Does the global currency hierarchy restrain monetary policy freedom?*

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ABSTRACT

This paper examines how a country's position in the international currency hierarchy shapes its monetary policy autonomy. Drawing on an unbalanced panel of 33 countries over the period 1995–2019, the analysis shows that countries with currencies lower in the hierarchy maintain structurally higher interest rates, even after controlling for macroeconomic fundamentals and the global financial cycle. This effect intensifies during crises, as also confirmed by local projections analysis of the years following the 2008 Global Financial Crisis. This means that noncore countries are constrained to respond adequately to domestic crisis conditions. There is no monetary policy constraint in a subsample of countries with open capital accounts and floating exchange rates, which suggests a Policy Trilemma rather than Currency Hierarchy story. Alternatively, core currency countries may self-select into this regime choice. This warrants further research.

Keywords: currency hierarchy, quantitative indicator, monetary policy autonomy, financial cycle, policy trilemma

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1. Introduction

As the Covid pandemic spread in early 2020, US and European policy interest rates dropped in support of economies in lockdown. But in many emerging and developing economies (EDEs), interest rates decreased much less over the course of the pandemic. What explains the difference in monetary policy responses? And what do shocks such as these reveal about structural constraints on monetary policy?

In addressing these questions, three key notions in the literature come into play. The Policy Trilemma (e.g. Aizenman, 2019) explains how economies with open capital accounts running a fixed exchange rate regime must follow global monetary policy. This suggests that the exchange rate regime determines whether EDEs have the freedom to let domestic conditions shape their monetary policy response.

Second, Rey (2014) argued that in an era of financial openness because of cross-border banking, monetary policy independence is constrained by capital account management, regardless of the exchange rate regime. The global financial cycle ensures that interest rates and credit conditions in emerging and EDEs follow global investor sentiment, unless capital accounts are managed.

Third, within this framework, the asset pricing literature suggests that remaining variation in policy rates is accounted for by higher country-specific risk premia in emerging and EDEs than in advanced economies. The intellectual division of labour is that the Policy Trilemma and the Global Financial Cycle explain the link between global structural conditions and a country's interest rate given its other policy choices, with risk premia explaining country-specific variation in rates.

The novel idea of the Global Financial Cycle was to shift financial openness from a country-specific choice to a global structural condition, so that with an open capital account, the exchange rate regime cannot insulate monetary policy from investor sentiment. The contribution of this paper is to relate variations in a country's monetary policy stance to global structural conditions that go beyond the Global Financial Cycle and beyond investor risk appetite. The paper revisits the question what explains variations in monetary policy, other than country specifics that set risk premia, and for a given level of financial openness and exchange rate regime.

We go beyond country specifics by building on the concept of currency hierarchy. Adding to the concepts of the Policy Trilemma, the Global Financial Cycle and risk premia, the key idea of currency hierarchy is that there is a ranking of currencies according to their international liquidity, i.e. their acceptability as international settlement medium. This acceptability is observable in trade invoicing and bond issuing bonds in the domestic currency, and in other countries' holdings of assets denominated in the domestic currency. The more this occurs, the higher is the country's rank in the global currency hierarchy.

As elaborated below, this implies more policy space, including monetary policy space, for instance space to reduce rates in response to the covid shock. In this sense, a higher position in the hierarchy means a lower risk premium. But the currency hierarchy concept goes beyond risk premium by introducing a structural dimension. Like the risk premium, a country's position in the global currency

hierarchy position is influenced by domestic conditions and policies. But unlike the risk premium, a country's hierarchy position is also determined by how the hierarchy is structured globally – something that is only partly within domestic policy discretion. If China starts accepting trade payments in Malaysian Ringgit, that elevates Malaysia in the currency hierarchy. Malaysia may have made negotiation efforts towards this, and so it has some influence over it, but it is China's decision. It is not fully determined by (investors' perception of) Malaysian country specifics expressed in the risk premium on the Ringgit.

In turn, China's ability to accept non-dollar payments depends on *its* dollar obligations and ability to meet them, depending in turn on its foreign exchange reserves, trade surplus, financial markets, and the willingness of its trade partners to accept Renminbi - in other words, its own position in the hierarchy. These interdependent currency positions are part of a global hierarchical structure. The thesis implied in the notion of a currency hierarchy is that in order to explain a country's policy space, including monetary policy space, knowing a country's place in the hierarchy should add information, beyond the information already implied in the country's trilemma position, global financial cycle proxies and risk premia determinants. For instance, the disconnect between interest rate differentials and expected exchange rate movements constitutes a persistent violation of uncovered interest parity. The currency hierarchy helps understand this violation, which is puzzling otherwise (Mehrling, 2013b; Gopinath & Stein, 2021).

To test this hypothesis is the project of the present paper. We develop an empirical proxy measure for a currency's hierarchy position. This Currency Hierarchy index (CHI) helps explain monetary policy in a sample of 33 countries observed over 1995-2019, accounting for global financial cycle, policy trilemma and risk premia determinants. We find that a one-point increase in the CHI corresponds to a 0.14–0.23 percentage point reduction in nominal interest rates. This indicates that countries lower in the hierarchy maintain structurally higher rates, after controlling for macroeconomic fundamentals. The findings suggest that the global currency hierarchy has something to add in explaining global variations in monetary policy.

In the next section, we elaborate and clarify key ideas, we set them in the context of global financial development since the 1990s, and we make connections to the literature. In section 3, we explore the data, we construct the Currency Hierarchy Index, and we set out our empirical methodology. In section 4 we analyse how this Index explains policy rate variations, particularly around crises, in panel regression. We reproduce the result in a larger sample with a simplified Index, and under a variety of robustness analyses. In section 5 we explore alternative explanations to the global currency hierarchy: the global financial cycle and the policy trilemma. In section 6 we augment the analysis with local projections analyses after the 2008 financial crisis. Section 5 concludes the paper with a summary, reflections and suggestions for future research on the currency hierarchy.

2. Currency Hierarchy and Monetary Policy Space

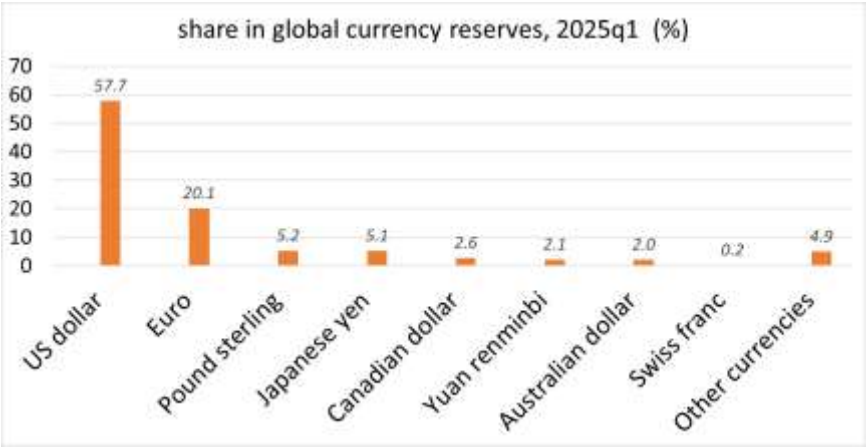
This currency hierarchy is a ranking according to currencies' liquidity, i.e. the acceptability of liabilities denominated in the currency. Current financial and monetary conditions mean that currencies are assets which are priced and traded internationally. Therefore, just as financial assets (including money assets) can be ranked in a domestic hierarchy (Mehrling 2013a), so currencies are part of a global currency hierarchy.

Since the 1990s, four features characterize the global financial environment in which monetary policy is made: global imbalances, dollar dominance, mostly floating exchange rates, and capital mobility,

with few restrictions on cross-border transactions and rising capital account openness (Jordà et al., 2018; Furceri & Loungani, 2018). Persistent global imbalances must be financed, and the presence of these net positions implies larger gross flows to and from deficit economies, often EDEs.

In the settling of these transactions, the US dollar functions as the reserve asset and settlement medium for the global financial system that intermediates the flows. The dollar is the dominant trade invoicing, banking and store of wealth currency, three features that evoke each other, as Gopinath and Stein (2018) demonstrate. A few currencies are traded internationally against the US dollar in deep markets and held as store of wealth (Figure 1). They are global 'near-moneys' or 'core currencies': the euro, the British pound, the yen, the Canadian and Australian dollars, renminbi, the Swiss franc. Since the dollar is global money, a currency's place in the hierarchy may be thought of as the distance to the dollar measured in 'moneyness', i.e. its suitability to be used as international settlement medium and store of value. Euro, pound, yen and renminbi are frequently used to settle; in contrast, the currencies of EDEs almost never are. Over 90% of international financial contracts are denominated in five currencies (Fritz et al., 2018).

Figure 1: the currency hierarchy in reserves



Source: IMF COFER data base. Accessed 1 October 2025

The survival constraint and investor sentiment

Therefore noncore currencies can be ranked according to whether they give access to dollars and other core currencies. A currency's position in this ranking matters because access to core currencies when payment is due is a 'survival constraint' (Mehrling 2013) for all countries engaging in international trade and investment. The constraint does not bite if one or more of the following conditions is met. A country may reliably generates dollar inflows by maintaining a trade surplus. Or it may have financial markets where dollars and local currency assets are traded, such as sizeable stock exchanges and local-currency bond markets. Or, its central bank may have reliable access to dollars through a Federal Reserve swap line.

But if none of these conditions is met, as in most EDEs, the survival constraint bites. The ability to access dollars if necessary now depends on investor sentiment, so that investor sentiment is a constraint on a country's monetary, financial and exchange rate policies. Access to dollars and dollar substitutes must be organized in a world of mostly floating exchange rates and capital mobility. This exchange rate variability and capital mobility have made it profitable for international investors to engage in the carry trade (arbitraging interest rate differentials), in foreign exchange swaps (hedging

currency risks) and to invest in exchange-traded funds. The result is extensive position taking by international investors in foreign currency assets, which increases exchange rate volatility and vulnerability. For instance, countries more exposed to exchange-traded funds are more sensitive to external shocks (Converse et al. 2023).

Therefore, since access to dollars is organized through the private financial markets, investors' views on a deficit country's currency and on its risk/return profile take on paramount importance for that currency's policy makers, who depend on dollar inflows. They must assure that investors deem assets denominated in the currency investible, so that dollar inflows continue. Shifts in investor risk appetite are among the key drivers of gross capital flow booms and retrenchments (Forbes & Warnock, 2012; Rey, 2015; Pagliari & Hannan, 2024).

This assessment by investors of local-currency assets, such as project bonds, depends on the risk and return of the underlying project. But it also depends on currency risks, in turn shaped by exchange rate and interest rate policies, regulations on capital movements and stability of government debt. Therefore policy makers' overweening concern is that their policies must not worry investors - unless the currency is high enough in the global hierarchy that access to dollars is reliably ensured anyway. This, in a nutshell, is the policy constraint that the currency hierarchy imposes. Like the 'global financial cycle' explanation of policy space, the 'currency hierarchy' explanation includes the importance of investor sentiment. But it adds to this that countries differ in how susceptible (or vulnerable) they are to sentiment, depending on their position in the currency hierarchy.

Determinants of a currency's hierarchy position

The position in the currency hierarchy depends on how concerned policy makers should be about access to core currencies. Viewing currencies as assets it is useful to consider a currency's valuation or its 'own rate of return' as perceived by investors. To systematically discuss and group the factors that affect this, it is useful to express the determinants of a currency's valuation r as

$$r = (q - c) + a + l \qquad (2.1)$$

where $(q - c)$ represents asset yield minus carrying costs—such as capital controls or transaction costs - (a) captures expected short-term appreciation (boosting returns) or depreciation (depressing returns) relative to the key currency, and (l) denotes a currency's liquidity premium, i.e. its convenience and global acceptability. A currency offering a higher own rate of return r is expected to appreciate (Andrade & Prates, 2013; De Paula et al., 2017; Löscher & Kaltenbrunner, 2023).

The components of (r) vary in their responsiveness to domestic policy. The liquidity premium (l) is structurally determined and largely exogenous for EDEs. Similarly, expected exchange-rate stability (a) depends primarily on market sentiment and the global financial cycle. Policymakers' influence lies mainly with (q) and (c): (c) can be reduced by signalling future currency convertibility and avoiding capital controls, while (q) can be sustained through contractionary fiscal and monetary policies that ensure high interest rates and low inflation (Löscher & Kaltenbrunner, 2023).

Since currencies at the top of the hierarchy benefit from high and stable liquidity premia (l) and strong appreciation expectations (a), they can maintain global acceptance even with low or negative ($q - c$), for instance low interest rates. For EDEs, (a) tends to be especially volatile (De Paula et al., 2017; Löscher & Kaltenbrunner, 2023). Combined with low liquidity premia, this volatility forces EDEs to actively manage the interest rate–capital flow barrier differential ($q - c$) in order to attract foreign capital by raising interest rates (q) or loosening capital account regulations to reduce (c). If successful,

the combined effect of ($q - c$) can offset the lower (l) and (a) and help stabilise investor demand (De Paula et al., 2017; Fritz et al., 2018; Ramos, 2019).

As a result, a high-return/low risk project bond denominated in the local currency may nevertheless be unattractive to foreign investors if: the currency's dollar exchange rate is expected to increases (so that dollar project returns fall); or if domestic interest rates fall (depressing the domestic yield curve, and hence the project return); or if the country's yield on sovereign debt rises (so that debt servicing costs and taxation rise, depressing future private project returns); or, finally, if transaction costs of currency conversion and capital movements rise (eating into dollar returns for a given local-currency return) or if the country's asset/liability structures are risky.

More investor concerns about any of these developments pose more risk of rapid declines in risk appetite and capital outflows, capital outflows, exchange rate swings, and more volatile business cycles (Neumeyer & Perri, 2005; Andrade & Prates, 2013). This dynamic decreases currency values in a positive feedback loop. The prospect limits EDE policy space in the above policies, but it does so differently for different countries, depending on the currency's use as store of value; the country's ability to raise money in its own currency and conversely, its need to rely on accumulating foreign exchange; investors' view of assets denominated in the currency; and the capital flows and exchange rate volatility that the currency is exposed to. Below we use these factors to construct an empirical measure for currency hierarchy position, and Currency Hierarchy index (CIH).

The hierarchy is durable and systemic

It is important to note that the hierarchy is durable (because of positive feedbacks) and it is also systemic, i.e. it cannot be decomposed into individual country features (although these, too, come into play). The systemic nature is grounded in the key features that give rise to the hierarchy – dollar dominance and the dynamics of private financial markets – which are shaped by policy and historical factors such as the historic Bretton Woods arrangement and its collapse, and the financial globalization policies and trends that followed. These cannot be reduced to individual country features, even though it is the behavior of individual countries that shapes how post-Bretton Woods financial globalization functions. This hybrid (both system-level and individual) nature of the hierarchy makes sense if the global monetary system is viewed as a complex system (e.g., Mitchel 2009) and the currency hierarchy is an 'emerging property' of that system. Emerging properties are complex-system features that emerge due to the interaction between the system's constituent parts, rather than being reducible to individual, 'representative-agent' behaviour.

Several positive feedbacks operate make the existence of a hierarchy durable (if it wasn't, it could not explain policy over time). Because most exports are priced in dollars, this shields U.S. inflation from external shocks and boosts demand for safe dollar assets, lowering U.S. borrowing costs. Other positive feedbacks exist because country-level efforts to live within the hierarchy by meeting the survival constraint, reinforce the hierarchy. For instance, after the Asian crisis of 1996, EDEs accumulated higher levels of foreign exchange reserves in anticipation of similar crises a strategy of self-insurance (Obstfeld et al., 2010; Andrade & Prates, 2013; Bonizzi, 2013; Akkemik & Özen, 2014; De Paula et al., 2017; Ali & Audi, 2023). Reserve accumulation has surged, with stocks often in the order of 30% of GDP and covering around eight months of imports in many EDEs (Rodrik, 2006). This increases demand for dollars and other core currencies relative to other currencies, and so it reinforces the hierarchy. Or again, trade deficit countries that depend on nontrade dollar inflows run policies such as high interest rates, stable exchange rates and low government debt to increase their currencies' attractiveness to investors and lenders. But this may hinder or preclude domestic investment and industrial policy to build up an export industry, and so it maintains dependence on

nontrade dollar inflows. Third, as discussed, EDEs low in the hierarchy may profitably choose (or may have no choice but) to rely more on short-term and speculative inflows, but also these flows make it harder to pursue longer-term developmental goals that would allow the country to climb in the hierarchy.

A currency's place in the hierarchy is governed by the above factors. It expresses a currency's attractiveness to investors and conversely, its vulnerability to investor sentiment. This vulnerability restricts policy space, and so a currency's place in the hierarchy should be among the variables explaining policy. We test this proposition in the analysis in the next sections.

In crunch times within the financial system, the hierarchy is especially relevant. The nature of any monetary hierarchy, including the global currency hierarchy, is that it bites in crisis times. Mehrling (2013a) analyses how any credit and payment system, including the global financial system, tends to be more elastic and expansionary in optimistic times, while in times of negative sentiment or financial stress, it imposes more payment discipline by diminishing the liquidity of assets lower in the hierarchy. In optimistic times, the hierarchy flattens, and differences in liquidity between different assets (such as currencies) become smaller. The scope of what assets are accepted as payment medium, and the range of assets that investors are willing to hold, widens. But in financial market downswings, the hierarchy steepens, differences in acceptability and liquidity of assets are more pronounced, so that assets lower in the hierarchy most offer higher yields to remain acceptable, as liquidity premiums increase.

An example of the hierarchy's relevance is the experience of Brazil's central bank in the last decade. It has frequently adopted a defensive policy stance, even when domestic conditions warranted easing. In the aftermath of the 2013 taper tantrum, it raised the policy rate from 10.0% in 2013 to 14.25% in 2015—despite slowing, and eventually negative, GDP growth and rising unemployment—in an effort to stabilise the currency and support investor confidence (Kaltenbrunner & Painceira (2018World Bank, n.d.; IMF, n.d.).

Another example is Turkey's 2018 response to soaring inflation, a rapidly depreciating lira and sustained capital outflows. Its central bank raised the policy rate from 7.25% in 2017 to 22.5% in 2018—despite a sharp slowdown in economic activity, with GDP growth falling from 7.5% to 3.0% over the same period (World Bank, n.d.; IMF, n.d.). This policy response was clearly driven less by domestic macroeconomic conditions than by the imperative to restore external credibility and deter further outflows. Since, Turkey has often been unable to ease monetary policy due to fears of renewed exchange rate instability (Kaltenbrunner et al., 2023).

Clearly, these are not episodes that can only be understood in terms of the currency hierarchy, but the assumption in this paper is that Brazil's and Turkey's place in the currency hierarchy adds insight to their monetary policy freedom in stress episodes, as it does in fact continuously.

To recap, the currency hierarchy is relevant because of the need to finance global imbalances in a world of core currencies around the dollar as the global reserve currency and payment medium. Access to global payment medium must be secured from private investors and creditors who view currencies as assets, each with its own rate of return, which varies with domestic policies but also with structural conditions. This limits EDEs' options to graduate from a low-hierarchy position, as well as their (monetary and other) policy space.

3. Building a Currency Hierarchy Index

Building on this conceptual discussion, an empirical proxy for a currency's place in the hierarchy can be constructed reflecting: the currency's use as store of value; the country's ability to raise money in its own currency and conversely, its need to rely on accumulating foreign exchange; investors' view of assets denominated in the currency; and the capital flows and exchange rate volatility that the currency is exposed to.

The currency's use as store of value is proxied by its *Share of Global FX Reserves (FXRES):* This variable reflects the share of global foreign exchange reserves held in a country's currency, serving as a proxy for international monetary dominance. It captures systemic trust and global usage (Fritz et al., 2018; Gopinath & Stein, 2021) and responds to structural factors such as economic size and financial depth (Chinn & Frankel, 2007). The natural logarithm of the FX share is used to reduce skewness arising from the dominance of the U.S. dollar.

The country's ability to raise money in its own currency is proxied by *Local Currency Bond Issuance (LCBOND):* This variable proxies a country's ability to issue debt in its own currency by measuring the share of local currency-denominated bonds in total public bond issuance (i.e., the sum of local and foreign currency bonds). It aligns with "original sin" (Hausmann et al., 2001), which highlights the structural inability of many EDEs to borrow in their own currency due to perceived risk and lack of trust.

The country's need to rely on accumulating foreign exchange is proxied by *FX Reserves as Share of GDP (FXRES_Y)* This variable captures the natural logarithm of a country's foreign exchange reserves relative to GDP. It is widely used as a proxy for external resilience and monetary policy space linked to trade-driven strength. It offers a more stable benchmark than volatile trade balance ratios (Aizenman & Lee, 2007; Obstfeld et al., 2010).

In EDEs, high reserve levels often reflect precautionary motives—aimed at insuring against external shocks—rather than trade income from strong export sectors (Andrade & Prates, 2013; Bonizzi, 2013; De Paula et al., 2017; Löscher & Kaltenbrunner, 2023). Therefore, to distinguish between precautionary and strength-based accumulation, noncore countries are classified as net importers or exporters based on their annual trade balances. For net importing EDEs, high reserves are interpreted to signal vulnerability and the variable is multiplied by –1 before standardizing.

Investor views, the pre-eminent concern of financial and monetary policy makers in EDEs, are expressed directly by credit rating agencies, and indirectly in the maturity and volatility of the capital flows that investors commit to the currency, and the volatility of the dollar price of the currency, its exchange rate. Liquidity preference theory suggests that if investor trust is high, they will buy long-dated liabilities in the currency, and they will rely more on the yields component of total returns than on the price variations (capital gains, speculative) component of total returns. Conversely, is investors are nervous about a currency, they will invest more short-term and more speculative capital flows. This does not mean investors shy a currency; part of their portfolio management is to seek out high-return, volatile investments alongside more stable low-return assets. EDEs can benefit from this preference, but the cost is that it locks them into dependence on short-term and speculative inflows.

Investors' view of assets denominated in the currency is proxied by *Sovereign Credit Rating (RATING):* This variable captures a country's perceived creditworthiness based on sovereign ratings from Standard & Poor's, Moody's, and Fitch. Higher ratings reflect greater trust and lower risk, enhancing the international acceptability of the currency (Alami et al., 2023; Vijaya, 2024). Long-term

issuer ratings are converted into a 1–21 scale (with 21 corresponding to AAA and 1 to C or D) and averaged without imputation.

The exchange rate volatility that the currency is exposed to is proxied by *Exchange Rate Volatility (XRVOL):* This variable captures exchange rate stability relative to the U.S. dollar, measured as the annual standard deviation of monthly log changes in the bilateral exchange rate. It serves as a common proxy for external vulnerability and financial risk, particularly in peripheral economies where high volatility often reflects speculative pressures (Obstfeld et al., 2010; Andrade & Prates, 2013; De Paula et al., 2017; Herr & Nettekoven, 2022). It also corresponds to the expected exchange-rate stability component *(a)* in Keynes' rate of return framework, where stability enhances investor confidence and reinforces the international standing of a currency (Fritz et al., 2018).

The capital flows volatility that the currency is exposed to is proxied by *Speculative Capital Flows as Share of GDP (SPECFLOWS):* This variable captures volatile and unrecorded financial outflows using the natural logarithm of the absolute value of net errors and omissions (E&O) in the balance of payments, expressed as a percentage of GDP. E&O is commonly used as a proxy for unrecorded capital flight (Cuddington, 1986; Lensink et al., 2000; Siranova & Tiruneh, 2018), and may also reflect irregular gross capital flows, particularly in countries with weak statistical capacity or large informal sectors (Bonizzi, 2013; Kaltenbrunner & Painceira, 2018). While short-term portfolio flows more directly capture hot money, such data are often inconsistently reported or unavailable. E&O offers broader coverage while still reflecting the unpredictable gross movements that can constrain monetary autonomy.

Lane & Milesi-Ferretti (2008) and Georgiadis & Mehl (2016) showing that also external debt and net international investment position affect vulnerability to capital flow reversals, as well as the transmission channels of monetary policy through valuation effects, but consistent data is only available from the early 2000s onwards. Moreover, including gross liabilities would penalize global financial hubs like the U.K. and U.S., where high debt reflects intermediation rather than fragility.

These six variables were used to construct a Currency Hierarchy Index (CHI) using Principal Component Analysis. Appendix Tables A1 and A2 provide summary statistics and pairwise correlations, respectively, for the six indicators used in constructing the CHI. The results show sufficient variation across indicators and no problematic levels of correlation. Even if stronger correlations had been present, however, this would not undermine the use of Principal Component Analysis, which is explicitly designed to handle interrelated variables. To aid interpretation, the index is rescaled to the 0 – 100 range, where a higher score corresponds to a higher liquidity premium *(l)*.

The CHI so offers a measure of financial subordination that is grounded in theory and that integrates key dimensions of external vulnerability, currency trust, market confidence, and global monetary dominance. Appendix Table A3 rank the 33 countries in the sample by their average CHI scores over the full period (1995–2021). Appendix Table and A4 does this by their scores in the most recent year, respectively. The average ranking reflects the long-term structural position, while the most recent ranking offers a snapshot. As expected, the United States consistently ranks highest, alongside other advanced economies such as Switzerland, Japan, and the United Kingdom, reflecting the central role of their currencies in global finance. In contrast, economies with histories of macroeconomic instability and capital flight—such as Argentina and Turkey - occupy lower positions.

4. Analysis: Does the global currency hierarchy restrain monetary policy freedom?

To answer this paper's central question, we explore the relation between a country's nominal interest rate and the CH Index in panel-data regressions and local projections analysis. The dataset we use is an unbalanced panel of 33 developed and developing economies over 1995–2019, across all major regions. Eurozone countries were excluded, given their unique position with respect to national monetary autonomy (the alternative would to include the eurozone as one unit).

Variables and data exploration

We use the level of the interest rate, rather than its change, given the focus on structural constraints in policy space and persistent cross-country differences in monetary policy stance (Taylor, 1993). Among the control variables we include periods of economic distress identified by output contractions in a crisis dummy (Cerra & Saxena, 2008; Reinhart & Rogoff, 2009; Laeven & Valencia, 2013). As noted, currency hierarchy is more pronounced during periods of economic distress, so we interact the crisis dummy with the CH Index. We expect a stronger constraining effect on monetary policy.

Other covariates include inflation, real GDP growth and unemployment (Romer & Romer 2004), all one-year lagged, reflecting central banks responses to macroeconomic conditions (Kuttner & Posen, 2001). We include structural differences in exchange rate frameworks in exchange rate regime dummies that distinguish between hard pegs, crawling pegs, managed floats, freely floating regimes, freely falling currencies, and dual markets, based on Ilzetzki, Reinhart, & Rogoff (2019; 2022). Differences in external openness are captured in the normalised Chen-Ito (2006) index of *de jure* legal and institutional capital account openness (KAOPEN), rather than actual exposure to capital flow volatility which is already embedded in the CH INDEX.

Tables A6 through A9 report the distribution and descriptives of the covariates and correlations. Most exchange rate regimes are managed floats (47.4%), crawling pegs (19.2%) or freely floating currencies (18.9%). Over time, there is bias toward more recent years due to data availability (table A7). Most of the 33 countries contribute between 2% and 4% of observations; the panel is relatively balanced (table A8). To reduce distortion from outliers, six (hyperinflation) observations with inflation rates above the 99th percentile were excluded. The average nominal policy rate is 5.16%, with substantial variation across countries and years, ranging from –0.75% to 67.88%. The KAOPEN index has a mean of 0.67 and a broad distribution. The CH INDEX, scaled on the 0-100 range, has a mean of 63.4 with a relatively symmetric distribution around the median. About 9% of observations fall in crisis years.

Multicollinearity is not a concern (Table A9 adjust numbering). Mechanical correlations with the interaction term aside, the highest observed correlation is between the policy rate and lagged inflation (0.61), which is to be expected given central bank policy goals.

Turning to this paper's question, Table A9 shows that CH INDEX is negatively correlated with the policy rate (–0.48), consistent with the central thesis. Also, Table A10 shows that economies in the lowest CH INDEX tercile have the highest average policy rate (8%), followed by those in the middle (4.9%) and highest (2.3%) CH INDEX terciles, with all three group differences statistically highly significant.

Panel regressions

While this already suggest that indeed the global currency hierarchy restrains monetary policy freedom, we now analyse this more formally, starting with equation 4.1:

$$PolicyRate_{i,t} =$$

$$\beta_0 + \beta_1 InflationRate_{i,t-1} + \beta_2 GDPGrowthRate_{i,t-1} + \beta_3 UnemploymentRate_{i,t-1} + \beta_4 CHI_{i,t} + \beta_5 KAOPEN_{i,t} + \theta ExchangeRateRegime_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (4.1)$$

with the variables defined as in tables A0 and A5. Table A11 reports OLS fixed-effect estimations. While (4.1) estimates the average effect of currency hierarchy across the business cycle, we noted that the survival constraint, and thus currency hierarchy, is expected to bind more tightly during downturns. We test this in equation (4.2):

$$PolicyRate_{i,t} = \beta_0 + \beta_1 InflationRate_{i,t-1} + \beta_2 GDPGrowthRate_{i,t-1} + \beta_3 UnemploymentRate_{i,t-1} + \beta_4 CHI_{i,t} + \beta_5 CrisisDummy_{i,t} + \beta_6 CrisisDummy_{i,t} * CHI_{i,t} + \beta_7 KAOPEN_{i,t} + \theta ExchangeRateRegime_{i,t} + \mu_i + \varepsilon_{i,t} \quad (4.2)$$

with $CrisisDummy_{i,t}$ defined as an output contraction, as above, and (obviously) without year fixed effects. A negative estimate of β_6 indicates less policy space due to currency hierarchy in downturns.

Table 1 reports the estimates. β_4 is estimated at –0.227 ($p < 0.01$), smaller with year fixed effects (–0.139, $p < 0.05$). Economies lower in the currency hierarchy systematically maintain higher interest rates. In particular, a one unit increase in CH INDEX is associated with a 0.14 to 0.23 percentage point reduction in the nominal interest rate, all else equal. This is 2.4% to 3.9% of the 5.84 percentage points standard deviation in policy rates (table A8).

For purposes of illustration, consider that if Chile (place 22) would rise to the currency hierarchy position of Malaysia (position 14), then the magnitude of the estimated conditional correlation at the sample mean suggests that this would be associated with policy rates that are structurally 112-184 basis points lower than they now are.

Or again, the more conservative year-fixed-effects coefficient of –0.139 implies a predicted interest rate gap of 9.86 percentage points between the United States and Croatia—the countries with the highest and lowest average CH INDEX scores, respectively (98.30 vs. 27.35). Even if both faced similar inflation and growth conditions, Croatia would need to maintain rates nearly ten percentage points higher to compensate for its structurally weaker position in the global currency hierarchy. In fact, the standard deviation (the typical variation) over time and between countries of CH INDEX is 18.6, corresponding to 240-430 basis points variation in interest rate at the sample mean.

These numbers illustrate the real-world relevance of movement within the currency hierarchy through time and differences between countries' position in the hierarchy.

We note also that the CH INDEX effect amounts to approximately half the size of the inflation coefficient. This implies that a 2-point decrease in CH INDEX results in roughly the same increase in nominal interest rates as the rise typically following a one percentage point rise in inflation. Inflation is, of course, a core determinant of monetary policy; this underscores how currency hierarchy is a structural constraint.

The interaction term in the two estimates of (4.2) is negative and significant (–0.104, $p < 0.01$; and –0.110, $p < 0.05$): the interest rate gap due to hierarchy widens during crises. The crisis dummy coefficient is large and positive, in both specifications (6.17, $p < 0.05$; and 7.34, $p < 0.05$), even when including year fixed effects which may seem counterintuitive at first. The composite effect at the sample mean turns negative only when a country's CH INDEX score exceeds approximately 59.3 (i.e.,

6.171 ÷ 0.104). With year fixed effects, the threshold is even higher—around 66.7 (i.e., 7.337 ÷ 0.110). (*this is incomplete - here include graph with interaction effect, conditional)*

This implies that only countries in the upper third of the CH INDEX distribution are likely to reduce interest rates in response to a financial crisis; countries below this threshold are predicted to maintain or even raise rates. The need to preserve investor confidence often forces them to adopt procyclical stances, tightening or resisting rate cuts at the very moment countercyclical action is most needed domestically.

Table 1 Global currency hierarchy and monetary policy freedom 1995–2019

Dependent: Nominal Policy Rate	(4.1)	(4.1)	(4.2)	(4.2)
Lagged Inflation	0.403**	0.339**	0.409**	0.338***
	(0.196)	(0.131)	(0.191)	(0.120)
Lagged Real GDP Growth	0.187***	-0.0341	0.217***	0.00770
	(0.0468)	(0.0571)	(0.0355)	(0.0396)
Lagged Unemployment	0.0344	-0.197*	0.0439	-0.176*
	(0.0991)	(0.111)	(0.101)	(0.0967)
CH INDEX	-0.227***	-0.139**	-0.210***	-0.110**
	(0.0560)	(0.0532)	(0.0493)	(0.0456)
Crisis Dummy			6.171**	7.337**
			(2.587)	(2.799)
CH INDEX * Crisis Dummy			-0.104***	-0.110**
			(0.0369)	(0.0431)
KAOPEN	-6.455***	-5.130***	-6.609***	-5.369***
	(2.079)	(1.640)	(2.081)	(1.598)
Hard Peg Dummy	2.147	-0.563	1.854	-0.809
	(1.853)	(1.601)	(1.870)	(1.599)
Crawling Peg Dummy	0.737	-0.573	0.752	-1.407
	(1.673)	(1.123)	(1.631)	(1.080)
Managed Floating Dummy	1.056	-0.573	0.991	-0.644
	(1.701)	(1.017)	(1.705)	(1.002)
Freely Falling Dummy	19.59**	18.57*	18.44**	17.21*
	(9.616)	(9.391)	(8.793)	(8.492)
Constant	-6.455***	22.02***	19.11***	19.76***
	(2.079)	(4.584)	(4.441)	(3.412)
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	No	Yes	No	Yes
Observations	626	626	626	626
Number of Countries	33	33	33	33
R-squared	0.455	0.578	0.474	0.599

*Note: the table reports the estimation of equations 4.1 and 4.2 in OLS with country fixed effects and clustered standard errors. Hausman test and heteroskedasticity and autocorrelation test results are available on request. Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.*

The other coefficients are as expected: inflation and income carry positive coefficients, those for unemployment and *de jure* capital account openness are, respectively, insignificant and negative[1].

Robustness check: a simplified Index, with larger sample

To probe the robustness of the results, we constructed a 'Simplified' Currency Hierarchy Index (SCH INDEX) that preserves the conceptual logic of the original index for a much larger sample. Specifically, excluding local currency bond issuance expands the sample size from 626 to 1,014 observations and increases country coverage from 33 to 54. The simplified index is again constructed via PCA, now using the remaining five standardised variables: share of global FX reserves, FX reserves as a share of GDP, sovereign credit rating, exchange rate volatility, and speculative capital flows as a share of GDP.

Appendix tables A14 through A24 summarise the SCH INDEX sample. Table A14 presents summary statistics for the five standardised input variables used to construct the simplified index, while Table A15 displays their pairwise correlations. Tables A16 and A17 report the average and most recent SCH INDEX scores per country, with the United States again ranking highest. Tables A18 to A20 describe the distribution of country-year observations by exchange rate regime, year, and country. Unlike the baseline sample, the extended dataset includes several observations classified under a dual market regime, and the corresponding dummy is therefore no longer excluded from the regression models.

Table A21 reports descriptive statistics for the regression variables, confirming sufficient dispersion across the sample. Twelve observations with inflation and policy rate values above the 99th percentile were again excluded to mitigate the influence of extreme outliers. Table A22 confirms that multicollinearity is not a concern, as no pairwise correlation exceeds 0.7, except for the mechanical correlation between the crisis dummy and interaction term.

Table A23 reports mean-difference t-tests of nominal policy rates across SCH INDEX terciles. Average policy rates are 9.70%, 8.73% and 2.85% in the low, middle and high terciles, respectively. Differences between the low and high, and the mid and high SCH INDEX groups are statistically significant at the 1% level for both one- and two-sided tests. The difference between the low and middle terciles, however, is only marginally significant: while the one-sided test supports a difference at the 10% level ($p = 0.0801$), the two-sided test does not ($p = 0.1601$), aligning with the relatively close group means. Despite this, the observed pattern remains consistent with theoretical expectations.

Table 2 presents the estimates for (4.1) and (4.2) using the SCH INDEX and extended country sample. The results reinforce the core findings and both research hypotheses. The SCH INDEX coefficient is negative and statistically significant at the 1% or 5% level across all specifications, with a one-point increase in SCH INDEX associated with a 0.14 to 0.23 percentage point reduction in the nominal interest rate. This effect equals approximately 1.9% to 3.1% of the standard deviation in policy rates

[1] The Wald test results in Appendix Table B5 shows the exchange rate regime dummies are not jointly significant (unsurprisingly, since country fixed effects likely absorb much of the variation). In line with this, only the 'freely falling' regime dummy is individually significant in the baseline regressions. In table A11 we exclude exchange rate regime dummies. Dropping these controls adds 65 observations and extends the analysis period through 2021. Also in this extended sample period, the estimates support the findings on equation (4.1), but less so on (4.2); the coefficient on the interaction term is statistically insignificant. One explanation is that the COVID-19 crisis of 2020–2021 constituted a highly synchronised global shock, which may have led to more uniform monetary policy responses across countries and capital markets—thereby obscuring the patterns typically associated with financial subordination.

(7.34 percentage points; see Appendix Table A21) and roughly half the size of the inflation coefficients—again underscoring the economic relevance of currency hierarchy alongside standard macroeconomic drivers.

Table 2. A simplified Index, with larger sample

Nominal Policy Rate	(4.1)	(4.1)	(4.2)	(4.2)
Lagged Inflation	0.380***	0.333***	0.383***	0.338***
	(0.0806)	(0.0721)	(0.0776)	(0.0678)
Lagged Real GDP Growth	0.172***	0.00807	0.191***	0.0337
	(0.0552)	(0.0524)	(0.0564)	(0.0518)
Lagged Unemployment	0.186	-0.0390	0.190*	-0.0281
	(0.113)	(0.133)	(0.107)	(0.123)
SCH INDEX	-0.230***	-0.163**	-0.209***	-0.140**
	(0.0664)	(0.0680)	(0.0610)	(0.0623)
Crisis Dummy			6.208***	6.468***
			(1.981)	(1.850)
SCH INDEX * Crisis Dummy			-0.112***	-0.104***
			(0.0344)	(0.0328)
KAOPEN	-4.451**	-3.382**	-4.425**	-3.296**
	(1.711)	(1.650)	(1.659)	(1.580)
Hard Peg Dummy	2.224	0.488	1.990	0.318
	(1.605)	(1.346)	(1.618)	(1.343)
Crawling Peg Dummy	1.896	-0.000393	1.770	-0.0523
	(1.539)	(1.143)	(1.532)	(1.102)
Managed Floating Dummy	0.693	-0.841	0.639	-0.849
	(1.657)	(1.085)	(1.664)	(1.070)
Freely Falling Dummy	16.21***	15.11***	14.88***	13.67***
	(4.371)	(4.283)	(4.221)	(4.131)
Dual Market Dummy	6.728***	3.966**	6.773***	4.099**
	(2.110)	(1.917)	(2.120)	(1.887)
Constant	15.73***	19.46***	14.53***	17.81***
	(3.930)	(3.715)	(3.709)	(3.518)
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	No	Yes	No	Yes
Observations	1,014	1,014	1,014	1,014
Number of Countries	54	54	54	54
R-squared	0.566	0.636	0.578	0.649

*Note: the table reports the estimation of equations 4.1 and 4.2 in OLS with country fixed effects and clustered standard errors. Hausman test and heteroskedasticity and autocorrelation test results are available on request. Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.*

In Model (4.2), the interaction terms between SCH INDEX and the crisis dummy are negative and significant at the 1% level (–0.112 and –0.104)—more so than in the baseline regressions, where the

interaction was significant at only the 5% level with time fixed effects. The magnitude of the interaction effect is again substantial, with the SCH INDEX impact being magnified by approximately 54% to 74% in crisis years. Based on these estimates, the SCH INDEX thresholds above which countries are expected to lower interest rates during downturns are approximately 55.4 (6.208 ÷ 0.112) and 62.2 (6.468 ÷ 0.104). here include conditional effect graphs In sum, the extended sample confirms that the ability to conduct countercyclical monetary policy during periods of economic distress remains a privilege largely reserved for countries that are not financially subordinated.

5. Global currency hierarchy, global financial cycle, or policy trilemma?

We now extend the analysis in three directions, capturing theoretical features of the global currency hierarchy. Here we connect to the conceptual discussion in section 2. There are three concerns that could be raised against the interpretation of the empirical results as evidence for the global currency hierarchy's impact on monetary policy freedom. It could be suggested that the results really point to normal variations in policy freedom over the business cycle; or that the results are better interpreted as evidence for the global financial cycle; or that they are evidence for the policy trilemma, rather than a global currency hierarchy.

Does the hierarchy bite in times of crisis?

If we identified an effect of the currency hierarchy on monetary policy freedom, then it should also be the case, as explained, that this effect is asymmetrically stronger specifically in times of crisis, rather than simply varying with growth conditions (Mehrling, 2013a). To test the role of crises, Table A12 replicates the estimation of equation (4.2), but replaces the binary crisis indicator with continuous GDP growth.

The results continue to support the key findings, but the interaction term is small statistically significant only at the 5% level in three out of four specifications. Interacting CH INDEX with continuous GDP growth yields inconclusive results, and this suggests that the currency hierarchy's monetary policy constraint is not symmetrical across growth experiences. It is more binding in crisis, but not symmetrically looser during upswings.

Currency hierarchy or global financial cycle?

The novel contribution of the currency hierarchy to understanding monetary policy space was to suggest that investor views are grounded in a currency's place in the hierarchy, rather than being entirely reducible to the global financial cycle, captured in investor sentiment. In table A13 we explore global risk sentiment by including the VIX (Chicago Board Options Exchange Volatility Index) as an additional control. The VIX reflects global risk sentiment spillovers tied to the dominance of the U.S. dollar, including flight-to-safety dynamics. Including it as a control may therefore absorb structural variation that CH INDEX is intended to capture, potentially understating monetary constraints. While controlling for the VIX helps isolate domestic drivers of interest rates, this conceptual overlap is precisely why it was excluded from the baseline regressions.

The main findings stand also when including the VIX; also the interaction term coefficient is negative and significant at the 5% level. This suggests that the constraints faced by financially subordinate countries are not merely driven by broader global volatility.

Currency hierarchy or policy trilemma?

In some sense, global currency hierarchy and the policy trilemma can be viewed as rival theoretical frameworks. Both specify conditions that restrain monetary policy freedom. If the above results show monetary policy constraint in conditions captured by the CH Index, then how do we know that these constraint do not arise in a familiar policy trilemma configuration?

The trilemma posits that countries with fixed exchange rate regimes and liberalised capital accounts must forgo monetary independence to maintain their currency peg and conduct foreign exchange interventions. While countries with closed capital accounts can, in theory, maintain monetary autonomy by insulating themselves from global financial markets, those are not the focus of this research. Currency hierarchy theory is most relevant in contexts where capital is mobile and external vulnerabilities—such as capital flow reversals and sudden stops—can materialise.

This leaves countries with both free capital mobility and a floating exchange rate regime as formally positioned to exercise monetary autonomy, while also being fully exposed to the structural constraints emphasised by currency hierarchy theory. This makes them a critical test case: if economies with currencies lower in the hierarchy face constrained policy space even within this group, this would suggest that structural asymmetries in the international monetary system impose limits that transcend formal regime choice. Put differently, if in this setting the currency hierarchy index has explanatory power, this is evidence that the global currency hierarchy position is not superfluous once a country's policy trilemma configuration is taken into account. This does not discredit the policy trilemma as an explanatory framework. It shows that taking into account that framework, there is variation in monetary policy freedom left to be explained by the global currency hierarchy.

To this end we select country-year observations with either a managed floating or freely floating exchange rate regime and a KAOPEN index of 0.7 or higher. We do this in the extended SCH INDEX sample, so as to ensure sufficient observations despite the selection. This threshold corresponds to the median KAOPEN score in the SCH INDEX sample, which is commonly used in the literature to indicate a high degree of capital account openness (Chin & Ito, 2006). The resulting subsample comprises 20 countries and 273 observations. Appendix Table A24 shows that the average SCH INDEX score in the restricted sample (70.83) is considerably higher than in the full SCH INDEX sample (52.39), reflecting the prevalence of more financially developed economies. Nonetheless, a standard deviation of 17.13 indicates sufficient within-sample variation for meaningful analysis.

The regression results in Appendix Table A25 show that within the trilemma-consistent subsample, the SCH INDEX coefficient remains negative but is statistically significant only when year fixed effects are excluded. Once year fixed effects are included, the coefficient becomes statistically insignificant and close to zero in magnitude. The interaction term is insignificant across all specifications. Perhaps this is because the smaller sample size limits statistical power, particularly when controlling for year fixed effects. Otherwise, these findings appear to contradict the idea that monetary autonomy differs structurally even within the same trilemma corner.

An alternative interpretation is that, rather than constraining monetary policy after regime choice, currency hierarchy may shape the regime choice itself. Countries lower in the currency hierarchy may pre-emptively install capital controls to guard against destabilising capital flows or adopt fixed exchange rate regimes to anchor expectations and import monetary credibility. In this view, currency hierarchy does not merely condition the effectiveness of a chosen policy regime—it helps determine which regimes are politically and economically viable to begin with.

Viewed from this perspective, the alignment between formal regime choice and structural monetary power in the trilemma-consistent subsample is an outcome of currency hierarchy dynamics. This subsample consists primarily of countries that already occupy structurally stronger positions in the international monetary system, leading to non-random selection into high-autonomy regimes and a form of sample bias. The relationship between SCH INDEX and interest rate behaviour cannot be fully observed—not because the constraint is absent, but because the countries most affected by it have already been filtered out. In this interpretation, currency hierarchy and interaction effects fade in this robustness check, even if their underlying structural logic remains valid. This warrants further research.

6. Local projections

To assess whether these patterns persist in a dynamic setting, local projections are used to trace the average response of policy rates over the seven years following the 2008–2009 Global Financial Crisis (GFC), allowing responses to vary across countries grouped by their pre-crisis CH INDEX and SCH INDEX scores. This approach treats the GFC as an exogenous, globally synchronised shock and examines whether a country's position in the international currency hierarchy influences its ability to adjust interest rates countercyclically in the aftermath.

Following Jordà (2005; 2023), equation (5.1) is estimated for each horizon $h = 0, 1, \dots, 7$. A seven-year horizon is chosen to capture both the immediate and medium-term monetary policy responses to the GFC, while avoiding excessive sample attrition over time.

$$PolicyRate_{i,t+h} = \beta_h GlobalFinancialCrisisDummy_{i,t} + \gamma_1 InflationRate_{i,t-1} + \gamma_2 GDPGrowthRate_{i,t-1} + \gamma_3 UnemploymentRate_{i,t-1} + \gamma_4 KAOPEN_{i,t} + \theta ExchangeRateRegime_{i,t} + \mu_i + \varepsilon_{i,t} \quad (5.1)$$

Here $PolicyRate_{i,t+h}$ denotes the nominal policy rate for country i at horizon h years after the onset of the crisis, and $GlobalFinancialCrisisDummy_{i,t}$ is a binary variable equal to one in 2008—the start of the GFC—and zero otherwise. Time fixed effects are omitted, as the GFC constitutes a common external shock.

Equation (5.1) is estimated separately for the Low, Mid, and High currency hierarchy groups. Countries are classified into terciles based on their 2007 CH INDEX and SCH INDEX scores, as listed in Appendix Tables A26 and A27. Due to insufficient data coverage over the 2008–2015 local projection window, the baseline sample comprises 27 countries (rather than 33), and the extended sample comprises 45 countries (rather than 54). Graphs 1 and 2 present the dynamic response of nominal policy rates for the CH INDEX and SCH INDEX samples, respectively. In both graphs, the vertical axis shows the estimated change in interest rates (in percentage points), relative to their level in the baseline year 2008 (h = 0).

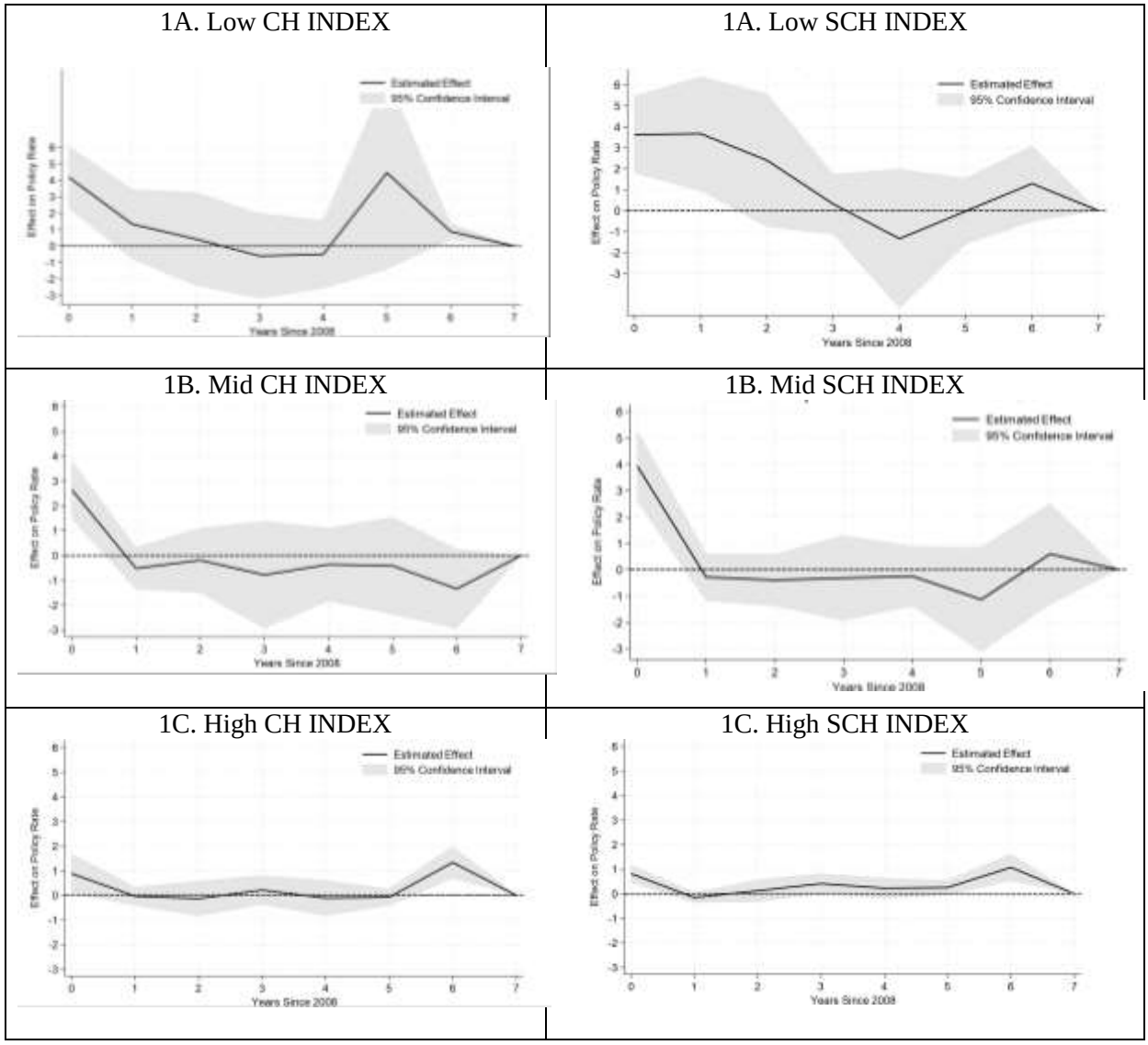
For the CH INDEX sample, the local projections presented in Graph 1 reveal clear variation in monetary adjustment across terciles. Figure 2 shows in Panel 1A shows that countries in the Low CH INDEX group significantly raise policy rates at the onset of the crisis, with the immediate effect exceeding 4 percentage points. Although rates gradually decline in the medium term, they remain elevated for much of the projection window.

In contrast, Panel 1B displays a more countercyclical pattern for Mid CH INDEX countries, with a modest initial increase followed by a faster return to baseline. From year one onward, estimated effects remain mostly negative, indicating that rates were lowered relative to their 2008 values. For the High

CH INDEX group, Panel 1C shows that estimated effects fluctuate closely around zero.. This muted response likely reflects the fact that many financially developed countries approached or reached the zero lower bound shortly after the onset of the crisis, constraining their ability to reduce rates further. Panels 2a, 2b and 2c replicates the local projection exercise for the SCH INDEX sample and paints a broadly similar picture.

These patterns support that a country's ability to conduct countercyclical monetary policy in the aftermath of a global crisis is tied to its position in the international currency hierarchy. The constraint appears especially binding for the group of most financially subordinate countries, which—facing heightened sensitivity to capital flight or a loss of investor confidence—tighten monetary policy even when domestic conditions would warrant easing. In contrast, countries with more dominant currencies retain the space to maintain or lower interest rates countercyclically, thereby suggesting a higher degree of monetary autonomy.

Figure 2: Local Projections: policy rate changes after the great financial crisis



7. Conclusion

This paper has examined the extent to which the global currency hierarchy constrains monetary policy autonomy. Relying on a newly constructed Currency Hierarchy Index (CH INDEX) and panel data from 33 countries over the period 1995–2019, the analysis offers a systematic quantitative assessment of how a country's position in the international currency system shapes its ability to set interest rates.

In panel regressions, we find that countries lower in the currency hierarchy maintain structurally higher nominal interest rates, reflecting external constraints tied to their currency hierarchy status and lower liquidity premium. The effect size is economically meaningful: a one-point increase in CH INDEX is associated with a 0.14–0.23 percentage point reduction in nominal interest rates, representing a significant share of the sample standard deviation and indicating substantial policy relevance alongside inflation—the primary driver of monetary policy.

The effect is stronger during crisis, which is in line with the steepening of the currency hierarchy in financial crunch times. The crisis-related effect becomes statistically weaker after 2019—likely due to globally synchronised policy responses during COVID-19. The results are robust to constructing a simplified index allowing for a larger sample. Only countries in the upper third of the CH INDEX distribution are predicted to lower rates in response to external shocks; others maintain or increase rates to preserve credibility and avoid capital flight.

We attempt to examine the relevance of the global currency hierarchy against to other key frameworks explaining monetary policy autonomy, the global financial cycle and the policy trilemma. First, the findings stand also when including the VIX as a proxy for the global financial cycle, which suggests that currency hierarchy cannot be reduced to global investor sentiment. Second, in a subsample of countries with both free capital mobility and a floating exchange rate regime, which are positioned to exercise monetary autonomy according to the policy trilemma, the findings are not reproduced when including year fixed effects. This is either due to the smaller sample size, or it can be interpreted as irrelevance of the currency hierarchy once the policy trilemma is taken into account. Alternatively, it is possible that countries that are not vulnerable to currency hierarchy constraints self-select into free capital mobility and a floating exchange rate regime. This warrants further research.

To climb the currency hierarchy, reducing exposure to the global financial cycle is a key priority, as the volatility of portfolio investments makes them poorly suited to addressing capital needs in developing economies. Where such inflows are permitted, policymakers should manage them proactively to limit instability—even at the cost of lower overall investment (Grabel, 1996). As a complementary strategy to capital controls, many countries accumulate foreign exchange reserves to insure against capital flow volatility. However, this approach is also costly, as it diverts scarce public resources from urgent development needs (Löscher & Kaltenbrunner, 2023). Against this backdrop, maintaining a trade or current account surplus emerges as a more viable long-term strategy for advancing within the currency hierarchy. When combined with low net external debt, sustained export surpluses can stabilize exchange rates, support medium-term appreciation expectations, and boost currency demand—ultimately reducing reliance on foreign investors and enhancing monetary policy autonomy (De Paula et al., 2017; Fritz et al., 2018). Achieving this trajectory will require adaptive, context-specific policymaking rather than adherence to rigid neoliberal developmental models (Nagel, 2025).

Looking ahead, the urgency of these strategies is likely to intensify. As prolonged quantitative easing in core countries gives way to rising interest rates, capital may flow out of developing economies—destabilizing their financial systems and making it harder to move up the currency hierarchy (Löscher

& Kaltenbrunner, 2023). At the same time, developing countries face disproportionate exposure to climate change, both through physical shocks and through transitional risks tied to decarbonisation. These challenges are expected to widen structural trade deficits by reducing commodity export revenues, while raising import demand for essentials like food and adaptation technologies. This dynamic weakens investor confidence, erodes the liquidity premium of subordinate currencies, and increases exchange rate volatility. In combination, these pressures risk deepening financial asymmetries and further entrenCH Indexng the international currency hierarchy (Persaud, 2023; Löscher & Kaltenbrunner, 2023).

That said, the findings of this study—as well as the policy implications drawn from them—should be interpreted in light of several limitations, which also point to promising avenues for future research. First, the construction of the CH INDEX and SCH INDEX relies on methodological choices—such as indicator selection, normalisation, and weighting—that may affect research results. Due to data gaps, net errors and omissions are used as a proxy for speculative flows, and external debt and Net International Investment Position (NIIP) are excluded despite their relevance to global shock vulnerability (Lane & Milesi-Ferretti, 2008). More broadly, the CH INDEX and SCH INDEX may also reflect institutional quality—such as governance, central bank independence, or policy credibility—that influences interest rates independently of financial subordination. While fixed effects control for time-invariant differences, time-varying institutional shifts may still introduce omitted variable bias or endogeneity. Future research could refine the index and strengthen causal inference through better data access, alternative weighting methods—such as factor-based weights or supervised PCA—and the use of instrumental variables or quasi-natural experiments to isolate exogenous changes in a country's institutional environment.

Second, the global monetary policy landscape is evolving in ways not fully captured by this study. While interest rates remain a key instrument, countries—especially those higher in the currency hierarchy—increasingly rely on unconventional tools such as quantitative easing and forward guidance. At the same time, financial globalisation has altered the transmission of monetary policy: traditional interest rate channels have become less central, while valuation effects and exchange-rate-induced wealth effects now play a larger role (Georgiadis & Mehl, 2016). Future research could explore how currency hierarchy theory applies to newer policy instruments and transmission channels, and whether currency hierarchy continues to shape policy autonomy in this changing context.

Third, future research could further clarify the conceptual and empirical boundaries between currency hierarchy theory and the policy trilemma. This thesis suggests that currency hierarchy may not only constrain monetary autonomy within a given regime, but also shape which regimes are politically and economically viable to adopt from the outset. From this perspective, the apparent absence of subordination effects after controlling for the trilemma may reflect non-random selection into high-autonomy regimes, rather than a lack of constraint. Future research could build on this insight by disentangling the sequencing and relative influence of these mechanisms through further empirical or qualitative work. One promising avenue is to develop identification strategies or quasi-experimental designs that better distinguish the effects of structural subordination from those of formal regime choice.

While there is an extensive literature on the global currency hierarchy, this paper is the first to quantify the hierarchy, trace its effect on monetary policy freedom, and assess it against the major theoretical alternatives. Much remains to be done on, among many other things, alternative ways to construct a currency hierarchy index and on possible mediating variables, such as the fiscal stance. We leave this for future research. This contribution is offered as a first step to a quantitative exploration of the global currency hierarchy. It leaves open important questions about its underlying causes. Why are some

countries able to climb the hierarchy over time, while others remain stuck? How do domestic political conditions, financial development, or regional monetary cooperation shape this trajectory? Future research could address these questions by combining macro-financial analysis with qualitative institutional work, country case studies, or interviews with policymakers. Only by answering these and other questions can we begin to confront the structural asymmetries implied by the international currency hierarchy and challenge the foundations of a global financial system in which monetary autonomy remains unequally distributed.

References (to be edited)

Ahmed, S., & Zlate, A. (2014). Capital flows to emerging market economies: A brave new world?. *Journal of International Money and Finance*, *48*, 221-248. https://doi.org/10.1016/j.jimonfin.2014.05.015

Aizenman, J. (2019). International reserves, exchange rates, and monetary policy: From the trilemma to the quadrilemma. In *Oxford Research Encyclopedia of Economics and Finance*. https://doi.org/10.1093/acrefore/9780190625979.013.313

Aizenman, J., & Ito, H. (2014). Living with the trilemma constraint: Relative trilemma policy divergence, crises, and output losses for developing countries. *Journal of International Money and Finance*, *49*, 28-51. https://doi.org/10.1016/j.jimonfin.2014.05.005

Aizenman, J., & Lee, J. (2007). International reserves: precautionary versus mercantilist views, theory and evidence. *Open Economies Review*, *18*, 191-214. https://doi.org/10.1007/s11079-007-9030-z

Akkemik, K. A., & Özen, Ş. (2014). Macroeconomic and institutional determinants of financialisation of non-financial firms: Case study of Turkey. *Socio-economic review*, *12*(1), 71-98. https://doi.org/10.1093/ser/mwt006

Alami, I., Alves, C., Bonizzi, B., Kaltenbrunner, A., Koddenbrock, K., Kvangraven, I., & Powell, J. (2023). International financial subordination: a critical research agenda. *Review of International Political Economy*, *30*(4), 1360-1386. https://doi.org/10.1080/09692290.2022.2098359

Ali, A., & Audi, M. (2023). Analyzing the Impact of Foreign Capital Inflows on the Current Account Balance in Developing Economies: A Panel Data Approach. *Journal of Applied Economic Sciences*, *18*(2), 80.

Andrade, R. P., & Prates, D. M. (2013). Exchange rate dynamics in a peripheral monetary economy. *Journal of Post Keynesian Economics*, *35*(3), 399-416. 10.2753/ PKE0160-3477350304

Bhargava, A., Bouis, R., Kokenyne, A., Perez-ArCH Indexla, M., Rawat, U., & Sahay, M. R. (2023). *Capital controls in times of crisis–do they work?*. International Monetary Fund. https://doi.org/10.5089/9798400211263.071

Bonizzi, B. (2013). Financialisation in developing and emerging countries: a survey. *International journal of political economy*, *42*(4), 83-107. https://doi.org/10.2753/IJP0891-1916420405

Bonizzi, B. (2017). International financialisation, developing countries and the contradictions of privatised Keynesianism. *Economic and Political Studies*, *5*(1), 21-40. https://doi.org/10.1080/20954816.2016.1274517

Bonizzi, B., & Kaltenbrunner, A. (2019). Liability-driven investment and pension fund exposure to emerging markets: A Minskyan analysis. *Environment and Planning A: Economy and Space*, *51*(2), 420-439. https://doi.org/10.1177/0308518X18794676

Bonizzi, B., & Kaltenbrunner, A. (2024). International currency hierarchyin the age of asset manager capitalism. *Environment and Planning A: Economy and Space*, *56*(2), 603-626. https://doi.org/10.1177/0308518X241227744

Borio, C., & Disyatat, P. (2011). Global imbalances and the financial crisis: Link or no link? (*BIS Working Papers No. 346*). Bank for International Settlements.

Bortz, P. G., & Kaltenbrunner, A. (2018). The international dimension of financialisation in developing and emerging economies. *Development and change*, *49*(2), 375-393. https://doi.org/10.1111/dech.12371

Bruno, V., & Shin, H. S. (2015). Capital flows and the risk-taking channel of monetary policy. *Journal of monetary economics*, *71*, 119-132. https://doi.org/10.1016/j.jmoneco.2014.11.011

Burger, J. D., & Warnock, F. E. (2006). Local currency bond markets. *IMF Staff papers*, *53*, 133-146. https://doi.org/10.2307/30036026

Calvo, G. A., & Mendoza, E. G. (2000). Rational contagion and the globalization of securities markets. *Journal of international economics*, *51*(1), 79-113. https://doi.org/10.1016/S0022-1996(99)00038-0

Cerra, V., & Saxena, S. C. (2008). Growth dynamics: the myth of economic recovery. *American Economic Review*, *98*(1), 439-457. 10.1257/aer.98.1.439

Cerutti, E., Claessens, S., & Rose, A. K. (2017). *How important is the global financial cycle? Evidence from capital flows* (No. w23699). National Bureau of Economic Research. 10.3386/w23699

CH Indexnn, M., & Frankel, J. A. (2007). Will the euro eventually surpass the dollar as leading international reserve currency?. In *G7 Current account imbalances: sustainability and adjustment* (pp. 283-338). University of CH Indexcago Press. doi.org/10.7208/9780226107288-010

Converse, N., Levy-Yeyati, E., & Williams, T. (2023). How ETFs amplify the global financial cycle in emerging markets. *The Review of Financial Studies*, *36*(9), 3423-3462. https://doi.org/10.1093/rfs/hhad014

Cruz, M., & Walters, B. (2008). Is the accumulation of international reserves good for development?. *Cambridge Journal of Economics*, *32*(5), 665-681. https://doi.org/10.1093/cje/ben028

Cuddington, J. T. (1986). *Capital flight: Estimates, issues, and explanations* (Vol. 58, p. 1986). Princeton, NJ: International Finance Section, Department of Economics, Princeton University.

Demir, F. (2009). Capital market imperfections and financialisation of real sectors in emerging markets: Private investment and cash flow relationship revisited. *World development*, *37*(5), 953-964. https://doi.org/10.1016/j.worlddev.2008.09.003

De Paula, L. F., Fritz, B., & Prates, D. M. (2017). Keynes at the periphery: Currency hierarchy and challenges for economic policy in emerging economies. *Journal of post Keynesian economics*, *40*(2), 183-202. https://doi.org/10.1080/01603477.2016.1252267

Drukker, D. M. (2003). Testing for serial correlation in linear panel-data models. *The stata journal*, *3*(2), 168-177. https://doi.org/10.1177/1536867X0300300206

Eichengreen, B., Hausmann, R., & Panizza, U. (2005). The pain of original sin. *Other people's money: Debt denomination and financial instability in emerging market economies*, 13- 47. doi.org/10.7208/9780226194578-003

Feldstein, M. S. (1999). Self-protection for emerging market economies (*NBER Working Paper No. 6907*). National Bureau of Economic Research. 10.3386/w6907

Fritz, B., de Paula, L. F., & Prates, D. M. (2018). Global currency hierarchy and national policy space: a framework for peripheral economies. *European Journal of Economics and Economic Policies*, *15*(2), 208-218. https://doi.org/10.4337/ejeep.2018.02.11

Forbes, K. J., & Warnock, F. E. (2012). Capital flow waves: Surges, stops, flight, and retrenchment. *Journal of international economics*, *88*(2), 235-251. https://doi.org/10.1016/j.jinteco.2012.03.006

Furceri, D., & Loungani, P. (2018). The distributional effects of capital account liberalization. *Journal of Development Economics*, *130*, 127-144. https://doi.org/10.1016/j.jdeveco.2017.09.007

Georgiadis, G., & Mehl, A. (2016). Financial globalisation and monetary policy effectiveness. *Journal of International Economics*, *103*, 200-212. https://doi.org/10.1016/j.jinteco.2016.10.002

Gopinath, G. (2015). *The international price system* (No. w21646). National Bureau of Economic Research. 10.3386/w21646

Gopinath, G., & Stein, J. C. (2021). Banking, trade, and the making of a dominant currency. *The Quarterly Journal of Economics*, *136*(2), 783-830. https://doi.org/10.1093/qje/qjaa036

Grabel, I. (1996). Marketing the third world: the contradictions of portfolio investment in the global economy. *World Development*, *24*(11), 1761-1776. https://doi.org/10.1016/0305-750X(96)00068-X

Hausmann, R., Panizza, U., & Stein, E. (2001). Why do countries float the way they float?. *Journal of development economics*, *66*(2), 387-414. https://doi.org/10.1016/S0304-3878(01)00168-7

Herr, H., & Nettekoven, Z. (2022). Currency hierarchy and underdevelopment. *European Journal of Economics and Economic Policies*, *19*(2), 238-259. https://doi.org/10.4337/ejeep.2022.02.06

Lane, P. R., & Milesi-Ferretti, G. M. (2008). The drivers of financial globalization. *American Economic Review*, *98*(2), 327-332. 10.1257/aer.98.2.327

Jolliffe, I. T. (2002). *Principal component analysis for special types of data*. Springer New York. https://doi.org/10.1007/0-387-22440-8_13

Jordà, Ò. (2005). Estimation and inference of impulse responses by local projections. *American economic review*, *95*(1), 161-182. 10.1257/0002828053828518

Jordà, Ò. (2023). Local projections for applied economics. *Annual Review of Economics*, *15*(1), 607-631. https://doi.org/10.1146/annurev-economics-082222-065846

Jordà, Ò., Schularick, M., Taylor, A. M., & Ward, F. (2018). *Global financial cycles and risk premiums* (No. w24677). National Bureau of Economic Research. 10.3386/w24677

Kaltenbrunner, A., & Painceira, J. P. (2018). Subordinated financial integration and financialisation in emerging capitalist economies: the Brazilian experience. *New political economy*, *23*(3), 290-313. https://doi.org/10.1080/13563467.2017.1349089

Kaltenbrunner, A., Karacimen, E., & Rabinovich, J. (2023). *The changing financial practices of Brazilian and Turkish firms under financial subordination, a mixed-methods analysis* (No. PKWP2306).

Kohler, K., Bonizzi, B., & Kaltenbrunner, A. (2023). Global financial uncertainty shocks and external monetary vulnerability: The role of dominance, exposure, and history. *Journal of International Financial Markets, Institutions and Money*, *88*, 101818. https://doi.org/10.1016/j.intfin.2023.101818

Koutsobinas, T. T. (2011). Liquidity preference in a portfolio framework and the monetary theory of Kahn. *Cambridge Journal of Economics*, *35*(4), 751-769. https://doi.org/10.1093/cje/beq041

Kuttner, K. N., & Posen, A. S. (2001). Beyond bipolar: A three-dimensional assessment of monetary frameworks. *International Journal of Finance & Economics*, *6*(4), 369-387. https://doi.org/10.1002/ijfe.167

Kvangraven, I. H., Koddenbrock, K., & Sylla, N. S. (2021). Currency hierarchyand uneven financialisation in 21st century Africa. *Community development journal*, *56*(1), 119-140. https://doi.org/10.1093/cdj/bsaa047

Laeven, L., & Valencia, F. (2013). Systemic banking crises database. *IMF Economic Review*, *61*(2), 225-270. https://doi.org/10.1057/imfer.2013.12

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

Lopez-Mejia, A. (1999). Large capital flows: causes, consequences, and policy responses. *Finance & Development*, *36*(3), 28-32.

Löscher, A., & Kaltenbrunner, A. (2023). Climate change and macroeconomic policy space in developing and emerging economies. *Journal of Post Keynesian Economics*, *46*(1), 113-141. https://doi.org/10.1080/01603477.2022.2084630

Mehrling, P (2013a) The Inherent Hierarchy of Money. Chapter 21 in: L Taylor, A Rezai, and T Michl (eds.) Social Fairness and Economics. Economic Essays in the Spirit of Duncan Foley. London: Routledge.

Mehrling, P (2013b) Essential hybridity: A money view of FX. Journal of Comparative Economics, Volume 41, Issue 2, 2013, Pages 355-363

Nagel, M. (2025). From vulnerability to stability? Latin American strategies to govern financial subordination. *Competition & Change*, 10245294241313003. https://doi.org/10.1177/10245294241313003

Neumeyer, P. A., & Perri, F. (2005). Business cycles in emerging economies: the role of interest rates. *Journal of monetary Economics*, *52*(2), 345-380. https://doi.org/10.1016/j.jmoneco.2004.04.011

Obstfeld, M. (2021). Trilemmas and tradeoffs: living with financial globalization. *The Asian monetary policy forum: Insights for central banking* (pp. 16-84). https://doi.org/10.1142/9789811238628_0002

Obstfeld, M., Shambaugh, J. C., & Taylor, A. M. (2010). Financial stability, the trilemma, and international reserves. *American Economic Journal: Macroeconomics*, *2*(2), 57-94. 10.1257/mac.2.2.57

Persaud, A. (2023). Unblocking the green transformation in developing countries with a partial foreign exchange guarantee. *Climate Policy Initiative*.

Pagliari, M. S., & Hannan, S. A. (2024). The volatility of capital flows in emerging markets: Measures and determinants. *Journal of International Money and Finance*, *145*, 103095. https://doi.org/10.1016/j.jimonfin.2024.103095

Prates, D. M. (2017). Monetary sovereignty, currency hierarchy and policy space: a post- Keynesian approach. *IE-Unicamp Working Paper*, *315*.

Prates, D. M. (2020). Beyond Modern Money Theory: a Post-Keynesian approach to the currency hierarchy, monetary sovereignty, and policy space. *Review of Keynesian Economics*, *8*(4), 494-511. 10.4337/roke.2020.04.03

Ramos, R. A. (2019). A Minskyan account of emerging currencies dynamics. *Journal of Post Keynesian Economics*, *42*(4), 638-661. https://doi.org/10.1080/01603477.2019.1640066

Reinhart, C. M., & Rogoff, K. S. (2009). The aftermath of financial crises. *American Economic Review*, *99*(2), 466-472. 10.1257/aer.99.2.466

Rey, H. (2015). *Dilemma not trilemma: the global financial cycle and monetary policy independence* (No. w21162). National Bureau of Economic Research. 10.3386/w21162

Rodrik, D. (2006). The social cost of foreign exchange reserves. *International economic journal*, *20*(3), 253-266. https://doi.org/10.1080/10168730600879331

Romer, C. D., & Romer, D. H. (2004). A new measure of monetary shocks: Derivation and implications. *American economic review*, *94*(4), 1055-1084. 10.1257/0002828042002651

Siranova, M., & Tiruneh, M. W. (2018). Exploding net errors and omissions as a capital flight phenomenon: the case of Slovakia. *Applied Economics*, *50*(16), 1866-1884. https://doi.org/10.1080/00036846.2017.1380288

Taylor, J. B. (1993). Discretion versus policy rules in practice. In *Carnegie-Rochester conference series on public policy* (Vol. 39, pp. 195-214). North-Holland. https://doi.org/10.1016/0167-2231(93)90009-L

Vijaya, R. (2024). Sovereign Credit Rating: Impact on Social Investment and Role in Financial Subordination. *Review of Radical Political Economics*, 04866134241270675. https://doi.org/10.1177/04866134241270675

APPENDIX: Data Sources

Bank for International Settlements. (n.d.). *Central bank policy rates (monthly average)* [Data set]. BIS Data Portal. Retrieved on January 22nd, 2025, from: https://data.bis.org/topics/CBPOL

Bank for International Settlements. (n.d.). *Securities statistics: Debt securities by currency, issuer, and residence*. Retrieved on April 1st, 2025, from: https://www.bis.org/statistics/secstats_to180923.htm

CH Indexnn, M. D., & Ito, H. (2006). What matters for financial development? Capital controls, institutions, and interactions. *Journal of development economics*, *81*(1), 163-192. https://doi.org/10.1016/j.jdeveco.2005.05.010

Federal Reserve Bank of St. Louis. (n.d.). *CBOE Volatility Index: VIXCLS* [Data set]. FRED. Retrieved on April 1st, 2025, from: https://fred.stlouisfed.org/series/VIXCLS

Fitch Ratings. (n.d.). *Sovereign ratings*. Retrieved on April 1st, 2025, from: https://www.fitchratings.com

Ilzetzki, E., Reinhart, C. M., & Rogoff, K. S. (2019). Exchange arrangements entering the twenty-first century: Which anchor will hold?. *The Quarterly Journal of Economics*, *134*(2), 599-646. https://doi.org/10.1093/qje/qjy033

Ilzetzki, E., Reinhart, C. M., & Rogoff, K. S. (2022). Rethinking exchange rate regimes. In *Handbook of international economics* (Vol. 6, pp. 91-145). Elsevier. https://doi.org/10.1016/bs.hesint.2022.02.010

International Monetary Fund (n.d.). *Exchange rate data (USD per domestic currency, EoP, monthly)* [Data set]. IMF Data Explorer. Retrieved on January 22nd, 2025, from: https://data.imf.org/en/Data-Explorer?datasetUrn=IMF.STA:ER(4.0.1)

International Monetary Fund. (n.d.). *Currency composition of official foreign exchange reserves (COFER)* [Data set]. IMF Data Explorer. Retrieved on April 1st, 2025, from: https://data.imf.org/en/Data-Explorer?datasetUrn=IMF.STA:COFER(7.0.0)

International Monetary Fund. (n.d.). *Interest rates* [Data set]. IMF Data Portal. Retrieved on January 22nd, 2025, from: https://www.imf.org/en/Data

Moody's Investors Service (n.d.). *Sovereign ratings*. Retrieved on April 1st, 2025, from: https://www.moodys.com

S&P Global Ratings (n.d.). *Sovereign credit ratings*. Retrieved on April 1st, 2025, from: https://www.spglobal.com/ratings

World Bank (n.d.). *World Development Indicators*. Retrieved on January 22nd, 2025, from: https://databank.worldbank.org/source/world-development-indicators

Appendix A: Tables

Table A0: Variables Incorporated in the CH INDEX

This table summarizes the six variables used to construct the Currency Hierarchy Index (CH INDEX) via Principal Component Analysis (PCA). Each variable captures a distinct aspect of a country's international monetary standing or external financial vulnerability. Where noted, signs are reversed prior to PCA so that higher values consistently indicate a stronger monetary position and lower financial subordination.

Variable Name	Description	Sign Reversed in PCA	Data Source
FXRES	Natural logarithm of the share of global foreign exchange reserves held in a currency; proxy for international monetary dominance	No	International Monetary Fund (Currency Composition of Official Foreign Exchange Reserves)
LCBOND	Share of domestic currency bonds in total public issuance; proxies capacity to issue debt in local currency	No	Bank for International Settlements (Debt Securities Statistics Database)
FXRES_Y	Natural logarithm of foreign exchange reserves relative to GDP; captures external resilience or vulnerability	Yes (only for net importers that do not issue a global reserve currency)	World Bank (World Development Indicators)
RATING	Average sovereign credit rating on a 1–21 scale; measures perceived financial stability	No	Standard & Poor's, Moody's Investors Service, and Fitch Ratings
XRVOL	Annual standard deviation of monthly log changes in USD exchange rate; indicates currency stability	Yes	International Monetary Fund (Exchange Rate Data)
SPECFLOWS	Natural logarithm of absolute value of net errors and omissions in the balance of payments relative to GDP; proxy for speculative capital flows	Yes	World Bank (World Development Indicators)

Table A1. Descriptive Statistics for Variables Included in the CH INDEX.

This table reports descriptive statistics for indicators included in the Currency Hierarchy Index (CH INDEX) before logarithmic transformation and standardisation over the period 1995-2021.

Variable	Obs.	Mean	Min.	25%	Median	75%	Max.	Std. Dev.
FXRES	703	2.730009	0	0	0	0	71.51801	12.35708
LCBOND	703	81.57432	0.0041788	74.02395	87.29404	99.91769	100	21.9849
FXRES_Y	703	10.02541	-43.48183	-12.05163	6.348791	22.69058	146.011	28.48904
RATING	703	15.1944	1.333333	12	14.33333	20.66667	21	4.435254
XRVOL	703	0.0372656	0	0.0181772	0.0292141	0.0472812	0.3061593	0.0317951
SPECFLOWS	703	1.036737	0.0009996	0.2015382	0.5513201	1.276425	11.32562	1.381305

Table A2. Correlation Matrix for Variables Included in the CH INDEX.

This table reports the correlation coefficients between indicators included in the Currency Hierarchy Index (CH INDEX) before logarithmic transformation and standardisation over the period 1995-2021.

Variable	(1)	(2)	(3)	(4)	(5)	(6)
FXRES	1.0000					
LCBOND	0.1843	1.0000				
FXRES_Y	-0.0547	0.3457	1.0000			
RATING	0.2757	0.6033	0.3450	1.0000		
XRVOL	-0.2394	-0.1233	-0.1382	-0.2251	1.0000	
SPECFLOWS	-0.0926	0.0604	0.1910	0.2329	0.0261	1.0000

Table A3. CH INDEX-Scores (Mean of All Observations per Country).

This table presents the average Currency Hierarchy Index (CH INDEX) scores for 33 countries over period 1995–2021, ranked from highest to lowest. The CH INDEX is constructed using Principal Component Analysis (PCA) on six standardised variables: (1) Share of Global FX Reserves, (2) Local Currency Bond Issuance, (3) FX Reserves as a Share of GDP, (4) Sovereign Credit Rating, (5) Exchange Rate Volatility, and (6) Speculative Capital Flows as a Share of GDP. Lower CH INDEX values reflect greater external dependence, while higher scores indicate stronger, more autonomous positions within the global currency hierarchy.

Rank	Country Name	Country Code	Currency Name	Currency Code	CH INDEX
1	United States	USA	US Dollar	USD	98.29527
2	Switzerland	CHE	Swiss Franc	CHF	92.07420
3	United Kingdom	GBR	Pound Sterling	GBP	90.67952
4	Japan	JPN	Yen	JPY	89.70229
5	Singapore	SGP	Singapore Dollar	SGD	84.19611
6	Norway	NOR	Norwegian Krone	NOK	79.56007
7	CH Indexna	CHN	Renminbi	CNY	79.30416
8	Australia	AUS	Australian Dollar	AUD	79.13473
9	Denmark	DNK	Danish Krone	DKK	78.79154
10	Canada	CAN	Canadian Dollar	CAD	76.55415
11	South Korea	KOR	South Korean Won	KRW	73.22629
12	Sweden	SWE	Swedish Krona	SEK	72.53017
13	Malaysia	MYS	Malaysian Ringgit	MYR	70.57988
14	Thailand	THA	Baht	THB	69.47792
15	Saudi Arabia	SAU	Saudi Riyal	SAR	68.08939
16	Czech Republic	CZE	Czech Koruna	CZK	64.95123
17	Chile	CHL	Chilean Peso	CLP	62.21524
18	Israel	ISR	Israeli New Shekel	ILS	56.17404
19	South Africa	ZAF	South African Rand	ZAR	56.02091
20	Russia	RUS	Russian Ruble	RUB	55.09526
21	Indonesia	IDN	Indonesian Rupiah	IDR	54.82608

22	Mexico	MEX	Mexican Peso	MXN	54.65790
23	Peru	PER	Sol	PEN	54.46946
24	India	IND	Indian Rupee	INR	53.43542
25	Poland	POL	Polish Zloty	PLN	52.70448
26	Hungary	HUN	Hungarian Forint	HUF	52.20433
27	Brazil	BRA	Brazilian Real	BRL	51.59373
28	Colombia	COL	Colombian Peso	COP	49.25858
29	Philippines	PHL	Philippine Peso	PHP	45.79537
30	Romania	ROU	Romanian Leu	RON	39.31550
31	Turkey	TUR	Turkish Lira	TRY	39.09708
32	Argentina	ARG	Argentine Peso	ARS	29.33677
33	Croatia	HRV	Croatian Kuna	HRK	27.34865

Table A4. CH INDEX-Scores (Most Recent Observation per Country).

This table presents the most recent Currency Hierarchy Index (CH INDEX) scores for 33 countries, ranked from highest to lowest. The CH INDEX is constructed using Principal Component Analysis (PCA) on six standardised variables: (1) Share of Global FX Reserves, (2) Local Currency Bond Issuance, (3) FX Reserves as a Share of GDP, (4) Sovereign Credit Rating, (5) Exchange Rate Volatility, and (6) Speculative Capital Flows as a Share of GDP. Lower CH INDEX values reflect greater external dependence, while higher scores indicate stronger, more autonomous positions within the global currency hierarchy.

Rank	Country Name	Country Code	Currency Name	Currency Code	CH INDEX
1	United States	USA	US Dollar	USD	98.17562
2	Switzerland	CHE	Swiss Franc	CHF	96.23472
3	Australia	AUS	Australian Dollar	AUD	89.96426
4	Japan	JPN	Yen	JPY	89.76174
5	Canada	CAN	Canadian Dollar	CAD	89.24920
6	United Kingdom	GBR	Pound Sterling	GBP	89.09113
7	CH Indexna	CHN	Renminbi	CNY	86.18196
8	Singapore	SGP	Singapore Dollar	SGD	84.31730
9	Denmark	DNK	Danish Krone	DKK	81.77184
10	Norway	NOR	Norwegian Krone	NOK	80.41051
11	South Korea	KOR	South Korean Won	KRW	76.88034
12	Sweden	SWE	Swedish Krona	SEK	75.92871
13	Czech Republic	CZE	Czech Koruna	CZK	75.17353
14	Malaysia	MYS	Malaysian Ringgit	MYR	73.32393
15	Thailand	THA	Baht	THB	70.71230
16	Saudi Arabia	SAU	Saudi Riyal	SAR	67.32561
17	Indonesia	IDN	Indonesian Rupiah	IDR	61.47664
18	Brazil	BRA	Brazilian Real	BRL	61.00267
19	Russia	RUS	Russian Ruble	RUB	58.82734
20	Israel	ISR	Israeli New Shekel	ILS	58.68773
21	South Africa	ZAF	South African Rand	ZAR	57.15963

22	Chile	CHL	Chilean Peso	CLP	55.36888
23	Peru	PER	Sol	PEN	54.93270
24	India	IND	Indian Rupee	INR	54.40425
25	Poland	POL	Polish Zloty	PLN	53.67755
26	Mexico	MEX	Mexican Peso	MXN	52.73050
27	Hungary	HUN	Hungarian Forint	HUF	50.66885
28	Philippines	PHL	Philippine Peso	PHP	50.59723
29	Colombia	COL	Colombian Peso	COP	46.38582
30	Romania	ROU	Romanian Leu	RON	39.91067
31	Croatia	HRV	Croatian Kuna	HRK	29.53628
32	Argentina	ARG	Argentine Peso	ARS	27.27392
33	Turkey	TUR	Turkish Lira	TRY	16.03450

Table A5. Covariates: definitions and sources

Variable Name	**definition**	**Data Source**
Nominal Policy Rate	Yearly average of monthly central bank interest rates; captures the full-year stance of monetary policy	International Monetary Fund (Interest Rates dataset); Bank for International Settlements (Central Bank Policy Rates database)
Currency Hierarchy Index (CH INDEX)	Composite index based on Principal Component Analysis (PCA); reflects a country's position in the international monetary system	Various sources (as described in Table 1)
Crisis Dummy	Binary variable for years with negative real GDP growth; identifies economic crises	World Bank (World Development Indicators)
Lagged Inflation	Annual percentage change in consumer prices, lagged by one year; reflects price stability	World Bank (World Development Indicators)
Lagged Real GDP Growth	Annual percentage change in real GDP, lagged by one year; indicates overall economic activity	World Bank (World Development Indicators)
Lagged Unemployment	Percentage of the labour force unemployed, lagged by one year; captures labour market conditions	World Bank (World Development Indicators)
Exchange Rate Regime Dummies	Categorizes exchange rate regimes; distinguishes between hard pegs, crawling pegs, managed floats, freely floating regimes, freely falling currencies, and dual markets	Ilzetzki, Reinhart, & Rogoff (2019; 2022)
Capital Account Openness (KAOPEN)	Normalised index of de jure capital account openness; reflects formal financial liberalisation	CH Indexnn & Ito (2006)

Table A6. Distribution of Observations by Exchange Rate Regime, 1995-2019.

This table shows the distribution of country-year observations across different exchange rate regime classifications following Ilzetzki, Reinhart, & Rogoff (2019; 2022) over the period 1995–2019. Outliers were removed.

Exchange Rate Regime	Frequency	Percentage (%)	Cumulative (%)
(1) Hard Peg	84	13.42	13.42
(2) Crawling Peg	120	19.17	32.59
(3) Managed Floating	297	47.44	80.03
(4) Freely Floating	118	18.85	98.88
(5) Freely Falling	7	1.12	100.00
(6) Dual Market	0	0.00	100.00
Total	626	100.00	

Table A7. Distribution of Observations by Year, 1995-2019.

This table shows the distribution of country-year observations across years over the period 1995-2019. Outliers were removed.

Year	Frequency	Percentage (%)	Cumulative (%)
(1) 1995	9	1.44	1.44
(2) 1996	12	1.92	3.35
(3) 1997	14	2.24	5.59
(4) 1998	16	2.56	8.15
(5) 1999	18	2.88	11.02
(6) 2000	19	3.04	14.06
(7) 2001	19	3.04	17.09
(8) 2002	22	3.51	20.61
(9) 2003	22	3.51	24.12
(10) 2004	24	3.83	27.96
(11) 2005	26	4.15	32.11
(12) 2006	27	4.31	36.42
(13) 2007	27	4.31	40.73
(14) 2008	29	4.63	45.37
(15) 2009	29	4.63	50.00
(16) 2010	29	4.63	54.63
(17) 2011	31	4.95	59.58
(18) 2012	32	5.11	64.70
(19) 2013	32	5.11	69.81
(20) 2014	31	4.95	74.76
(21) 2015	30	4.79	79.55
(22) 2016	32	5.11	84.66
(23) 2017	32	5.11	89.78
(24) 2018	33	5.27	95.05
(25) 2019	31	4.95	100.00
Total	626	100.00	

Table A8. Distribution of Observations by Country (Model 1 & 2 | 1995–2019).

This table shows the distribution of country-year observations across countries over the period 1995-2019. Outliers have been removed.

Year	Frequency	Percentage (%)	Cumulative (%)
(1) Argentina	22	3.51	3.51
(2) Australia	25	3.99	7.51
(3) Brazil	23	3.67	11.18
(4) Canada	25	3.99	15.18
(5) CH Indexle	9	1.44	16.61
(6) CH Indexna	9	1.44	18.05
(7) Colombia	24	3.83	21.88
(8) Croatia	24	3.83	25.72
(9) Czech Republic	18	2.88	28.59
(10) Denmark	21	3.35	31.95
(11) Hungary	23	3.67	35.62
(12) India	25	3.99	39.62
(13) Indonesia	14	2.24	41.85
(14) Israel	25	3.99	45.85
(15) Japan	5	0.80	46.65
(16) Malaysia	24	3.83	50.48
(17) Mexico	15	2.40	52.88
(18) Norway	15	2.40	55.27
(19) Peru	13	2.08	57.35
(20) Philippines	25	3.99	61.34
(21) Poland	18	2.88	64.22
(22) Romania	12	1.92	66.13
(23) Russia	16	2.56	68.69
(24) Saudi Arabia	4	0.64	69.33
(25) Singapore	25	3.99	73.32
(26) South Africa	25	3.99	77.32
(27) South Korea	18	2.88	80.19
(28) Sweden	22	3.51	83.71
(29) Switzerland	21	3.35	87.06
(30) Thailand	19	3.04	90.10
(31) Turkey	15	2.40	92.49
(32) United Kingdom	22	3.51	96.01
(33) United States	25	3.99	100.00
Total	626	100.00	

Table A9a. Descriptive Statistics (Model 1 & 2 | 1995-2019).

This table reports descriptive statistics for variables included in Model (1) and Model (2) over the period 1995-2019. Outliers have been removed.

Variable	Obs.	Mean	Min.	25%	Median	75%	Max.	Std. Dev.
(1) Policy Rate	626	5.159936	-0.75	1.5	4	6.75	67.88182	5.836228
(2) Lagged Inflation	626	3.992985	-1.836558	1.532134	2.786658	5.134204	30.5552	4.277572
(3) Lagged Real GDP Growth	626	3.499714	-10.89448	1.901194	3.323161	5.199969	14.51975	2.947601
(4) Lagged Unemployment	626	7.38789	0.249	4.109	6.2565	8.72	27.035	4.794731
(5) CH INDEX	626	63.41429	0	51.40327	61.08221	76.14693	100	18.65616
(6) Crisis Dummy	626	0.0894569	0	0	0	0	1	0.2856303
(7) KAOPEN	626	0.6721446	0	0.4172374	0.7008403	1	1	0.3270357

Table A9. Correlation Matrix (Model 1 & 2 | 1995-2019).

This table reports the correlation coefficients between variables included in Model (1) and Model (2) over the period 1995-2019. Outliers have been removed.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Policy Rate	1.000												
(2) Lagged Inflation	0.609	1.000											
(3) Lagged Real GDP Growth	0.093	0.040	1.000										
(4) Lagged Unemployment	0.294	0.245	-0.152	1.000									
(5) CHI	-0.480	-0.447	-0.092	-0.418	1.000								
(6) Crisis Dummy	0.122	0.146	-0.199	0.028	-0.151	1.000							
(7) CHI * Crisis Dummy	-0.016	0.063	-0.158	-0.048	0.017	0.911	1.000						
(8) Hard Peg Dummy	-0.155	-0.193	-0.077	0.016	-0.060	0.107	0.045	1.000					
(9) Crawling Peg Dummy	0.118	0.240	0.151	-0.072	-0.338	-0.039	-0.069	-0.192	1.000				
(10) Managed Floating Dummy	-0.045	-0.044	0.036	-0.113	0.071	-0.029	0.030	-0.374	-0.463	1.000			
(11) Freely Floating Dummy	-0.051	-0.074	-0.125	0.198	0.352	-0.065	-0.025	-0.190	-0.235	-0.458	1.000		
(12) Freely Falling Dummy	0.466	0.209	-0.020	0.014	-0.184	0.180	0.066	-0.042	-0.052	-0.101	-0.051	1.000	
(13) KAOPEN	-0.487	-0.499	-0.220	-0.344	0.491	0.023	0.080	0.080	-0.113	-0.045	0.120	-0.071	1.000

Table A10: Mean Difference T-Tests of Policy Rates Across CH INDEX Terciles.

This table reports summary statistics for nominal policy rates across countries grouped into terciles based on their average Currency Hierarchy Index (CH INDEX) over the period 1995–2019. Pairwise mean-difference t-tests (low vs. middle, low vs. high, and middle vs. high) are conducted to assess whether average policy rates differ significantly across the CH INDEX distribution.

*** p<0.01, ** p<0.05, * p<0.1

	Obs.	Mean	Std. Error	Std. Dev.	[95% conf. interval]
Low	224	8.062636	0.526212	7.875619	[7.025652, 9.09962]
Mid	191	4.936069	0.2869855	3.966218	[4.369983, 5.502156]
High	211	2.281043	0.1362234	1.97876	[2.012502, 2.549583]

	Low vs. Mid	Low vs. High	Mid vs. High
One-sided test P(T < t)	1.0000	1.0000	1.0000
Two-sided test P (|T| > t)	0.0000***	0.0000***	0.0000***
One-sided test P(T > t)	0.0000***	0.0000***	0.0000***

Table A11. Regression Results (Model 3 & 4 | 1995–2021).

This table reports the estimated coefficients for Model (3) and Model (4) over the period 1995-2021. Compared to Model (1) and Model (2), these models exclude exchange rate regime dummies to extend the analysis through 2021. Both models are estimated using panel regressions, with standard errors clustered at the country level.

3) $$PolicyRate_{i,t} = \beta_0 + \beta_1 InflationRate_{i,t-1} + \beta_2 GDPGrowthRate_{i,t-1} + \beta_3 UnemploymentRate_{i,t-1} + \beta_4 CHI_{i,t} + + \beta_5 KAOPEN_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t}$$

4) $$PolicyRate_{i,t} = \beta_0 + \beta_1 InflationRate_{i,t-1} + \beta_2 GDPGrowthRate_{i,t-1} + \beta_3 UnemploymentRate_{i,t-1} + \beta_4 CHI_{i,t} + \beta_5 CrisisDummy_{i,t} + \beta_6 CrisisDummy_{i,t} * CHI_{it} + \beta_7 KAOPEN_{i,t} + \mu_i + \varepsilon_{i,t}$$

Nominal Policy Rate	(3)	(3)	(4)	(4)
Lagged Inflation	0.512***	0.494***	0.530***	0.517***
	(0.109)	(0.0446)	(0.0924)	(0.0357)
Lagged Real GDP Growth	0.115	-0.0772	0.130**	-0.0288
	(0.0733)	(0.0772)	(0.0536)	(0.0537)
Lagged Unemployment	-0.0301	-0.217	-0.0311	-0.181
	(0.122)	(0.131)	(0.110)	(0.110)
CH INDEX	-0.299***	-0.240**	-0.276***	-0.210**
	(0.107)	(0.117)	(0.0807)	(0.0824)
Crisis Dummy			6.126	7.225
			(4.613)	(4.647)
CH INDEX * Crisis Dummy			-0.106	-0.0920
			(0.0649)	(0.0607)
KAOPEN	-4.183**	-2.917**	-4.313**	-3.130**
	(1.590)	(1.266)	(1.655)	(1.323)
Constant	24.61***	25.51***	23.14***	22.72***
	(7.989)	(7.565)	(5.966)	(4.514)
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	No	Yes	No	Yes
Observations	691	691	691	691
Number of Countries	33	33	33	33
R-squared	0.335	0.450	0.359	0.476

Note: the table reports the estimation of equation 1 in OLS with country fixed effects and with clustered standard errors. Hausman test and heteroskedasticity and autocorrelation test results are available on request. Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Table A12. Regression Results (Model 5 & 6 | 1995–2021).

This table reports the estimated coefficients for Model (5) and Model (6) over the periods 1995-2019 and 1995-2021. Compared to Model (2) and Model (4), these models interact the Currency Hierarchy Index (CH INDEX) directly with GDP growth, rather than with a crisis dummy. Both models are estimated using panel regressions, with standard errors clustered at the country level.

5) $$PolicyRate_{i,t} = \beta_0 + \beta_1 InflationRate_{i,t-1} + \beta_2 GDPGrowthRate_{i,t-1} + \beta_3 UnemploymentRate_{i,t-1} + \beta_4 CHI_{i,t} + \beta_5 GDPGrowthRate_{i,t-1} * CHI_{i,t} + \beta_6 KAOPEN_{i,t} + \theta ExchangeRateRegime_{i,t} + \mu_i + \varepsilon_{i,t}$$

6) $$PolicyRate_{i,t} = \beta_0 + \beta_1 InflationRate_{i,t-1} + \beta_2 GDPGrowthRate_{i,t-1} + \beta_3 UnemploymentRate_{i,t-1} + \beta_4 CHI_{i,t} + \beta_5 GDPGrowthRate_{i,t-1} * CHI_{i,t} + \beta_6 KAOPEN_{i,t} + \mu_i + \varepsilon_{i,t}$$

Nominal Policy Rate	(5)	(5)	(6)	(6)
Lagged Inflation	0.415*	0.337**	0.515***	0.493***
	(0.206)	(0.129)	(0.116)	(0.0406)
Lagged Real GDP Growth	0.166***	-0.0203	0.112	-0.0556
	(0.0386)	(0.0566)	(0.0725)	(0.0745)
Lagged Unemployment	0.0111	-0.193*	-0.0578	-0.211
	(0.104)	(0.108)	(0.125)	(0.126)
CH INDEX	-0.240***	-0.133**	-0.307***	-0.231*
	(0.0562)	(0.0547)	(0.106)	(0.114)
CH INDEX * Real GDP Growth	0.00215**	-0.00107	0.00181**	-0.00188*
	(0.000971)	(0.000976)	(0.000839)	(0.000995)
KAOPEN	-6.365***	-5.110***	-4.086**	-2.922**
	(2.165)	(1.619)	(1.630)	(1.257)
Hard Peg Dummy	2.252	-0.597		
	(1.830)	(1.617)		
Crawling Peg Dummy	0.633	-1.444		
	(1.635)	(1.104)		
Managed Floating Dummy	1.035	-0.549		
	(1.658)	(1.008)		
Freely Falling Dummy	19.70**	18.51*		
	(9.577)	(9.414)		
Constant	20.74***	21.80***	24.92***	25.26***
	(5.416)	(4.506)	(8.099)	(7.333)
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	No	Yes	No	Yes
Observations	626	626	691	691
Number of Countries	33	33	33	33

R-squared	0.460	0.578	0.340	0.453

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A13. Regression Results (Model 7 & 8 | 1995–2019).

This table reports the estimated coefficients for Model (7) and Model (8) over the period 1995-2019. Compared to Model (1) and Model (2), these models introduce the VIX (CH Indexcago Board Options Exchange Volatility Index) as an additional control to account for global fluctuations in risk sentiment. Both models are estimated using panel regressions, with standard errors clustered at the country level.

$$7)\ PolicyRate_{i,t} = \beta_0 + \beta_1 InflationRate_{i,t-1} + \beta_2 GDPGrowthRate_{i,t-1} + \beta_3 UnemploymentRate_{i,t-1} + \beta_4 CHI_{i,t} + + \beta_5 KAOPEN_{i,t} + \beta_6 VIX_t + \theta ExchangeRateRegime_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t}$$

$$8)\ PolicyRate_{i,t} = \beta_0 + \beta_1 InflationRate_{i,t-1} + \beta_2 GDPGrowthRate_{i,t-1} + \beta_3 UnemploymentRate_{i,t-1} + \beta_4 CHI_{i,t} + \beta_5 CrisisDummy_{i,t} + \beta_6 CrisisDummy_{i,t} * CHI_{i,t} + \beta_7 KAOPEN_{i,t} + \beta_8 VIX_t + \theta ExchangeRateRegime_{i,t} + \mu_i + \varepsilon_{i,t}$$

Nominal Policy Rate	(7)	(7)	(8)	(8)
Lagged Inflation	0.402*	0.339**	0.405**	0.338***
	(0.201)	(0.131)	(0.194)	(0.120)
Lagged Real GDP Growth	0.187***	-0.0341	0.217***	0.00770
	(0.0458)	(0.0571)	(0.0352)	(0.0396)
Lagged Unemployment	0.0346	-0.197*	0.0437	-0.176*
	(0.0988)	(0.111)	(0.100)	(0.0967)
CH INDEX	-0.226***	-0.139**	-0.202***	-0.110**
	(0.0515)	(0.0532)	(0.0469)	(0.0456)
Crisis Dummy			6.200**	7.337**
			(2.637)	(2.799)
CH INDEX * Crisis Dummy			-0.107**	-0.110**
			(0.0391)	(0.0431)
KAOPEN	-6.455***	-5.130***	-6.604***	-5.369***
	(2.079)	(1.640)	(2.065)	(1.598)
VIX	0.00298	-1.796***	0.0186	-1.703***
	(0.0269)	(0.471)	(0.0315)	(0.511)
Hard Peg Dummy	2.141	-0.563	1.804	-0.809
	(1.875)	(1.601)	(1.899)	(1.599)
Crawling Peg Dummy	0.732	-1.484	0.711	-1.407
	(1.686)	(1.123)	(1.649)	(1.080)
Managed Floating Dummy	1.045	-0.573	0.925	-0.644
	(1.716)	(1.017)	(1.720)	(1.002)
Freely Falling Dummy	19.60*	18.57*	18.52**	17.21*
	(9.709)	(9.391)	(8.890)	(8.492)
Constant	20.09***	44.28***	18.31***	40.86***
	(4.659)	(7.158)	(3.878)	(7.530)

Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	No	Yes	No	Yes
Observations	626	626	626	626
Number of Countries	33	33	33	33
R-squared	0.455	0.578	0.474	0.599

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A14. Descriptive Statistics for Variables Included in the SCH INDEX.

This table reports descriptive statistics for indicators included in the Simplified Currency Hierarchy Index (SCH INDEX) before logarithmic transformation and standardisation over the period 1995-2021.

Variable	Obs.	Mean	Min.	25%	Median	75%	Max.	Std. Dev.
(1) Share of Global FX Reserves	1,151	1.723727	0	0	0	0	71.51801	9.74995
(2) FX Reserves as Share of GDP	1,151	5.747364	-43.48183	-13.87963	4.35239	17.05482	146.011	26.66295
(3) Sovereign Credit Rating	1,151	13.67101	1.333333	10	13.33333	17.5	21	4.888533
(4) Exchange Rate Volatility	1,151	0.035271 3	0	0.014162	0.026162 4	0.045265 7	0.491947 2	0.038542 7
(5) Speculative Capital Flows as Share of GDP	1,151	1.400019	0.000000	0.266329 3	0.695017 9	1.675736	53.29881	2.674431

Table A15. Correlation Matrix for Variables Included in the SCH INDEX.

This table reports the correlation coefficients between indicators included in the Simplified Currency Hierarchy Index (SCH INDEX) before logarithmic transformation and standardisation over the period 1995-2021.

Variable	(1)	(2)	(3)	(4)	(5)
(1) Share of Global FX Reserves	1.0000				
(2) FX Reserves as Share of GDP	-0.0167	1.0000			
(3) Sovereign Credit Rating	0.2539	0.3855	1.0000		
(4) Exchange Rate Volatility	-0.1438	-0.1014	-0.0870	1.0000	
(5) Speculative Capital Flows as Share of GDP	-0.0624	0.0961	0.0008	0.0937	1.0000

Table A16. SCH INDEX-Scores (Mean of All Observations per Country).

This table presents the average Simplified Currency Hierarchy Index (SCH INDEX) scores for 54 countries over the period 1995–2021, ranked from highest to lowest. The SCH INDEX is constructed using Principal Component Analysis (PCA) on five standardised variables: (1) Share of Global FX Reserves, (2) FX Reserves as a Share of GDP, (3) Sovereign Credit Rating, (4) Exchange Rate Volatility, and (5) Speculative Capital Flows as a Share of GDP. Lower SCH INDEX values reflect greater external dependence, while higher scores indicate stronger, more autonomous positions within the global currency hierarchy.

Rank	Country Name	Country Code	Currency Name	Currency Code	SCH INDEX
1	United States	USA	US Dollar	USD	98.09725
2	Japan	JPN	Yen	JPY	88.15225
3	United Kingdom	GBR	Pound Sterling	GBP	87.94173
4	Switzerland	CHE	Swiss Franc	CHF	85.53582
5	Singapore	SGP	Singapore Dollar	SGD	73.41515
6	Canada	CAN	Canadian Dollar	CAD	73.05740
7	Australia	AUS	Australian Dollar	AUD	72.49716
8	Denmark	DNK	Danish Krone	DKK	67.57073
9	Norway	NOR	Norwegian Krone	NOK	67.43335
10	Saudi Arabia	SAU	Saudi Riyal	SAR	64.97326
11	Sweden	SWE	Swedish Krona	SEK	64.92861
12	CH Indexna	CHN	Renminbi	CNY	64.40389
13	South Korea	KOR	South Korean Won	KRW	62.38479
14	Malaysia	MYS	Malaysian Ringgit	MYR	58.76063
15	New Zealand	NZL	New Zealand Dollar	NZD	58.28373
16	Thailand	THA	Baht	THB	57.70619
17	Peru	PER	Sol	PEN	54.34082
18	CH Indexle	CHL	CH Indexlean Peso	CLP	53.33588
19	Czech Republic	CZE	Czech Koruna	CZK	53.23220
20	Azerbaijan	AZR	Azerbaijani Manat	AZN	51.39500
21	Russia	RUS	Russian Ruble	RUB	49.09318

22	Iceland	ISL	Icelandic Króna	ISK	47.47722
23	Indonesia	IDN	Indonesian Rupiah	IDR	47.43571
24	Vietnam	VNM	Vietnamese Dong	VND	46.27520
25	Israel	ISR	Israeli New Shekel	ILS	45.80251
26	South Africa	ZAF	South African Rand	ZAR	45.15475
27	Hungary	HUN	Hungarian Forint	HUF	44.91877
28	Colombia	COL	Colombian Peso	COP	44.36705
29	Brazil	BRA	Brazilian Real	BRL	43.56603
30	Mexico	MEX	Mexican Peso	MXN	43.42354
31	Bahamas	BHS	Bahamian Dollar	BSD	43.39996
32	Suriname	SUR	Surinamese Dollar	SRD	43.27868
33	Papua New Guinea	PNG	Kina	PGK	43.07708
34	Poland	POL	Polish Zloty	PLN	42.39508
35	Nigeria	NGA	Naira	NGN	40.06857
36	India	IND	Indian Rupee	INR	39.07047
37	Morocco	MAR	Moroccan Dirham	MAD	36.84879
38	Costa Rica	CRI	Costa Rican Colón	CRC	36.28704
39	Philippines	PHL	Philippine Peso	PHP	36.14032
40	Bangladesh	BGD	Taka	BDT	35.98814
41	Argentina	ARG	Argentine Peso	ARS	35.75954
42	Ghana	GHA	Ghanaian Cedi	GHS	35.31903
43	Croatia	HRV	Croatian Kuna	HRK	35.05443
44	North Macedonia	MKD	Macedonian Denar	MKD	34.88470
45	Romania	ROU	Romanian Leu	RON	33.94415
46	Belize	BLZ	Belize Dollar	BZD	33.28411
47	Kenya	KEN	Kenyan Shilling	KES	32.65393
48	Armenia	ARM	Armenian Dram	AMD	32.30873
49	Turkey	TUR	Turkish Lira	TRY	29.99275
50	Albania	ALB	Albanian Lek	ALL	29.78725
51	Jamaica	JAM	Jamaican Dollar	JMD	29.25507

52	Belarus	BLR	Belarusian Ruble	BYN	28.27644
53	Kyrgyz	KGZ	Kyrgyzstani Som	KGS	27.64185
54	Moldova	MDA	Moldovan Leu	MDL	25.64694

Table A17. SCH INDEX-Scores (Most Recent Observation per Country).

This table presents the most recent Simplified Currency Hierarchy Index (SCH INDEX) scores for 54 countries, ranked from highest to lowest. The SCH INDEX is constructed using Principal Component Analysis (PCA) on five standardised variables: (1) Share of Global FX Reserves, (2) FX Reserves as a Share of GDP, (3) Sovereign Credit Rating, (4) Exchange Rate Volatility, and (5) Speculative Capital Flows as a Share of GDP. Lower SCH INDEX values reflect greater external dependence, while higher scores indicate stronger, more autonomous positions within the global currency hierarchy.

Rank	Country Name	Country Code	Currency Name	Currency Code	SCH INDEX
1	United States	USA	US Dollar	USD	98.59026
2	Switzerland	CHE	Swiss Franc	CHF	89.72106
3	Canada	CAN	Canadian Dollar	CAD	89.43474
4	United Kingdom	GBR	Pound Sterling	GBP	87.87665
5	Australia	AUS	Australian Dollar	AUD	87.47141
6	Japan	JPN	Yen	JPY	87.41095
7	CH Indexna	CHN	Renminbi	CNY	81.86703
8	Singapore	SGP	Singapore Dollar	SGD	75.39020
9	Norway	NOR	Norwegian Krone	NOK	69.63447
10	Denmark	DNK	Danish Krone	DKK	69.40940
11	Sweden	SWE	Swedish Krona	SEK	67.53491
12	Czech Republic	CZE	Czech Koruna	CZK	66.91435
13	South Korea	KOR	South Korean Won	KRW	66.14372
14	Saudi Arabia	SAU	Saudi Riyal	SAR	65.59789
15	Malaysia	MYS	Malaysian Ringgit	MYR	60.36304
16	Thailand	THA	Baht	THB	57.56936
17	Russia	RUS	Russian Ruble	RUB	57.45692
18	New Zealand	NZL	New Zealand Dollar	NZD	56.68834
19	Indonesia	IDN	Indonesian Rupiah	IDR	55.39382
20	Peru	PER	Sol	PEN	55.05917
21	CH Indexle	CHL	CH Indexlean Peso	CLP	53.74074

22	Azerbaijan	AZR	Azerbaijani Manat	AZN	52.73515
23	Vietnam	VNM	Vietnamese Dong	VND	52.59649
24	Brazil	BRA	Brazilian Real	BRL	49.98178
25	South Africa	ZAF	South African Rand	ZAR	46.88272
26	Israel	ISR	Israeli New Shekel	ILS	46.85994
27	Iceland	ISL	Icelandic Króna	ISK	45.45222
28	Poland	POL	Polish Zloty	PLN	44.07262
29	Papua New Guinea	PNG	Kina	PGK	44.04705
30	Ghana	GHA	Ghanaian Cedi	GHS	43.67948
31	Mexico	MEX	Mexican Peso	MXN	42.92517
32	Philippines	PHL	Philippine Peso	PHP	40.99770
33	India	IND	Indian Rupee	INR	40.62492
34	Hungary	HUN	Hungarian Forint	HUF	38.60213
35	Romania	ROU	Romanian Leu	RON	38.52277
36	Colombia	COL	Colombian Peso	COP	37.79235
37	Bangladesh	BGD	Taka	BDT	37.35984
38	Morocco	MAR	Moroccan Dirham	MAD	36.98015
39	Costa Rica	CRI	Costa Rican Colón	CRC	36.86145
40	North Macedonia	MKD	Macedonian Denar	MKD	35.83897
41	Croatia	HRV	Croatian Kuna	HRK	33.36816
42	Bahamas	BHS	Bahamian Dollar	BSD	32.95423
43	Kenya	KEN	Kenyan Shilling	KES	32.21026
44	Belarus	BLR	Belarusian Ruble	BYN	30.71574
45	Armenia	ARM	Armenian Dram	AMD	30.54653
46	Albania	ALB	Albanian Lek	ALL	30.43239
47	Argentina	ARG	Argentine Peso	ARS	29.92520
48	Nigeria	NGA	Naira	NGN	29.74465
49	Jamaica	JAM	Jamaican Dollar	JMD	29.70055
50	Belize	BLZ	Belize Dollar	BZD	29.48420
51	Kyrgyz	KGZ	Kyrgyzstani Som	KGS	27.33201

52	Suriname	SUR	Surinamese Dollar	SRD	26.52090
53	Moldova	MDA	Moldovan Leu	MDL	26.15131
54	Turkey	TUR	Turkish Lira	TRY	19.49173

Table A18. Distribution of Observations by Exchange Rate Regime (Model 1 & 2 | 1995–2019 | SCH INDEX).

This table shows the distribution of country-year observations across different exchange rate regime classifications following Ilzetzki, Reinhart, & Rogoff (2019; 2022) for the Simplified Currency Hierarchy (SCH INDEX) sample over the period 1995–2019. Outliers have been removed.

Exchange Rate Regime	Frequency	Percentage (%)	Cumulative (%)
(1) Hard Peg	222	21.89	21.89
(2) Crawling Peg	225	22.19	44.08
(3) Managed Floating	405	39.94	84.02
(4) Freely Floating	130	12.82	96.84
(5) Freely Falling	27	2.66	99.51
(6) Dual Market	5	0.49	100.00
Total	1,014	100.00	

Table A19. Distribution of Observations by Year (Model 1 & 2 | 1995–2019 | SCH INDEX).

This table shows the distribution of country-year observations across years for the Simplified Currency Hierarchy (SCH INDEX) sample over the period 1995–2019. Outliers have been removed.

Year	Frequency	Percentage (%)	Cumulative (%)
(1) 1995	16	1.58	1.58
(2) 1996	23	2.27	3.85
(3) 1997	29	2.86	6.71
(4) 1998	28	2.76	9.47
(5) 1999	29	2.86	12.33
(6) 2000	31	3.06	15.38
(7) 2001	33	3.25	18.64
(8) 2002	33	3.25	21.89
(9) 2003	37	3.65	25.54
(10) 2004	39	3.85	29.39
(11) 2005	39	3.85	33.23
(12) 2006	42	4.14	37.38
(13) 2007	45	4.44	41.81
(14) 2008	47	4.64	46.45
(15) 2009	45	4.44	50.89
(16) 2010	49	4.83	55.72
(17) 2011	48	4.73	60.45
(18) 2012	49	4.83	65.29
(19) 2013	49	4.83	70.12
(20) 2014	47	4.64	74.75
(21) 2015	52	5.13	79.88
(22) 2016	51	5.03	84.91
(23) 2017	52	5.13	90.04
(24) 2018	51	5.03	95.07
(25) 2019	50	4.93	100.00

Total	1,014	100.00

Table A20. Distribution of Observations by Country (Model 1 & 2 | 1995–2019 | SCH INDEX).

This table shows the distribution of country-year observations across countries for the Simplified Currency Hierarchy (SCH INDEX) sample over the period 1995–2019. Outliers have been removed.

Year	Frequency	Percentage (%)	Cumulative (%)
(1) Albania	7	0.69	0.69
(2) Argentina	25	2.47	3.16
(3) Armenia	6	0.59	3.75
(4) Australia	25	2.47	6.21
(5) Azerbaijan	16	1.58	7.79
(6) Bahamas	8	0.79	8.58
(7) Bangladesh	10	0.99	9.57
(8) Belarus	10	0.99	10.55
(9) Belize	25	2.47	13.02
(10) Brazil	23	2.27	15.29
(11) Canada	25	2.47	17.75
(12) CH Indexle	23	2.27	20.02
(13) CH Indexna	23	2.27	22.29
(14) Colombia	24	2.37	24.65
(15) Costa Rica	12	1.18	25.84
(16) Croatia	24	2.37	28.21
(17) Czech Republic	24	2.37	30.57
(18) Denmark	25	2.47	33.04
(19) Ghana	8	0.79	33.83
(20) Hungary	23	2.27	36.09
(21) Iceland	17	1.68	37.77
(22) India	25	2.47	40.24
(23) Indonesia	20	1.97	42.21
(24) Israel	25	2.47	44.67
(25) Jamaica	17	1.68	46.35
(26) Japan	16	1.58	47.93
(27) Kenya	7	0.69	48.62
(28) Kyrgyz	4	0.39	49.01
(29) Malaysia	24	2.37	51.38
(30) Mexico	21	2.07	53.45
(31) Moldova	9	0.89	54.34
(32) Morocco	16	1.58	55.92
(33) New Zealand	20	1.97	57.89
(34) Nigeria	11	1.08	58.97
(35) North Macedonia	16	1.58	60.55
(36) Norway	25	2.47	63.02
(37) Papua New Guinea	17	1.68	64.69
(38) Peru	16	1.58	66.27
(39) Philippines	25	2.47	68.74
(40) Poland	25	2.47	71.20
(41) Romania	20	1.97	73.18
(42) Russia	22	2.17	75.35
(43) Saudi Arabia	20	1.97	77.32
(44) Singapore	25	2.47	79.78

(45) South Africa	25	2.47	82.25
(46) South Korea	20	1.97	84.22
(47) Suriname	12	1.18	85.40
(48) Sweden	25	2.47	87.87
(49) Switzerland	24	2.37	90.24
(50) Thailand	19	1.87	92.11
(51) Turkey	18	1.78	93.89
(52) United Kingdom	25	2.47	96.35
(53) United States	25	2.47	98.82
(54) Vietnam	12	1.18	100.00
Total	1,014	100.00	

Table A21. Descriptive Statistics (Model 1 & 2 | 1995–2019 | SCH INDEX).

This table reports descriptive statistics for variables included in Model (1) and Model (2) over the period 1995-2019 using the Simplified Currency Hierarchy Index (SCH INDEX). Outliers have been removed.

Variable	Obs.	Mean	Min.	25%	Median	75%	Max.	Std. Dev.
(1) Policy Rate	1,014	6.62943	-0.75	2.25	5	8.25	67.88182	7.337582
(2) Lagged Inflation	1,014	5.110063	-7.113768	1.570531	3.005823	6.226141	59.21973	7.06081
(3) Lagged Real GDP Growth	1,014	3.709998	-13.12673	1.884493	3.659199	5.500952	34.5	3.474995
(4) Lagged Unemployment	1,014	7.443821	0.249	4.078	6.1645	8.941	37.32	5.293564
(5) SCH INDEX	1,014	52.39289	0	38.63131	48.43434	63.94946	100	17.95158
(6) Crisis Dummy	1,014	0.0996055	0	0	0	0	1	0.2996211
(7) KAOPEN	1,014	0.6003945	0	0.25	0.7	1	1	0.3457841

Table A22. Correlation Matrix (Model 1 & 2 | 1995-2019 | SCHI).

This table reports the correlation coefficients between variables included in Model (1) and Model (2) over the period 1995-2019 using the Simplified Currency Hierarchy Index (SCHI). Outliers have been removed.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Policy Rate	1.000													
(2) Lagged Inflation	0.681	1.000												
(3) Lagged Real GDP Growth	0.022	-0.059	1.000											
(4) Lagged Unemployment	0.123	0.036	-0.114	1.000										
(5) SCHI	-0.489	-0.369	-0.087	-0.297	1.000									
(6) Crisis Dummy	0.175	0.133	-0.211	0.003	-0.090	1.000								
(7) SCHI * Crisis Dummy	0.018	0.042	-0.190	-0.039	0.053	0.918	1.000							
(8) Hard Peg Dummy	-0.115	-0.180	0.076	0.205	-0.114	0.031	0.012	1.000						
(9) Crawling Peg Dummy	0.097	0.167	0.075	-0.122	-0.293	-0.035	-0.063	-0.283	1.000					
(10) Managed Floating Dummy	-0.103	-0.082	-0.012	-0.134	0.118	-0.056	-0.012	-0.432	-0.436	1.000				
(11) Freely Floating Dummy	-0.119	-0.094	-0.123	0.107	0.444	-0.029	0.033	-0.203	-0.205	-0.313	1.000			
(12) Freely Falling Dummy	0.577	0.430	-0.059	-0.021	-0.226	0.252	0.111	-0.088	-0.088	-0.135	-0.063	1.000		
(13) Dual Market Dummy	0.064	0.102	-0.085	-0.021	-0.013	-0.023	-0.022	0.037	-0.038	-0.057	-0.027	-0.012	1.000	
(14) KAOPEN	-0.446	-0.345	-0.185	-0.227	0.563	-0.017	0.057	-0.138	-0.110	0.133	0.185	-0.136	-0.030	1.000

Table A23. Mean Difference T-Tests of Policy Rates Across SCH INDEX Terciles.

This table reports summary statistics for nominal policy rates across countries grouped into terciles based on their average Simplified Currency Hierarchy Index (SCH INDEX) over the period 1995–2019. Pairwise mean-difference t-tests (low vs. middle, low vs. high, and middle vs. high) are conducted to assess whether average policy rates differ significantly across the SCH INDEX distribution.

*** p<0.01, ** p<0.05, * p<0.1

	Obs.	Mean	Std. Error	Std. Dev.	[95% conf. interval]
Low	259	9.69637	0.6185957	9.955356	[8.47823, 10.91451]
Mid	350	8.728903	0.3751412	7.01825	[7.991081, 9.466725]
High	405	2.853745	0.1113058	2.239985	[2.634934, 3.072556]

	Low vs. Mid	Low vs. High	Mid vs. High
One-sided test P(T < t)	0.9199	1.0000	1.0000
Two-sided test P (|T| > t)	0.1601	0.0000***	0.0000***
One-sided test P(T > t)	0.0801*	0.0000***	0.0000***

Table A24. Descriptive Statistics (Model 9 & 10 | 1995–2019 | SCH INDEX).

This table reports descriptive statistics for variables included in Model (9) and Model (10) over the period 1995-2019 using the Simplified Currency Hierarchy Index (SCH INDEX). Outliers have been removed.

Variable	Obs.	Mean	Min.	25%	Median	75%	Max.	Std. Dev.
(1) Policy Rate	273	2.796925	-0.75	0.6375	2	4.5	17	2.794203
(2) Lagged Inflation	273	2.293997	-1.352837	0.9890946	1.906636	2.69137	58.45105	3.911269
(3) Lagged Real GDP Growth	273	2.936619	-13.12673	1.795661	2.860446	4.074476	14.51975	2.677325
(4) Lagged Unemployment	273	5.860549	2.467	4.117	5.433	7.28	13.505	2.233767
(5) SCH INDEX	273	70.82957	33.03318	56.60553	67.97133	87.55254	100	17.1273
(6) Crisis Dummy	273	0.0915751	0	0	0	0	1	0.2889549

Table A25. Regression Results (Model 9 & 10 | 1995–2019 | SCH INDEX).

This table reports the estimated coefficients for Model (9) and Model (10) over the period 1995-2019 using the Simplified Currency Hierarchy Index (SCH INDEX). Compared to Model (1) and Model (2), these models exclude exchange rate regime dummies and KAOPEN as controls, as the sample is already restricted to countries with floating or managed float regimes and high capital account openness. Both models are estimated using panel regressions, with standard errors clustered at the country level.

9) $$PolicyRate_{i,t} = \beta_0 + \beta_1 InflationRate_{i,t-1} + \beta_2 GDPGrowthRate_{i,t-1} + \beta_3 UnemploymentRate_{i,t-1} + \beta_4 SCHI_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t}$$

10) $$PolicyRate_{i,t} = \beta_0 + \beta_1 InflationRate_{i,t-1} + \beta_2 GDPGrowthRate_{i,t-1} + \beta_3 UnemploymentRate_{i,t-1} + \beta_4 SCHI_{i,t} + \beta_5 CrisisDummy_{i,t} + \beta_6 CrisisDummy_{i,t} * SCHI_{i,t} + \mu_i + \varepsilon_{i,t}$$

Nominal Policy Rate	(9)	(9)	(10)	(10)
Lagged Inflation	0.254	0.312***	0.286*	0.310***
	(0.148)	(0.0939)	(0.144)	(0.0975)
Lagged Real GDP Growth	0.244**	0.0431	0.233**	0.0447
	(0.102)	(0.0728)	(0.0942)	(0.0726)
Lagged Unemployment	0.386*	0.103	0.364*	0.103
	(0.191)	(0.141)	(0.207)	(0.141)
SCH INDEX	-0.0963***	-0.00946	-0.0985***	-0.00879
	(0.0225)	(0.0264)	(0.0235)	(0.0267)
Crisis Dummy			1.153	2.056
			(3.274)	(2.685)
SCH INDEX * Crisis Dummy			-0.0247	-0.0294
			(0.0413)	(0.0323)
Constant	6.056***	5.097**	6.361**	5.052**
	(2.077)	(2.212)	(2.243)	(2.301)
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	No	Yes	No	Yes
Observations	273	273	273	273
Number of Countries	20	20	20	20
R-squared	0.208	0.618	0.217	0.622

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A26. Country Classification Based on 2007 CH INDEX-Scores.

This table presents the classification of countries into terciles based on their 2007 Currency Hierarchy Index (CH INDEX) scores. Countries are grouped into Low, Mid, and High CH INDEX categories to reflect their relative monetary positions at the onset of the Global Financial Crisis.

High CH INDEX	Denmark, Norway, Singapore, South Korea, Sweden, Switzerland, United Kingdom, United States
Mid CH INDEX	Australia, Brazil, Canada, Czech Republic, Indonesia, Malaysia, Mexico, Russia, Thailand
Low CH INDEX	Argentina, Colombia, Croatia, Hungary, India, Israel, Peru, Philippines, South Africa, Turkey

Table A27. Country Classification Based on 2007 SCH INDEX-Scores.

This table presents the classification of countries into terciles based on their 2007 Simplified Currency Hierarchy Index (SCH INDEX) scores. Countries are grouped into Low, Mid, and High SCH INDEX categories to reflect their relative monetary positions at the onset of the Global Financial Crisis.

High SCH INDEX	Australia, Canada, CH Indexna, Denmark, Japan, Malaysia, Norway, Saudi Arabia, Singapore, South Korea, Sweden, Switzerland, United Kingdom, United States
Mid SCH INDEX	Azerbaijan, Brazil, CH Indexle, Czech Republic, Hungary, Iceland, Indonesia, Israel, Mexico, New Zealand, Peru, Russia, South Africa, Suriname, Thailand
Low SCH INDEX	Albania, Argentina, Belarus, Belize, Colombia, Croatia, India, Jamaica, Moldova, Morocco, North Macedonia, Papua New Guinea, Philippines, Poland, Romania, Turkey

Appendix B: test results

All diagnostic tests are based on Model (4.1), which serves as a baseline. Model (4.2) extends this specification by introducing a crisis dummy and an interaction term. As these constructed variables can cloud diagnostic interpretation, particularly for multicollinearity, Model (4.2) is not separately tested. Instead, it is assumed to align with the diagnostic results established for Model (1).

B.1. Variance Inflation Factor Test

Table B1 shows that multicollinearity is not a concern. Mean VIFs are 1.81 (CH INDEX) and 1.99 (SCH INDEX), well below the common threshold of 5. The highest individual VIF is 3.30 for the crawling peg dummy in the SCH INDEX sample, indicating acceptable correlation levels.

Table B1. Variance Inflation Factor (VIF) Test for Multicollinearity.

This table reports variance inflation factor (VIF) values for explanatory variables in Model (1), estimated using the Currency Hierarchy Index (CH INDEX) sample and the Simplified Currency Hierarchy Index (SCH INDEX) sample. Mean VIFs are shown at the bottom of each column.

Variable	VIF (CH INDEX)	VIF (SCH INDEX)
Lagged Inflation	1.59	1.54
Lagged Real GDP Growth	1.15	1.11
Lagged Unemployment	1.65	1.34
CH INDEX / SCH INDEX	2.27	2.33
KAOPEN	1.70	1.63
Hard Peg Dummy	1.82	2.74
Crawling Peg Dummy	2.57	3.30
Managed Floating Dummy	2.34	3.14
Freely Falling Dummy	1.22	1.68
Dual Market Dummy		1.07
Mean VIF	1.81	1.99

B.2. Hausman Test

Table B2 confirms that fixed effects estimation is preferred. Hausman tests reject the null hypothesis of no correlation between regressors and unobserved country-specific effects for both the CH INDEX ($\chi^2(9) = 58.22$, $p < 0.0001$) and SCH INDEX ($\chi^2(10) = 33.25$, $p = 0.0002$) samples. This indicates that random effects are inconsistent and justifies the use of fixed effects throughout the analysis.

Table B2. Hausman Test for Fixed vs. Random Effects.

This table reports the results of the Hausman specification test for Model (1), using the Currency Hierarchy Index (CH INDEX) sample and the Simplified Currency Hierarchy Index (SCH INDEX) sample. The test compares fixed effects and random effects estimators. The null hypothesis assumes no correlation between the explanatory variables and unobserved country effects, implying consistency of the random effects estimator.

	χ^2 Statistic	P-value	Conclusion
CH INDEX	58.22	0.0000	Reject H0: Fixed effects preferred
SCH INDEX	33.25	0.0002	Reject H0: Fixed effects preferred

B.3. Breusch–Pagan / Cook–Weisberg Test

Table B3 shows clear evidence of heteroskedasticity. Breusch–Pagan/Cook–Weisberg tests reject the null hypothesis of constant variance in both the CH INDEX ($\chi^2(1) = 1776.98$, $p < 0.0001$) and SCH INDEX ($\chi^2(1) = 1310.47$, $p < 0.0001$) samples. As a result, all regressions use cluster-robust standard errors at the country level.

Table B3. Breusch-Pagan / Cook-Weisberg Test for Heteroskedasticity.

This table reports the results of the Breusch–Pagan/Cook–Weisberg test for heteroskedasticity, applied to residuals from Model (1) pooled OLS regressions in the Currency Hierarchy Index (CH INDEX) sample and the Simplified Currency Hierarchy Index (SCH INDEX) sample. The test evaluates whether the variance of the residuals is constant (homoskedasticity) or varies systematically with the fitted values. The null hypothesis assumes homoskedastic errors.

	χ^2 Statistic	P-value	Conclusion
CH INDEX	1776.98	0.0000	Reject H0: Heteroskedasticity present
SCH INDEX	1310.47	0.0000	Reject H0: Heteroskedasticity present

B.4. Wooldridge Test

Table B4 detects first-order autocorrelation. The Wooldridge tests for autocorrelation (Drukker, 2003) reject the null hypothesis for both the CH INDEX ($F = 748.35$, $p < 0.0001$) and SCH INDEX ($F = 1181.00$, $p < 0.0001$) samples, confirming the presence of autocorrelation. All regressions therefore use cluster-robust standard errors at the country level.

Table B4. Wooldridge Test for Autocorrelation.

This table reports the results of a manual Wooldridge test for first-order autocorrelation in panel data, following Drukker (2003). The test is based on regressing residuals from the fixed effects version of Model (1) on their lagged values, using the Currency Hierarchy Index (CH INDEX) sample and the Simplified Currency Hierarchy Index (SCH INDEX) sample. The null hypothesis assumes no autocorrelation in the idiosyncratic errors.

	F-statistic	P-value	Conclusion
CH INDEX	748.35	0.0000	Reject H0: Autocorrelation present
SCH INDEX	1181.00	0.0000	Reject H0: Autocorrelation present

B.5. Wald Test on Exchange Rate Regimes

Table B5 tests the joint significance of exchange rate regime dummies. In the CH INDEX sample, the null hypothesis of joint insignificance cannot be rejected at the 5% level ($F(4, 32) = 2.34$, $p = 0.0767$). In contrast, the SCH INDEX sample shows joint significance ($F(5, 53) = 6.00$, $p = 0.0002$), indicating that regime classifications contribute explanatory power. While the dummies are retained across specifications for theoretical consistency, for completeness, a robustness check excluding them is also conducted.

Table B5. Wald Test for Joint Significance of Exchange Rate Regime Dummies.

This table presents Wald test results assessing whether the exchange rate regime dummies are jointly significant in explaining variation in the policy rate in Model (1), using the Currency Hierarchy Index (CH INDEX) sample and the Simplified Currency Hierarchy Index (SCH INDEX) sample. The null hypothesis assumes that all tested coefficients are equal to zero.

	F-statistic	P-value	Conclusion
CH INDEX	2.34	0.0767	Fail to reject H0: Not jointly significant
SCH INDEX	6.00	0.0002	Reject H0: Jointly significant