Chasing the Shadows: How Significant Is Shadow Banking in Emerging Markets?

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Broadly defined as credit intermediation involving entities and activities outside the regular banking system,1 shadow banking raises important policy concerns. Given significant challenges with data availability, the size, nature and significance of shadow banking in emerging market and developing economies (EMDEs) are even less discussed and understood. Shadow banking in EMDEs generally does not involve long, complex, opaque chains of intermediation, as is often the case in advanced economies. Nonetheless, it can pose systemic risks, both directly, as its importance in the total financial system grows (with the concomitant credit, market, and liquidity risks that its participants undertake), and indirectly through its interconnectedness with the regulated banking system. At the same time, shadow banks also play an important role in channeling alternative funding sources to EMDEs, especially as deleveraging pressures from European banks continue. This suggests that policy makers need to manage trade-offs carefully to ensure that shadow banks provide alternative but safe sources of funding to the private sector without generating additional systemic risks. Based on a snapshot of selected EMDEs in East Asia and in Central and Eastern Europe, and subject to caveats dictated by limited data availability, the shadow banking system is relatively small in most EMDEs, but has grown markedly in recent years, reaching a not insignificant share of the financial system in some countries, while remaining largely unregulated.

What Is Shadow Banking?

Shadow banking comprises a set of activities, markets, contracts, and institutions that operate partially (or fully) outside the traditional commercial banking sector, and, as such, are either lightly regulated or not regulated at all. The distinguishing feature of shadow banking is that it decomposes the process of credit intermediation into a sequence of discrete operations (FSB 2011a, exhibit 1). A shadow banking system can be composed of a single entity that intermediates between end-suppliers and end-borrowers of funds, or it could involve multiple entities forming a chain (FSB 2011a; Pozzar and others 2010).2 In the latter case, one or more of the entities in the chain might be a bank or a bank-owned entity, but these operations are typically performed by separate specialist nonbank entities that interact across the wholesale financial market and rely on the wholesale market for funding (Comotto 2012). In doing so, shadow banks redistribute risk through credit, maturity and liquidity transformation, raising systemic risks, especially if combined with high leverage.

Participants of the shadow banking sector typically include a wide range of nonbank financial intermediaries conducting various activities. In advanced financial systems, the players typically include money market, credit hedge, invest-
ment, and exchange-trading funds; conduits or special purpose vehicles; and finance, insurance, and leasing companies. The activities range from securitization, securities lending, repos, loans and other banklike functions, including collecting deposits (EC 2012; FSB 2011a; Pozsar and others 2010).

The challenges posed by shadow banking may differ between advanced and emerging markets. Based on recent analyses of the sector in the United States and other advanced economies, shadow banking involves many credit intermediation steps and complex linkages within the shadow banking system as well as between traditional and shadow banks. In emerging markets, these steps and linkages tend to be simpler, with finance, leasing, and factoring companies; investment and equity funds; insurance companies; pawn shops; and underground entities comprising the main participants in the shadow banking system.

Assessing the significance of shadow banking is hindered by considerable data challenges. Using a proxy measure of nonbank credit intermediation based on flows of funds data for Australia, Canada, Japan, the Republic of Korea, the United Kingdom, the United States and the euro area, the Financial Stability Board (FSB) estimated the size of the global shadow banking system at about US$60 trillion in 2010—representing 25–30 percent of the total financial system, or about half of assets in the regular banking sector, compared to an estimated US$27 trillion in 2002 (FSB 2011b). After growing rapidly until 2007, reaching about US$60 trillion, many parts of the shadow banking system collapsed in 2008 (Pozsar and others 2010), but recovered to the 2007 level in 2010. No aggregate estimate is available so far on the size or importance of nonbank financial intermediation in EMDEs, though it is believed to be small but growing, compared to the size of their total financial system.

**Why Increased Focus on Shadow Banking? Benefits and Costs**

It is generally agreed that financial intermediation through nonbank channels provides some benefits, and hence can constitute a useful part of the financial system (EC 2012; FSB 2011a; Pozsar 2010). For example, shadow banks provide alternatives to bank deposits for large investors, especially given the insufficient amounts of insured deposits in the traditional banking system compared to the large size of the cash pools held by institutional investors. Their specialized expertise in specific functions enables them to channel resources toward specific needs more efficiently. Moreover, they provide alternative funding for the real economy—particularly useful when traditional banking or market channels become temporarily impaired—as in the current crisis. Shadow banks can also provide funding and risk diversification: they can facilitate credit extension to certain sectors that might otherwise not have access to credit, and provide investors and banks a range of tools for liquidity, maturity, and credit risk management.

At the same time, shadow banking activities can be an important source of systemic risk. After all, the global financial crisis originated in the shadow banking sector in 2008. Since then, there has been growing recognition that despite the beneficial role it can play in providing credit, the shadow banking system may pose even greater systemic risk than traditional banking, because its activities are exposed to similar financial risks as traditional banks, but are not subject to the same degree of oversight and regulation. These risks include:

- **The potential for excess leverage.** Activities in the shadow banking system can be highly leveraged, including through securities financing transactions (SFTs) that entail a temporary transfer of securities by a lender to a borrower on a collateralized basis. SFTs include both repo markets (in which commercial banks also participate) and securities lending transactions. The use of such nondepository sources of collateralized funding can facilitate high levels of leverage since these assets can be used as collateral to raise more funds, which can then be used to buy more assets that in turn can be used as collateral to raise more funds (hence amplifying procyclicality). The practice that allows a prime broker to use collateral posted by, say, a hedge fund, for its own funding (rehypothecation) plays an important role in shadow banking, increasing the estimated size of the system prior to the crisis to at least 50 percent larger than had been previously documented (Singh and Aitken 2010). A defined set of customer protection rules that limit rehypothecation of assets may not exist in all countries.

- **Amplification of procyclicality.** As noted above, practices in the shadow banking system also amplify procyclicality—that is, the mutually reinforcing interactions between the financial and real sectors of the economy that tend to exacerbate business cycle fluctuations and financial sector instability. Procyclicality can arise for several reasons:
  - Valuation changes in collateral assets can cause procyclicality. Rising collateral asset values increase cash/securities lent and, because the value of collateral assets is positively correlated with the business cycle, rising collateral values increase the credit availability during economic expansions.
  - SFTs involve the use of margins and haircuts, which, in turn, affect leverage. Margins and haircuts tend to be procyclical; in an upswing, a reduction in haircuts or initial margins increases the maximum leverage available to the borrower, even if other credit terms remain unchanged. As leverage increases, additional purchases of collateral can be financed. The resulting higher demand for assets lowers credit spreads.
and raises the value of collateral assets, encouraging further increases in the amount that can be borrowed against this collateral. Conversely, in a downturn—or when market confidence evaporates—the value of collateral falls and margins/haircuts are increased, potentially leading to abrupt deleveraging and fire sales.

- **Instability of wholesale funding and potential for “modern-style bank run.”** The shadow banking system relies on wholesale funding, which is not directly or permanently supported by any official safety net (such as deposit insurance and access to central banks as lenders of last resort). Shadow banks undertake significant maturity and liquidity transformations, and many, if not most, fund themselves through short-term or callable deposit-like liabilities, including short-dated asset-backed commercial papers (ABCPs), short-term repos, and money fund investments. This practice exposes the system to a “run” (or sudden, large-scale withdrawals by clients of their funds), undermining the wider financial system.

- **Transmission of systemic risk.** Shadow banking activities are often linked to the regular banking system through a complex web of interconnections (Turner 2012). Commercial banks are often part of the shadow banking chain, or provide explicit or implicit support to the shadow banking entities to enable maturity/liquidity transformation. Also, banks often invest in financial products of shadow banks, alongside other providers of funds, such as consumers and corporations. The failure of an institution in the shadow banking sector could then generate significant contagion and affect the overall financial system stability. These bank–nonbank linkages can also exacerbate the procyclical buildup of leverage discussed above, involve “flawed credit risk transfers” through securitization and heighten risks of asset bubbles, especially when both systems invest in the same assets. Hence, even in cases where there is no direct connection, banks can be exposed to common concentrations of risks in financial markets through common holdings of assets and derivative positions.

- **Regulatory arbitrage and circumvention.** Shadow banking activities could be used to circumvent the tighter regulations imposed on banking institutions. Provided that shadow banks are not subject to a similar set of regulations and oversight, the tightening of the regulation of risky banking activities could push such activities from the regulated banking system toward less- or unregulated shadow banks, and could even generate systemically important nonbank financial institutions. Effectiveness of regulation to reduce systemic risk and leverage is hence undermined by the shadow banking system, leaving risks intact (or even greater) in the broader financial system, especially when the two parts of the financial system remain connected through ownership or financial linkages.

### Is the Shadow Banking System a Similar Source of Risk for EMDEs?

Whether or not the shadow banking system constitutes a significant risk for the financial systems of EMDEs depends on a number of factors, including:

i. the size and systemic importance of shadow banking in total financial system;

ii. types of activities shadow banks are engaged in and their riskiness;

iii. if and how they are linked to the banking sector; and

iv. if and how they are regulated.

Unfortunately, information on the characteristics and size of shadow banks in EMDEs is hard to come by, and in many cases, available information (from central bank or regulatory agencies’ Web sites or financial sector assessment programs [FSAPs] conducted in recent years) is fragmented and may not be fully comparable. With these caveats in mind, this section looks at a snapshot of the shadow banking system in Central and Eastern Europe and in East Asia, with a particular focus on China.

Overall, banks dominate the financial systems of many EMDE’s, but the shadow banking sector has gained importance in some countries. In East Asia, traditional banking still dominates the formal financial sector, but nonbank financial intermediation may provide important shadow banking services in some regions. The sector is particularly large in the Philippines and Thailand (more than one-third of total financial system assets) and its share has been gradually rising (figure 1). However, in select Central Eastern European countries, shadow banking grew rapidly until 2007, and then lost some of its share following the global financial crisis.

The factors underlying the development of the nonbank financial intermediation are somewhat similar to those that stimulated its growth in advanced countries. For example, as in the United States, where fundamental changes over several decades placed pressures on both the asset and liabilities side of banks’ balance sheets, eroded their competitive advantage and spurred the growth of shadow banking, tighter regulations or restrictions imposed on regulated banking institutions to address monetary and financial stability concerns in EMDEs increased the cost of bank intermediation and played a role in the growth of (unregulated) shadow lending (for example, China, Bulgaria, Croatia, and Romania).

Comparing the nature of shadow banking in EMDEs to those in more advanced countries suggests that the nature of the challenges posed is somewhat different. In EMDEs, the shadow banking sector is relatively simple, given the level of sophistication of financial markets and instruments, and is less about long, complex, opaque chains of intermediation and
more about being weakly regulated or falling outside the regulatory sphere altogether. The sector is typically no more than 39 percent of the total financial system in the sample countries, and is made up of a range of institutions that focus on provision of alternative sources of financing to the economy (such as leasing and factoring companies, credit unions, cooperative banks, microfinance companies, and pawn shops).

The challenge posed by these entities is that they are either not regulated or are subject to fragmented oversight (due, for example, to being part of a large conglomerate owned by foreign banking groups or to being supervised by separate entities that may not cooperate effectively). In some countries, such institutions may also be subject to less strict regulation and may hold unique privileges. In addition to introducing unlevel playing field considerations compared to the tightly regulated banking system, such regulatory gaps may mean that as the importance of the sector grows over time, an important part of the financial sector may remain out of the systemic risk radar and could hence contribute to growing systemic risks, considering the ownership and activity linkages that keep banks and nonbanks connected. China’s shadow banking sector, which has received considerable attention recently, helps demonstrate such risks.

**Shadow Banking in China**

The shadow banking sector in China is defined more broadly as lending outside the banking system, and does not necessarily involve leverage and maturity transformation. The rapid growth of such lending activities led the People’s Bank of China (PBOC) to introduce the concept of “total social financing” in early 2011, specifically to track loans, entrusted loans, and other bank-intermediated credit products that are often not captured on their balance sheet. However, since then, new products appear to have emerged to avoid disclosure on this broader metric, with many banks turning their loans into financial products through trust companies, which then invest in sectors with high returns, but also with high risk.

Shadow lending in China takes place through a wide range of entities, all of which are difficult to track down. The entities range from trust companies to pawn shops, microfinance companies, credit and leasing guarantee companies, and individual money lenders. The main forms of shadow lending consist of informal lending as well as underground intermediation, entrusted loans, trust loans (wealth management), and bank acceptance bills (Barclays Capital 2011; IIF 2012; South China Morning Post 2012).

While subject to significant difficulties of measurement, the size of the Chinese shadow banking system is estimated to have reached worrisome proportions since last year. Off-balance sheet and underground lending is estimated to have more than tripled by end-2010, from RMB 3 trillion in 2007, compared to an 84 percent increase (to RMB 50.7 trillion) in recorded bank lending over the same period, and only part of such lending is covered in official statistics. Anecdotal information suggests that the share of nonbank loans may have increased from 8.7 percent of the total loans in 2002 to as much as 79.7 percent in 2010. The system has grown further since the beginning of 2011, when the state tightened control of credit, resulting in underground financing filling the gap. Some private sector estimates put the size of shadow financing as ranging from RMB 8.5 trillion (or US$1.33 trillion) to RMB 10 trillion, with an estimated annual fund flow of RMB 2 trillion (5 percent of GDP; Monan 2011).6

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**Figure 1. Evolution of the Shadow Banking Sector in Selected EMDEs**

![Figure 1. Evolution of the Shadow Banking Sector in Selected EMDEs](image-url)

Source: Authors’ illustration from data drawn from FSAPs and central bank and other regulatory agency reports.

Notes: Data on total financial sector in the Philippines do not include pension funds. Data on total financial sector of Thailand include private pension funds but not public pension funds. Due to lack of available data, asset data for four Thailand financial institutions in some years in 2003–5 were estimated based on the average growth of the other specialized financial institutions that provided data. Similarly, due to lack of available data, asset data for specialized vehicles in Romania for 2010 were estimated based on the average growth of the system. For China, there is significant informal private lending and underground intermediation, which cannot be captured in the formal statistics reported above.
What are the key concerns?
There are growing concerns that shadow banking, because it is outside state supervision, challenges the stability of China’s financial system:

• **Direct linkages with banks.** Banks are involved with shadow banking entities and products, primarily through the letters of credit they issue and the role they play in entrusted loans. Banks have also used off-balance sheet wealth management products to attract deposits—short-term products to savers that pay high interest rates but allow the banks to bring the deposits back on their balance sheets at the end of each month to meet their regulatory requirements. The media reported that commercial lenders issued RMB 8.5 trillion in wealth management products in the first half of 2011, compared to RMB 7.0 trillion for the whole of 2010. Problems in the shadow banking system would hence affect banks directly through these links. As discussed later in this note, this area has been the focus of recent regulatory action.

• **Indirect linkages with banks.** Isolated cases of defaults could trigger widespread redemptions, though potential defaults should not directly add to nonperforming loans (NPLs) of commercial banks. However, it is possible that second-round effects of borrowers’ problems might lead to more serious problems for banks. Property developers borrow significantly from banks, accounting for about 8 percent of total bank credit; should property developers face redemptions from investors, their ability to repay bank loans could be seriously affected. Nonetheless, since the investors in wealth management products are private individuals (as opposed to other financial institutions), the intermediation chain is shorter and difficulties may not result in the vicious cycle of falling asset prices, deteriorating balance sheets, and forced sell-off of assets seen in advanced economies following the subprime crisis.

• **Exposure to market, credit, and maturity/liquidity risk by trust companies.** The key risks seen with trust financing is the dependence on underlying asset prices, which are subject to potential correction and the often risky pricing behavior undertaken to attract investment. The bulk of trust financing is directed toward infrastructure projects (32 percent), followed by industrial and commercial projects (18 percent) and real estate (16 percent; KPMG 2012). A sharp slowdown in the economy and/or decline in asset prices could lead to an increase in defaults. Their leveraged positions and typically shorter-term liabilities than assets also subject trust companies to maturity and liquidity risks.

• **Other concerns.** The rapid rise in underground lending and associated high borrowing rates raise concerns about an emergence of potential social and political tensions. There is also a concern that shadow banking is weakening macroeconomic management, rendering monetary policy (still largely conducted through qualitative control) ineffective.

The Chinese authorities have been acknowledging the danger of rising risks in the shadow banking system, and have undertaken some measures to address the risks it poses.

• **Monitoring and indirect regulation.** The authorities announced plans to establish a monitoring system for private lending and cracked down on banks by requiring them to include in their reserve requirement ratios letters of credit and deposits for bank acceptance bills (a commonly used trade financing tool). At the same time, state officials maintain the legitimacy of private lending as an integral source of capital for small- and medium-sized enterprises (SMEs), arguing that “Government departments will perfect relevant rules and laws to guide the activities of private lending and build multi-level credit markets” (Tse 2011).

• **Shadow banking related to bank–trust cooperation.** Measures include: (i) limiting trust loans extended in bank–trust cooperation to less than 30 percent of total bank–trust businesses; (ii) requiring banks to move back off-balance sheet assets related to trust bank cooperation by end-2011; (iii) requiring that large banks set aside risk-weighted capital of 11.5 percent for trust loans extended in bank–trust cooperation that are not included in banks’ balance sheets and that small banks set aside 10.5 percent; (iv) requiring trust companies to set aside risk-weighted capital of 10.5 percent of capital for trust loans extended that are not included in bank balance sheets; and (v) forbidding trust companies to distribute dividends if the trust compensation reserve is less than 150 percent of their NPLs, or less than 2.5 percent of the trust loans extended in the bank trust cooperation (Barclays Capital 2011).

• **Formalizing shadow banks.** The government established an experimental financial reform zone in Wenzhou in March 2012, paving the way to convert underground small loan companies into local banks servicing SMEs.

The measures undertaken by the Chinese authorities are important steps to address the growing size of the shadow banking sector and the risks it poses to the financial system. Given the direct and indirect linkages with banks and the susceptibility of shadow banks to market and credit risks, monitoring and regulating the sector and their linkages with banks and formalizing private lenders to bring them under the regulatory umbrella should help reduce the risks. At the same time, to a significant extent, the rapid rise of the shadow banking sector has been in response to the incentives cre-
ated by the tight controls over bank lending, and on deposit and lending rates. Shadow banking entities have provided alternative means for borrowers to obtain funds and for savers to get better returns to their savings. A lasting solution to the rapid rise in shadow banking therefore will also require addressing some of the root causes that give rise to such regulatory arbitrage.

Conclusions

Although at present the size of the shadow banking sector is relatively small in most EMDEs, it has grown sizably, reaching a not insignificant share of the economy and the financial system in some countries. Shadow banking in EMDEs poses risks to financial stability; direct or indirect links between formal banks and shadow banks can generate or add to systemic risk. Segments of the shadow banking sector in EMDEs are either not regulated or are subject to weak or fragmented oversight, with the regulatory arbitrage across sectors undermining the effectiveness of tighter prudential regulations on the banking system. Moreover, shadow bank activities subject them to credit, market and liquidity risks, and could add to systemic risk directly as the importance of the sector in total financial system grows, and indirectly through their interconnectedness with the regulated banking system.

Given the potential risks the shadow banking system poses for financial stability, the FSB has been considering ways to address shadow banking activities and entities. It has been focusing on: (i) indirect regulation, by regulating the links between the shadow banking activities and the regulated banking system; (ii) extending or revising the existing regulation to shadow banks; and (iii) adopting new regulations specifically designed for shadow banking activities and entities. Moreover, the FSB has emphasized the need to keep the system “under permanent surveillance, since new risks and new interconnections are created in the global economy” (Turner 2012), as financial institutions adjust to a changing regulatory and economic environment.

At the same time, shadow banks play an important role in channeling alternative funding sources to the EMDEs, especially as the significant deleveraging pressure from European banks continues. Some nonbank sources of financing have indeed started to support the credit needs of the global economy, at least for some categories of loans (Feyen, Kibuuka, and Ötker-Robe 2012), starting to fill the gap created by European bank retrenchment. This means that the EMDE policy makers need to manage these trade-offs carefully and follow closely the ongoing global efforts to generate proposals by end-2012 to regulate the shadow banking system. This is crucial for EMDEs, as much as for advanced countries, to ensure that shadow banks help provide alternative but safe sources of funding to the private sector, without generating additional systemic risks. Recommendations include:

• Policy makers need to deepen their understanding and strengthen the oversight of the shadow banking system in their countries from both stability and development perspectives by collecting regular data and information and reporting them in financial stability reports.
• Regulatory and supervisory agencies of banking and non-banking institutions need to cooperate closely and monitor possible channels through which banks and non-banks may interact to limit the risk of regulatory arbitrage and capture risks that could be moving toward the shadows. The authorities also need to address the root causes of such regulatory arbitrage, including the incentives created by tighter controls over bank activities that are not applied to shadow banks.
• EMDEs need to expand their capital markets to provide alternative but safe sources of funding to households, firms and corporations, and, subject to appropriate prudential rules, deepen financial markets that could facilitate risk management and reduce excessive reliance on the banking system.

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About the Authors


Notes

1. This broad definition adopted by FSB excludes pure equity trading and foreign currency transactions by entities outside the regular banking system, unless they constitute part of a credit intermediation chain, while including trading of credit-related financial instruments, such as bonds and structured products.
2. In contrast to the traditional banking system, where credit intermediation is performed “under one roof,” intermediation is performed through a chain of nonbank financial intermediaries in a multistep process in the shadow banking system (Pozsar and others 2010): “These steps entail the “vertical slicing” of traditional banks’ credit intermediation process and include (1) loan origination, (2) loan warehos-
ing, (3) asset backed securities (ABS) issuance, (4) ABS warehousing, (5) ABS convertible debt obligations issuance, (6) ABS “intermediation” and (7) wholesale funding. The shadow banking system performs these steps of shadow credit intermediation in a strict, sequential order with each step performed by a specific type of shadow bank and through a specific funding technique.”

3. Although both repo and securities lending transactions result in collateralized lending, they differ in their motivation. Repo trades are generally executed to raise cash. Securities lending programs are often conducted by custodian banks acting as agents on behalf of beneficial owners (including asset managers, pension funds, and insurance companies). Prime brokers use securities lending programs to help meet customer buy orders, finance short sales, and hedge derivative exposures.

4. When cash lent on repo trades is lower than the market value of the collateral security, the applicable discount is referred to as a haircut. There is no haircut when government bonds are used as collateral security. In securities lending, the market value of the collateral that is posted has to be higher than the value of the securities, and this overcollateralization is referred to as the margin.

5. For example, money market mutual funds grew in response to interest rate ceilings on commercial bank deposits, providing savers an alternative to commercial bank deposits.

6. Official estimates provide a lower, though still significant, range. The PBOC estimates the size of shadow lending to be at least 20 percent of China’s total outstanding loans, or RMB 3.4 trillion (US$531 billion). The FSAP last year identified shadow banking as one of the key risks in China’s increasingly complex regulatory system. The FSAP estimated the total assets of the nonbank financial system (including insurance companies, pensions funds, securities firms, fund management and futures companies, finance companies of enterprise groups, trust and finance leasing companies, lending and auto financing companies, and money brokerage firms) at 12.3 percent of the total financial system assets (33 percent of GDP) in 2010.

References


IMF (International Monetary Fund), and the World Bank. “Financial Sector Stability Assessments.” For selected countries (various issues from 2006–12).


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