

BOX 5: REVISITING NON-BANK FINANCIAL INTERMEDIATION (NBFi) IN MALTA: A CURRENT FINANCIAL STABILITY OVERVIEW¹

Introduction

The NBFi ecosystem is diverse encompassing distinct business models subject to different regulatory regimes within and across jurisdictions. Such institutions offer an alternative avenue for funding the economy and can also pose systemic risk, as evidenced by the classical case of Archegos Capital Management in 2021 and the liability-driven funds in the UK Gilts market in 2022. In a bid to assess this sector, the Central Bank of Malta had published a study focusing on “*Non-bank Financial Intermediation (NBFi) in Malta from a Financial Stability Perspective*” in its *Financial Stability Report 2020*.² This article sought to delineate for the first time, the footprint of the NBFi sector in Malta. Since then, global macroeconomic conditions were affected by several geopolitical developments and other events including the persistence of the pandemic and the ongoing wars in Ukraine and the Middle East. Such events impacted money and capital markets as well as financial entities on various fronts. In addition, significant progress has been achieved in data collection and analysis. In June 2023, the National Statistics Office (NSO) announced a revision to Malta’s Balance of Payments and International Investment Position statistics, incorporating new data sources. This resulted in an improved compilation of Captive Financial Institutions and Money Lenders (CFIMLs) data, significantly changing the reported assets of this sector as from 2019 onwards.³ At the same time, pension funds data also became available to the Central Bank of Malta.

Motivated by these developments, this box aims to provide an update on the domestic NBFi sector and the risk profile stemming from their bank-like activities, focusing on the analysis from end 2019 onwards. Section 1 presents an overview of the methodology and provides an update on the NBFi perimeter. Section 2 follows with an assessment of the narrow measure to identify the extent of bank-like activities by this sector, while Section 3 concludes.

The NBFi perimeter

1.1 Methodology and data updates

The methodology presented in the Central Bank of Malta’s *FSR 2020* assesses institutions against major systemic risk channels. It categorizes the non-bank sector into the broad and narrow measures of NBFi based on the ESRB’s and the Financial Stability Board’s (FSB) methodologies, respectively.⁴ The broad measure excludes entities already subject to strict regulations, such as Insurance Companies and Pension Funds (ICPFs) and Central Counterparties (CCPs) with a banking license, aligning with the ESRB’s methodology as highlighted in its NBFi Risk Monitor Report 2023 (ESRB, 2023).⁵ These entities are further filtered to derive the narrow measure, based on the FSB’s methodology and unchanged from that adapted for the *FSR 2020*.⁶ Figure 1 lays down the perimeter of the non-bank financial sector.

¹ Prepared by Mr Albert Sniec, Economist within the Financial Stability, Surveillance Office. The author would like to extend his thanks to Mr Andrew Spiteri, Manager within the Financial Stability, Surveillance Office; Ms Wendy Zammit, Head of the Financial Stability, Surveillance and Research Department; and Mr Alan Cassar, Chief Officer of Financial Stability, for their invaluable feedback and suggestions.

² <https://www.centralbankmalta.org/site//Financial-Stability/WP-Other-Studies/box4-fsr-2020.pdf>.

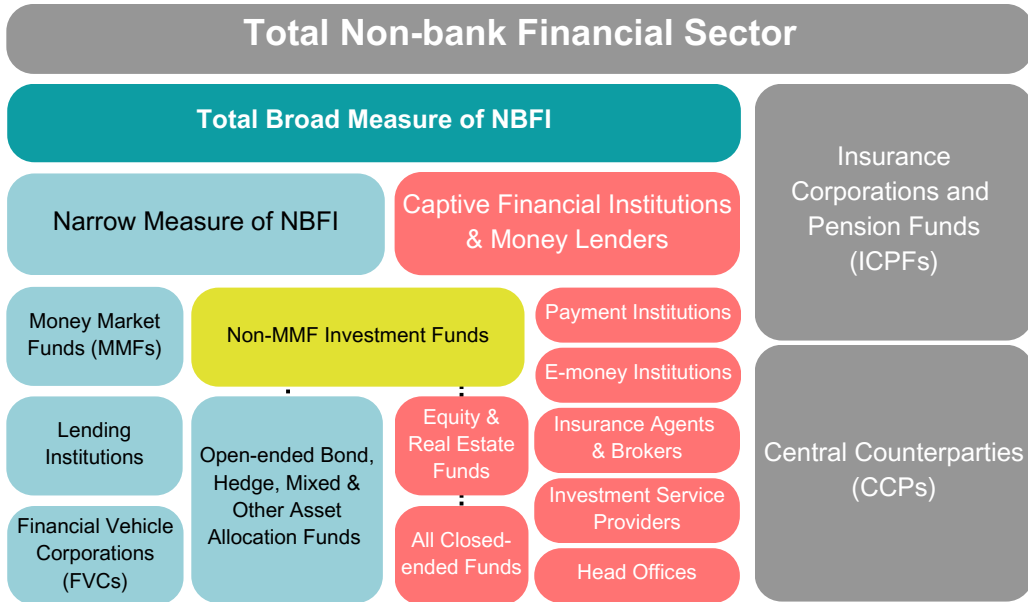
³ As per the Press Information Notice made on 13 June 2023 by the NSO: <https://nso.gov.mt/events/balance-of-payments-and-international-investment-position/>.

⁴ Refer to footnote 2 for a more detailed institutional breakdown.

⁵ With regards to CCPs, no such entities registered in Malta as of December 2023.

⁶ Refer to the Global Monitoring Report on Non-Bank Financial Intermediation: [Global Monitoring Report on Non-Bank Financial Intermediation 2023 \(fsb.org\)](https://www.fsb.org/publications/global-monitoring-report-on-non-bank-financial-intermediation-2023/).

Figure 1
PERIMETER OF NON-BANK ENTITIES



Source: Central Bank of Malta.

Note 1: No MMFs have been registered in Malta since the end of 2019.

Note 2: An “Other Asset Allocation Fund” is one that cannot be classified under any of the other fund types. One example of this would be an investment fund investing in commodities.

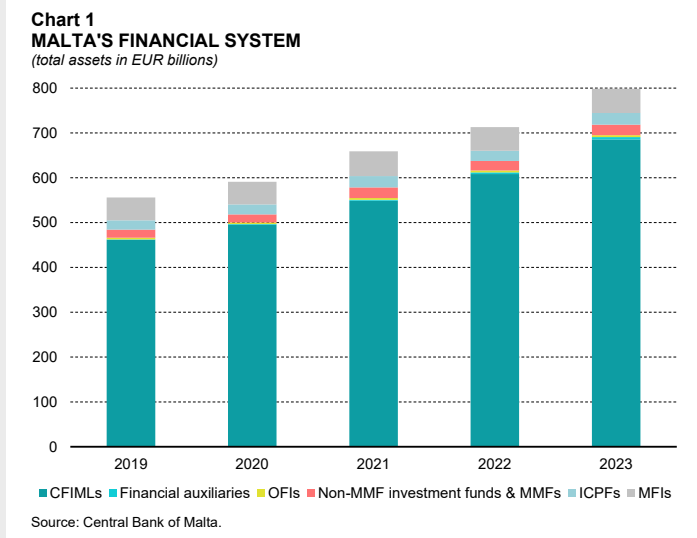
1.2 The NBF perimeter in Malta

1.2.1 Overall financial system and non-bank sector

The Maltese financial system recorded significant growth, with assets increasing by about 43.6% between 2019 and 2023, reaching almost €800 billion in December 2023 (see Chart 1).⁷ The predominant driver of this expansion was the non-bank sector which registered a 47.4% increase in total assets to reach €744.6 billion by end-2023.

1.2.2 Broad measure – NBF

From 2019 to 2023, the broad measure grew by 48.4% to €718.5 billion. Accounting for 95.4% of the broad measure, this growth was driven largely by the CFIMLs



⁷ Data is always as of year-end December unless stated otherwise.

sector, which expanded by 48.6% to €685.5 billion. Financial auxiliaries also saw substantial growth, with assets increasing to €5.2 billion by December 2023, mainly due to the surge in e-money institutions.⁸ Additionally, real estate, equity, and closed-ended funds grew significantly, bolstered by robust activity in the property market and strong stock market performance.

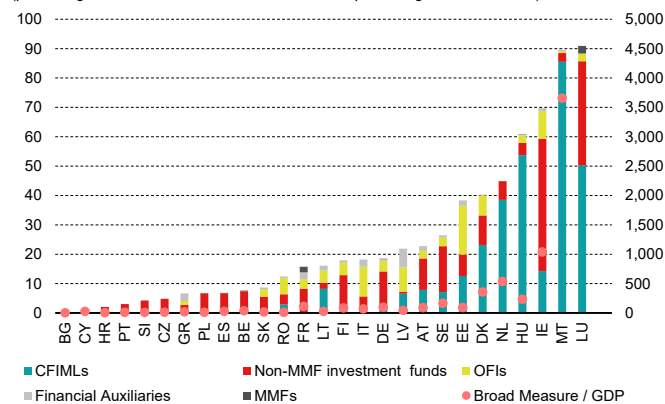
Comparing Malta with other EU countries underscores its significant position within the EU's financial landscape.

Alongside recognized financial centres like Ireland and Luxembourg, Malta stands out with the broad measure comprising 89.6% of the total financial system's assets (see Chart 2).⁹ This position stands as well when measuring the broad measure in relation to GDP, with Malta having the second highest share of about 3600%. However, in sharp contrast, while the non-MMF investment funds account for an important share for both Luxembourg (39%) and Ireland (65%), they represent just over 3% of Malta's broad measure. Domestically, CFIMs take centre stage, accounting for 95% of the broad measure, like in Hungary and the Netherlands. Such institutions account for a little over half of the broad measure for Luxembourg and even less for Ireland. Moreover, Ireland distinguishes itself with over 13% of its broad measure attributed to OFIs.

1.2.3 Narrow measure – NBF1

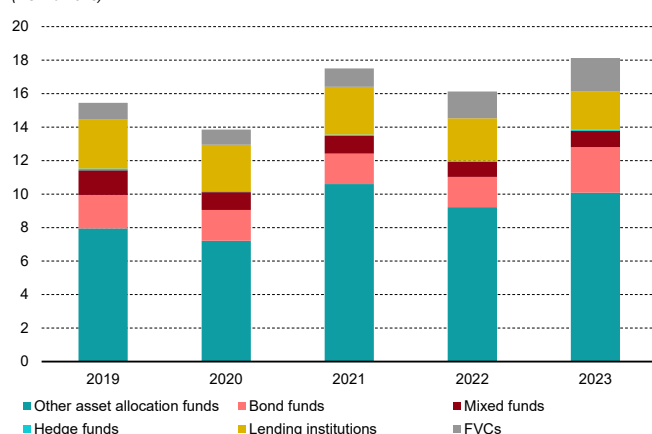
The narrow measure of NBF1 reflects the perimeter of those entities posing bank-like financial stability risks. This is notably small, constituting 2.4% of the overall non-banks' assets in Malta as of December 2023. Although between 2019 and 2023, the measure grew by 17%, some fluctuations were evident, which are closely tied to broader market developments. The onset of the pandemic in 2020 inflicted some stress on these entities, through their investments, resulting in a

Chart 2
COMPARISON OF THE BROAD MEASURE ACROSS EU COUNTRIES
(percentage of total financial sector assets – LHS; percentage of GDP – RHS)



Sources: Central Bank of Malta for Malta and Eurostat for all other jurisdictions.
Note: Data as of December 2022. Results for Luxembourg are excluded from the Broad Measure/GDP (RHS) owing to its high share of about 19,000%.

Chart 3
THE NARROW MEASURE
(EUR billions)



Source: Central Bank of Malta.

⁸ To some extent the growth in e-money institutions reflected one new institution which started operating within the period, with its balance sheet data representing clients' money held. However, even excluding this institution, the remaining e-money institutions still reported exceptional growth, with the number of licensed entities also growing from 16 in 2019 to 27 by December 2023.

⁹ Note that the share of the broad measure increased in 2023, but only marginally to 89.97% from the 89.62% reported in the chart.

slight decline in the overall sector's assets. Investment funds were particularly vulnerable, leading to outflows and investment losses. Nonetheless, as the initial shock of the pandemic subsided, the subsequent year witnessed a significant rebound as markets adjusted to the new normal, fostering stability in the process. Post-2021, these institutions reported a slight decline in assets as mounting inflationary pressures prompted central banks to tighten their monetary policy stance, which notably impacted yields due to rising interest rates. Once more, there was a significant rebound in 2023, as the narrow measure surpassed its 2021 peak, totalling €18.1 billion by December 2023 (see Chart 3).

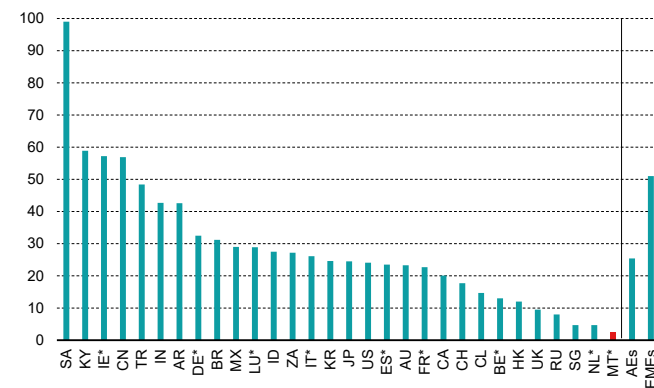
In comparison to other selected jurisdictions, both within and outside the EU, Malta reported the lowest ratio of the narrow measure of the non-bank sector, as illustrated in Chart 4. This is attributed to Malta's non-bank financial sector being heavily influenced by CFIMs, which are excluded from the narrow measure.¹⁰

The narrow measure is primarily composed of open-ended non-MMF investment funds, excluding equity and real estate funds, which grew by almost 20% from 2019 to 2023. Their share of the narrow measure increased slightly, rising from 74.7% to 76.5% over the same period. Notably, these consisted of other asset allocation funds, which experienced robust growth, particularly in 2021 (see Chart 5). Open-ended bond funds also surged, while mixed funds saw a decline and hedge funds remained marginal. Meanwhile, lending institutions faced a significant decline of nearly 23%, mainly due to reduced loans granted to sectors other than banks, especially noticeable in 2022 and 2023 due to increased borrowing costs. In contrast, FVCs doubled in size, driven by expansions in holdings of debt securities and securitized assets.

The analysis conducted in this section reveals that

**Chart 4
COMPARISON OF NARROW MEASURE ACROSS SELECT JURISDICTIONS**

(percentage of total non-bank sector assets)



Sources: Central Bank of Malta for Malta; FSB for all other jurisdictions.
Note 1: AEs = Advanced Economies, EMES = Emerging Market Economies.
Note 2: All data shown as of end of year 2021, with EU jurisdictions marked by *.

**Chart 5
DEVELOPMENTS IN THE NARROW MEASURE OF NBF1**

(total assets in EUR billions)



Source: Central Bank of Malta.

¹⁰ In comparison to other jurisdictions that calculate the narrow measure using an activity-based approach (per the FSB), Malta uses an entity-based approach. This does not change results significantly given that CFIMs comprise such a large amount of the total non-bank financial sector in Malta.

while prima facie the NBFIs sector in Malta appears sizable, it is predominantly comprised of entities that are not extensively involved in credit intermediation, and therefore unlikely to present bank-like risks to financial stability. As a result, the focus shifts to a considerably smaller subset of entities, offering alternative financing avenues beyond those of the traditional banking sector.

2. Financial stability risks of NBFIs

2.1 Bank-like metrics

This section updates most of the metrics which were initially proposed and evaluated in the *FSR 2020* article.¹¹ These metrics, which draw from the FSB's methodology, aim to assess potential financial stability risks within the narrow measure by evaluating entities' involvement in credit intermediation, maturity and liquidity transformation, leverage, and interconnectedness with the banking system. The summarised ratios are presented in Table 1.

Credit intermediation indicators assess the extent to which these institutions provide credit, either through both loans and debt securities (CRE 1), or solely loans (CRE 2). Values range between 0 and 1, with larger values indicating a higher degree of credit intermediation.

Maturity transformation indicators analyse the extent to which short-term funding is used to finance long-term assets which could expose entities to rollover or refinancing risk and require rapid asset sell-offs during stressed periods.¹² MAT 1 looks at the proportion of long-term assets less long-term

Table 1
DEFINITIONS OF BANK-LIKE METRICS

Bank-Like Metric	Indicator 1	Indicator 2
Credit Intermediation (CRE)	CRE 1	CRE 2
	$\frac{\text{Credit Assets}}{\text{Total Financial Assets}}$	$\frac{\text{Loans}}{\text{Total Financial Assets}}$
Maturity Transformation (MAT)	MAT 1	MAT 2
	$\frac{\text{Long term assets} - \text{Equity} - \text{Long term liabilities}}{\text{Total Financial Assets}}$ $\frac{\text{Long term assets} - \text{Long term liabilities}}{\text{Total Financial Assets}}^*$	$\frac{\text{Short term liabilities}}{\text{Short term assets}}$
Liquidity Transformation (LIQ)	LIQ 1	
	$\frac{\text{Total Financial Assets} - \text{Liquid Assets} + \text{Short term liabilities}}{\text{Total Financial Assets}}$	
Leverage (LEV)	LEV 1	
	$\frac{\text{Total Financial Assets}}{\text{Equity}}$ $\frac{\text{AUM}^*}{\text{NAV}}$	
Interconnectedness (INT)	INT 1	INT 2
	$\frac{\text{Assets with Credit Institutions}}{\text{Total Financial Assets}}$	$\frac{\text{Liabilities with Credit Institutions}}{\text{Total Financial Assets}}$

Notes: All indicators are in line with the FSB's methodology (2023). * indicates indicator applicable to Investment funds. Short-term assets and liabilities are given by deposits, loans and debt securities with maturities of less than one year, whereas long-term assets and liabilities are those with maturities of more than one year. For FVCs, assets (and loans) include securitized assets (and loans). Additionally, equity claims have been considered as short-term assets. Moreover, liquid assets consist of deposits, sovereign bonds, debt securities issued by MFIs and equity & investment fund shares. The metric for liquidity transformation have been adapted to reflect the newly published methodological update on liquidity for both Investment Funds and Insurance Companies. In addition, for the calculation of maturity transformation SBS data has been adjusted to reflect the residual maturity, rather than original maturity.

¹¹ The removal of the former LIQ 1 indicator was deemed appropriate on the basis that it served more so as a liquidity ratio that assessed the proportion of an entities' illiquid assets, rather than as a metric that evaluated the extent of liquidity transformation.

¹² Refer to the *Analytic Framework for Financial Stability Risk Identification, Assessment and Response* by the Financial Stability Oversight Council (FSOC) of the US Treasury: [Analytic-Framework-for-Financial-Stability-Risk-Identification-Assessment-and-Response.pdf \(treasury.gov\)](https://www.fsb.org/wp-content/uploads/2018/03/Analytic-Framework-for-Financial-Stability-Risk-Identification-Assessment-and-Response.pdf).

liabilities, and in the case of OFIs less equity, as a share of total financial assets. This would equate to the long-term assets funded by short-term liabilities. The ratio ranges from -1 to +1, indicating negative and positive maturity transformation, respectively, with a value of 0 suggesting no maturity transformation. Positive maturity transformation refers to when long-term assets are funded by short-term liabilities, while negative maturity transformation indicates that assets are mainly funded through long-term liabilities. MAT 2 measures the short-term liabilities in relation to short-term assets, with values between 0 and 1 indicating negative maturity transformation, values of 1 indicate that short-term liabilities are equal to short-term assets, and values above 1 signal short-term funding dependence.

Liquidity transformation involves the use of liquid short-term funding to finance illiquid, long-term assets. The LIQ 1 ratio assesses this by matching the illiquid assets with short-term liabilities. A value up to 1 indicates negative or no liquidity transformation since liquid assets would be more than or equal to the short-term liabilities. As the value surpasses 1 and approaches the maximum possible level of 2, the indicator shows an increasing degree of positive liquidity transformation, as the entity uses short-term funding to finance illiquid assets.

Leverage looks at the share of assets funded by equity (AUM over NAV for investment funds), whereby the higher the ratio, the higher the leverage, which could limit the entity's ability to meet its obligations and heighten the potential for sudden liquidity shortages.¹³

Interconnectedness with credit institutions looks at both the assets and liabilities side of the balance sheet, with INT 1 and INT 2, respectively. A higher value indicates a greater extent of interconnectedness, which might lead to increased contagion risk, where the destabilization in one segment could spillover into the other.¹⁴

2.2 Risk assessment

This section analyses the results of these bank-like metrics, presenting those of investment funds on an aggregate basis and by asset allocation type, as well as results for OFIs at an aggregated level and by licence type. Table 2 summarises the results and employs a colour-coding scheme to illustrate the level of engagement in each relevant area of activity, ranging from insignificant to high. In addition, the direction of the associated arrows points to an increase, decrease or unchanged level of risk, based on the value of the change in the relevant z-scores from the baseline period of 2019 to 2023, where a change of -1 or less indicates a decreasing engagement, a change of +1 or more indicates an increasing engagement, while a score in between indicates a stable engagement.¹⁵

Credit intermediation is primarily driven by lending institutions, and to a lesser extent, by bond funds and FVCs. Lending institutions are heavily involved in credit intermediation through loan issuance, which constitutes nearly 86% of their assets, but have seen a decrease in their level of engagement since 2019. By definition, the bond funds' intermediation takes place through their substantial holdings of debt securities, as evidenced in CRE 1. FVCs play a more subdued role, with 13% of their assets in loans and an additional 26% in debt securities, resulting in a low engagement in CRE 1.

Maturity transformation is most prominent among bond funds, which in line with their investment strategies, show significant allocations to long-term debt securities and a lower proportion of short-term

¹³ Refer to the *Analytic Framework* by the FSOC.

¹⁴ From a report published by the Banque de France on *Non-Bank Financial Intermediation: Vulnerabilities and Challenges: Non-bank financial intermediation: vulnerabilities and challenges | Banque de France (banque-france.fr)*.

¹⁵ The z-score is estimated based on quarterly data from December 2019. The position as of December 2023 and as of December 2019 of each relevant indicator is compared to the mean, divided by the standard deviation. Such a process helps in determining how many standard deviations the end of 2023 and end of 2019 figure stand away from the mean within the period assessed. The two figures are then compared to determine whether there has been an increase, decrease, or no change in the risk levels for each respective indicator, based on the ranges presented above.

Table 2
SUMMARY OF POTENTIAL FINANCIAL STABILITY RISKS

Bank-Like Metrics	Indicators	Open-ended Investment Funds					OFIs		
		Aggregate IFs	Bond Funds	Mixed Funds	Hedge Funds	Other Asset Allocation Funds	Aggregate OFIs	Lending Institutions	FVCs
Credit Intermediation	CRE 1	▶	▶	▲	▶	▶	▼	▼	▲
	CRE 2	▶	▶	▲	▶	▶	▼	▼	▲
Maturity Transformation	MAT 1	▲	▶	▲	▶	▶	▼	▼	▲
	MAT 2	▲	▶	▲	▶	▶	▼	▼	▲
Liquidity Transformation	LIQ 1	▶	▶	▶	▶	▶	▼	▼	▲
Leverage	LEV 1	▲	▲	▼	▲	▲	▼	▼	▲
Interconnectedness	INT 1	▼	▼	▼	▲	▼	▶	▶	▼
	INT 2	▼	▼	▲	▲	▼	▼	▼	▲

Source: Central Bank of Malta.

Note: The colours of the arrows reflect the degree of potential engagement in each relevant area of activity, according to the specified colour coding below. The colour coding is judgment-based and informed by descriptive statistics using a percentile approach that splits the ranges of each indicator into four segments. The direction of the arrows indicates an increase, decrease or unchanged level of risk.

Engagement Level	Risk Direction
Insignificant	△
Low Engagement	▷
Medium Engagement	▽
High Engagement	▶

assets. These are concurrently highly reliant on short-term funding. However, when aggregated, investment funds exhibit low but increasing risk in maturity transformation. The results for lending institutions are heavily influenced by one large entity which accounts for nearly 80% of the overall aggregate assets, driving the positive maturity transformation that is being observed. When excluding this entity, the remaining lending institutions show negative maturity transformation, with minimal short-term liabilities and a greater reliance on equity funding. Overall, aggregate lending institutions saw a decreased risk level in both measures. However, excluding the largest entity, the risk level for MAT 1 remained stable, while the risk level for MAT 2 increased, but engagement was insignificant. FVCs generally exhibit negative maturity transformation due to the prominence of long-term liabilities, particularly the issuance of long-term debt securities and shareholders' funds.

The engagement in liquidity transformation varies across entities. Lending institutions exhibit positive liquidity transformation with medium engagement, again driven by the largest entity that holds a significant amount of short-term liabilities but few liquid assets. Since the remaining institutions hold minimal short-term liabilities and a fair amount of liquid assets, by omitting the largest entity, the rest of the entities exhibit insignificant engagement in liquidity transformation. FVCs also exhibited insignificant liquidity engagement holding a limited amount of short-term liabilities. Meanwhile, investment funds' liquidity transformation stood at a medium level, but remained stable as the developments in mixed funds, which experienced a decrease in their liquid assets, were offset by the acquisition of liquid assets by other asset funds. However, the accumulation of illiquid assets could pose significant vulnerability for open-ended funds as it can lead to liquidity mismatches during periods of substantial outflows.¹⁶

Leverage within OFIs stood high, indicative of high engagement. FVCs recorded increased leverage, with more than half of their funding coming from issuing debt securities and loans. Lending institutions' high leverage is again driven by the largest entity which reported substantial bank funding. Excluding such entity, leverage was far more contained and of low engagement. Meanwhile, although

¹⁶ Refer to blog published by F. Natalucci, M.S.Quereshi & F. Suntheim (IMF, 2022) [How Illiquid Open-End Funds Can Amplify Shocks and Destabilize Asset Prices \(imf.org\)](https://www.imf.org/en/Blogs/Articles/2022/04/28/220428-how-illiquid-open-end-funds-can-amplify-shocks-and-destabilize-asset-prices).

investment funds observed a slight increase in leverage, this remained limited, also due to the stringent regulatory frameworks such as the UCITS Directive, which imposes restrictions on borrowing for investment purposes, limiting it to 10% of their assets on a temporary basis.¹⁷ Additionally, Alternative Investment Funds (AIFs) asset managers are required to set reasonable leverage limits whilst national authorities are empowered to impose limits if financial stability is threatened.¹⁸

Engagement through interconnectedness with the banking system remained insignificant for investment funds on both the asset and liability sides. Hedge funds have a higher, albeit still low degree of interconnectedness, due to a larger proportion of bank deposits and share issuances to banks on their balance sheets. Among OFIs, interconnectedness has remained stable on the asset side and decreased on the liability side, with overall low engagement. Lending institutions remain significantly influenced by the largest entity, which reported funding from a credit institution resulting in an overall medium engagement, as otherwise the remaining institutions exhibit medium and insignificant engagement on the asset and liability fronts, respectively. Meanwhile, FVCs observe insignificant levels of interconnectedness.

3. Conclusions and way forward

The analysis of the non-bank financial sector shows that NBF activity in Malta as defined by the narrow measure, remains smaller than in other jurisdictions, when expressed as a share of the non-bank sector's assets. This is primarily attributed to the dominant presence of CFIML entities in Malta.¹⁹ Furthermore, the narrow measure is predominantly influenced by investment funds, which make up more than 78% of total asset base and are to some extent subject to stricter supervision and regulation. Over the years, the narrow measure has shown a consistent upward trend, fuelled by increasing demand for financing from alternative non-bank entities. However, this growth trajectory has been interrupted by sustained stress episodes, such as the pandemic-induced economic downturn, as well as the more recent monetary policy tightening cycle.

In terms of bank-like metrics, high engagement in credit intermediation was observed for lending institutions and bond funds. The latter are also strongly engaged in maturity transformation. At the same time, lending institutions exhibit positive liquidity and maturity transformation and have a high level of leverage. However, such developments are influenced by the largest entity which skews the overall outcome, and when excluded, the remaining institutions registered more contained and lower levels of engagement. Similarly, FVCs engage in high leverage. Overall, investment funds reported limited engagement in bank-like activities, with a medium level of liquidity transformation reported.

Looking ahead, the goal is to refine the narrow measure, concentrating on entities with substantial ties to the domestic economy. The box considers all the funds registered domestically. However, the established methodology, which identifies domestically-relevant investment funds, highlights that only 8.6% of the total assets of such investment funds falling within the scope of narrow measure are domestically relevant.²⁰

The methodology presented in this article is constantly being refined with the aim of focusing more on the entities' individual activities, including their domestic-relevance. In this regard, the next steps in this field of work include a consistent methodology for specifying systemic relevance for the OFI sector and identifying the entities in scope. The Bank intends to exploit further the indicator approach presented in this article to track through time the engagement of the identified systemically relevant entities in the dimension of bank-like risks.

¹⁷ Referenced in Directive 2009/65/EC of the European Parliament and of the Council: <https://rb.gy/xdpz99>.

¹⁸ Referenced in Directive 2011/61/EU of the European Parliament and of the Council: <https://rb.gy/ymp7p7>.

¹⁹ Refer to the FSB's Global Monitoring Report on Non-bank Financial Intermediation (2022).

²⁰ Refer to 'Revisiting the methodology for selecting domestically relevant investment funds' published in the FSR 2020.