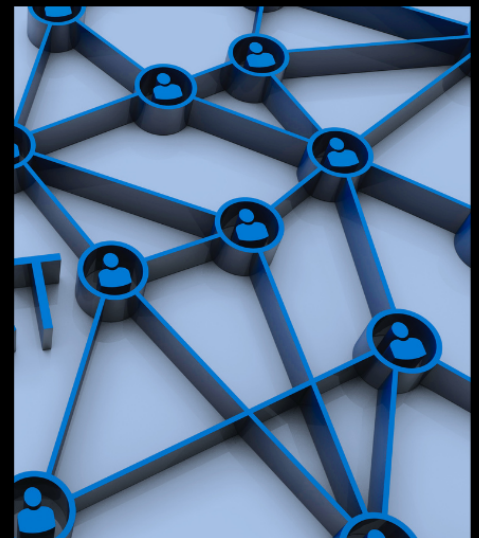




ASSESSING DIRECT BALANCE SHEET LINKAGES BETWEEN BANKS AND NON-BANK FINANCIAL INSTITUTIONS IN BARBADOS

Thematic Article from the

**Financial
Stability
Report
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Assessing Direct Balance Sheet Linkages Between Banks and Non-Bank Financial Institutions in Barbados

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Introduction

Interconnectedness between banks and non-bank financial institutions (NBFIs) has become an increasingly important dimension of financial stability analysis. Since the global financial crisis, policymakers have paid closer attention to these linkages, recognising that financial institutions operate within an interconnected network through which stresses can be transmitted across sectors. These relationships commonly arise through banks' provision of financial and operational services to NBFIs, including access to payment systems, custodial services, securities investments, and trading infrastructure (BIS 2025). These linkages matter because of the risk of contagion, whereby stress in one part of the system can quickly spread to others, thereby amplifying existing financial risks such as credit, liquidity, market, and operational vulnerabilities.

The growing scale of the NBFI sector has increased the importance of monitoring their connections with banks. Globally, the NBFI sector expanded by 9.4 percent in 2024, double the pace of the banking sector, and accounted for 51.0 percent of global financial assets (FSB 2025a). As NBFIs expand and play a greater role in financial intermediation, their links with banks may deepen, increasing the potential for shocks to propagate across the financial system. Assessing these linkages therefore becomes critical for identifying emerging vulnerabilities and the build-up of systemic risks.

From a financial stability perspective, the significance of interconnectedness depends not only on the aggregate size of exposures, but also on how these exposures are distributed across institutions and sectors. Even where system-wide exposures appear contained, vulnerabilities may emerge if exposures are concentrated in a limited number of institutions, counterparties, or NBFI sectors. International evidence indicates that rising bank exposures to NBFIs can increase contagion risks, particularly where exposures are opaque, concentrated, or sizeable relative to banks' own capital or liquidity buffers (IMF 2025). These considerations are especially relevant for small financial systems, which are often characterised by shallow and concentrated structures, leaving a limited number of institutions to intermediate financial flows across sectors (IMF 2024).

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In Barbados, the financial system comprises primarily commercial banks, finance companies, credit unions, insurance companies, mutual funds, and pension funds.⁴ While NBFIs play an important role in domestic financial intermediation, banks continue to dominate the system, accounting for over half of total financial system assets in 2025. In larger and more market-based financial systems, bank-NBFI linkages often arise from complex financial arrangements. However, direct interconnections between banks and NBFIs in Barbados are most likely to occur through traditional balance sheet channels.

This article assesses direct linkages between banks and NBFIs in Barbados to identify potential transmission channels and vulnerabilities that may have implications for financial stability. The analysis focuses on bank lending to NBFIs, their deposit placements within the banking system, the concentration of these exposures across institutions, and their systemic relevance.

The analysis finds that direct bank lending to NBFIs remains small relative to banks' loan portfolios, suggesting limited solvency risk from potential credit losses through this channel under current conditions. However, NBFI deposits at banks are materially larger and more concentrated, indicating that liquidity transmission represents the more relevant direct channel of bank-NBFI interconnectedness in Barbados.

Direct Linkages Between Banks and NBFIs in Barbados

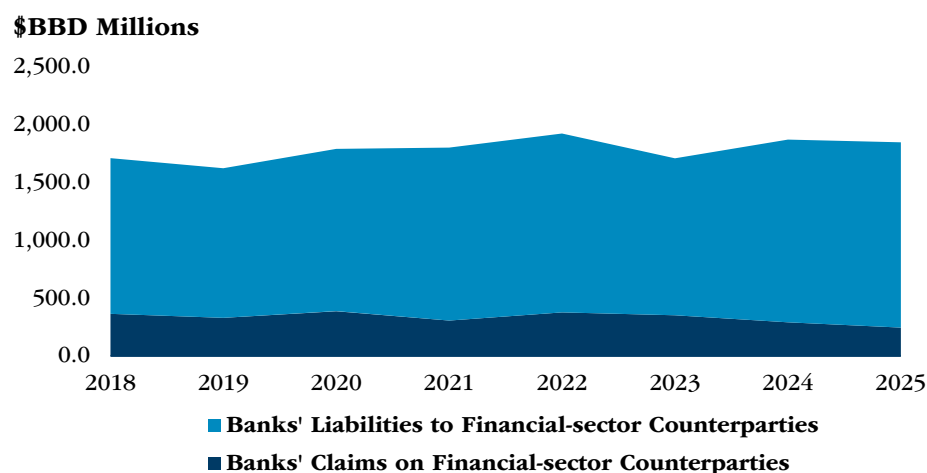
Over the past five years, banks' claims on financial sector counterparties averaged 2.1 percent of total assets, compared with liabilities averaging 10.1 percent of total liabilities, indicating that direct balance sheet linkages are more significant on the liability side (Figure 1). Financial sector counterparties cover other depository corporations and other financial corporations, including credit unions, finance companies, insurers, pension funds, investment funds, securities firms, bank holding companies, public financial institutions, and other financial entities. This broad aggregate series is used to identify the principal instruments through which banks are connected to the wider financial sector.

At end-2025, banks' claims on financial-sector counterparties were predominantly loan-based, with loans accounting for 85.2 percent, while securities and equity holdings remained negligible. This pattern reflects the broader structure of Barbados' capital market, which is characterised by thin equity trading and low corporate fixed-income issuances (World Bank and IMF 2014). On the liability side, financial sector counterparties' claims on banks were predominantly in the form of deposits, which represented 80.2 percent of total claims.

Given this composition, the analysis focuses on bank lending to NBFIs and NBFI deposit placements with banks, as these constitute the main channels of direct balance sheet interconnectedness. The NBFI perimeter comprises finance companies, credit unions, insurance companies, pension funds, investment pools and unit trusts, and securities dealers and underwriters for which granular sector-level exposure data are available.

⁴ See *Central Bank of Barbados and Financial Services Commission Financial Stability Report 2025*.

Figure 1: Banks' Exposures to Financial Sector Counterparties



Source: Central Bank of Barbados (Other Depository Corporations Survey)

Bank Lending to NBFIs

Bank lending to NBFIs was estimated at \$73.1 million as at December 2025, constituting less than one percent of commercial banks' total loan portfolio (Figure 2A). The bulk of this credit was directed towards finance companies (79.1 percent), largely reflecting outstanding balances of non-deposit-taking entities, that often rely on bank borrowing as a source of funding for their lending and financing activities.⁵ Exposures to investment pools and unit trusts were comparatively limited, consisting mainly of medium-to-long-term loans. In this context, bank credit serves as a source of leverage that supports the lending and investment activities of NBFIs. It can also provide liquidity to meet short-term cash needs without necessitating asset sales (FSB 2025b). In Barbados, more than half of bank credit to insurance companies takes the form of overdraft facilities, suggesting that these exposures are more closely tied to short-term liquidity management than to longer-term investment financing. Insurers typically use such arrangements as bridge financing to manage temporary cash-flow mismatches between immediate payment obligations and expected inflows from policyholders, brokers, or reinsurers.

While access to bank credit enhances the financial flexibility of many NBFI sectors, it also creates a potential transmission channel through which stress in the NBFI sector could affect banks. Credit quality deteriorations, funding pressures, or liquidity shortfalls at NBFIs could expose banks to credit losses or increased drawdowns on credit lines. Further, financial leverage can further amplify risks to the banking sector, particularly where banks are exposed to institutions that may be more vulnerable during periods of financial stress (FSB 2023). Notwithstanding these risks, the small scale of bank lending to NBFIs suggests that this channel is unlikely to pose material solvency risks to the Barbadian banking system given the current scale, and as a result, direct credit contagion from NBFIs to banks is limited. However, loan

⁵ Finance companies include institutions categorised as finance companies, trust and mortgage finance companies, merchant banks, and financial leasing companies.

exposures to NBFIs should be continuously monitored as their scale and risk profile can alter quickly under changing market conditions.

NBFI Deposit Placements at Banks

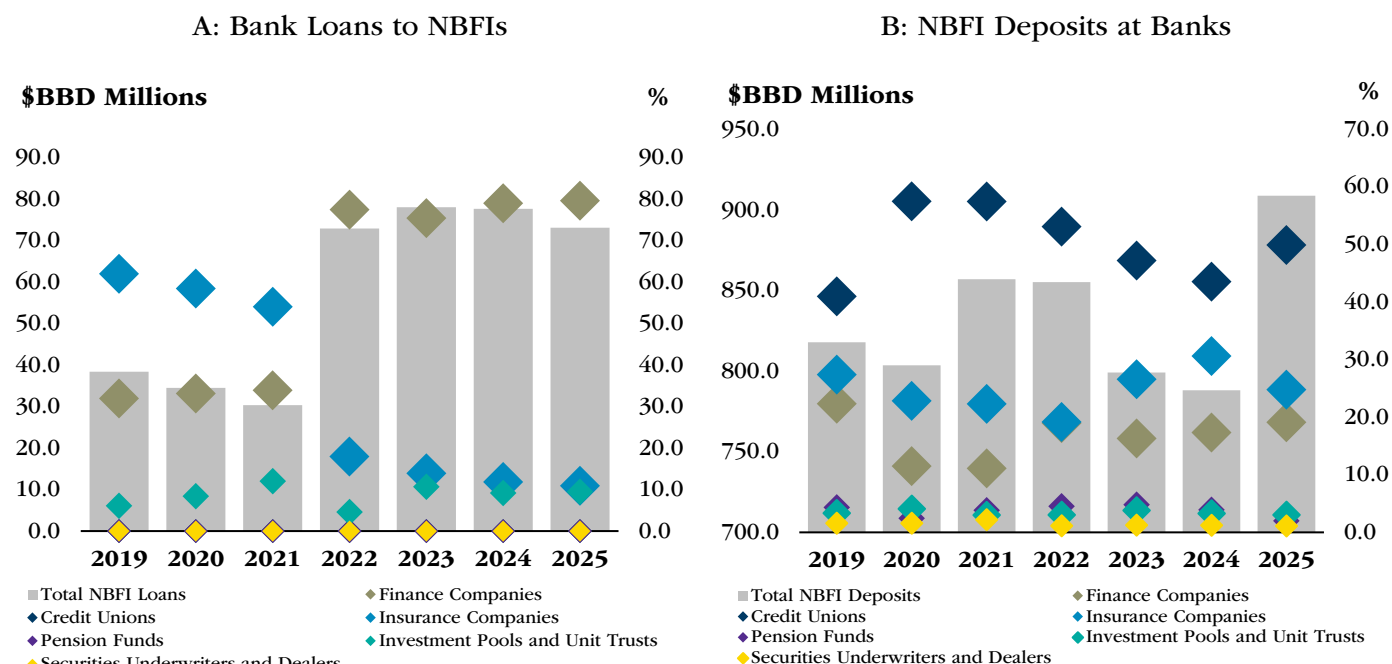
Bank-NBFI interconnectedness is more pronounced through deposit placements than through credit exposures as several NBFIs maintain cash balances at commercial banks. As NBFIs expand, their reliance on bank credit may decline, while their deposit holdings at banks may increase, deepening the bank-NBFI connections (BIS 2025). Total NBFI deposits in the banking system were estimated at \$908.9 million as at December 2025, equivalent to 6.9 percent of total bank deposits (Figure 2B).

Some NBFIs hold relatively high liquidity buffers in excess of immediate operating requirements. A portion of these liquid assets is held as deposits at commercial banks, making banks an important provider of liquidity management services to the NBFI sector. This is particularly applicable to deposit-taking NBFIs given the volume of deposits mobilised by these institutions. Credit unions held the largest deposit balances at commercial banks, accounting for 49.9 percent of total NBFI deposits – equivalent to approximately 16.0 percent of their member deposits. Finance companies accounted for a further 19.1 percent, representing 21.7 percent of deposits mobilised by that sector. For deposit-taking institutions, these placements at commercial banks reflect the need to maintain readily available funds to meet potential consumer withdrawals.

Insurance companies also maintained sizeable deposits at commercial banks, accounting for 24.8 percent of total NBFI deposits. These balances primarily support routine liquidity needs, including claims processing, operating expenses, and other short-term payment obligations. Other NBFIs, including investment pools, unit trusts, and pension funds, held comparatively smaller deposit balances which form part of their broader liquidity and portfolio management strategies. These deposits usually serve as cash buffers for redemptions, settlement activity, and portfolio rebalancing, while preserving flexibility during periods of market uncertainty.

While these balances do not constitute a significant source of funding for the banking sector, they reflect the central role of commercial banks in the liquidity management framework of the NBFIs. Banks act as key counterparties for settlement, liquidity placements, and short-term cash management. This creates a direct channel through which liquidity pressures in the NBFI sector can be transmitted to banks. During periods of financial stress, large withdrawals of institutional deposits could potentially weaken bank liquidity positions and heighten funding pressures, particularly when deposits are concentrated within a small number of institutions. At the same time, disruptions in banking services could restrict NBFIs' access to funds needed to meet operational and short-term liquidity requirements.

Figure 2: Bank-NBFI Sectoral Exposures

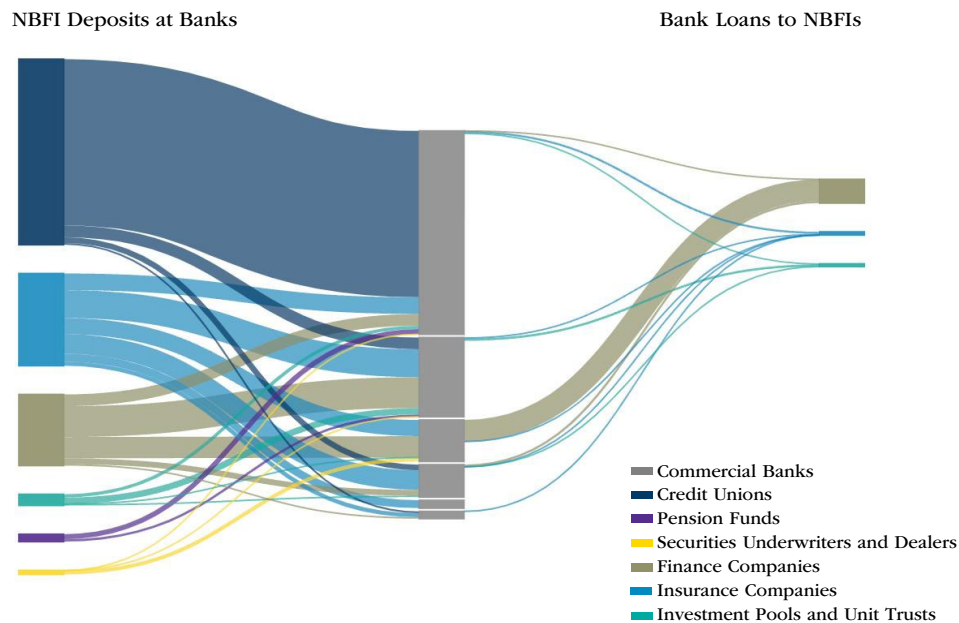


Concentrated Exposures

At the aggregate level, NBFI exposures remain modest relative to the size of the banking sector. NBFI deposits represented an average of 5 percent of total deposits across most banks. However, both the scale and sectoral composition of exposures varied across institutions (Figure 3).

This pattern highlights an important structural feature of Barbados' financial landscape and is aligned with global evidence that bank exposures to NBFIs are often unevenly distributed across institutions. International evidence further indicates that NBFI deposit funding can be concentrated within certain bank business models, reflecting specialised service offerings and reliable financial infrastructure that attract institutional clients (ECB/ESRB 2026). Correspondent banking relationships are especially relevant in this context, as they enable banks to access financial services in other jurisdictions and facilitate cross-border payments (BIS 2016). For a small open financial system such as Barbados, banks with well-established correspondent banking relationships may hence be more attractive counterparties for NBFIs requiring access to overseas markets for foreign-currency payments, investment services, reinsurance, or other settlement needs.

Figure 3: Distribution of NBFI Exposures Across Commercial Banks



Source: Central Bank of Barbados

Notes: The Sankey diagram shows financial exposures between commercial banks and the NBFI sectors. Each node (vertical bar) represents a specific segment of the financial sector where larger nodes indicate greater total exposures. Each link represents an exposure between commercial banks and an NBFI sector, with wider links indicating larger exposures. Flows on the left-hand side represent NBFI deposits held at banks, while flows on the right-hand side represent bank loans to NBFIs.

Group affiliation may also contribute to concentrated bank-NBFI linkages. When financial institutions form part of the same financial group, intra-group arrangements can influence the allocation of liquidity, credit facilities, funding, and operational services within the group. While these arrangements may support operational efficiency, risk management, and the effective use of capital, they can also create channels for contagion, step-in risk,⁶ and reputational spillovers within financial groups (Joint Forum 1999). Although intra-group exposures are not assessed directly in this article due to the unavailability of granular data, ownership structures may partly explain the concentration of some bank-NBFI linkages in Barbados.

Overall, the distribution of NBFI exposures across banks suggests that the relatively small scale of bank-NBFI linkages may mask important differences across institutions and sectors. Assessing concentrated exposures is therefore critical, because it highlights how stress originating in a specific NBFI sector can be transmitted disproportionately to a small number of banks, potentially amplifying system-wide effects despite the modest aggregate size of exposures. These risks become more material where exposures are large relative to banks' own capital or liquidity buffers (IMF 2025).

⁶ Step-in risk is the risk that a financial institution provides support to a distressed affiliated entity to protect its reputation or business interests, despite having no legal obligation to do so.

Assessing the Materiality of Bank-NBFI Linkages

To assess the materiality of bank-NBFI linkages, an exposure index was constructed for each NBFI sector and exposure channel. The index combines two dimensions of risk: the concentration of exposures across banks and the size of those exposures relative to the relevant buffers of the exposed banks. This approach recognises that exposures are more likely to be systemically relevant from a financial stability perspective when they are concentrated in a small number of institutions and large relative to buffers available to absorb stress.

For each NBFI sector, the exposure index value is given by:

$$EI_s = 100 \times C_s \times B_s \quad \text{Eq. 1}$$

where:

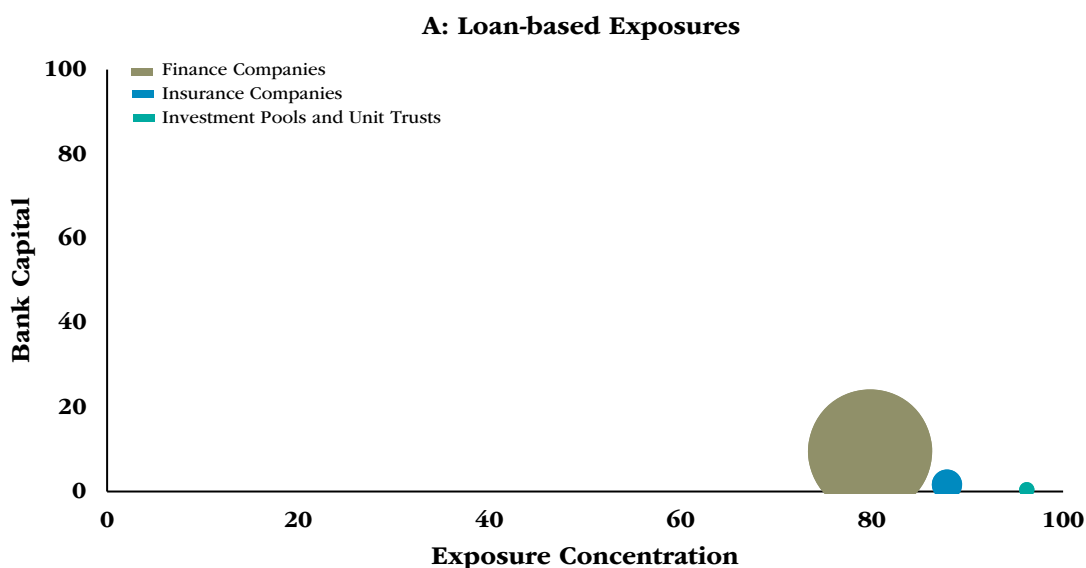
EI_s is the exposure index for NBFI sector s ;

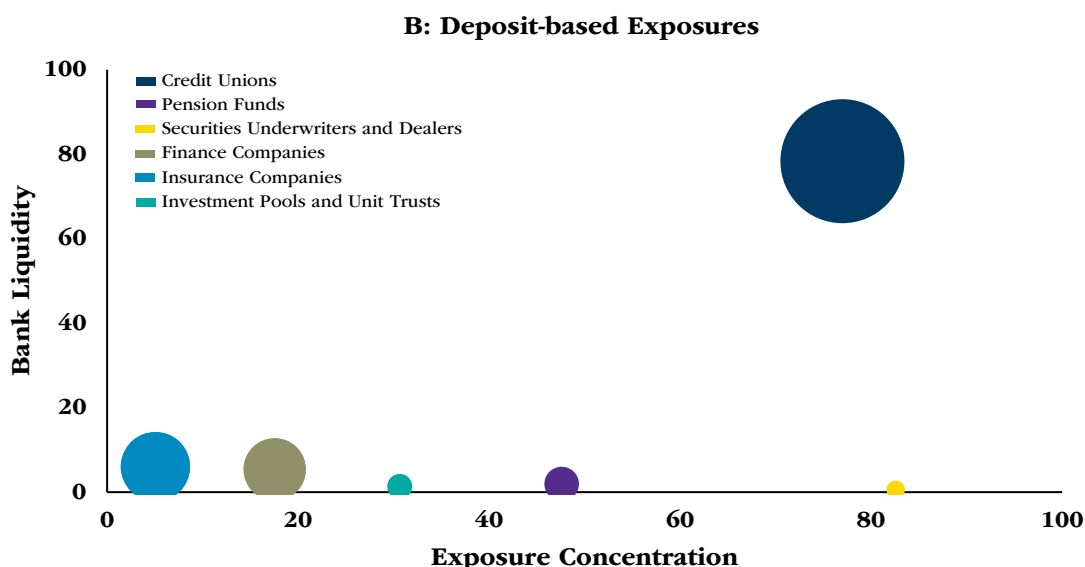
C_s is a normalised Herfindahl concentration measure for exposure to sector s ; and

B_s is a buffer-adjusted exposure measure for sector s .

Loan exposures are measured relative to banks' capital to gauge their capacity to absorb potential credit losses from NBFIs, while deposit exposures are measured relative to banks' liquid assets to capture potential liquidity pressures arising from NBFI deposit withdrawals. In the exposure index, higher values indicate that exposures to a given NBFI sector are both concentrated and more material relative to the buffers of the exposed banks. Index values are multiplied by 100 for ease of presentation; the resulting values are presented in Figure 4. Calculation details are provided in the appendix.

Figure 4: Bank – NBFI Exposure Index





Source: Authors' calculations

Notes: Index values were calculated using data as at December 2025. The horizontal axis measures concentration across banks, while the vertical axis measures buffer-adjusted exposure. Each bubble represents an NBFI sector and its size is proportional to the aggregate sectoral exposure relative to the combined buffers of the exposed banks.

Figure 4A shows that NBFI loan exposures are highly concentrated across banks, but they remain limited relative to the capital buffers of exposed banks. Even though the loans-based exposure index is higher for finance companies, exposures are still modest when assessed against banks' loss absorbing capacity. Loan exposures to NBFIs hence appear unlikely to pose material solvency risks under current conditions, particularly given that commercial banks continue to maintain capital buffers well above prudential requirements.

In the deposit-based exposure index, credit union deposits emerge as the most material source of potential liquidity vulnerability for banks (Figure 4B). This reflects both strong concentration in the banking system and sizeable exposures relative to the liquidity buffers of the banks holding those funds. In an extreme scenario, a withdrawal of these deposits could have a pronounced impact on the liquidity position of the exposed entities. These risks are further amplified by the fact that credit unions and banks undertake similar intermediation activities, which increases the scope for common liquidity shocks to affect both sectors simultaneously.

Other NBFI sectors appear to pose lower direct liquidity risk in the present assessment. Although commercial bank exposures to insurance and finance companies are more evident, their deposits are less concentrated and remain small relative to the liquidity buffers of the banks holding those funds. The remaining NBFI sectors also show some degree of concentration, but the scale of their placements is limited relative to exposed banks' liquidity buffers, suggesting lower materiality for financial stability.

Taken together, this suggests that exposure concentration alone does not necessarily imply material risk; exposures become more materially relevant when they are both concentrated and sizeable relative to the buffers available to absorb them.

Policy Implications

The findings suggest that direct bank-NBFI linkages do not currently pose a significant systemic risk to the Barbadian financial system. Nevertheless, the analysis highlights several areas that warrant continued supervisory attention.

The concentration of NBFI deposits within individual banks suggests that monitoring institutional concentration should remain an important component of liquidity risk surveillance. While NBFI deposits account for a relatively small share of total bank funding at the system level, their uneven distribution across banks means that institution-specific vulnerabilities may emerge during periods of significant financial stress.

In addition, continued monitoring of bank-NBFI exposures is important given the evolving role of NBFIs in domestic financial intermediation. As NBFIs expand and diversify their activities, their interactions with banks may increase through funding, lending, payment, and settlement channels. Maintaining detailed information on these linkages can support the early identification of emerging vulnerabilities and potential contagion channels.

Moreover, enhanced reporting of bank-NBFI exposures could strengthen financial stability surveillance. More granular information on exposures by counterparty, sector, maturity, and currency would improve the assessment of concentration risks and facilitate more targeted stress testing exercises.

Finally, the findings reinforce the importance of assessing interconnectedness across the financial system rather than focusing solely on individual sectors. While the direct exposures examined in this article appear manageable, indirect linkages and common exposures may represent additional channels through which stress could propagate across the financial system.

Conclusion

The rapid expansion of the NBFI sector globally has heightened the importance of monitoring its connections with banks. As these institutions grow and play a larger role in financial intermediation, deeper bank-NBFI linkages can increase the potential for stress to propagate across the financial system, contributing to the build-up of systemic vulnerabilities.

This analysis indicates that direct balance-sheet interconnectedness between banks and NBFIs in Barbados remains relatively contained. Bank lending to NBFIs accounts for only a small share of banks' overall loan portfolio, suggesting that the direct credit risk channel is unlikely to pose material solvency concerns to the banking system under current conditions. The more significant linkage arises on the liability side of banks' balance sheets where NBFIs maintain sizeable deposit balances at commercial banks. While these deposits support the liquidity management needs of NBFIs, they create a channel through which stress in the NBFI sector could be transmitted to the banking system. However, under current conditions, this direct

liquidity channel appears manageable at the system level but remains material for banks with concentrated exposures.

This distinction between system-wide and institution-specific vulnerabilities is important, as aggregate exposure indicators may, however, understate the risks associated with bank-NBFI linkages. The exposure index shows that credit unions' deposits at banks represent the most material channel through which potential liquidity stress can emerge, reflecting both the concentration of these exposures and their size relative to the available liquidity buffers. As a result, these findings highlight the importance of monitoring not only the aggregate size of bank-NBFI linkages, but also their distribution across institutions, sectors, maturities, and currencies.

While current direct bank-NBFI linkages do not appear to present an immediate systemic threat to the Barbadian banking sector, maintaining close supervisory monitoring of these bank-NBFI linkages will remain a critical component of macro-financial surveillance and financial stability assessments as NBFIs continue to grow.

Nevertheless, this analysis is subject to several limitations that should be considered when interpreting the findings. The assessment focuses primarily on direct balance sheet exposures and therefore does not capture indirect linkages arising from common asset holdings, intragroup relationships, or payment system dependencies. Together, these channels could amplify stress transmission, potentially leading this analysis to understate the broader financial implications of bank-NBFI interconnectedness. Moreover, the absence of complete bilateral exposure data limits the use of network-based stress simulations to assess potential shock transmission between individual banks and NBFIs, including possible second-round effects that may arise across the financial system. Future work incorporating more granular exposure data and stress-testing techniques would support earlier identification of emerging vulnerabilities and provide a more complete evaluation of potential contagion channels and systemic risk.

Appendix: Construction of the Bank-NBFI Exposure Index

The exposure index is calculated for each NBFI sector and exposure channel using bank-level data as at December 2025. Let $E_{b,s}$ denote bank b 's exposure to NBFI sector s . For loan exposures, $E_{b,s}$ represents outstanding bank loans to the NBFI sector, while for deposit exposures, it represents deposits placed by the sector at the bank. The index uses total outstanding balances and does not distinguish exposures by instrument type, maturity or currency.

Total exposure to sector s is defined as

$$E_s = \sum_{b=1}^N E_{b,s}$$

and each bank's share of that exposure share is given by

$$p_{b,s} = \frac{E_{b,s}}{E_s}$$

where $N = 6$ denotes the number of commercial banks.

Exposure concentration is measured using a normalised Herfindahl index, which places the measure on a common scale to facilitate interpretation and comparison across NBFI sectors:

$$C_s = \frac{\sum_{b=1}^N p_{b,s}^2 - 1/N}{1 - 1/N}$$

The buffer-adjusted exposure measure reflects the size of each bank's exposure relative to its relevant buffer and is scaled by its sectoral exposure share:

$$B_s = \sum_{b=1}^N p_{b,s} \left(\frac{E_{b,s}}{X_b} \right)$$

where X_b denotes the relevant bank-side buffer. Total liquid assets are used for deposit exposures, reflecting banks' capacity to meet potential deposit withdrawals, while capital is used for loan exposures, reflecting their loss-absorbing capacity.

The final index is given by

$$EI_s = 100 \times C_s \times B_s$$

Banks with no exposures to a sector are assigned an exposure share of zero but remain included in the sectoral normalisation. Where total exposure to a sector is zero, the index is not calculated.

Table A1 reports the underlying values used to construct Figure 4.

Table A1: Components of the Bank – NBFI Exposure Index

A: Loan-based Exposure Index Values

	Normalised HHI (C_s)	Buffer-adjusted Exposure Measure (B_s)	Exposure Index (El_s)
Finance Companies Loans	0.80	0.10	8.00
Insurance Companies Loans	0.88	0.02	1.76
Investment Pools Loans	0.96	0.004	0.38

B: Deposit-based Exposure Index Values

	Normalised HHI (C_s)	Buffer-adjusted Exposure Measure (B_s)	Exposure Index (El_s)
Finance Companies	0.18	0.05	0.90
Credit Unions	0.77	0.78	60.06
Insurance Companies	0.05	0.06	0.30
Pension Funds	0.48	0.02	0.96
Investment Pools and Unit Trusts	0.31	0.01	0.31
Securities Dealers and Underwriters	0.83	0.01	0.83

Source: Authors' calculations

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