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Shadow Banking Growth and Financial Stability Risks: A Contemporary Systematic Review

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Abstract

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This article examines how the post crisis growth of shadow banking affects financial stability in an increasingly non-bank centric financial system. It asks under what conditions non-bank financial intermediation amplifies, rather than mitigates, systemic risk, and how regulation and macroprudential policy shape these outcomes. Using a contemporary systematic review of peer reviewed studies published between 2019 and 2023, the article synthesizes evidence on the drivers of shadow banking expansion, its links with bank balance sheets, and its contribution to leverage, liquidity transformation, and interconnectedness. The discussion organizes the literature into three strands covering growth mechanisms, transmission channels to bank soundness and systemic risk, and the design and effectiveness of regulatory and macroprudential responses. The main findings show that shadow banking can provide useful credit and liquidity services, but that its stability implications depend critically on funding structures, cross sector linkages, and the extent to which prudential oversight extends beyond traditional banks.

1. Introduction

Shadow banking, broadly defined as credit intermediation conducted by non-bank financial institutions outside the traditional regulatory perimeter, has become a structural feature of modern financial systems. Non-bank intermediaries such as money market funds, finance companies, securitization vehicles, and various investment funds have expanded rapidly as banks adjust to tighter post crisis regulation and investors search for higher yields in a low interest environment. Empirical evidence for Europe and emerging markets shows that shadow banking growth is closely associated with bank balance sheet constraints, institutional investor demand, and opportunities for regulatory arbitrage created by differences between banking and non-bank prudential regimes (Hodula et al., 2020; Arora & Kashiramka, 2023a). This expansion has increased the complexity and interconnectedness of financial systems and raised concerns about the channels through which non-bank entities may transmit or amplify shocks.

A growing body of research links shadow banking to systemic risk and bank stability. Using European data, Pellegrini et al. (2022) find that large shadow institutions, especially money market funds and investment funds, can be major contributors to systemic risk, with their marginal contribution increasing with size and reliance on market-based funding. For emerging market economies, Arora and Kashiramka (2023b) report that rapid growth of non-bank financial institutions and bank lending to shadow entities is associated with weaker banking sector soundness and heightened financial fragility. Firm level studies for China indicate that shadow banking activities undertaken by banks and non-financial corporations are associated with higher risk taking, stock price crash risk, and equity mispricing, suggesting that such activities may propagate rather than diversify risk (Si & Li, 2022).

At the same time, other contributions stress that shadow banking also serves functional roles in providing credit, liquidity, and risk sharing services that traditional banks may not fully supply. Conceptual work questions whether shadow banking should be treated as equivalent to conventional banking from a monetary perspective and emphasizes the diversity of business models, funding structures, and risk profiles across non-bank intermediaries (Bouguelli, 2020). Empirical analyses of macroprudential policies targeting specific shadow activities, such as wealth management products in China, show that well designed regulatory tools can mitigate the adverse impact of shadow banking on bank stability, highlighting the importance of policy design rather than simple size-based restrictions (Ouyang & Wang, 2022).

These developments make the growth of shadow banking and its implications for financial stability an important topic that requires systematic and up to date assessment. The issue is important because expanding non-bank intermediation can shift risks outside the traditional regulatory core, create new forms of maturity and liquidity transformation, and alter the transmission of monetary and macroprudential policy. Existing studies respond to this challenge from different angles, examining the drivers of shadow banking expansion, its contribution to systemic risk, and the impact of targeted regulations, but the evidence remains dispersed across regions, institutional settings, and methodological approaches (Hodula et al., 2020; Pellegrini et al., 2022; Arora & Kashiramka, 2023a). This article responds by conducting a contemporary systematic literature review of peer reviewed studies published between 2019 and 2023, with the aim of integrating these strands of research. The review formulates the central problem as understanding under what conditions shadow banking growth threatens financial stability rather than complementing bank-based intermediation, summarizes how different empirical approaches address this question, and discusses the relevance of the findings for ongoing policy debates on the design of macroprudential frameworks for an increasingly non-bank centric financial system.

2. Literature Review

The literature on shadow banking increasingly treats it as a heterogeneous system of non-bank intermediation whose theoretical characterization is still contested. Conceptual and mapping studies show that shadow banking spans money market funds, securitization vehicles, investment funds, and other market-based intermediaries that perform bank like functions with different balance sheet structures and degrees of regulation (Nath & Chowdhury, 2021). This diversity raises questions about whether shadow banking should be analyzed as an extension of banking or as a distinct set of monetary and credit arrangements, with some authors stressing functional similarities and others emphasizing balance sheet and institutional differences (Bouguelli, 2020). From a broader monetary perspective, shadow liabilities and credit instruments affect the demand for traditional bank deposits and loans, altering the composition of money and credit and potentially reshaping the transmission of monetary policy (Serletis & Xu, 2019). This review takes these conceptual debates as the theoretical core, using them to frame how subsequent empirical work defines, measures, and interprets shadow banking growth and its risks.

A second cluster of contributions examines the drivers of shadow banking expansion and its interaction with the regulated banking system. For Europe and emerging markets, evidence suggests that tighter bank regulation, investor search for yield, and regulatory arbitrage opportunities are key determinants of non-bank credit growth, with country specific institutional factors shaping the relative importance of each channel (Hodula et al., 2020; Arora & Kashiramka, 2023b). Studies that model joint demand for banking and shadow banking services find that market participants treat them as both substitutes and complements, with shifts between the two segments depending on relative returns, liquidity conditions, and prudential constraints (Serletis & Xu, 2019). In emerging market settings, growth in shadow banking credit has been linked to structural features such as shallow capital markets, bank centric financial systems, and evolving regulatory frameworks, raising concerns that the migration of activity outside the core may weaken the effectiveness of conventional monetary and macroprudential instruments (Nath & Chowdhury, 2021; Arora & Kashiramka, 2023b). Rather than viewing these studies in isolation, this review evaluates how consistent their findings are across regions and regulatory environments and what they imply about the generalizability of proposed growth mechanisms.

The literature also increasingly focuses on the stability implications of shadow banking and the role of regulation. Systemic risk studies for the European financial system show that large shadow entities, particularly investment funds and money market funds, can be major contributors to systemic risk, with their marginal contribution rising in periods of market stress (Pellegrini et al., 2022). Cross country work for G20 economies finds that increases in shadow banking credit relative to the size of the financial system are associated with weaker traditional stability indicators and a higher probability of financial stress, even after controlling for macroeconomic conditions and banking sector characteristics (Mirjalili et al., 2021). At the same time, macroprudential research documents that tighter bank focused regulation can lead to leakage, with credit creation shifting toward less regulated shadow entities and partly offsetting the stabilizing intent of prudential tools (Gebauer & Mazelis, 2023). Other studies highlight that targeted macroprudential measures, such as restrictions on specific shadow products in China, can reduce spillovers from shadow activities to bank stability when well designed and enforced (Ouyang & Wang, 2022). By comparing and synthesizing these strands, the literature review evaluates the strength of evidence linking shadow banking growth to systemic risk, identifies areas where results are context dependent or conflicting, and delineates gaps that motivate the contemporary systematic review conducted in this article.

3. Methods

This study uses a systematic literature review approach to synthesize recent evidence on shadow banking growth and its implications for financial stability. The review focuses on peer reviewed journal articles published between 2019 and 2023.

Relevant studies were identified through keyword searches in major academic databases using combinations of terms such as "shadow banking", "non-bank financial intermediation", "market-based finance", "systemic risk", "financial stability", and "macroprudential policy". The search was restricted to articles written in English and published in academic journals. After removing duplicates, titles and abstracts were screened to exclude studies that did not discuss shadow banking as a credit intermediation mechanism or did not link it to risk, stability, or regulatory issues. Conceptual pieces without a clear focus on shadow banking, policy notes, book chapters, and non-refereed working papers were excluded to maintain a consistent quality threshold.

Articles that passed the initial screening were read in full to confirm their relevance. For each study, a simple extraction template was used to record information on country or region, type of shadow entities or activities analyzed, data and empirical methods, measures of shadow banking size or growth, indicators of financial stability or systemic risk, and main findings. The selected studies were then synthesized using descriptive and thematic analysis. Descriptively, the literature was mapped by year, geography, and main analytical focus, such as growth drivers, bank interaction, systemic risk, or regulation. Thematically, findings were grouped into clusters on drivers of expansion, transmission channels to bank soundness and systemic risk, and the design and effectiveness of regulatory and macroprudential responses. This structure provides a clear basis for evaluating how the recent literature converges or diverges and for identifying gaps that motivate further research.

4. Results and Discussion

The systematic review identifies several robust empirical patterns regarding the growth of shadow banking and its implications for financial stability. Across the final sample of studies, there is broad agreement that non-bank financial intermediation has continued to expand in scale and complexity since the global financial crisis, often through investment funds, money market funds, trust products, and off-balance sheet credit channels. Evidence for Europe shows that larger shadow entities, especially money market funds, contribute disproportionately to systemic risk measured by tail dependence with the rest of the financial system, reinforcing concerns that size and market interconnectedness magnify vulnerability to stress transmission (Pellegrini et al., 2022). Similar conclusions emerge from multi country analyses documenting dense linkages between banks and shadow entities through wholesale funding markets, liquidity backstops, and cross holdings of securities, which blur institutional boundaries and complicate risk monitoring (Serletis & Xu, 2019; Nath & Chowdhury, 2021).

At the macro level, the review reveals that shadow banking often amplifies the procyclicality of credit and leverage. Dynamic stochastic general equilibrium and vector autoregression models that explicitly incorporate shadow banking sectors show that accommodative monetary policy or positive risk appetite shocks tend to trigger expansions in shadow credit, heightened leverage, and more fragile funding structures, which in turn increase the sensitivity of the financial system to adverse shocks (Gong et al., 2021). These channels are particularly pronounced in jurisdictions where regulatory arbitrage allows credit intermediation to shift outside the perimeter of bank capital and liquidity requirements, thereby weakening the effectiveness of traditional macroprudential tools. At the same time, several studies highlight that shadow banking can partially smooth credit supply when bank balance sheets are constrained, suggesting an ambiguous net effect that depends on the strength of supervisory frameworks and the quality of underlying assets (Serletis & Xu, 2019; Gebauer & Mazelis, 2023).

Micro level evidence complements these macro findings by documenting how shadow banking activities shape risk taking incentives at the firm and institutional level. Firm level studies for emerging markets show that when non-financial corporations engage in shadow banking activities, for example through entrusted loans or wealth management products, they tend to increase overall risk taking, reduce focus on core business, and elevate exposure to market and liquidity shocks, especially in environments of weak corporate governance and high financing constraints (Si & Li, 2022). Bank level analyses similarly find that shadow banking opportunities can encourage higher off-balance sheet leverage, greater reliance on short term wholesale funding, and more aggressive portfolio strategies, all of which are associated with larger contributions to systemic risk during periods of stress (Pellegrini et al., 2022; Zhang et al., 2022). Importantly, some studies suggest that stronger macroprudential policies, clearer resolution regimes for non-bank entities, and tighter disclosure standards can mitigate these adverse incentives by reducing regulatory arbitrage and improving market discipline.

The review also underscores important heterogeneity across regions and institutional setups. Panel studies for European and emerging economies show that the sensitivity of shadow banking to uncertainty, financial conditions, and regulatory reforms varies with the structure of domestic financial systems and the degree of capital market development (Cincinelli et al., 2022; Hodula et al., 2023). In bank dominated systems with shallow capital markets, shadow banking growth appears more tightly linked to credit supply constraints in the traditional banking sector, whereas in market-based systems it is more responsive to global risk sentiment and asset price cycles. These differences have direct implications for policy design, suggesting that one size fits all regulatory approaches to non-bank financial intermediation are unlikely to be effective. Instead, the evidence points to the need for jurisdiction specific combinations of entity based and activity-based tools, coordinated with bank regulation, to manage systemic risk without unduly constraining beneficial financial innovation.

Overall, the systematic review indicates that shadow banking growth is closely intertwined with financial stability risks through multiple channels, including leverage, liquidity transformation, interconnectedness, and regulatory arbitrage. However, it also highlights that under appropriate regulatory safeguards and transparency standards, some forms of non-bank intermediation can support credit provision, risk sharing, and market completeness. The balance between these stabilizing and destabilizing roles depends critically on how prudential authorities extend surveillance and macroprudential policy beyond the traditional banking perimeter, how they coordinate cross sector and cross border regulation, and how they respond to the rapidly evolving interaction between shadow banking, fintech, and capital markets.

5. Conclusion

The review shows that shadow banking has evolved into a structurally important, but inherently ambivalent, component of modern financial systems. On the one hand, non-bank intermediaries expand the supply of credit, liquidity, and risk sharing beyond traditional banks, helping to meet investor demand and alleviate bank balance sheet constraints. On the other hand, this growth often comes with greater leverage, maturity and liquidity transformation, and dense interconnections with banks and capital markets, which can amplify the transmission of shocks and increase systemic vulnerability. The evidence indicates that the net impact of shadow banking on financial stability depends less on its mere size and more on how activities are funded, how risks are distributed across sectors, and how effectively prudential frameworks extend beyond the banking core.

The findings also emphasize that regulation and macroprudential policy critically shape whether shadow banking plays a stabilizing or destabilizing role. Bank focused reforms alone can encourage leakage of risk to less regulated entities, weakening the effectiveness of capital and liquidity requirements if not accompanied by activity based and entity-based oversight of non-bank intermediaries. At the same time, targeted and well-designed macroprudential tools can reduce spillovers from shadow activities to bank balance sheets and limit the buildup of systemic risk without shutting down useful forms of market-based finance. Overall, the review suggests that safeguarding financial stability in an increasingly non-bank centric system requires integrated surveillance across sectors, close coordination between monetary and macroprudential policies, and continued research on how new forms of shadow banking, including fintech and cross border structures, reshape risk transmission and the design of effective regulatory responses.

References

Arora, D., & Kashiramka, S. (2023a). Are shadow banks a threat to the financial stability of EMEs?. *China Accounting and Finance Review, 25*(4), 488-512.

Arora, D., & Kashiramka, S. (2023b). What drives the growth of shadow banks? Evidence from emerging markets. *Emerging Markets Review, 54*, 100993.

Bouguelli, R. (2020). Is shadow banking really akin to banking? A critical analysis in light of monetary theory. *Journal of Post Keynesian Economics, 43*(1), 1-27.

Gebauer, S., & Mazelis, F. (2023). Macroprudential regulation and leakage to the shadow banking sector. *European Economic Review, 154*, 104404.

Gong, X. L., Xiong, X., & Zhang, W. (2021). Shadow banking, monetary policy and systemic risk. *Applied Economics, 53*(14), 1672-1693.

Hodula, M., Melecky, A., & Machacek, M. (2020). Off the radar: factors behind the growth of shadow banking in Europe. *Economic Systems, 44*(3), 100808.

Hodula, M., Perić, B. Š., & Sorić, P. (2023). Economic uncertainty and non-bank financial intermediation: Evidence from a European panel. *Finance Research Letters, 53*, 103675.

Nath, R. D., & Chowdhury, M. A. F. (2021). Shadow banking: a bibliometric and content analysis. *Financial Innovation, 7*(1), 68.

Ouyang, A. Y., & Wang, J. (2022). Shadow banking, macroprudential policy, and bank stability: Evidence from China's wealth management product market. *Journal of Asian Economics, 78*, 101424.

Pellegrini, C. B., Cincinelli, P., Meoli, M., & Urga, G. (2022). The role of shadow banking in systemic risk in the European financial system. *Journal of Banking & Finance, 138*, 106422.

Serletis, A., & Xu, L. (2019). The demand for banking and shadow banking services. *The North American Journal of Economics and Finance, 47*, 132-146.

Si, D. K., & Li, X. L. (2022). Shadow banking business and firm risk-taking: Evidence from China. *Research in International Business and Finance, 62*, 101729.

Mirjalili, S. H., Esfandiary, M., & Zarei, M. (2021). The impact of shadow banking on the financial stability: Evidence from G20 countries. *Journal of Money and Economy, 16*(2), 237-252.