.65)	9.06 (6.18)	10.94* (6.56)	12.84* (7.17)	14.55* (7.57)	16.56** (8.00)	19.07** (8.38)	19.73** (8.14)	22.10*** (7.60)
CFG x CA	-0.61*** (0.21)	-1.23*** (0.35)	-1.89*** (0.52)	-2.15*** (0.67)	-2.15*** (0.72)	-1.98*** (0.71)	-1.63** (0.73)	-1.21 (0.75)	-0.66 (0.82)	-0.06 (0.92)	0.21 (0.90)	0.53 (0.99)
CFG x CA x V_{EU}	-0.47 (0.37)	-1.21** (0.57)	-1.81** (0.83)	-2.22** (0.98)	-2.45** (1.00)	-2.47** (0.99)	-2.31** (1.04)	-1.98* (1.03)	-1.39 (1.03)	-0.55 (1.03)	-0.30 (0.90)	-0.06 (0.92)

⁹ These numbers are obtained as $\beta_{2,h} \times \text{std}(GFC_t) \times \text{std}(V_{t-1})$, where std refers to the standard deviation.

Note: The table reports the response of the EMBI to a one unit tightening shock in global financial conditions (GFC), along with additional effects conditional on: (i) equity market valuation gaps in the U.S. ($GFC \times V_{US}$) or Europe ($GFC \times V_{EU}$); (ii) the current account positions of the EMEs ($GFC \times CA$); and (iii) the interaction between equity market valuation gaps and the current account position ($GFC \times CA \times V_{US}$ or $GFC \times CA \times V_{EU}$). Standard errors clustered by country and time are reported in brackets. Statistical significance is denoted by asterisks: one for the 10% level, two for the 5% level, and three for the 1% level. The projection horizon spans from 1 to 12 months.

Furthermore, $\beta_{3,h}$ and $\beta_{4,h}$ are negative across all specifications and significant for most horizons, typically at the 1% or 5% level. A negative $\beta_{3,h}$ suggests that current account surpluses help insulate bond markets from adverse shocks. A negative β_4 indicates that this insulation is even stronger during periods of excessive equity market valuations.

Quantitatively, $\beta_{3,h}$ implies that the increase in spreads is moderated by approximately 3.2 and 2.2 bp per percentage point of current account surplus in Models 3 and 4, respectively, following a one-unit GFC shock at its peak (months 4 and 5). For a one standard deviation GFC shock and a one standard deviation difference in current account balances, this translates into a moderating effect of roughly 16 and 11 bp, respectively.¹⁰

The triple interaction coefficients $\beta_{4,h}$ suggest an even stronger cushioning effect during periods of overvaluation. At horizons 4–5, the additional moderation from current account surpluses reaches 1.8 and 2.5 bp per percentage point of surplus in Models 3 and 4, respectively. Scaling by the standard deviations of GFC (1.73), current account positions, and valuation gaps, the additional moderating effects equal 9 and 10 bp.¹¹ Combined with the direct effect of the current account, countries with strong external positions experience a total moderation of approximately 25 and 21 bp in Models 3 and 4 during episodes of global stress and overvalued assets. This represents a notable buffer—roughly 15%—against the baseline effect of GFC tightening.

5 Concluding Remarks

Academia has paid little attention about how asset overvaluation, long flagged by international institutions, amplifies global shocks. We show overvaluation in financial centers amplifies their impact in emerging markets. However, policymakers can cushion it by promoting external balance, which becomes important in periods of heightened volatility, for example, due to trade tensions and geopolitical uncertainty.

¹⁰ These numbers are obtained as $\beta_{3,h} \times \text{std}(GFC_t) \times \text{std}(CA_{t-1})$, where $\text{std}(CA_{t-1})$ is the average standard deviation of the current account across countries.

¹¹ As in the previous case, these numbers are obtained as $\beta_{4,h} \times \text{std}(GFC_t) \times \text{std}(V_{t-1}) \times \text{std}(CA_{t-1})$, where $\text{std}(CA_{t-1})$.

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