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Article

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Invited Article

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Frontier-market economies as a new group of the financial periphery: patterns and transmission channels of global shocks

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This paper seeks to fill a gap in the literature on frontier market economies (FMEs) with the following two research questions: (i) Which are the drivers of FMEs' integration into financial globalisation? (ii) What explains the greater vulnerability of FMEs compared to emerging market economies (EMEs) to global financial shocks? We argue that the emergence of FMEs as a new group of the financial periphery fills a vacuum left for global investors by the major EMEs, whose spreads declined in the past decade due to high foreign currency reserve accumulation and other EME-related factors. To answer the second question, we introduce the concept of financial hierarchy as a second layer of the currency hierarchy: while the currency hierarchy is organized by the different degrees of liquidity premia currencies offer, in the financial hierarchy, not currencies, but financial assets are placed according to the nominal yield. While FMEs' currencies have a lower liquidity premium than those of EMEs, the difference between them is not vast – as both are not accepted at the international level – and are insufficient to explain FMEs' greater vulnerability to external financial shocks. We argue in the paper that this vulnerability stems mainly from the position of FMEs' at the bottom of the financial hierarchy, which results in a different pattern of international financial integration.

Keywords: *frontier market economies, financial periphery, financial globalisation, patterns of international financial integration*

JEL codes: *E6, F3, F6*

1 INTRODUCTION

Even before the outbreak of the Covid-19 pandemic, many developing countries were already facing increasing debt burdens. The current 'polycrisis' (Tooze 2022), with its mutually reinforcing effects of different phenomena, such as the lingering effects of the pandemic, the impact of global warming and the war against Ukraine, have worsened

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this situation, harming their ability to mobilize financial resources for a greener, sustainable and inclusive development. On top of that, the ongoing monetary tightening in the United States and other leading economies to dampen soaring inflation is hindering the pace of recovery and squeezing, even more, the fiscal space in the developing world.

What differentiates this polycrisis from the 1980s' and 1990s' crises are that emerging market economies (EMEs) have been less affected than the so-called frontier market economies (FMEs). EMEs are mostly upper-middle-income developing or, as we prefer to label them, peripheral countries that have engaged in financial globalisation since the 1990s, while FMEs are defined here as the group of peripheral countries with mainly low- or lower-middle-income levels which opened to global financial markets only in the last decade, during the capital flows boom after the Global Financial Crisis (GFC) of 2008.

Therefore, EMEs and FMEs are two groups of peripheral countries that joined financial globalisation, yet at different moments, making up what we call the 'financial periphery'. Both are vulnerable to global financial shocks, i.e. changes in global financial conditions and concurrent changes in the appetite for risk and liquidity preference of global investors. However, this time around, FMEs were affected more severely by external financial shocks than EMEs. Among the five countries that defaulted after the Covid-19 shock, four are FMEs (Suriname, Sri Lanka, Ghana, Zambia).¹ Moreover, two FMEs completed (Belize) or are under debt restructurings (Ethiopia). Moreover, while two FMEs (Belize and Barbados) undertook a pre-emptive restructuring, many of them are on the brink of default, such as El Salvador and Pakistan. During the recent bank stress episode in developed countries, these economies have been one of the principal victims of global investors' flight to quality. Consequently, market access conditions have deteriorated significantly: more than 40 per cent of frontier bonds that will mature in 2025 were trading at distress levels in April 2023. External sovereign bonds' refinancing needs are expected to rise sharply to US\$12.4 billion in 2024, prompting concern that more frontiers may default if market access is not restored. Egypt and Kenya are particularly vulnerable (IMF 2023; see also Curran 2023).

In Paula et al. (2020), we analyse the changing nature of the external vulnerability of EMEs over the capital flow cycles of financial globalisation from the perspective of a Keynesian-Structuralist approach. Its key feature is a systemic tendency in capitalism to a centre-periphery or asymmetrical relationship, long identified by Latin American structuralist economists, which includes not only a technological-productive dimension but also a monetary and financial dimension (Ocampo 2001). To theorize the monetary asymmetry, we elaborated in prior publications the concept of currency hierarchy (Paula et al. 2017; Fritz et al. 2018). In this paper, also following this approach, we turn our focus to the FMEs.

Until now, most literature on the FMEs originates from multilateral institutions, such as the International Monetary Fund (IMF 2022) and the financial sector, especially from asset managers and investment research and data platform companies (Aberdeen 2015; Culverhouse 2021), stressing issues related to the return and risks of investments in FMEs. Surprisingly, most of the existing academic literature, to our knowledge, also takes this investors' perspective on FMEs: Sukumaran et al. (2015) examine whether there exist benefits from diversification into FMEs for Australian investors, while Stereńczak et al. (2020) analyse the illiquidity premium of frontier market stock returns.

1. The fifth country is Malawi, a non-market access country. We excluded here the three countries that defaulted due directly to the war in Ukraine (Ukraine, Russia and Belarus). While Ukraine suspended all its debt payments in the wake of Russia's invasion, Russia and Belarus defaulted in 2022 because their debt payments could not be processed due to sanctions after the Ukrainian war (IMF 2023).

Yet, to our knowledge, there is no analysis of this group of countries from a development perspective at the academic level.

This paper seeks to fill this gap with the following two research questions: (i) What are the drivers of FMEs' integration into international financial markets? (ii) What explains the greater vulnerability of FMEs compared to EMEs to global financial shocks?

We have two main findings for the first research question. First, the spreads of EMEs' sovereign bonds declined over the past decade, and their credit ratings were upgraded due to lower external vulnerability associated with foreign currency reserve accumulation and the adoption of market-friendly macroeconomic policies. Thus, from the investors' side, the search for new options of high-risk investment as part of their portfolio diversification and search for yield resulted in the emergence of FMEs as a new group of the financial periphery. Second, from the demand side, the so-called missing middle of developing finance underlined this emergence. Many FMEs climbed the income scale from low-income (LIC) to lower-middle-income (LMIC) countries and have lost access to affordable external finance and official development assistance (United Nations 2020). Consequently, FMEs' sovereigns started to tap international capital markets to close their balance of payment gaps and development financing needs.

To answer the second question, we introduce the concept of *financial hierarchy* as a second layer of the currency hierarchy. While the currency hierarchy is organized by currency's liquidity premia, understood as the ability to fulfill all functions of money in the international sphere, in the financial hierarchy, financial assets, and not currencies, are placed according to their nominal yield.

This new concept serves us to understand the ongoing differentiation process within the financial periphery. While FMEs' currencies have a lower liquidity premium than those of EMEs, the difference in their liquidity premia is not wide – as both are not accepted at the international level – and are insufficient to explain FMEs' greater vulnerability to external financial shocks. This vulnerability also stems from the position of FMEs' at the bottom of the financial hierarchy, which results in a different international financial integration pattern.

The paper is organized as follows. Section 2 discusses the first question about the drivers of FMEs' integration into financial globalisation. Section 3 introduces the concept of financial hierarchy as an additional layer to the currency hierarchy and lays out the differences in the degree of macroeconomic volatility due to financial shocks between the two groups of the financial periphery. Section 4 provides the conclusion.

2 THE DYNAMICS OF FINANCIAL GLOBALISATION AND THE EMERGENCE OF FRONTIER MARKET ECONOMIES

The financial integration of FMEs has been pushed both by the supply side of the global financial market, and the demand side by the countries themselves. On the supply side, the inclusion of frontier markets into the portfolio of international investors began in the aftermath of the GFC. Boom and bust cycles are characteristic of financial globalisation. The first cycle was in the 1990s and ended with a series of EMEs' financial crises in Asia and Latin America; the second in the years before the GFC; and the third and latest one in the period between the GFC and the Covid-19 pandemic (see Paula et al. 2020; Akyüz 2017). The relentless search by global investors for higher short-term returns in this last period was even more aggressive due to the historically low interest rates and unprecedented quantitative easing policies in centre countries. In this context, investors targeted assets issued by EMEs. However, they also went after a new asset class – securities issued by the FMEs – in search of higher yields than EME assets and opportunities of risk diversification.

In the post-GFC boom of capital flows, global investors have adopted new financial strategies to invest in the financial periphery. They have relied increasingly on passively managed or benchmark-driven funds, which track or closely follow a flagship benchmark index that has a predefined list of countries and securities with specific weights, i.e. they allocate their portfolio according to the share of each country's bonds in the index. Examples of these indexes are the J.P. Morgan's Emerging Market Bond Index (EMBI) and the Next Generation (NexGen) – which is the Benchmark index for the FMEs – for sovereign bonds and Morgan Stanley's MSCI indexes for equities – which also have specific indexes for EMEs and FMEs. As El-Erian (2023) stresses, besides charging lower fees relative to active portfolio management, passive portfolio management is particularly attractive in a global context where the combination of very low interest rates and massive injections of central bank liquidity boosted virtually all assets and increased the correlations across asset classes.

Benchmark-driven investment strategies introduce a high degree of similarity or herding behaviour in the small number of asset managers that account for the bulk of global investors' financial wealth. Benchmark-driven funds follow a flagship benchmark index with a predefined list of countries and securities with specific weights (e.g. JP Morgan EMBI for sovereign bonds and Morgan Stanley's MSCI for equities). Investment funds, in general, are already accompanied by significant herding behaviour, as they bundle the risks of different assets and countries into one index. The use of common or highly correlated benchmarks (due to similar methodologies in constructing the indexes) further increases the 'herd' treatment of this group of countries.

Moreover, the influence of benchmark indices goes beyond the passive funds, as managers of actively managed funds tend to be evaluated relative to benchmarks, with around 70 per cent of country allocations of investment funds being influenced by benchmark indexes (Goldberg/Krogstrup 2018). Therefore, the predominance of investment strategies linked to these indexes after the GFC has reinforced the role of global push factors in capital flow dynamics, leaving EMEs and FMEs even more exposed to unexpected changes in global financial conditions and global investors' liquidity preference.

Regarding the inclusion of FMEs in this investment pattern, the EMBI NextGen, launched in 2011, tracked dollar-denominated sovereign bonds issued by 17 FMEs. After that, more than 20 LMICs and a few LICs issued foreign currency bonds for the first time (IMF 2019) and were included in the index. Consequently, the number of FMEs in the J.P. NexGen increased to 38 countries in April 2020 and has remained the same since then, while the index for EMEs (EMBI+) currently has 26 countries.² In turn, the inclusion in these indexes has stimulated the issuance of new foreign bonds by FMEs since the benchmark-driven funds have to allocate a share of its portfolio to these countries' sovereign bonds.

As the index's name suggests, the underlying idea is that the FMEs are the 'next generation' of EMEs. But why did global asset managers search for a new asset class in the periphery in the post-GFC capital flows boom, leading to the emergence of the FMEs as a new partner from the financial periphery?

Only a few studies empirically assess the characteristics and drivers of capital flows to FMEs (de Soyaes et al. 2019; Silva et al. 2021). Silva et al. (2021: 10) stress that the increase in bond issuance by EMEs after the GFC coincided with a decreasing trend in global financial market volatility, suggesting that during calm periods in global financial markets, foreign investors have a higher appetite for risk and, consequently, are more willing to invest in higher yield, but also speculative grade and higher risk securities, such as FMEs' bonds.

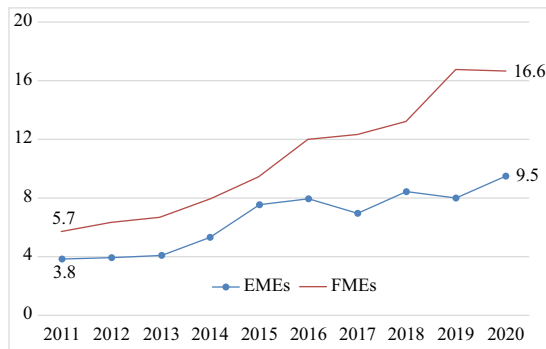
2. JP Morgan has also an 'EMBI diversified' index that includes EMEs and some FMEs.

Indeed, the global low-interest-rate environment has pushed global investors in search of higher returns to invest in FMEs' bonds, thus contributing to debt build-up in these countries and significantly increasing the interest burden of FMEs since 2011. In the case of the FMEs, this burden is concentrated in the public sector: the Public and Publicly Guaranteed (PPG) debt responded to 71 per cent of the FMEs' total external debt in 2020. At the same time, the share of government revenues going to serve this debt rose from 5.7 per cent in 2011 to 16.6 per cent in 2020 (compared to 9.5 per cent of EMEs), indicating an increasing external debt vulnerability of FMEs' sovereigns. On top of that, because of their integration into global capital markets, the share of private creditors in FMEs' PPG debt rose from 20 per cent in 2010 to 35.3 per cent in 2021, of which 23.5 per cent are in the hands of bondholders (compared to 9.3 per cent in 2010), making FMEs' sovereigns vulnerable to changes in global financial conditions (see Figures 1 and 2).

The context of abundant liquidity and low or even negative interest rates in the centre explains only partially the inclusion of FMEs' sovereign bonds in the portfolio of global asset managers. A trend of decreasing returns of EMEs' securities over the capital flows booms since the 2000s (see Figure 3) also underlines this search to expand the financial periphery further. The financial assets of the forerunners (the EMEs) have become less profitable due to two trends.

The first is the rising share of EMEs' securities in global asset managers' portfolios that have decreased these securities' price volatility – which increases the risks but also the speculative returns – simply due to the rise in the volume of such assets in global investors' portfolios. Although this share is still small from a global perspective, it is not only increasing but is also much greater than the share of FMEs (see Figure 4). The stock of portfolio investments (debt and equity) of FMEs are still marginal compared to EMEs, although they have been growing since 2012.

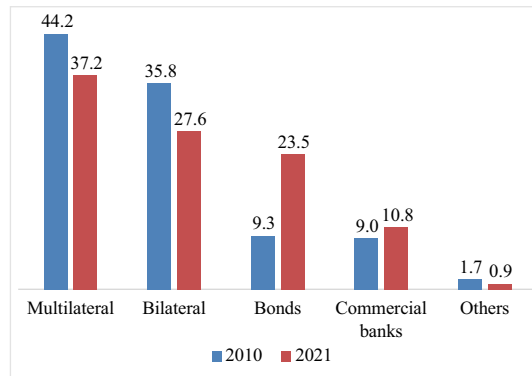
The second trend is the fall in the country-risk premium required by global investors. This fall was associated with the strategy of EME sovereigns after the financial crisis of the 1990s of decreasing the currency mismatch in their balance sheets – and, consequently, the vulnerability to external shocks – through pre-emptively building-up foreign currency reserves and repurchasing external sovereign bonds. This trend contributed to the upgrade to investment



Notes: PPG: Public and publicly guaranteed debt. FMEs: Sample of JP Morgan NexGen excluding Barbados, Namibia and Suriname because of data availability. EMEs: Sample of JP Morgan EMBI+ excluding Venezuela and including India and Malaysia; see Appendix 1. Because of data availability, EMEs' series excludes Croatia and Hungary.

Source: Authors' elaboration based on World Bank, International Debt Statistics and national sources.

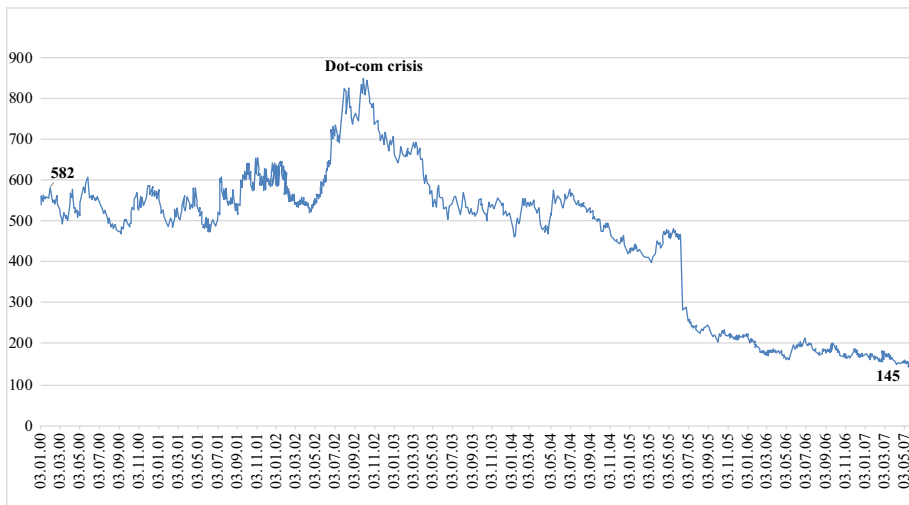
Figure 1 PPG external debt service to government revenues (%)



Notes: PPG: Public and publicly guaranteed debt. FMEs: Sample of JP Morgan NexGen excluding Barbados, Namibia and Suriname because of data availability.

Source: Authors' elaboration based on World Bank, International Debt Statistics and national sources.

Figure 2 FMEs' PPG debt: composition by creditor (%)

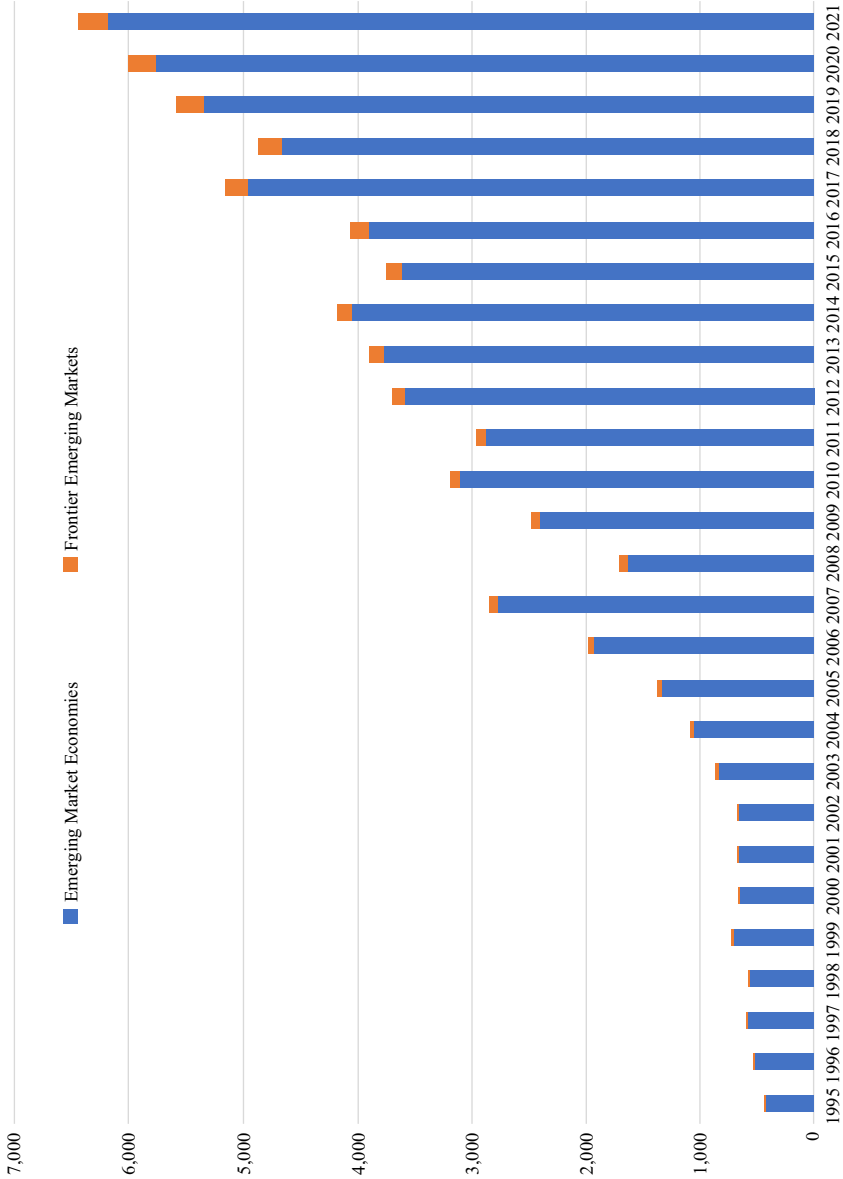


Notes: EMEs: Sample of JP Morgan EMBI+ excluding Venezuela and including India and Malaysia: see Appendix 1. Because of data availability, this series excludes India, Oman, Qatar, Romania, Saudi Arabia and Thailand.

Source: Authors' elaboration based on Refinitiv data.

Figure 3 Returns to EMEs' sovereign bonds: average spread (basis points)

grade of many EMEs' sovereigns since credit rating agencies (CRA) usually follow the market and not the other way around (Griffith-Jones/Kraemer 2021). This has resulted in a vacuum in the speculative or high-yield segment. Moreover, most EMEs have adopted market-friendly macroeconomic policies (such as inflation targeting, flexible exchange rates and fiscal austerity) that improved the country's macroeconomic fundamentals in the view of CRA, hence also playing a role in the climbing in the rating scale. This led to the emergence



Notes: EMEs: sample of EMBI+ excluding Venezuela and including India and Malaysia; FMEs: see Appendix 1.
 Source: Authors' elaboration with data extracted from Milesi-Ferretti (2023).

Figure 4 Global external liabilities of EMEs and FMEs: portfolio debt and equity – US\$ billion

of a new type of risk since the balance sheet losses associated with currency devaluations have shifted to global investors. Their reaction to these losses through selling EME securities has adverse effects on EMEs' asset prices and exchange rates that have been labelled as 'original sin redux' (Hofmann et al. 2020; see also Paula et al. 2020). According to Curran (2021), although non-resident holdings of domestic government debt in EMEs decreased after the Covid-19 pandemic, it is still high in many EMEs, reaching more than 60 per cent in Peru, 30 per cent in South Africa and around 25 per cent in Indonesia and Colombia.

In the face of the decreased returns of EMEs' financial assets, the centre-periphery dynamics of financial globalisation drove the emergence of FMEs as a new group of the financial periphery. In the Bretton Woods system, peripheral countries depended on the centre as markets for their commodities and were simultaneously functional to the centre as markets for manufactured goods. In the current international monetary and financial system, the financial periphery depends on the centre to get external financing to close the foreign exchange gap in the balance of payments and also, in some cases, to obtain development finance – that either is not available or is available with higher interest rates and shorter maturity in the domestic financial markets. Simultaneously, the financial periphery has become functional to the centre as it offers higher yield assets to global asset managers than those available in the centre. Frequently, however, the interest rate differentials between the centre and periphery attract capital inflows more than necessary to finance current account deficits (or even in cases of EMEs with current account surplus), exploring carry trade operations characterized by loans in currencies with low-interest rates and investment in currencies with high-interest rates.

From the demand side, the decreasing access to development finance in the context of a meagre bi- and multilateral development cooperation certainly has played a role in the search of these countries for private international capital. The so-called 'missing middle of development finance' (United Nations 2020) describes the consequences of the upgrading of several countries from LICs to LMICs and the consequent loss of access to concessionary external financing and grants within official development finance. The share of concessional financing for FMEs has dropped from 61 per cent of total external debt in 2000 to 50 per cent in 2016 (de Soyares et al. 2019: 10).

3 CURRENCY HIERARCHY AND FINANCIAL HIERARCHY: A CONCEPT TO DIFFERENTIATE FRONTIER FROM EMERGING MARKET ECONOMIES

This section addresses our second research question about the differences between FMEs and EMEs to understand why the FMEs are more vulnerable to global financial shocks. For this, firstly, we present the theoretical concept of currency hierarchy, as already established in Paula et al. (2017) and introduce a second dimension, the concept of financial hierarchy. Secondly, we identify the main drivers of FME's greater vulnerability to global shocks.

3.1 The concepts of currency and financial hierarchies

The concept of currency hierarchy emerges from the Keynesian-Structuralist idea that, at the international level, currencies are ordered along their liquidity premia and that economies with currencies at the lower end of this hierarchy are more vulnerable to global shocks. This approach has two building blocks: Latin-American Structuralism, and Keynes' analysis of the hierarchical structure of an international monetary system based on a key currency.

The starting point of Latin American structuralism is Prebisch's (1949) idea that the dynamics of peripheral countries can only be understood through their form of global

economic integration. In the context of the Bretton Woods regime, with highly restricted international financial mobility, he exclusively focused on the technological gap of the periphery vis-à-vis the centre as the fundamental global asymmetry. The periphery's specialization in commodity exports, he argued, let them profit from the international division of labour much less than the centre countries which traded manufactured goods, thus leading to a further peripheralisation of the former and increasing the economic gap between centre and periphery.

In the post-Bretton Woods era, however, with the emergence of financial internationalisation and globalisation from the 1970s on, centre-periphery relations gained a second layer of monetary and financial asymmetry, overlapping with the technological and productive asymmetry. A group of authors has theorised this as a currency hierarchy (Andrade/Prates 2013; Fritz et al. 2018; Kaltenbrunner 2015; Paula et al. 2017).

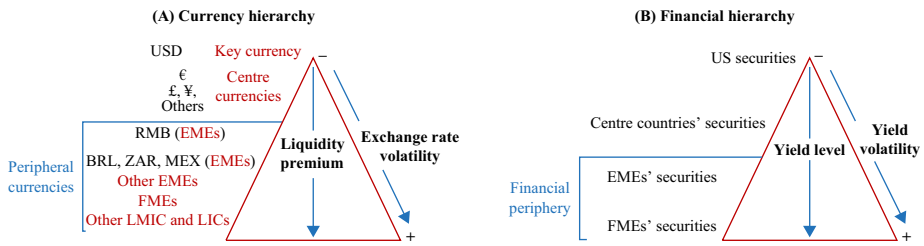
The concept of currency hierarchy is grounded in Keynes' concept of a non-pecuniary liquidity premium specific to each currency. Paula et al. (2017) applied Keynes' (1936) formal equation of total return on assets, including the liquidity premium to different currencies. With this, currencies are hierarchically positioned according to their degree of liquidity, which relates to their ability to perform the three functions of money internationally. The key currency has the highest liquidity premium as it performs all functions of money also at the international level (means of payment, unit of account and store of value). Currencies placed below the key currency must compensate for their lower liquidity premium, especially with higher interest rates.

While Keynes (1944) analysed a global monetary system characterised by a gradual shift of the key currency from the British pound to the US dollar, we today find a currency hierarchy with the US dollar persisting as the global key currency, and with the Euro and the currencies issued by the other centre countries below the US dollar. These latter also are liquid currencies at the international level, but with a smaller liquidity premium than the US dollar because they perform the money functions only partially.

At the bottom, we find the currencies of the periphery that, in general, are characterized by the inability to borrow internationally in their own currency as they do not perform the means of payment function (as well as the other functions of money) at the international level. This inability, – also labelled 'original sin' (Eichengreen et al. 2005, 2022) – results in a currency mismatch in the balance sheets of the public and private sectors, which is one key determinant of the high vulnerability of EMEs and FMEs to changes in global financial conditions. Moreover, their goods and services traded internationally usually are denominated in US dollar as a unit of account.

Financial integration of countries placed at the bottom of the currency lowers their macroeconomic policy space (Paula et al. 2017). In a context of volatile global capital flow cycles, shaped by the monetary policy of the key currency (Flassbeck 2014), the currency hierarchy also divides countries into 'business cycle makers' at the top of the hierarchy, and 'business cycle takers' at the bottom (Ocampo 2001).

As capital flows ultimately depend on external factors (see, among others, Koepke 2018), countries with currencies at the bottom of the currency hierarchy are much more vulnerable to these volatile global capital flows. The literature on the currency hierarchy argues that this applies especially to peripheral countries that have opened to the international capital market, i.e. the EMEs. Although their share in the portfolios of global investors has been increasing since the 1990s, their participation share in absolute terms is still marginal. However, as these inflows fall on relatively smaller financial markets, they have a higher impact on the local economy. Consequently, the boom-and-bust phases of the global capital flow cycle exercise higher pressure on domestic financial markets and on the exchange rates of EMEs. As shown in Figure 5, the lower the liquidity premium of a currency, the higher the volatility of its



Source: Authors' elaboration.

Figure 5 Currency hierarchy and financial hierarchy

external value, i.e. the exchange rate. To cope with this volatility and its adverse effects, countries must adjust their monetary and fiscal policies to the rhythm of global liquidity cycles, so that a lower liquidity premium also corresponds with a lower policy space.

Figure 5A also depicts a threefold differentiation within the bottom part of the currency hierarchy that emerged over the last decades. First, when we use the global turnover in foreign currency (covering all financial contracts between different currencies) as an indicator of the use of a currency as a means of payment at the international level, we see that the Chinese RMB climbed the hierarchy above the other EMEs currencies from 1 per cent in 2001 to 7 per cent in 2022 (BIS 2022).

Second, the currencies of the big EMEs, such as the Brazilian Real, the South African ZAR and the Mexican peso, experienced a slight increase, from 0 to 1–2 per cent in the same period. However, in the latter cases, even this small increase is somehow misleading since it does not stem from an increased liquidity premium, but instead reflects the demand for them as speculative assets associated with the greater liquidity and deepness of their foreign exchange derivative markets (Orsi 2019; Ramos 2019).

The third, and most recent change at the bottom of the currency hierarchy is the entry of many LMICs and a few LICs – the FMEs – into the global financial market (see Section 2).

To synthesise this asymmetry at the bottom of the currency hierarchy, we introduce the concept of *financial hierarchy* (Figure 5B). In this hierarchy, the securities issued by the United States, the other centre countries and the financial periphery are hierarchically positioned according to their yield. The relative distance between EMEs and FMEs becomes clearer in this figure as the securities of these two country groups are farther away from each other regarding the yield they offer to international investors than their currencies regarding their liquidity premia. Moreover, the financial hierarchy only includes the securities of countries from the financial periphery – i.e., that joined financial globalisation – thus excluding LMICs and LICs that are not FMEs and are positioned at the bottom of the currency hierarchy.

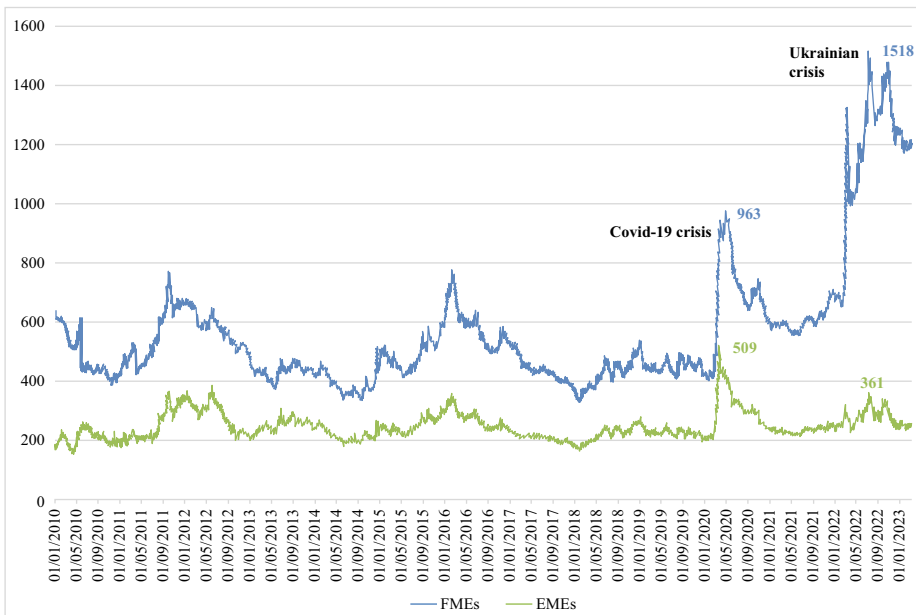
3.2 Higher vulnerability of FMEs compared to EMEs: different international financial integration patterns

The currency and the financial hierarchy are intertwined. The position in the currency hierarchy partly explains why FMEs' securities have a higher yield level than EMEs: this yield needs to compensate for the lower currency premium and the greater exchange rate volatility (and risk) of FMEs' currencies. This higher yield FMEs' sovereigns need to pay in their external bonds is one determinant of their greater external debt vulnerability

than EMEs' sovereigns (see Section 2). But simultaneously, a vicious cycle occurs as global investors also demand a higher yield to compensate for the major credit risk due to this greater vulnerability. The high yield level also explains the predominance of sovereign external bonds, as FMEs' private corporations and financial institutions would need to pay an additional credit risk to tap international capital markets.

Because of their higher yield, FMEs' sovereign bonds have filled in the vacuum in the speculative or non-investment grade segment left by many EMEs during the capital flow booms before and after the GFC (see Section 2). Speculative-grade bonds offer higher yield assets for global investors but have greater yield volatility since they are the first victims of these investors' herd-like behaviour in moments of global financial shocks and consequent increases in investors' liquidity preference. During major external shocks, such as Covid-19 and the Ukraine war, FMEs' sovereigns were subjected to sharper swings in spreads, being hit with a greater intensity than EMEs' issuers. They faced huge risk repricing, with the number of distressed issuers in the international capital market (with spreads over 1,000 basis points) rising to record levels (see Figure 6). This means that most of them lost market access.

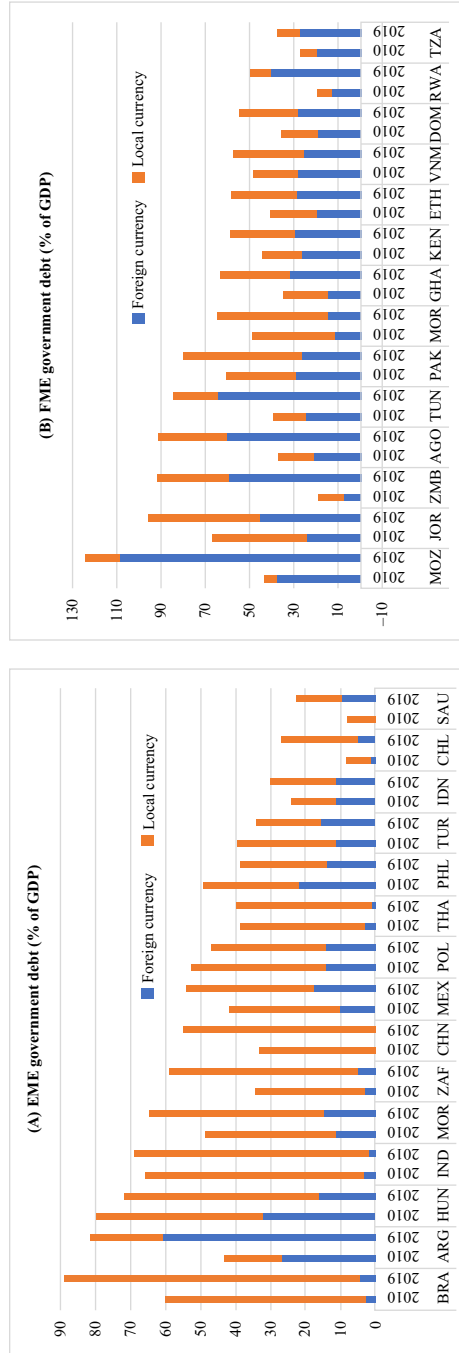
Therefore, the segment of credit rating where securities are located – which is one feature of the international financial integration pattern – underlines the greater yield volatility of FMEs' securities compared to those of EMEs. As external sovereign bonds denominated in foreign currency account for a greater share of government debt of FMEs than EMEs (see Figure 7), yield volatility harms relatively much more FMEs' sovereigns.



Notes: EMEs and FME: see Appendix 1. EMEs' series excludes Thailand because of data availability, and Russian Federation and Ukraine (outliers after March 2022); FMEs' series excludes Armenia because of data availability.

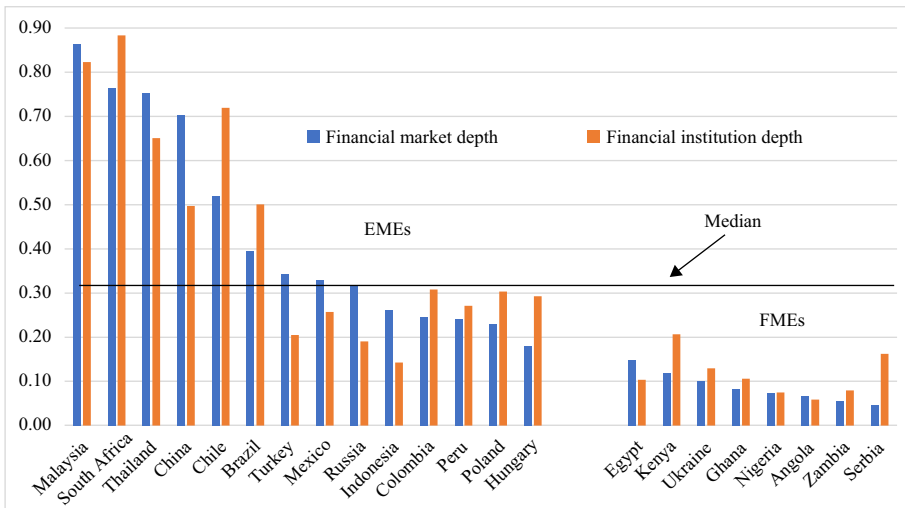
Source: Authors' elaboration based on Refinitiv data.

Figure 6 Returns to EMEs' and FMEs' sovereign bonds: average spread (basis points)



Source: Authors' elaboration with data extracted from IMF (2020).

Figure 7 Government debt as percentage of GDP



Source: Authors' elaboration with data extracted from IMF (2020).

Figure 8 Financial market and institutions depth score (index)

The position at the bottom of the financial hierarchy also underlies another feature of FMEs' international financial integration pattern that contributes as well to the greater vulnerability of this new group of the financial periphery to global financial shocks compared to EMEs. Global investors prefer to buy the higher-yield external securities issued by FMEs in the international capital markets than domestic securities as, in the first case, they do not carry the currency risk. Consequently, non-resident portfolio inflows to FMEs' domestic capital markets are more marginal than those to EMEs. However, their markets are also shallower and less liquid than EMEs' ones (see Figure 8).

Using the metaphor of Haldane (2011) of the 'big fish and small pond' – where the big fish are capital flows and the small pond the domestic capital markets of EMEs – FMEs are an even smaller pond than EMEs. The lack of deep financial markets and limited market liquidity tends to 'compound market pressures in time of stress, due to reduced capacity of market makers to intermediate flows' (IMF 2020: 60). Consequently, the impact of flight-to-quality movements on domestic asset prices and yields is more significant for FMEs than EMEs. The greater volatility in domestic sovereign bond yields contributed to pushing FMEs, such as Zambia, into debt distress. Non-resident investors account for a relevant share of the country's domestic sovereign debt (Setser 2023)

The external financial integration pattern – the predominance of external sovereign bonds and the smaller participation of non-resident investors in domestic capital markets than in EMEs – also underlies the prevalence of the original sin as the main transmission channels of external financial shocks in FMEs, which adversely affects sovereigns' balance sheets, constraining further the fiscal space of these countries. In the case of EMEs, the original sin redux has become an important transmission channel of external financial shocks due to the greater participation of non-resident investors in the domestic capital markets. Moreover, the private sector also has a high degree of external indebtedness, which makes its balance sheet vulnerable to currency depreciations (Paula et al. 2020).

4 CONCLUSION

The centre–periphery dynamics of financial globalisation expanded the financial periphery, including the FMEs as new partners. These, however, face greater external constraints and development financing needs than EMEs in the 1990s and are even more vulnerable to the financial asymmetry of financial globalisation.

FMEs have filled the vacuum left for global investors by the major EMEs in the high-yield and non-investment grade segment. The segment of credit rating where securities are located is one key feature of the international financial integration pattern and explains the greater yield volatility of FMEs' securities compared to those of EMEs. As external sovereign bonds denominated in foreign currency account for a greater share of government debt of FMEs than EMEs, yield volatility harms relatively much more FMEs' sovereigns. Although non-resident portfolio inflows to FMEs' domestic capital markets are more marginal than those to EMEs, their markets are shallower and less liquid. Consequently, the impact of flight-to-quality movements on domestic asset prices and yields is more significant for FMEs than EMEs.

We introduced in this paper the concept of financial hierarchy, as a second layer of the concept of currency hierarchy, to better understand the even more peripheral position of the FMEs in comparison to the EMEs, which results in an exacerbation of the impact of global financial shocks, and, consequently, greater volatility in securities yields. This constrains the policy space of FMEs further than that of EMEs.

The rise in the external vulnerability of the FMEs increases, even more, the disequilibrium between the benefits and costs of international financial integration for these countries. The benefits are associated with access to external financing in countries with narrow domestic financial markets; the costs, however, are very high. For instance, FMEs pay higher interest rates on their external debt compared to EMEs, and the FMEs' share of public debt denominated in foreign currencies is higher than in the EMEs, so that the balance-sheets effects of a currency depreciation related to the original sin affect public debt directly. This results in greater macroeconomic instability, lower fiscal space and a consequent increase in poverty in already poor countries, among other adverse consequences.

FMEs' greater external debt vulnerability – associated with their position in the currency and financial hierarchies – reinforces the herd behaviour of global investors in moments of deteriorating external financial conditions. So, it is no coincidence that most countries currently in default or in high risk of debt distress are FMEs. On top of that, they face a more complex creditor base – bondholders, China and official multilateral creditors – that results in long and difficult debt negotiations, delaying market access and raising costs of financial distress. Even in the absence of outright default, prolonged periods of high borrowing rates may lead to debt overhang for years to come, as the international debt architecture does lack a multilateral legal framework for sovereign debt resolution. The risk of spiralling debt crises, lower growth and lower policy space leaves these countries even further away from a climate-resilient, low-carbon and inclusive development.

A reform of the international financial architecture is necessary. Such reform should include mechanisms to prevent external debt crises (such as the regulation of capital flows), a global statutory approach for debt resolution and the scale-up of affordable development finance (such as concessional loans by multilateral banks and development agencies and ODA) and the adoption of a new criterion instead of income thresholds for eligibility to such finance. Otherwise, the centre–periphery dynamics will lead to the inclusion of further LICs into international capital markets with its deleterious consequences for development, poverty reduction and green transition in the periphery.

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APPENDIX 1

FMEs: Countries of the <i>JP Morgan NexGen</i> (38 countries)	EMEs: Countries of the <i>JP Morgan EMBI+</i> excluding Venezuela and including India and Malaysia (25 countries)
Angola	Argentina
Armenia	Brazil
Azerbaijan	Chile
Barbados	Colombia
Belarus	Croatia
Belize	Dominican Republic
Bolivia	Ecuador
Cameroon	Egypt
Costa Rica	Hungary
Côte d'Ivoire	India
El Salvador	Indonesia
Ethiopia	Malaysia
Gabon	Mexico
Georgia	Oman
Ghana	Panama
Guatemala	Peru
Honduras	Philippines
Iraq	Qatar
Jamaica	Romania
Jordan	Russia Federation
Kenya	Saudi Arabia
Maldives	South Africa
Mongolia	Thailand
Mozambique	Ukraine
Namibia	Uruguay
Nigeria	
Pakistan	
Papua New Guinea	
Paraguay	
Rwanda	
Senegal	
Sri Lanka	
Suriname	
Tajikistan	
Tunisia	
Uzbekistan	
Vietnam	
Zambia	

Source: Authors' elaboration.