

Shadow Monetary Regimes and the Fragmentation of the Global Dollar SystemAuthor: Georges Abou Merhy¹*Affiliation: CIRAME Research Center, Business School**Holy Spirit University of Kaslik, P.O Box 446, Jounieh, Lebanon***Abstract:**

In this study, we investigate how cross-border dollar flows reconfigure in a context where domestic banking systems collapse and international economic integration continues to grow. The more conventional literature on international finance assumes that monetary authority only disappears after a currency collapse or an official dollarization. On the other hand, evidence from recent financial crises suggests that monetary coordination breaks down well before a national currency officially vanishes. Drawing on the case of Lebanon, this research informs our understanding of the ways economic actors adjust their financial practices when formalized banking infrastructures fail. Through an academic analysis of observable monetary behaviours and alternative financial mechanisms that have emerged within the Lebanese economy since the eruption of the financial crisis in 2019, the paper follows a conceptual and analytical research approach with naturalistic methods of interpretation. Evidence suggests that households, firms, and economic intermediaries increasingly turn to a range of alternative channels for accessing global dollar liquidity. These involve remittance networks, money transfer operators, informal foreign exchange markets, foreign bank accounts, and new digital payment technologies. This study not only reflects the evolution of cross-border dollar flows shaped by these conditions, but also identifies the formation of a systematic alternative financial intermediation system called the Shadow Cross-Border Dollar Infrastructure. Rather than serving as isolated informal activities, these mechanisms together compose the joints of a parallel financial network that enables cross-border transactions to persist despite the freezing of domestic banking institutions. The Lebanese case highlights the ways in which globalization can endure while sovereign financial systems face deep dislocation. Understanding these dynamics could help explain both recent developments in the international monetary system and its future trajectory, particularly in high-inflation, capital-controlled, or financially unstable economies.

Keywords:

Shadow financial infrastructure, Dollarization, Cross-border payments, Monetary fragmentation, International Finance

Introduction: "The What & Why"

International finance is one of the most important branches of economics in our everyday world; it focuses on studying the monetary interactions, the financial relationships and the capital flows between countries. It usually focuses precisely on exchange rates, foreign direct investment (FDIs) and the management of risks and crises in the global market. International literature often implies that countries lose monetary power primarily when the currency collapses, hyperinflation hits, and official dollarization takes place, Lebanon serving as a perfect example for that case. The alleged key message behind this idea is that monetary authority disappears after currency failure.

As we all can realize in our everyday world, even though currencies may still exist, as well as central banks and even their corresponding laws, there are major challenges that will stop people from storing their wealth in unstable local currency, refrain from settling large transactions with domestic currencies, and most important of all; withhold domestic banks for cross-border payments. What we can acknowledge is that monetary power can collapse before currency disappears. One thing worth mentioning is that it is not only a national issue, it goes way beyond that; it concerns a variety of aspects, such as to how dollars circulate globally, how cross-payment occurs, and most importantly, who controls settlement. The whole structure of the global dollar system may be changing altogether. Lebanon isn't a victim, it is a laboratory; Lebanon is classified by experts as an extreme, inadequate and revealing case. Lebanon never consistently illustrates what happens when formal financial channels stop, but globalization continues; domestic banks largely closed and frozen in time, huge diaspora inflows, heavy importing that supports the economy, and the Lebanese Pounds slowly getting replaced by the United States Dollar we all know today. We can observe a lot of behaviors in the country, whether prices are quoted in USD, rents and wages are negotiated in USD, cash dollars heavily preferred, stablecoins used for payments, foreign accounts used by residents, and informal money changers replacing banks (Whish, OMT, Taptap Send, etc...). This article refers to the phenomenon called "Shadow Cross-Border Dollar Infrastructure". Getting more deep into the explanation, "Shadow" represents being outside formal regulations, such as the black market, "cross-border" meaning what connects Lebanon to global dollars, and finally "infrastructure" constitutes as not being random, but systematic. Most international finance focuses on analyzing exchange rate collapses, inflation and hyperinflation, dollarization levels, foreign reserves, balance of payments and central bank policies, resulting in creating conceptual gaps; less attention is being given to how people choose which money to use daily, how firms decide to receive foreign payments and how households move money across borders in practice. So the real problem is that most literature do not deeply analyze behavioral monetary coordination, leaving room for informal, or semi-formal cross-border settlements; in other words, researchers study outcomes, but enough study how coordination shifts before outcomes appear. So we can conclude that this area is slightly underexplored, which creates conceptual gaps in international finance literature. But this article therefore questions: how do cross-border dollar flows reorganize when domestic banking systems collapse but globalization and international trade continues?

This article contributes to international finance literature by proposing the detailed concept of shadow cross-border dollar infrastructure, and using Lebanon as a laboratory to demonstrate how a new layer of global dollar intermediation operates outside sovereign banking systems.

While Lebanon represents an extreme case, similar patterns may still be emerging in other high-inflation and capital restricted economies, offering more suggestions such as broader implications for the future architecture of the international monetary system.

Literature Review: "The story so far "

Conventional international finance literature accounts for monetary power through macroeconomic stability and institutional credibility. According to classical monetary theory, national currencies get their authority from the power of sovereign institutions, especially central banks, to control money supply, ensure price stability and regulate financial intermediation (Mishkin, 2019). Under this framework confidence in a currency is tied to macroeconomic fundamentals such as inflation control, foreign reserves and fiscal discipline. When these components erode, currency substitution and dollarization tend to emerge as mechanisms economic agents use to defend their purchasing power.

Dollarization thus has emerged as a major field of inquiry within international finance. Dollarization, as defined by Calvo & Végh (1992), means that foreign currency is widely used in a domestic economy both from the perspective of being used as a store of value, unit of account, or medium of exchange. Subsequent studies distinguish more formally between official dollarization, where foreign currency replaces the national currency in a formal and permanent agreement, and informal dollarization, where foreign currency occurs increasingly alongside the domestic as medium of exchange (Reinhart et al 2003). Research on countries like Ecuador, Argentina, and Zimbabwe show that dollarization typically happens during episodes of extreme macroeconomic instability, hyperinflation or banking crises.

Most of the literature focuses on the macroeconomic implications of dollarization, in other words, on loss of monetary sovereignty and limitation to use the monetary policy, but several others studies state that much depends also on financial intermediation. Such financial systems depend on banks as the central nodes bridging domestic economic actors and global capital markets (Allen & Gale, 2000). Domestic banks provide international payments, trade financing, and cross-border liquidity flows via correspondent banking networks. Such institutional architectures constitute what could be understood as the formal infrastructure of global finance.

But when domestic banking systems start to break down, often economic sustenance relies on financial arrangements outside the formal banking system. Financial crises in turn prompt the emergence of informal financial networks when formal institutions cannot meet basic needs (Portes & Haller, 2005). Depending on the operational context, these networks can encompass money transfer operators, informal currency exchangers, diaspora remittance channels and digital financial platforms which enable individuals and firms to circumvent formal banking systems.

The evolution of financial technology in recent years has also opened the door towards all this and more. Digital payment systems, mobile banking platforms, and blockchain-based assets like stablecoins have created new ways for value to pass through countries without going through traditional financial institutions (Adrian & Mancini-Griffoli, 2019). These innovations have considerably lowered transaction costs and broadened access to global financial networks, especially in areas where conventional banking infrastructure is limited or unreliable.

These papers mark a noteworthy step forward but, with some admirable exceptions, existing work still largely looks at monetary instability through the lens of macroeconomic indicators like

exchange rate volatility, inflation and balance-of-payments imbalances. These indicators signal the consequences of monetary crises but tell only a partial story, as they reveal little about the behavioral and institutional adaptations societies undertake in response to financial disruption. Specifically, there is relatively little research on how households, firms and diasporas coordinate alternative payment systems in a context of domestic banking channel collapse but economic globalization continuity.

In this respect, the Lebanese financial crisis serves as a particularly illuminating backdrop. Since the banking restrictions were imposed in 2019, Lebanon has been subject to one of the most acute financial collapses in modern history, with hyperinflation and paralysis (banking) alongside a steep depreciation of the Lebanese pound (World Bank 2021). But even as the domestic banking system has collapsed, international trade, remittance inflows and cross-border financial transactions have persisted across an array of alternative modalities. They include money transfer operators, foreign bank accounts held abroad, informal currency exchange networks and increasingly digital payment mechanisms.

This phenomenon accentuates a possible conceptual lapse in the literature of international finance. While existing theories do a good job of explaining the collapse of currencies and dollarization, they offer less on how cross-border financial intermediation would be rearranged once formal banking infrastructures break down. Put differently, whereas the macroeconomic effects of monetary crises have been thoroughly investigated by scholars, much less attention has been paid to how changes to mechanisms of financial settlement will shift during such periods.

This paper proposes the development of a Shadow Cross-Border Dollar Infrastructure to help fill this gap. Instead of seeing informal financial activities as aberrations or short-term crises response, this framework understands them as a historically situated and systemic layer of financial intermediation that exist parallel—or sometimes in lieu—of the formal banking system. Through the empirical case of Lebanon, this study seeks to demonstrate how such gray infrastructures enable global dollar circulation and support economic activity in localities with effectively decayed domestic financial institutions.

Understanding these dynamics is not only essential as a response to through two decades of record-high economic movements, but in a global financial system characterized by capital mobility, digital financial technologies and transnational diaspora networks that enable economic actors to bypass traditional monetary frontiers. As such conditions are found in other high-inflation and capital-restricted economies, shadow financial infrastructures may also provide valuable insights into changes shaping the core architecture of the international monetary system (beainy & Kamel, 2023).

Methodology: "The how we did it "

Using a conceptual and analytical research design, this study captures the reconfiguration of cross-border dollar flows as domestic banking systems get upended while international economic integration does not go away. The study does not limit itself to exclusive numerical financial models but explores the structural transformation of financial intermediation through qualitative observation and analytical interpretation of monetary behaviors. With this, we aim to comprehend how economic actors adjust their money practices for when the formal banking infrastructures cease functioning.

The research is mainly based on a case-study approach with Lebanon as an analytical laboratory for the study of the rise of alternative cross-border settlement mechanisms. Lebanon provides an especially interesting case in this regard; ever since 2019, the (domestic) banking system has faced tightening banking restrictions, resulting in near paralysis of the local banking system itself while economic activity and international trade continued using alternative means. This habitat allows us to watch how people, businesses and diaspora networks replace money intermediation when no financial institutions can work.

For the purpose of this analysis, the study uses secondary data sources and official reports from international organizations, including the World Bank, International Monetary Fund (IMF) and Bank for International Settlements (BIS). These are macroeconomic indicators and reports concerning the implicit rates of exchange rate depreciation, inflation, capital controls and the disturbance of domestic banking services. Furthermore, the study also analyzes the observable financial behavior in the Lebanese economy, such as the dollarization phenomenon and its relevance to domestic transactions through increasing remittance channels; increasing dependence on money transfer operators and digital payment systems (whether bank or non-bank) in cross-border flows.

It has also merged behavioral lectures of monetary coordination in the Lebanese economy. The notable observations are USD quoting of prices, negotiation of wages and rents in foreign currency, cash preferences for physical dollar bills, and the use of alternative channels like stablecoins, international bank accounts and money transfer operators. It is analysed as indicators of the way economic agents change its financial behaviour when confidence in domestic monetary institutions drops.

An analytical framework for the research: the focus is on structural characteristics of what this research calls Shadow Cross-Border Dollar Infrastructure Instead of viewing informal financial activities as ad hoc reactions to crisis, the research asks if such practices constitute an explicit network through which economic agents can retain access to global flows of dollar liquidity. We are especially attentive to the mechanisms through which domestic economic entities become linked to international financial networks in spite of the dysfunctionality of sovereign banking institutions.

By conducting this conceptual analysis, the study aims to illuminate the mechanisms that uphold cross-border financial flows beyond traditional banking systems. Closely analyzing the Lebanese case, therefore, this methodology seeks to uncover (1) how alternative financial infrastructures are established; (2) how they coordinate monetary behavior of diverse classes of economic agents; and (3) how these structures serve to maintain a globalized form of finance even where domestic financial crises reach extreme levels.

Results: "The facts "

A qualitative assessment of the financial landscape in Lebanon after 2019 shows a number of structural changes that transformed how cross-border funds are channeled through the economy. Even amid the near paralysis that gripped the domestic banking sector after banking restrictions and capital controls were imposed, international financial traffic did not vanish. In its place, however, a complex set of alternative mechanisms was put in place that allowed households and firms, and economic intermediaries feeding them, to continue having access to global dollar liquidity. Taken together, these mechanisms point to the existence of a parallel financial

architecture enabling the movement of dollars through both the Lebanese economy and beyond its borders.

The most tangible and rapid change has been the widespread use of the United States dollar as the unit of account in domestic economic exchange. In several sectors of the Lebanese economy, from real estate to retail commerce, education to hospitality and professional services, prices are increasingly quoted in U.S. dollars as a matter of course. Even when transactions are finally settled in Lebanese pounds, the dollar price often provides the reference point from which to calculate the local currency equivalent. This practice showcases widespread mistrust of the domestic currency and highlights that economic agents are looking for a foreign currency anchor to maintain purchasing power and price stability.

The economic structure of relationships has also shifted toward dollar-based contracts, alongside price denomination. Wages, rents and service contracts are often negotiated in U.S. dollars instead of Lebanese pounds. In the labour markets many employers fully or partly pay cash dollars to their employees in cash, during sectors linked with international markets such as tourism, technology, consulting, and export-oriented services. This change reflects the fact that dollarization in Lebanon is no longer just a matter of transactional convenience but rather of deeper institutional adaptation within economic coordination.

A second key observation relates to the broader networks of remittances as a dominant channel for financial flows into the economy (Saber & Sassine, 2022). Lebanon has been historically sustained by a large and dispersed diaspora, and remittances have for decades played an important role in the support of household income and domestic consumption. After the banking sector was disrupted, remittance channels became even more critical to the transmission of this economy. Through this system, money transfer operators such as OMT and Whish and even international platforms like Taptap Send have become the main channels for foreign currency entering the Lebanese financial system, effectively usurping traditional banks' role (Saliba et al., 2023).

These remittance channels function at notable scale and efficiency. Many Lebanese households receive transfers from relatives working abroad in Europe, North America, the Gulf region and Africa. These funds are then typically converted at money transfer operators, and disbursed as dollar currency rather than being deposited into local bank accounts. This process does let recipients directly access hard currency without having to depend on the formal banking system. Consequently, money transfer operators have taken on roles that banks traditionally filled; liquidity distribution and cross-border settlement.

Another important development has been the rapid expansion of informal and semi-formal foreign exchange markets. Due to the disconnect between the official exchange rate and market conditions, these parallel currency markets have become the dominant means by which foreign exchange transactions are carried out. Now, currency exchange offices, street-level money changers and digital exchange platforms all play a vital role (Kamel et al., 2025) in premiums that effectively determine the rate at which most people do their business. Such markets do the job of converting Lebanese pounds into U.S. dollars and vice versa, essentially performing liquidity allocation functions previously performed by the banking sector itself.

So the informal exchange rate has become the leading price indicator in the economy, directing pricing decisions throughout a range of sectors. Companies by businesses and importers, retailers often use these market-based exchange rates to set product prices and costs, and modalities for financial planning (Chaanine et al., 2023). This shift signals the fact that foreign currency is now in a more decentralized price discovery process outside of centralized monetary authorities and in traders' hands.

Another phenomenon that can be observed is the growing dependence of Lebanese individuals and companies on foreign banking infrastructures. Individuals and entities with access to the international economic system often use offshore bank accounts for payment services, cross-border financial transactions and to hold wealth. These accounts, usually based in jurisdictions such as Gulf states, Europe or North America, facilitate Lebanese economic actors' access to global financial services while circumventing domestic banking restrictions.

This hope led to the externalization of financial activity, which had the effect of moving large components of Lebanon's financial intermediation beyond the reach of its sovereign banking framework. This means that at more immediate level, a lot of businesses hold accounts in foreign financial institutions from which they make international payments, even while operating physically inside Lebanon. This dual structure leads to a fragmented and fragmenting financial environment, in which domestic economic activity is only partially buttressed by financial infrastructures moving either themselves or simply their coordinates into foreign soil.

Another emerging trend is the increasing use of digital financial technologies and blockchain-based assets within this new financial ecosystem. During the last few years, Lebanese freelancers, technology workers and some digital entrepreneurs have turned more to stablecoins and other digital assets to get paid by international clients. These instruments enable users to hold and transfer value in units of U.S. dollars without needing access to the traditional banking institution system.

Stablecoins in particular have garnered interest because they offer the price stability of dollar-pegged assets with the ease by which blockchain-based transfer systems can facilitate transactions. With digital wallets and peer-to-peer (P2P) networks, people can receive cross-border payments almost instantaneously and without many of the regulatory burdens of traditional financial institutions. The scale of these digital channels is still smaller than remittance networks, but their existence shows the spreading out of mechanisms that could facilitate cross-code (digital) financial flows (Subrahmanyam et al., 2024).

Combined, these observations show a layered system of alternative forms of financial intermediation shaping the Lebanese economy. This system already utilizes, but is not limited to, networks of diaspora remittance channels, money transfer operators (MTOs), informal markets for foreign exchange, foreign banking systems as well as new technological means for digital payments. Each of these elements helps ensure continued access to global dollar liquidity in the face of domestic banking institution dysfunction.

The concurrent operation of these mechanisms reveal a complex financial infrastructure that allows economic agents to maintain inter-country transfers and currency cooperation without relying on the conventional banking system. Instead of isolated responses to crisis, these mechanisms operate in tandem as a parallel infrastructure that ensures the flow of global dollars continues to circulate within the Lebanese economy (Beainy, 2023).

Discussion and conclusion: "The so what ? "

This paper investigates the reconfiguring of cross-border dollar flows in a globalized world, characterized by economic international integration, as domestic banking systems have broken down. Drawing on Lebanon as an analytical case, the project identified a set of financial practices that allow for economic actors to access global dollar liquidity even amid the dysfunction of sovereign banking institutions.

These findings indicate that the collapse of domestic monetary systems does not have to signal an end to financial activity. Instead, financial coordination can move to other mechanisms that form outside the framework of the banks. These mechanisms in the Lebanese case include remittance networks; money transfer operators; informal foreign exchange markets and informal foreign banks; and new means for transferring value electronically such as on-line electronic banking systems. Collectively, these channels constitute an alternative system of financial intermediation that keeps cross-border transactions going and allows for dollar circulation in the domestic economy.

The concept presented here — Shadow Cross-Border Dollar Infrastructure — provides a lens through which to view this evolution. Instead of seeing informal financial activity as either fragmented or episodic reactions to crisis, the research shows that these mechanisms are co-creating a structured infrastructure that allows economic actors to remain plugged into global financial networks. This structure enables globalization to function even where domestic monetary institutions have lost credibility and ability.

The Lebanese case thus underscores an important difference between currency collapse and monetary coordination. Though the domestic currency may eventually be deprived of its role as both a store of value and medium of exchange, financial actors can continue to recalibrate their practice along pathways that secure access to stable foreign currencies (FX) and international payment systems. That is, monetary authority can fray long before national currencies formally vanish.

These observations have wider implications for international finance. Many existing approaches to the analysis of monetary crises are centered on macroeconomic indicators such as depreciation volatility, inflation or depletion of foreign exchange reserves. Although such indicators are critical, the Lebanese example indicates that there is also a need to focus on behavioral/structural dynamics that appear over financial systems in times of institutional collapse. Understanding the dynamics behind emerging alternative settlement networks is therefore likely to grow in relevance in assessing the resilience of global financial integration.

Moreover, such shadow financial infrastructures can reflect a slow-moving revolution in the architecture of the global dollar system. As financial technologies advance, and as cross-border connectivity improves, economic actors may become empowered to bypass traditional banking channels whenever those channels are unreliable or inaccessible. This could transform the interplay of national monetary sovereignty and global financial integration.

Although Lebanon is an extreme example of a case of financial collapse, such dynamics may be found in other economies with high inflation, capital restrictions or banking instability. Future research could thus apply this analytical framework to explore other countries under similar conditions, enabling scholars to reach a deeper understanding of how alternative financial infrastructures emerge and function in diverse institutional contexts.

The Lebanese experience shows that the global circulation of dollars is not determined solely by the stability of domestic banking systems. Rather, financial coordination can be mediated by a range of alternative mechanisms that work together to create an infrastructure parallel to that connecting local economies and the international financial system. Thus, tracking and studying these shadow infrastructures may provide deeper insights into the evolving dynamics of the global monetary system.

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