

Ensayos Económicos es una revista editada por la Subgerencia General de Investigaciones Económicas

ISSN 1850-6046 Edición electrónica

Banco Central de la República Argentina San Martín 235 / Edificio San Martín Piso 7, Oficina 701 (C1003ABF) Ciudad Autónoma de Buenos Aires / Argentina

Tel.: (+5411) 4348-3582/3814

Email: ensayos.economicos@bcra.gob.ar

Página Web: <a href="http://www.bcra.gob.ar/PublicacionesEstadisticas/Ensayos\_economicos.asp">http://www.bcra.gob.ar/PublicacionesEstadisticas/Ensayos\_economicos.asp</a>

Fecha de publicación: Mayo de 2022

Diseño de tapa e interior | Gerencia Principal de Comunicación y Relaciones con la Comunidad, BCRA Diagramación | Subgerencia General de Investigaciones Económicas, BCRA

Ensayos Económicos está orientada a la publicación de artículos de economía de carácter teórico, empírico o de política aplicada, y busca propiciar el diálogo entre las distintas escuelas del pensamiento económico para contribuir a diseñar y evaluar las políticas adecuadas para sortear los desafíos que la economía argentina enfrenta en su proceso de desarrollo. Las opiniones vertidas son exclusiva responsabilidad de los autores y no se corresponden necesariamente con la visión institucional del BCRA o de sus autoridades.

Esta revista apoya el acceso abierto a su contenido bajo el principio de que la libre disponibilidad de la investigación para el público estimula un mayor desarrollo global del intercambio de conocimiento. Para facilitar una mayor difusión y utilización, los artículos se encuentran bajo la licencia Creative Commons Atribución-NoComercial-Compartirlgual 4.0 Internacional.



Esta licencia permite copiar y redistribuir el material en cualquier medio o formato, y transformar y construir a partir del material original, mientras no sea con fines comerciales, se mencione el origen del material de manera adecuada, brindando un enlace a la licencia e indicando si se han realizado cambios, y se distribuya bajo la misma licencia del original.

# International Monetary and Financial Hierarchies: Macroeconomic Implications for Emerging Market Economies

# Annina Kaltenbrunner\*

Leeds University Business School, United Kingdom

# **Abstract**

This paper discusses the hierarchic features of the international monetary and financial system and the implications these hierarchies have for macroeconomic conditions in Emerging Capitalist Economies (ECEs) using the example of the Covid Shock in March 2020. In particular, it draws attention to two key macroeconomic implications: first, the existence of external vulnerability and adverse exchange rate dynamics, increasingly independent of economic conditions in ECEs; second, the external constraint on monetary policy in ECEs. Analytical emphasis is placed on how recent changes in the global financial system, such as the rise of non-bank financial institutions (NBFIs) and the general move to market-based financial systems, might affect those international monetary and financial hierarchies and their consequences.

JEL Classification: F31, F32, F36, F38, F62.

*Keywords*: international monetary system, international financial system, emerging capitalist economies, external vulnerability, monetary policy, non-bank financial institutions (NBFIs).

<sup>\*</sup> The views expressed in this article are of the author and do not necessarily represent the ones of the BCRA or its authorities. Email: a.kaltenbrunner@leeds.ac.uk.

# Jerarquías monetaria y financiera a nivel internacional: implicancias macroeconómicas para economías emergentes

## **Annina Kaltenbrunner**

Escuela de Negocios de la Universidad de Leeds, Reino Unido

## Resumen

Este documento analiza las características jerárquicas del sistema monetario y financiero internacional y las implicancias que tienen para las condiciones macroeconómicas de las Economías Capitalistas Emergentes (ECE), utilizando el ejemplo del shock Covid de marzo de 2020. En particular, se destacan dos implicancias macroeconómicas clave: en primer lugar, la existencia de vulnerabilidad externa y una dinámica cambiaria adversa, cada vez más independiente de las condiciones económicas de las ECE; en segundo lugar, la restricción externa de la política monetaria en las ECE. Se hace hincapié en el análisis sobre la forma en que los cambios recientes en el sistema financiero mundial, como el peso creciente de las instituciones financieras no bancarias (IFNB) y el avance generalizado hacia un sistema financiero basado en el mercado, podrían afectar a estas jerarquías monetarias y financieras internacionales y sus consecuencias.

Clasificación JEL: F31, F32, F36, F38, F62.

Palabras clave: economías capitalistas emergentes, instituciones financieras no bancarias (IFNB), política monetaria, sistema financiero internacional, sistema monetario internacional, vulnerabilidad externa.

The presentation at the 2021 Jornadas Monetarias and Bancarias of the Argentinean Central Bank discussed the hierarchic features of the international monetary and financial system and the implications these hierarchies have for macroeconomic conditions in Emerging Capitalist Economies (ECEs). The international monetary hierarchy refers to the dominant role of the US Dollar in the international monetary systems and the existence of a global currency hierarchy, in which currencies assume different ranks depending on their ability to fulfil international money functions. Financial hierarchies are reflected in the nature of cross-border capital flows and the agglomeration of financial activities in financial centers in Advanced Capitalist Economies (ACEs). The presentation drew particular attention to two key macroeconomic implications of these monetary and financial hierarchies: first, the existence of external vulnerability and adverse exchange rate dynamics; second, the external constraint on monetary policy in ECEs. In addition, analytical emphasis was placed on how recent changes in the global financial system, such as the rise of non-bank financial institutions (NBFIs) and the general move to market-based financial systems, might affect those international monetary and financial hierarchies and their consequences.

A large literature has pointed to the dominant role of the US dollar in the international monetary system (e.g. Kenen, 2002; Aldasoro and Ehlers, 2018; Gourinchas, 2021). Indeed, despite the US' declining economic power with regards to international trade and foreign direct investment, the Dollar remains the dominant international medium of exchange (vehicle and trade settlement currency), unit of account (vehicle and funding currency), and store of value (investment currency) (e.g. Cohen and Benney, 2014; Belfrage et al. 2106). According to data compiled by the Bank for International Settlements, in 2019 the Dollar denominated more than 80% of international foreign exchange transactions, around 50% of international trade, and more than 40% of international debt securities (BIS, 2020).

At the same time, ECE currencies continue to assume a very limited international – and indeed sometimes domestic – role, and are situated at lower ranks of the international currency hierarchy (e.g. Prates and Andrade, 2013; Kaltenbrunner, 2015; Bonizzi, 2017). The rise of market-based finance and NBFIs have further accentuated these monetary hierarchies. This is so because the Dollar is the currency of denomination of most investment vehicles, collateral requirements, debt that is used to leverage investments, as well as the required base currency for most NBFIs' clients. This raises the demand for the dollar and – as a flipside – latent depreciation pressures on those currencies less able to fulfil international monetary functions. At the same time, although some ECE currencies have seen increased demand by non-residents/non-nationals, this demand has been biased towards potentially destabilizing short-term investment currency internationalisation, rather than more sustainable forms of internationalisation such as trade invoicing/settlement and funding currency internationalisation (Belfrage *et al.* 2016; Orsi, 2019).

International financial asymmetries can be characterized from a spatial and from an institutional level. Concerning the former, financial activities remain highly concentrated in a few financial centers

<sup>-</sup>

<sup>&</sup>lt;sup>1</sup> The analysis of currency internationalisation and currency dominance according to the degree a currency assumes international money functions draws on an established body of literature both in Economics (e.g. Kenen, 1983) and International Political Economy (e.g. Cohen, 1971). This literature normally distinguishes between the demand for international money by private and public actors. For simplicity, we abstract from public actors here.

predominantly in ACEs (e.g. Wójcik, 2013). From an institutional angle, ACE institutions remain key players and sources of cross-border capital flows. For example, Fichtner (2017) shows that in 2014 more than 50% of external deposits of all BIS reporting banks were held by Anglo-American institutions. This dominance of ACE institutions in the global financial system is likely to be exacerbated by the rise of NBFIs, at least in the short to medium term. Indeed, the asset manager industry, to a much greater extent than global banks, is concentrated in the US: among the 20 largest asset managers 14 are US institutions (Thinking Ahead Institute 2021).

These monetary and financial asymmetries have severe implications for macroeconomic conditions in ECEs. As indicated above, the presentation focused on two: first, external vulnerability, that is the risk of sudden and large withdrawals of non-resident financial flows, and adverse exchange rate dynamics; second, the external constraints on monetary policy.

The sudden and large withdrawal of cross-border financial flows has been a long-standing policy concern of ECEs (e.g. Griffith-Jones, 1998). In the wake of the ECE exchange rate crises of the 1990s and early 2000s, the traditional literature located the reasons for these withdrawals largely in domestic policy failures. These included the mismanagement of macroeconomic fundamentals (e.g. the monetary financing of fiscal deficits), and the distortions created by strongly managed (pegged) exchange rate regimes (e.g. current account deficits and currency and maturity mismatches in domestic actors' balance sheets) (e.g. Krugman, 1979; Radelet et al. 1998; Sarno and Taylor, 1999). More progressive authors pointed to the inability of ECE actors to fund themselves in domestic currencies, their "original sin" (e.g. Eichengreen et al. 2003). Policy recommendations to overcome these vulnerabilities included further removal of discretionary government interventions, including increased macroeconomic discipline, the adoption of floating exchange rate regimes, and in many cases inflation targeting as the primary aim of monetary policy. Domestic financial fragilities in the form of currency mismatches were hoped to be addressed by further developing domestic financial markets, ideally with the presence of long-term (institutional) foreign investors.

However, as recent experiences in the Global Financial Crisis and most recently in the Covid shock showed, these policy measures have not reduced ECEs' external vulnerability and the risk of large and sudden exchange rate depreciations. To the contrary, as highlighted in the growing literature on the global financial cycle (e.g. Rey, 2015), these risks have become exacerbated over recent years and have become even more uncoupled of domestic economic conditions. For example, the IMF shows that in the first quarter of March 2020, when fears about the virus first spooked international financial markets, currencies like the South African Rand, the Mexican Peso, and the Brazilian Real lost around 25% of their value (IMF, 2020a). Moreover, evidence seems to indicate that rather than stabilizing domestic financial markets, non-resident institutional investors with a longer investment horizon such pension and insurance funds contributed to ECEs' external vulnerability – in particular during moments of significant liquidity squeezes on global financial markets (Bonizzi and Kaltenbrunner, 2018).

The presentation located this sustained external vulnerability in the structural monetary and financial asymmetries of the global financial system. Non-resident financial investors, even if they have a longer investment horizon, remain firmly embedded in ACE/Dollar funding markets, which leaves

them vulnerable to international market and funding conditions. An increase in international risk aversion and/or tightening of global dollar funding, can force those investors to sell their ECE assets largely independent of domestic economic conditions. Moreover, as highlighted by Kaltenbrunner and Painceira (2015) as "new forms of external vulnerability" and the BIS as "original sin redux" (e.g. Hofman et al. 2020), though some ECE actors, in particular sovereigns in large ECEs, have managed to reduce their original sin and borrowed in domestic currencies, this has not reduced their exposure to sudden and large capital outflows. This is so because ECE local currency borrowing from non-resident investors, funded in ACE currencies on international financial markets, shifts the currency mismatch from the domestic agent to the non-resident investor. This currency mismatch in non-resident investors' balance sheets, in turn, makes them more vulnerable to (expected) exchange rate changes, potentially exacerbating the volatility of financial flows.

This structural external vulnerability of ECEs is likely to be deepened by the rise of NBFIs and market-based finance. As discussed above, the rise of NBFIs has further cemented the role of the US Dollar as the system's key funding currency. At the same time though, these institutions have less stable and secured access to dollar funding (including lender of last resort activities of the FED), which raises the risk of fire sales and sudden withdrawals of capital. Moreover, recent evidence shows that the use of index and exchange-traded funds by NBFIs can lead to quasi-automatic adjustments in investment decisions, as countries are in/excluded in the index and/or country compositions change (e.g. Petry et al. 2021; Aramonte et al. 2022). Redemption calls by global clients of NBFIs can further contribute to these pressures, largely independent of conditions in ECEs and often against the own assessment of fund managers (Kaltenbrunner, 2018; Naqvi, 2019).

The second macroeconomic implication of the global monetary and financial hierarchies highlighted in the presentation is the constraint these impose on monetary policy making in ECEs. Indeed, arguably much more so than in ACEs, monetary policy in ECEs is geared towards securing the smooth integration into the global economy, at times at the expense of domestic considerations. This external constraint on monetary policymaking refers to both the management of macroeconomic prices, in particular the interest rate and the exchange rate, and the provision of liquidity through reserve accumulation and lender of last resort activities. Whereas macroeconomic prices constitute a crucial part of returns for non-resident financial investors, foreign exchange liquidity is essential to provide (a) the security of macroeconomic price stabilization (e.g. through exchange rate interventions), and (b) the possibility for non-resident investors to withdraw their investments at any time and no/little loss of value.

Again, these constraints are likely to be deepened with the rise of NBFIs and market-based financing. In US dollar dominated, market-based financial systems, where financial returns are predominantly based on trading gains, the stabilization of asset prices and the provision of (US Dollar) liquidity becomes arguably even more important than in bank-based system. The stabilization of asset prices might require interventions in capital markets directly, rather than only in money and foreign exchange markets. At the same time, more volatile financial markets might require more frequent provision of foreign exchange liquidity to secure investor exit. This increased role for central bank liquidity operations has spurred some commentators to argue that we observe a transformation of central banks from lenders of last resort to market makers of last (daily) resort (Hauser, 2021;

Mushtaq, 2021). Overall, interventions are becoming more complex due to the rising interconnectedness between sophisticated financial instruments, diverse financial actors – which frequently don't have direct access to central bank liquidity – and traditional dealer banks.

ECE central bank interventions in the Covid shock are a good example of both, the external constraint imposed on monetary policy making in ECEs, and the increasingly complex and changing role of those central bank operations. For the first time, ECE central banks didn't only intervene in the foreign exchange market to smooth the impact of the large external shock, but also engaged in direct asset purchases mainly in secondary government bond markets (Arslan et al. 2020; IMF, 2020b). In some countries, such as Chile, Colombia, and Brazil, central banks even intervened in corporate bond markets. According to results from the IMF, these interventions were aimed at stabilizing bond markets, provide liquidity to the financial sector, and strengthen monetary policy transmission at longer maturities (IMF, 2020b). Only in a few countries (e.g. Ghana, Guatemala, Indonesia, and Philippines), they were aimed explicitly at budgetary financing.

Interestingly, even countries with interest rates well above zero (e.g. India, Philippines, and South Africa) engaged in direct asset purchases. This shows that rather than just domestic economic policy concerns, fears of portfolio outflows and ineffective policy transmissions were a key concern for ECE central banks in their interventions. Indeed, according to Arslan et al. (2020) bond purchase programs in ACEs were "designed to provide credit support for firms, keep bond markets functional and support monetary accommodation more generally as policy rates have reached their effective lower bound. By contrast, EM BPPs do not explicitly seek to provide monetary stimulus or credit support. Instead, they address market dislocations arising from investor risk aversion. By launching them, EME central banks signal that they are taking the role of dealers and buyers of last resort in the bond market, to reassure investors" (pp. 2).

In sum, this essay –and the presentation it is based on– have shown the severe macroeconomic complications the hierarchic international monetary and financial system brings for ECEs. It discussed particularly the risk of external vulnerability and adverse exchange rate dynamics, and the substantial external constraints international monetary and financial subordination imposes on monetary policy making in those countries. These adverse macroeconomic dynamics and external constraints, in turn, substantially constrain development and developmental policies. Only an at-least partial de-coupling from international financial markets will be able to reduce some of the worst implications of these international hierarchies. This would entail, on the one hand, a careful development of domestic financial markets with the participation of long-term oriented (institutional) investors and, on the other hand, the revival of state-backed financial institutions such as development banks. However, given the structural causes of these monetary and financial hierarchies, national policy measures will ultimately not be enough. Stemming the power of private finance on the global level and reducing its spatial and national concentration will also be essential to mitigating the adverse consequences of ECES' international monetary and financial subordination.

## References

Aldasoro, I., and Ehlers, T. (2018); "The geography of dollar funding of non-US banks", *BIS Quarterly Review December*.

Aramonte, S., Schrimpf, A., and Shin, H. S. (2022); Non-bank financial intermediaries and financial stability, *Bank for International Settlements*.

Arslan, Y., Drehmann, M., and Hofmann, B. (2020); "Central bank bond purchases in emerging market economies", *BIS Bulletin*, 20.

Bank for International Settlements (BIS) (2020); "US Dollar Funding: An International Perspective", CGFS Papers, 65.

Belfrage, C., Jaeger, J., and Kaltenbrunner, A. (2016); "Analyzing the Integration of Brazilian Financial Markets: The Case for Currency Internationalisation", Summary Report of the Project *Analyzing the Integration of Brazilian Financial Markets*, online source, available at: <a href="https://business.leeds.ac.uk/research-aire/dir-record/research-projects/1788/analysing-the-integration-of-brazilian-financial-markets">https://business.leeds.ac.uk/research-aire/dir-record/research-projects/1788/analysing-the-integration-of-brazilian-financial-markets</a>.

Bonizzi, B. (2017); "An Alternative Post-Keynesian Framework for Understanding Capital Flows to Emerging Markets", *Journal of Economic Issues*, 15(1), pp. 137-162.

Bonizzi, B., and Kaltenbrunner, A. (2018); "Liability Driven Investment and Pension Fund Exposure to Emerging Markets: A Minskyan Analysis", *Environment and Planning A: Economy and Space*, 51(2), pp. 420-439.

Cohen, B. J. (1971). The Future of the Sterling as an International Currency, Macmillan.

Cohen, B. J., and Benney, T. (2014); "What Does the International Currency System Really Look Like?", *Review of International Political Economy*, 21 (5), pp. 1017-1041.

Eichengreen, B., Hausmann, R., and Panizza, U. (2003); "Currency Mismatches, Debt Intolerance and Original Sin: Why They are not the Same and Why it Matters", *NBER Working Paper*, 10036.

Fichtner, J. (2017); "Perpetual Decline or Persistent Dominance? Uncovering Anglo-America's True Structural Power in Global Finance", *Review of International Studies*, 43(1), pp. 3-28.

Gourinchas, P.O. (2021); "The Dollar Hegemon? Evidence and Implications for Policymakers", in *The Asian Monetary Policy Forum: Insights for Central Banking*, pp. 264-300.

Griffith-Jones, S. (1998); Global Capital Flows: Should they be Regulated?, Palgrave.

Hauser, A. (2021); "From Lender of Last Resort to Market Maker of Last Resort via the Dash for Cash: Why Central Banks Need New Tools for Dealing with Market Dysfunction", Bank of England, Speech.

Hofmann, B., Shim, I., and Shin, H. S. (2020); "Original Sin Redux and Policy Responses in Emerging Market Economies during the COVID-19 Pandemic", in *COVID-19 in Developing Economies*, S. Djankov and U. Panizza (eds.), CEPR Press, pp. 353-362.

International Monetary Fund (IMF) (2020a); Global Financial Stability Report, April 2020.

International Monetary Fund (IMF) (2020b); Global Financial Stability Report, October 2020.

Kaltenbrunner, A. (2015); "A Post Keynesian Framework of Exchange Rate Determination: A Minskyan Approach", *Journal of Post Keynesian Economics* 38(3), pp. 426-448.

Kaltenbrunner, A. (2018); "Financialized Internationalisation and Structural Hierarchies: A Mixed-method Study of Exchange Rate Determination in Emerging Economies", *Cambridge journal of economics*, 42(5), pp. 1315-1341.

Kaltenbrunner, A., and Painceira, J. P. (2015); "Developing Countries' changing Nature of Financial Integration and New Forms of External Vulnerability: The Brazilian experience", *Cambridge Journal of Economics*, 39(5), pp. 1281-1306.

Kenen, P. (1983); "The Role of the Dollar as an International Currency", *Group of Thirty Occasional Papers*, 13.

Kenen, P. (2002); "The Euro vs. the Dollar: Will there be a Struggle for Dominance?", *Journal of Policy* Modeling, 24 (July), pp. 347-354.

Krugman, P. (1979); "A Model of Balance of Payments Crisis", *Journal of Money, Credit and Banking*, 11, pp. 311-325.

Musthaq, F. (2021); "Unconventional Central Banking and the Politics of Liquidity", Review of International Political Economy, pp. 1-26.

Naqvi, N. (2019); "Manias, Panics and Crashes in Emerging Markets: An Empirical Investigation of the post-2008 Crisis Period", *New political economy*, 24(6), pp. 759-779.

Orsi de Souza Lima, B. (2019); "Currency Internationalisation and Currency Hierarchy in Emerging Economies: The Role of the Brazilian Real", University of Leeds Doctoral Thesis.

Petry, J., Fichtner, J., and Heemskerk, E. (2021); "Steering Capital: The Growing Private Authority of Index Providers in the Age of Passive Asset Management", *Review of International Political Economy*, 28(1), pp. 152-176.

Prates, D. M., and Andrade, R. (2013); "Exchange Rate Dynamics in a Peripheral Monetary Economy", *Journal of Post Keynesian Economics*, 35(3), pp. 399-416.

Radelet, S., Sachs, J. D., Cooper, R. N., and Bosworth, B. (1998); "The East Asian Financial Crisis: Diagnosis, Remedies and Prospects", *Brookings Papers on Economic Activity*, 1998(1), pp. 1-90.

Rey, H. (2015); "Dilemma not Trilemma: The Global Financial Cycle and Monetary Policy Independence", *NBER Working Paper*, 21162 (May).

Sarno, L., and Taylora, M. P. (1999); "Moral Hazard, Asset Price Bubbles, Capital Flows, and the East Asian Crisis: The First Tests", Journal of International Money and Finance, 18(4), pp. 637-657.

The Thinking Ahead Institute (2021); *The world's largest asset managers – 2021*, online source: available at: <a href="https://www.thinkingaheadinstitute.org/research-papers/the-worlds-largest-asset-managers-2021/">https://www.thinkingaheadinstitute.org/research-papers/the-worlds-largest-asset-managers-2021/</a>.

Wójcik, D. (2013); "The Dark Side of NY-LON: Financial Centers and the Global Financial Crisis", *Urban Studies*, 50(13), pp. 2736-2752.